Teacher Education: Local and Global

Edited by: Maxine Cooper
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>vi</td>
</tr>
<tr>
<td>Keynote Speakers</td>
<td>1</td>
</tr>
<tr>
<td>Learning As Boundary-Crossing In School-University Partnership</td>
<td>3</td>
</tr>
<tr>
<td>Amy B. M. Tsui</td>
<td></td>
</tr>
<tr>
<td>Symposia</td>
<td>15</td>
</tr>
<tr>
<td>Teachers In The Quagmire: Working Through The Equity Policy Crisis</td>
<td>17</td>
</tr>
<tr>
<td>Lori Beckett, Bob Meyenn &amp; Lyn Martinez</td>
<td></td>
</tr>
<tr>
<td>The Learning Place</td>
<td>19</td>
</tr>
<tr>
<td>Jane Carr, Carolyn Kaighley, Jim D’Castro &amp; Theresa Feletar</td>
<td></td>
</tr>
<tr>
<td>Local District And State Responses To The Global Challenge Of Beginning Teacher Support</td>
<td>21</td>
</tr>
<tr>
<td>Fiona Conroy, Maxine Cooper &amp; Kay Martinez</td>
<td></td>
</tr>
<tr>
<td>SOSE: Where To Now? Issues For teacher Educators</td>
<td>23</td>
</tr>
<tr>
<td>Julie Dyer, Debra Bateman &amp; Catherine Harris</td>
<td></td>
</tr>
<tr>
<td>Globalising Teacher Education</td>
<td>25</td>
</tr>
<tr>
<td>Lorraine Ling, Eva Burman, Maxine Cooper &amp; Peter Ling</td>
<td></td>
</tr>
<tr>
<td>Middle Schooling Teacher Education: Where Are We At In Australia?</td>
<td>26</td>
</tr>
<tr>
<td>Lisa Hunter, Lesley Newhouse-Maiden, Terry de Jong &amp; Donna Pendergast</td>
<td></td>
</tr>
<tr>
<td>Teacher And Teaching Identities In Global And Postmodern Contexts</td>
<td>28</td>
</tr>
<tr>
<td>Ninetta Santoro, Eileen Honan, Simone White, Joanne Reid &amp; Elizabeth Hirst</td>
<td></td>
</tr>
<tr>
<td>Squaring Off Within The Politics Of Inclusion: International Challenges To Local Approaches To Teacher Education</td>
<td>30</td>
</tr>
<tr>
<td>Roger Slee, Linda Graham, Mary Keefe &amp; Suzanne Carrington</td>
<td></td>
</tr>
<tr>
<td>Papers</td>
<td>33</td>
</tr>
<tr>
<td>Regenerating Teaching And Learning: Empowering Students Through Negotiating Curriculum In History – Challenges For Education And Educators</td>
<td>35</td>
</tr>
<tr>
<td>Joe Alexander</td>
<td></td>
</tr>
<tr>
<td>Continuing Professional Learning: What’s Really Going On?</td>
<td>45</td>
</tr>
<tr>
<td>Melissa Bennett &amp; Marilyn Cole</td>
<td></td>
</tr>
<tr>
<td>Beyond Cyber-Tooth Policy: Teacher Education, ‘Old Times’ Thinking, And Computing And Communication Technologies In Schools</td>
<td>56</td>
</tr>
<tr>
<td>Chris Bigum &amp; Leonie Rowan</td>
<td></td>
</tr>
<tr>
<td>Factors Influencing The Employment Experience And Aspirations Of A Cohort Of Beginning Teachers: Two Years On</td>
<td>62</td>
</tr>
<tr>
<td>Ted Booth &amp; Jennifer Rung</td>
<td></td>
</tr>
<tr>
<td>Use Of Digital Professional Portfolios To Enhance Pre-Service Teachers’ Meta-Abilities</td>
<td>70</td>
</tr>
<tr>
<td>Carolyn Broadbent</td>
<td></td>
</tr>
<tr>
<td>What You Need To Know About ICT In Schools: Why We Need More Critical Debate</td>
<td>76</td>
</tr>
<tr>
<td>Mark E. Brown</td>
<td></td>
</tr>
</tbody>
</table>
Assessing Final-Year Preservice Teachers' Preparedness For Teaching Art Education In NSW Primary Schools
Sue Hudson & Peter Hudson .................................................................................................................................227

Local Responses To The Needs Of Samoan Students: Implications For Pre-Service Education Programs
Judith Kearney, Maria Dobrenov-Major & Gary Birch ..........................................................................................237

Classroom Simulation: Enhancing The Learning Experience For Pre-service Teachers
Lisa Kervin, Brian Ferry, Lisa Carrington, Jan Turbill, Brian Cambourne, John Hedberg & David Jonassen
.................................................................................................................................................................244

Transversing The Digital Divide Using Interactive Whiteboards
Lisbeth Kitson, Judith Kearney & Margaret Fletcher ..........................................................................................252

A New Teaching Professionalism For New Times: The Role Of Teacher Education From A Poststructuralist Perpective
Mary Klein .............................................................................................................................................................259

Making A Difference In Child Protection: Towards An Effective Education For Teachers
Louise Laskey ........................................................................................................................................................265

Positioning The Practicum Through Research And Scholarship
Rosie Le Cornu ..................................................................................................................................................274

Situated Teacher Learning In The Danwei Community Of Practice: An Ethnography
Yongcan Liu ......................................................................................................................................................281

The Development Of Modern Foreign Language Student Teachers' Conceptions About Self During A One-Year PGCE Programme
Yongcan Liu & Linda Fisher ..................................................................................................................................287

An Apple For The Teacher?
Noella Mackenzie ................................................................................................................................................294

Developing An Inclusive Model For 'Teacher' Professional Development
Rod Maclean & Simone White ............................................................................................................................302

Using The Results Of Diagnostic Testing To Promote Mathematical Pedagogical Knowledge
Heather Mays ........................................................................................................................................................310

Re-Constructing Relations Of Teacher Education And Professional Practice: Boundary Pedagogy And Practitioners At Work
Diane Mulcahy .....................................................................................................................................................318

Taking Teacher Education On A Field Trip: An 'Authentic' Task That Provides 'Authentic' Learning
Jennifer Munday ..................................................................................................................................................327

Preparing Middle Years Teachers To Meet The Needs Of Young Adolescents In New Times: The Story Of An Innovation In Teacher Education
Lesley Newhouse-Maiden & Terry de Jong ........................................................................................................334

Learning To Be Teachers Of Visual Literacy And Teachers Of Multiliteracies
Betty J Noad ........................................................................................................................................................343

The Artful Practice Of Practicum Assessment
Michelle Ortlipp ..................................................................................................................................................348

Virtual Teachers: Negotiating New Spaces For Teaching Bodies
Donna Pendergast & Cushla Kapitzke ..................................................................................................................356

"I Felt Like A Teacher Today": Beginning Teachers And Professional Identity
Marilyn Pietsch & John Williamson ...................................................................................................................364

Federal And State Policies On Multiculturalism And The Teaching Of Culture: A Focus On Primary Education
Cristina Poyatos Matas & Susan Bridges ...........................................................................................................371
Using Video Stimulated Recall And Concept Mapping In Reflective Teaching Practices: Strengths, Limitations And Potential Threats
Paul Reitano

Providing A Space For Professional Growth Through Research
Paul Reitano & Cheryl Sim

Transforming Frameworks: New Approaches To CCTs And The Pursuit Of Educational Equity
Leonie Rowan & Chris Bigum

Meeting The Skill Requirements Of Vet Practitioners In New Times
Michelle Simons

Emotional Intelligence: Why It Affects Language Learning
Usaporn Sucaromana

Professional Experience And Undergraduate’s Self-Efficacy For Teaching
Richard Taffe & Sally Knipe

The Use Of ‘Collective Biography’ For Narrative Inquiry In Teacher Education Placement Research
Bill Ussher

Using NSW Quality Pedagogy And A Virtual School To Foster Critical Thinking In Pre-Service Teachers
Neill Ustick

New Times, New Teachers: Valuing Social And Emotional Wellbeing In Teacher Education
Karen Vincent, Trevor Hazell, Jennifer Allen & Tom Griffiths

Exploring The Impact Of Professional Experience On Retention Within A Teacher Education Pre-Service Program
Glenice Watson & Greer Cavallaro Johnson

Epilepsy: Does Authoritative Discourse Cause Society And Teachers To Fall?
Noelene Weatherby-Fell, John Hammond & Brian Kean

Social And Emotional Wellbeing In Teacher Education: Reflections By Early Career Teachers
Noelene Weatherby-Fell & Karen Vincent

Career Change Students In Teacher Education: The Policy And Research Context
Judy Williams

Community Partnerships In Teacher Education Programs: Volunteering And Student Teacher Identities
Annette Woods, Lorelei Carpenter and Pieta Lack

The Meta-Evaluation Of Teacher Training Programs For Elementary Education In Turkey
Sefik Yasar, Mehmet Gultekin, Nilufer Kose & Pinar Girmen & Sengul A nagon

List of Authors
Foreword

The theme of this conference is 'Teacher Education: Local and Global'. The forces for internationalisation and globalisation impact on educational policies, curriculum and pedagogy in teaching and teacher education. Papers presented in the conference confront questions such as What does the globalisation movement mean for teachers and schools at the local, national and international level? What is the impact of globalisation on teacher professional identity/ies?

The idea of teachers as agents for transformation across local domains and in global contexts is one that is continually confronting us as teacher educators. Moving from and within the micro social relations of the classroom to the global contexts of educational systems and societies there are a range of issues to explore in relation to teaching and teacher education. For example, advances in information and communication technology are transforming the ways we communicate, teach and learn about ourselves and the spaces that we interact within. Developing digital literacies and working to overcome digital divides are part of the process and empowering work confronting teachers and teacher educators in our times.

This publication draws on a wide range of research perspectives to provide a snapshot of current research examining teacher education in local and global contexts. Contributors to this publication come from all states of Australia, as well as overseas contributors from the UK, USA, NZ, Belgium, Canada, and Turkey. The papers cover a wide range of contemporary issues and themes in teacher education. The themes addressed are Teacher education and the professional regeneration of teaching and learning in new times; Our identities as teachers and teacher educators in local and global contexts; Local and global concerns in thinking about the future of the teaching profession; Digital literacies and creative concerns and issues in and for teacher education. Many papers display the richness of the interconnections between these issues. However, one important theme to emerge throughout the book is the importance of research into the factors surrounding the development of innovative thinking supported by new technologies in education classes.

The perspectives encountered in this publication include research into the education of teachers and government and system policies that impact on the education of teachers and leadership and governance issues related to leading teacher education institutions. Additionally teacher education program initiatives and professional practices around how schools and universities are dealing with the ongoing education of the teaching workforce show the diversity of initiatives in research and practices in teacher education locally and globally.

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Keynote Speakers
Learning As Boundary-Crossing In School-University Partnership

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This paper discusses how globalization has challenged the traditional conception of learning as the acquisition of a body of knowledge. It points out that to respond to the intensity and immediacy of information transmission and knowledge generation, and to cope with the multi-faceted complexity of new knowledge, it is essential for us to engage in collective knowledge generation by participating in communities of practice and crossing community boundaries. Using a case of adopting lesson study as a mediating tool to replace traditional practicum supervision, this presentation illustrates the expansive learning that occurs in the boundary zone where student teachers, mentors and university tutors meet as they try to resolve old and new contradictions, resulting in the generation of a new tool for learning for all participants, and a transformed activity system. This paper concludes that in order to cope with the challenges of globalization, it is essential to develop the capability to engage in solving problems which are ill-defined, negotiate the object of an activity system which is poorly understood, explore new roles, and form new relationships. It is this capability which lies at the heart of the adage "learning to learn".

Globalization and educational responses

Globalization is a complex, multi-dimensional phenomenon involving economic, political, cultural, environmental and technological domains which are inextricably intertwined linked (Held, 1998). The complexity of the issues and processes involved can be gleaned from the multiple ways in which globalization has been characterized. Scholars who subscribe to the views of what has been referred to as the "hyperglobalization" school emphasize the emergence a new global order (see Kim, 2000). Some focus on the technological capabilities in overcoming geographical barriers and characterize globalization as the advent of a borderless society which is open and integrated (Waters, 1995). Some focus on the intensified economic interaction between countries, which has led to a fundamental change in national economies and the role of nation-states (Baker, Epstein, & Pollin, 1998; Wright, 2004). They characterize globalization as a "de-nationalized era" in which nation-states play a diminishing role in socio-economic processes. Economic and political decisions, in their view, are increasingly made by multinational corporations and transnational organizations. There are also those who focus on the internationalization of production. They characterize globalization as a new world order with a new international system for the division of labour and new migration patterns (Cox, 1994).

There are, however, scholars who are skeptical of the new global order depicted. They point out that the present economic situation is not new and that the state is as powerful as ever. Those who support this view focus on an increasingly unequal distribution of power and wealth between developed and developing countries. They characterize globalization as neo-colonization and a fragmentation process which aggravates the sociopolitical, cultural and economic divide (Khor, 1995). There are still others focus on its impact on cultural identities and characterize globalization as a destructive process. They highlight the cultural homogenization brought about by the commodification of cultural experiences which are essentially Western or American (Barber, 1995; Ritzer, 1998; Tomlinson, 1999). Increasingly, however, researchers of globalization subscribe to the view that globalization is really a process of "globalization" (Robertson, 1995) in which global and local forces are mutually constitutive. They argue that this process is typified by hybridization rather than homogenization or heterogenization.

Whichever characterization of globalization one subscribes to, one cannot deny that we are experiencing an era in which time and space are highly compressed, and interconnectivity has intensified in all aspects of human life so that events which happen in one part of the world can have instant repercussions in others (Giddens, 1990, 2000; Albrow, 1990). The intensity and immediacy of information transmission, knowledge generation and interaction require that we respond to changes within a short
Educators came to a new understanding of their work as teachers and teacher educators. Crossing boundaries and resolving contradictions, student teachers, mentors and university teacher educators learned to pass language benchmark tests before they are allowed to teach the language. The teacher education courses offered by Higher Education Institutions are being inspected and assessed by the Office for Standards in Education, and the quality ratings awarded have resource implications in the form of student number allocation (see Green, 2004). In Hong Kong, language teachers are required to pass language benchmark tests before they are allowed to teach the language.

Equally prevalent in the education policy discourse is the discussion of educational failures and how to remedy them. Teachers and teacher educators are often made the scapegoat for these failures. Quality assurance mechanisms and procedures have been implemented to improve economic efficiency and effectiveness. For example, in the US, teacher licensure tests have been introduced for the purpose of accountability. Pass rates in these tests, and programme completion rates have been used by the government to rank teacher education programmes with financial implications (see Mitchell, Robinson, Plake and Knowles, 2001). In the UK, detailed standards, mostly expressed in behavioural language, have been prescribed for assessing teachers at all stages of professional development (see Furlong et al., 2000). The teacher education courses offered by Higher Education Institutions are being inspected and assessed by the Office for Standards in Education, and the quality ratings awarded have resource implications in the form of student number allocation (see Green, 2004). In Hong Kong, language teachers are required to pass language benchmark tests before they are allowed to teach the language.

The adoption of principles of economic rationalism in education, including teacher education, reflects a reductionist view of learning as the acquisition of a static body of knowledge and skills, and of teacher education as the acquisition of a body of pedagogical skills. Paradoxically, it is precisely such a traditional view of knowledge and learning that globalization has thrown into question. This presentation discusses how globalization has challenged traditional conceptions of knowledge and learning and the implications for teacher learning. It points out that to respond to the intensity and immediacy of information transmission and knowledge generation, and to cope with the multi-faceted complexity of new knowledge, it is essential to experience collective knowledge generation through participation in communities of practice and through crossing community boundaries. It reports on a case of boundary-crossing in school-university partnership mediated by lesson study as a boundary object. It discusses how, in the course of crossing boundaries and resolving contradictions, student teachers, mentors and university teacher educators came to a new understanding of their work as teachers and teacher educators.

Nature of knowing and learning

Ever since the term "knowledge society" was coined by Peter Drucker, the word "knowledge" has become a buzzword for almost everything. For example, seminars have become "knowledge forums", and libraries are often called "knowledge navigation centres". It has been assumed that there is a shared understanding of what "knowledge" means. In most cases, knowledge means a body of information, and knowing is equated with the acquisition of a body of information.

Wenger, Snyder and McDermott (2002) elucidate the nature of knowledge as follows: first, knowledge is knowing how; second, it is both tacit and explicit; third, it is both social and individual, and fourth, it is dynamic. Some of these characteristics have been emphasized in teacher education research, for example, the tacit nature of teacher knowledge embedded in "knowing-how" as opposed to "knowing that" (Schön, 1983); and the individual nature of teacher knowledge as encapsulated in the term "personal practical
knowledge" (Elbaz, 1983; Clandinin, 1992; Connelly & Clandinin, 1995). However, what has been under-emphasized is the fact that teacher knowledge needs to be made explicit through sharing and informal learning, such as storytelling, conversation, coaching and apprenticeship, as well as through documentation, tools and procedures. Explicit and tacit knowledge must go hand in hand because the former cannot be applied without the latter. The social nature of knowledge is another important characteristic that has been neglected until recently. We experience knowing individually, but we create knowledge collectively, through resolving controversies, as Wenger et al. (2002) point out. Understanding the collective and the dynamic nature of knowledge is important in an age of globalization when new knowledge is being generated at an accelerating speed and the half-life of knowledge is getting shorter and shorter. It is no longer possible for an individual to know everything, even in one's own field of expertise. The increasing complexity of new knowledge generated necessitates multiple perspectives in problem-solving.

Along similar lines, Engeström (2001) points out that in an age of rapid change, the traditional view of knowledge as stable and well-defined is being seriously challenged. The age-old assumption that there is a competent teacher who knows what should be learnt no longer holds. We are constantly learning something ahead of time that is ill-defined or poorly understood. Engeström’s description of the nature of learning captures the essence of the challenge that we are confronted with nowadays: as soon as a new set of solutions is proposed, a new set of problems, often inherent in the solutions, arises. The kind of learning that is required has been referred to as “expansive learning”, where in the course of resolving contradictions, a more encompassing object and motive for the activity is constructed, resulting in a transformed activity system (Engeström 2001, p. 137). This conception of learning is particularly illuminating in view of the rapid generation of new knowledge brought about by technology, and has important implications for the kind of learning that should be experienced by learners as well as teachers.

**Participation in multiple communities of practice and boundary-crossing**

In order to engage in the kind of learning characterized by Wenger et al. and Engeström, participation in communities of practice is essential. In the process of participation, knowledge is shared, debated and codified; explicit knowledge is integrated with and made sense of through the tacit knowledge shared by members of the community. "Knowing" is a living process in which knowledge is generated in the course of acting, thinking and conversing with fellow practitioners (see Wenger, 1998).

The multi-dimensionality of globalization and the interconnectivity that globalization has brought about have blurred, expanded, and penetrated traditional boundaries, as mentioned earlier in this paper. Distributed (as opposed to collocated) communities of practice are now the norm rather than the exception (Wenger et al., 2002). It is no longer sufficient to acquire expertise within the boundary of one’s own discipline or profession. One has to engage with members of other communities of practice (see also Tsui, 2003). One has to move between multiple parallel contexts. These contexts demand and afford different, and sometimes conflicting, mediating tools and patterns of social interaction (Tuomi-Gröhn, Engeström, & Young, 2003). One is challenged to negotiate and integrate elements from different contexts to provide solutions to problems, and to engage in dialogic problem-solving. Engeström, Engeström and Kärkkäinen (1995) have argued for a broader, multi-dimensional view of expertise, which they refer to as a “horizontal” as opposed to a “vertical” view that focuses on stages of knowledge development and levels of skill. This new landscape of expertise has been characterized as “polycontextuality” and "boundary-crossing" (see Tuomi-Gröhn et al., 2003). Experts, they point out, not only engage in multi-tasking within the same activity system or community of practice, but also operate in multiple communities of practice. This horizontal view applies not only to experts, but to teachers and learners.

Wenger et al. (2002) point out that while boundaries are often seen as sources of potential difficulties and hence carry negative connotations, they also afford opportunities for innovation and renewal. Crossing boundaries often forces participants to take a fresh look at their long-standing practices and assumptions, and can therefore be a source of deep learning. They point out that "While the core of a practice is a locus of expertise, radically new insights and developments often arise at the boundaries between communities" (Wenger et al., 2002, p. 153).

The term "boundary zone" has been proposed to describe a place where elements from both activity systems are present (Konkola, 2001, cited in Tuomi-Gröhn, 2003). The concept of “the third space” has been proposed alternatively to describe the learning that takes place when ideas from different cultures meet and form new meanings (Gutiérrez, Baquedano-López, & Tejeda, 1999). A boundary zone is
polycontextual, multi-voiced and multi-scripted. As such, it is characterized by alternative or competing discourses and positionings which afford opportunities for the transformation of conflicts and tensions into rich zones of learning. The expansive learning that takes place is typically triggered by existing practices being questioned, rather than by a given learning task (see Engeström, 1999). Boundary-crossing involves going into unfamiliar territories and requires cognitive retooling. New elements are introduced from one community of practice to another via boundary crossers, or "brokers". These elements, which have been referred to as "boundary objects" (Star, 1989), often lead to the creation of new tools. As Engeström et al. (1995) point out, technological innovations and new product developments typically involve horizontal boundary-crossing and sustained boundary interactions (see also Wenger et al., 2002). In some cases, the introduction and creation of new boundary objects can lead to profound changes in the activity system. Therefore, we need to engage in learning which develops our capability to cross boundaries, negotiate the object of an activity system (even when it is ill-defined), and resolve contradictions with members of multiple communities of practice.

**Boundary-crossing in school-university partnership**

School-university partnership has been viewed in the technical sense of bridging the gap between schools and universities, and has been equated with bridging theory and praxis. The differences between the goals of schools and universities are seen as problematic. University tutors are concerned about student teachers' learning: how well student teachers are able to relate theory to practice in the classroom, and whether their classroom practices are theoretically motivated. School mentors (or cooperating teachers), however, are concerned about their students' learning. When they supervise student teachers, they focus on whether the student-teachers are able to follow and cover the content of the school curriculum so that they do not have to "clean up the mess" when they resume teaching their own classes (Roth & Tobin, 2002). This is further complicated by the fact that student teachers are caught in the middle: they need to satisfy the requirements of both school mentors and university tutors. The participants therefore find ways to "work round" these contradictions by adapting to the activity systems. For example, student teachers may behave like "chameleons" and change their teaching styles and methods according to whether they are observed by mentors or by university tutors. However, it is precisely this difference in focus that affords opportunities for learning for all participants and for pedagogical innovation to occur. I would like to suggest that school-university partnership should be reconceptualized as making available a "boundary zone" which provides affordances for questioning existing practices and for generating contradictions which can lead to innovation and renewal as they are being resolved. Of course, it could also be a source of difficulty. Whether it is a source of difficulty or an opportunity depends on whether and how the contradictions are resolved.

A school-university partnership was set up between the University of Hong Kong and secondary schools in Hong Kong ten years ago. Since then, the number of secondary schools in partnership has grown to over a hundred. The initial conception was largely pragmatic: experienced teachers were invited to act as mentors to student teachers placed in their schools during the teaching practicum. The guidance these mentors provided encompassed not just classroom teaching, but all aspects of a teacher's role, including the supervision of extra-curricular activities, pastoral care of a class, and so on. The university tutors, in return, provided advice and assistance to schools regarding pedagogy, curriculum design, and staff development.

**From practicum supervision to lesson study**

*Contradictions in practicum supervision*

As mentioned before, when student teachers (STs) are placed in schools for the practicum, they are taken as replacements for practising teachers and are expected to teach reasonably well. Hence they become part of the activity system where the object is the students' learning. When university tutors (UTs) supervise STs, they become part of a different activity system in which the object is the student teachers' learning. STs therefore have to operate in two different activity systems with two different, though related, objects. To put it another way, they operate in a hybrid activity system with a janus-faced object: their own learning when UTs are involved and students' learning when school mentors (MTs) are involved. When practising teachers are brought in as mentors to offer guidance to STs, they are required to cross the boundaries of the communities of practice of schools and universities; and they participate in another activity system in which the object contains an inherent contradiction: the students' learning and the ST's learning.
In the School-University Partnership established by the Faculty of Education, we have introduced a number of collaborative initiatives, one of which relates to the supervision of practical teaching. We conduct joint lesson observations and tripartite conferences amongst UTs, MTs and STs (T'sui et al. 2001). By doing this, all three parties are engaged in boundary-crossing. The contradictions can be seen in Figure 1.

As shown in Figure 1, the objects of the two activities systems (Obj 1a and Obj 1b) are different in emphasis. While the MTs are more focused on the students’ learning, the UTs are more focused on student teachers’ learning. A lesson which is well taught by a student teacher will lead to a positive student learning outcome. However, a poorly taught lesson may be a positive learning experience for student teachers, but not for students. The boundary zone (Object 2) is where both elements—student teachers’ learning and students’ learning—are present.

Lesson study as a boundary object

In order to resolve the contradictions, one of the university tutors introduced "lesson study" as a mediating tool in the boundary zone. A brief outline of "lesson study" is presented below.

"Lesson study" is an established practice adopted by teacher-led professional development groups in Japan and China. The term "lesson study" was derived from the Japanese word jugyo kenkyuu and coined by Yoshida (1999). In China, the term "lesson research" is commonly used. Lesson study is a systematic investigation of classroom pedagogy conducted collectively by a group of teachers rather than by individuals, with the aim of improving the quality of teaching and learning. The investigation is conducted by examining a series of lessons in a cyclical manner. The lessons are collectively crafted by teachers, focusing on a particular content, exploring alternative approaches to the content, addressing a particular weakness in student learning or a particular teaching difficulty faced by teachers. The collectively planned lesson is conducted by a teacher, and is also observed and reflected on by the whole group. On the basis of the group's comments, the lesson will be revised, re-taught and reflected on again before a polished lesson is shared outside the team (see Yoshida, 1999; Stigler & Hiebert, 1999). The polished lesson, as Campbell (2003) points out, is only a by-product of the reflective process. The impact of the process goes well beyond the lesson itself. It includes a deeper understanding of content knowledge and how students learn, as well as improved pedagogical skills. As the term "lesson study" suggests, the focus of the investigation is the "lesson" and not the individual teacher. As such, this takes the pressure off individual teachers and encourages free and open discussions about the lessons.

"Lesson study", as both a pedagogical practice and a tool for professional development, has drawn the attention of educational researchers because of the consistently outstanding achievement of Japanese and
Chinese students, particularly in mathematics (Linn, Lewis, Tsuchida & Songer, 2000; Stigler & Hiebert, 1999). Attempts have been made to replicate lesson studies in the United States (see for example, Lewis, 2002; Campbell, 2003; Wagner, 2003).

At the University of Hong Kong, staff members have been conducting lesson studies with school teachers, investigating various aspects of student learning (see the studies reported in Marton and Tsui, 2004). It was an artefact in university tutors' community of practice. In the case reported in this presentation, the lesson study involved not only practising teachers, but also student teachers (STs). It was a boundary object introduced by a UT as a boundary broker. The lesson study team consisted of two STs majoring in Chinese language and literature, Chung and Si; two mentors (MTs), Teacher Lo and Teacher Wong; both experienced teachers in a partnership school; and two UTs, Yan King and Angela. Yan King was an experienced teacher educator and Angela was a former Chinese teacher who had already been working at the university for a year when the study started.

Yan King was familiar with the research literature on lesson study as well as the practice in China. She had adopted lesson study for investigating aspects of learning with MTs in partnership schools, but not with STs. Teacher Lo had been involved in lesson studies with peers but not STs. The rest of team were new to lesson study. When Yan King introduced lesson study to MTs and STs, she emphasized the collective responsibility for student learning and the non-personal and non-evaluative nature of the activity. She hoped that by adopting lesson study as a mediating tool, the focus of the activity would shift from the evaluation of an individual ST’s performance in the classroom to student learning and pedagogy, since lesson plans, teaching materials and pedagogical strategies would be owned by the team. The STs would be researchers in their own classrooms rather than objects of research (Wang-Iverson, 2001).

The lesson study

The lesson study lasted four weeks and consisted of two cycles. The team met six times, including two pre-observation conferences and four lesson observations which were immediately followed by post-observation conferences. The lessons covered a lengthy piece of text on Chinese art and the underlying schools of thought. The first cycle started with two collective lesson planning conferences, followed by more detailed lesson planning meetings between two MT-ST pairs. Teacher Lo was the personal mentor for Si and Teacher Wong for Chung. Chung taught the planned lesson first and was observed by the rest of the team. This was followed by post-observation conferencing. During the conference, comments and suggestions for improvement were provided. The lesson plan and teaching materials were subsequently revised by both STs and then taught by Si, observed by the team, and again followed by post-observation conferencing.

The first cycle failed to achieve the intended outcome. The STs found the experience stressful and unrewarding, especially Si. The re-taught lesson conducted by Si was unsatisfactory and drew a great deal of criticism from the rest of the team. The STs wanted to abandon the activity. At the end of the first cycle, the team shared their views about the experience. The STs felt that they had been put under pressure, that some of the criticisms were severe and unfair, and that they had not been given enough time and space to reflect on the suggestions and gain ownership of the lesson. Yan King persuaded them to go through another cycle to "give lesson study another chance", and the team suggested amendments to the procedures. In the second cycle, instead of preparing the lessons with the MTs, the STs worked on their own. They consulted the MTs only when they felt that they needed input. The rest of the procedures remained the same, with Si teaching the lesson first followed by Chung. The lessons improved substantially in terms of pedagogy and student response, and the conferences were much more focused on the lessons. The team was happy with the outcome and described the process as a "rich learning experience". How can we make sense of this change?

New contradictions in lesson study

To understand how the two cycles of lesson study developed over time, four post-observation conferences, each lasting 45 minutes, were transcribed and analysed. In addition, interviews with and reflections by MTs and the UTs regarding their experiences of lesson study were examined. A grounded approach was adopted with no preconceived categories of analysis. The discourse was interrogated according to whether the propositions in each speaking turn taken by the participants were evaluative or not. A distinction was made between whether they were focused (a) on the evaluation of personal performance in the enactment of the lesson plan, including the collectively prepared materials and strategies, or (b) on the lesson with no attribution to personal performance. For (a), a further distinction was made between whether the evaluation was positive, that is, "evaluation focused: positive" (EFP), or
negative, that is, "evaluative focused: negative" (EFN). This distinction was necessary because the negative evaluations, understandably, were a source of anxiety for the STs. For (b), a distinction was made between whether the lesson-focused discussion was about pedagogy, that is, "lesson focused: pedagogy" (LFp) or about content, that is, "lesson focused: content" (LFc). The topic of the lessons—Chinese art and the underlying Chinese schools of thought—was difficult, even for the STs. The clarification of the STs' understanding of content was a prerequisite to discussions regarding pedagogy.

A more detailed analysis of the evaluative propositions showed that some were self-evaluations made by the STs. The ability and readiness of the STs to evaluate their own teaching was an important indication of their pedagogical awareness. Therefore, two more categories were identified: 1) self-evaluation of the ST, and 2) whether the evaluation was positive (SEP) or negative (SEN). A seventh category, self-explanation or justification (SE), was also identified to classify the explanations offered by STs in justifying their teaching or their understanding of the content of the lesson. The unit of analysis in the study was the "idea unit", which consists of one or more than one proposition relating to the same idea. In some cases, an idea was illustrated with examples, and this was counted as one idea unit. However, there were cases where, in the course of providing an example, the speaker shifted from one idea to another. In such cases, the ideas were counted as two units. As the analysis was based on propositions, elicitations were not counted. The findings of the analysis are presented in Table 1.

### Table 1
Analysis of post-observation conferences

<table>
<thead>
<tr>
<th>UNIT</th>
<th>1ST CONFERENCING (1ST CYCLE)</th>
<th>2ND CONFERENCING (1ST CYCLE)</th>
<th>3RD CONFERENCING (2ND CYCLE)</th>
<th>4TH CONFERENCING (2ND CYCLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFP</td>
<td>26 21.1%</td>
<td>13 10.7%</td>
<td>28 23.5%</td>
<td>22 21.6%</td>
</tr>
<tr>
<td>EFN</td>
<td>26 21.1%</td>
<td>46 38.0%</td>
<td>10 8.4%</td>
<td>17 16.7%</td>
</tr>
<tr>
<td>SEP</td>
<td>2 1.6%</td>
<td>0 0.0%</td>
<td>4 2.8%</td>
<td>4 3.9%</td>
</tr>
<tr>
<td>SEN</td>
<td>7 5.7%</td>
<td>5 4.1%</td>
<td>15 12.6%</td>
<td>7 6.9%</td>
</tr>
<tr>
<td>SE</td>
<td>3 2.5%</td>
<td>18 14.9%</td>
<td>4 3.4%</td>
<td>11 10.8%</td>
</tr>
<tr>
<td>LFp</td>
<td>35 28.5%</td>
<td>24 19.8%</td>
<td>34 28.6%</td>
<td>29 28.4%</td>
</tr>
<tr>
<td>LFc</td>
<td>24 19.5%</td>
<td>23 19.3%</td>
<td>15 12.4%</td>
<td>12 11.8%</td>
</tr>
<tr>
<td></td>
<td>123</td>
<td>100.1%</td>
<td>121</td>
<td>100%</td>
</tr>
</tbody>
</table>

EFP = evaluation focused: positive  
EFN = evaluation focused: negative  
SEP = self-evaluation: positive  
SEN = self-evaluation: negative  
SE = self-explanation or justification  
LFp = lesson focused - pedagogy  
LFc = lesson focused - content

As we can see from Table 1, in the first cycle, a high percentage of idea units were focused on the evaluation of personal teaching efficacy in each of the two conferences, with the second conference showing as high as 49%. While there were equal percentages of negative and positive evaluations in the first conference, in the second conference, the percentage of negative evaluations far exceeded that of positive evaluations. It is also noteworthy that in the second conference, there was a much higher percentage of self-explanation and a lower percentage of self-evaluation. In the second cycle, however, the picture changed considerably. The evaluative units in the third and fourth conferences dropped, with the former dropping dramatically to 27.4%. In both cycles, there was a substantially higher percentage of evaluative units in the re-taught lesson and a stronger focus on content than pedagogy in the lesson which was taught for the first time (hereafter "first taught lesson").

The new contradictions in the lesson study are represented in Figure 2.

The unsatisfactory outcome of the first cycle appeared to have been caused by two factors. The first has to do with the difficulty caused by community boundaries. As mentioned before, the involvement of STs in lesson study was new to all participants. Although Yan King emphasized the non-evaluative and collective nature of lesson study, the participants were unable to cross over immediately from the activity system of supervision in which they had been operating to that of lesson study. As a result, the STs' perceptions of the roles and power relationships of participants in lesson study were the same for both systems. STs saw their relationship with the MTs as that of "master-apprentice", and with the UTs as "teacher-student". Si felt that Teacher Lo treated her as his own student. The STs also saw both the MTs...
and UTs as "assessors". In the first cycle, they tried to follow the suggestions provided by both, especially the guidance provided by the MTs, and were afraid of making mistakes. Si confessed that she took copious notes when Teacher Lo explained concepts in Chinese art to her; when she tried to reproduce them in class, she was apprehensive that she would be unable to reproduce them without distortion. She said, "He (Teacher Lo) actually remembered exactly what he said to me and if I could not reproduce it well, he knew!" The MTs said that they perceived the UTs and the STs as "partners". For example, Teacher Lo explained in the interview that he viewed the STs as students rather than partners because they were also teaching his students. However, the negative evaluations of the students, which were often direct and not hedged, were indicative of an unequal power relationship.

The second factor contributing to the outcome in the first cycle has to do with the contradictions inherent in lesson studies in which collective and individual dimensions are present. While lessons are collectively prepared, they are individually enacted by teachers in the classroom. Similarly, while the lesson plan and the materials are revised collectively, again, the revised plan is enacted individually. This contradiction can give rise to tensions which may be dysfunctional if unresolved. This is evidenced by three things that happened in the first cycle. First, in post-lesson conferences, discussions of what worked and what did not work in the classroom became evaluations of the teaching efficacy of individual teachers. There were high proportions of personal evaluative units in the first and second conferences.

Second, the collectively prepared lesson which incorporated multiple expertise from experienced mentors and respected university tutors generated high expectations from all parties. In the conference at the end of the first cycle, Teacher Lo said, "I try to offer as much as I can. The reason why I am so direct in giving my comments is because I have high expectations for lesson study." The STs thought that the lesson plans that had been drawn up were "perfect" before they taught the lessons. In addition, because the materials and tasks were collectively prepared, each participant had their own view of how they should be enacted. When the actual enactment fell short of their individual expectations, all parties were disappointed. This was revealed in the conferences when both the MTs and UTs reminded the STs on a number of occasions of what had been planned or revised in the previous conference. They pointed out the gap between the plan and the enactment. Teacher Lo actually said (albeit in a non-threatening manner) that he was "very upset" when Si was not able to explain a concept properly since he had gone over it with her. This led to a higher proportion of negative than positive evaluations and caused a great deal of stress.

Figure 2.
Lesson study as boundary object.

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Figure 2.
Lesson study as boundary object.
and anxiety. The STs said at the end of the first cycle that they were completely overwhelmed by the input from MTs and UTs. They felt that they did not have enough time and space to make sense of the input and to gain ownership of the ideas. They were demoralized because they felt they were unable to live up to the team's expectations. They also felt that it was unfair that they should be criticized for materials for which they were not personally responsible.

Third, the collective contribution to lesson preparation coupled with unequal power relationships among the participants, was obstructive to the development of professional autonomy. In this study, the STs were caught in a dilemma. On the one hand, they felt that no matter how good a lesson plan looked, they should modify the activities and materials to suit their personal style of teaching and the characteristics of their students. For example, the STs pointed out the difference between their classes. Chung's class loved activities and games, and was highly responsive. Si's class was more reserved; they loved to listen to the teacher and they tended to ask thought-provoking questions. Yet on the other hand, the STs were apprehensive about modifying the lesson plans because they had been collectively prepared. For example, Chung was reluctant to make changes to the PowerPoint slides prepared by Teacher Lo lest they distorted his original intentions. The problem was particularly serious in the re-taught lesson in the first cycle. Si felt that what worked well in Chung's lesson might not work as well with her class. She felt that she needed to make modifications, but was not sure to what extent she should do so. She said, "you gave us a lot of suggestions on how to revise the lesson (after Chung had taught the lesson) ... then I had to think about how to implement them. I had to read more. When I did so, I found that I didn't quite understand the suggestions. So I had to make my own interpretations and add my own materials.... The result was a new set of materials." The question of how far they should keep to the original interpretation and how much autonomy they had plagued the STs.

Resolving the contradictions: Negotiating lesson study

In the second cycle, some of the contradictions were resolved. The team felt that since a great deal of input had already been provided, the STs should be given the autonomy to make decisions regarding the selection of materials and the lesson plan. Si taught the first lesson and it was obvious that her teaching improved dramatically. Not only was she much more confident, she was also able to use materials and activities judiciously. Instead of rushing through the lesson, she covered fewer materials but more effectively. As shown in Table 1, in the third conference, a considerably higher percentage was taken up by lesson-focused discussions (47.9%), as compared with the second conference, and only slightly over 30% were evaluative units. There were far more positive than negative evaluations. It is also significant that Si was better able to talk about her teaching practices and experiences (16.8% compared with 4.1% in the second conference), and to critically assess her own performance (12.6% of SEN compared with 4.1% SEN). What was less well resolved were the contradictions in the re-taught lesson. As can be seen from the fourth conference, there was a higher percentage of evaluative units and negative evaluative units compared with the third conference. The contradiction between the benefit and the constraint of re-enacting a lesson already enacted by a different teacher in a different context has yet to be addressed in detail. Nevertheless, Chung engaged more in justifying her actions.

Reflecting on the entire process, both STs indicated that they felt less pressure in the second cycle, and that they had the time and space to make sense of the input provided and to make their own decisions. Looking back on the experience, Chung said that she did not feel as negative about the experience in the first cycle as she had initially felt. She now had a better understanding of the input provided by the MTs and UTs, and felt that it was useful. Si enjoyed the experience and she felt a sense of empowerment. Yan King felt that she had a better understanding of the dynamics involved in lesson study. She said she had started with a simplistic view of lesson study as a mechanism for the improvement of teaching in a linear fashion. The negative outcome of the first cycle was unanticipated. The positive outcome of the second cycle convinced her (as well as the rest of the team) of the importance of exploring and addressing problems that may arise during lesson study, rather than abandoning the tool. The MTs felt that the multiple perspectives and expertise afforded by lesson study were particularly enriching. For example, Teacher Lo said that he enjoyed seeing new ideas being used by STs and that they provided an impetus for changing his own teaching strategies. He also felt that the process and the culture of collaborative learning were very important. Teacher Wong felt that lesson study was a "genuine 'mutual observing and learning' model of pedagogy". She found the new perspectives provided by the UTs and the STs particularly illuminating.

In the above discussion, I explored the expansive learning that participants from different communities of practice engaged in when they crossed their community boundaries. Lesson study was a boundary
object introduced by one of the university tutors to mediate the learning experience. As we have seen, the adoption of lesson study as a mediating tool was intended to resolve the contradictions that were inherent when participants from more than one community of practice were brought into mutual engagement. However, none of the participants, including Yan King, had a clear idea of what the lesson study would eventually look like and what the outcome would be. The study showed that while lesson study resolved some existing contradictions, others remained. Furthermore, it gave rise to new contradictions. What is important is that instead of interpreting this as a failure, the participants tried to address the contradictions, and in the course of resolving them, they not only came to a new understanding of lesson study, but also created a new mediating tool for learning. This new tool, which involved novice and experienced teachers, led to a transformation of the activity system from the "supervision" of novices to the professional development of both novices and experts. As Peter Drucker (2000) points out, there is a mutually interdependent and interactive relationship between tools and concepts. The use of a new tool, he observes, forces us to see things in a different way. In the study discussed in this presentation, the new tool brought about a new learning experience: the participants shifted their roles in the activity system, established a new relationship, and participated in the discourse in a different way. They became members of a new community of practice.

Concluding remarks
In this paper, I have outlined the distinctive features of globalization and the rapid changes that it has brought about in all aspects of our lives. I have pointed that new forms of communication, new relationships among hitherto unrelated groups, and new connections among apparently discrete domains have led to re-negotiations of what it means to know and what it means to learn (see Pea and Brown, 1991). As Engeström points out, "In important transformations of our personal lives and organizational practices, we must learn new forms of activity which are not yet there. They are literally learned as they are being created. There is no competent teacher." (2001, p. 138) We are constantly challenged by forms of activity which are ill-defined and problems which have no ready answers. As teachers and teacher educators, we should be less concerned about how much our students know and whether they have acquired transferable skills. We should be more concerned about whether they have developed the capability to engage in expansive learning by looking for solutions to ill-defined problems in collaboration with members of other communities of practice. It is this capability that lies at the heart of the often cited adage "learning to learn".

References


Symposia
Contentious policy areas like gender equity are reflected in local and global concerns in thinking about the future of the teaching profession. These are characterised by disagreement and debate between those involved in schools and teacher education as well as educational research across the western world. There are professional differences but also real conflicts and dilemmas when it comes to articulating concerns about girls and boys, not least between feminists and pro-feminists on the one hand and the men's rights lobby on the other. This symposium attempts a solution in exploring ways to support teachers and teacher educators deal with the equity demands of schooling. The first paper addresses teachers' concerns, given the multiple demands made on their professional expertise. The second paper addresses teacher educators' concerns about teacher learning and the organisation of knowledge in the teacher education curriculum. Finally, the third addresses policy support for teachers working with students and addressing social and educational inequities.

Beyond 'Naïve Possibilitarianism'

Lori Beckett

This paper reports on teachers' concerns about girls and boys and how education works at the chalkface in a school community characterised by multiple inequities. It draws on research data about what it means to be a productive teacher, and is steeped in teachers' day-to-day professional concerns. These include syllabus requirements, policy dictates on curriculum programming, mandatory outcomes, pedagogies, assessment and reporting, literacy and numeracy, and student needs, which all impact on what is possible in practice. The pressures on teachers present challenges but also opportunities to confront the needs of teachers in identifying both the academic and social purposes of girls' and boys' education.
Equity, Social Justice And The Teacher Education Curriculum

Bob Meyenn

Australian faculties of education all have as part of their mission a commitment to issues of equity and social justice. What is done as part of the teacher education curriculum to address these issues and to prepare our graduates to confront and deal with the ranges of social, cultural and intellectual inequities present in the classrooms? The answer to this question varies considerably and is the focus of this paper as well as an analysis of practical ways to incorporate equity and social justice issues into the Teacher Education Curriculum.

Teachers' Needs And Near-Life Experiences In The Policy Arena

Lyn Martinez

While the economic rationalism, corporate managerialism and new conservatism of the mid to late 1990s left many of the social justice directions of state schooling in Queensland gasping for breath, there were still a number developments that kept the optimism of true believers high. If anything, those happy few remaining workers in the areas of social justice in systems were as worn out by the enthusiasm with which they supported Queensland State Education -2010, the Queensland School Reform Longitudinal Study report, New Basics, Literate Futures, Partners for Success, and the Framework for Students at Educational Risk, as they were by the new conservative managerialism. These were really near-life experiences. Drawing on research work with Parlo Singh and Sandra Taylor, this paper asks critical questions in order to set some directions for policy support on equity and social justice. Is there still hope within these frameworks? What is the role of academics? Can the work of excellent teachers, committed to social justice, and getting the results, become pivotal in reviving the flagging spirits of the profession?
The Learning Place

Jane Carr, Carolyn Keighley, Jim D’Castro & Theresa Feletar
The Learning Place, Education Queensland

The Learning Place is Education Queensland's gateway to a range of innovative community, communication and online learning environments and curriculum repositories. This symposia explores the Learning Place through a large state wide online event and online learning through Schools of Distance Education.

Overview Of The Learning Place

Jane Carr

A quick guide through all the dynamic environments that support learning communities including use of the Blackboard 6 Learning Management System, communication tools such as project rooms, chats and forums, blogs, comic chat and MOOs, Collaborative Online Project areas, Professional Learning Communities and the Curriculum Exchange Learning Object Repository.

Online Literacy Festival

Carolyn Keighley & Jim D’Castro

Using Vogler's model of the Hero's Journey we will examine how our hero (the Australian Teacher) transforms their practise and identity along the quest for successful participation in an Online Literature Festival. Education Queensland's Learning Place provided the vehicle that was used to explore a range of pedagogical initiatives including teaching and learning in an online environment. The environment, encapsulated through the Learning Place Mentor model, supported and empowered teachers to promote their use of online communication within their classrooms and professional networks. We share their successes, failures and examine the growth of the Festival as a catalyst for change. Participants will be able to see how an online communication project, using the Learning Place tools, has made a difference to the way that we interact and gain new perspectives on the world. We discuss how the festival has increased accessibility to physical and intellectual resources. It has broadened teaching and learning opportunities and allowed educators and students to celebrate learning within an authentic context.
Reshaping Schools Of Distance Education

Feletar, Theresa

The Learning Place has had a significant role in reshaping Distance Education curriculum and methods of delivery, assessment and communication. We will explore how online learning and communication has supported new and innovative delivery methods to better support student learning.
Local District And State Responses To The Global Challenge Of Beginning Teacher Support

Fiona Conroy
Professional Practice Directorate, NSW Department of Education and Training

Maxine Cooper
Griffith University

Kay Martinez
James Cook University Townsville

This symposium builds on issues developed at the ATEA 2004 conference, when we argued that high quality education systems require the ongoing supply, support and professional development of quality teachers who are recognized and valued for their specific contributions to the teaching profession. This year, we report on two initiatives aimed at supporting career entry of new teachers and professional learning for all teachers in public education systems. Some key questions to be addressed in this symposium are:

What can be done at district and state level to maintain quality teachers in public schools?
What role can teacher educators take up in initiatives aimed at building professional capital for quality teaching?

Implementation Of The NSW Teacher Mentor Program: Year 3

Fiona Conroy

Fiona Conroy, manager of New Teacher Development in the Professional Practice Directorate of NSW Department of Education and Training, will report on the third year of implementation of the Teacher Mentor Program. The program has developed from 2003 when 50 Teacher Mentors were appointed to schools with high staffing turnover, has been systematically evaluated, and this year has been expanded to 80 schools across the state, and will include 60% of all newly appointed teachers. Fiona will outline the processes involved in initiating, establishing and maintaining the project in the largest teacher employing authority in Australia.

Induction: Professional Alliances In Learning (IPAL)

Maxine Cooper

Maxine Cooper, Griffith University, will present a case study of beginning teachers in the Griffith University-Education Queensland partnership project Induction: Professional Alliances in Learning (IPAL). This project used the Education Queensland Professional Standards as a framework to assist beginning teachers work through a range of professional issues. For the purposes of this presentation the focus will be ways to meet the needs of new teachers to establish their professional identity within the context of a community of learners and to value diversity and complexity in the professional community.
NSW Teacher Mentor Program: Key Features

Kay Martinez

Kay Martinez, James Cook University Townsville, who has been involved with the NSW Teacher Mentor Program since its inception, will identify key features of the project as they relate to the literature on mentoring and induction. These include: preparation, recognition and reward of mentors for their work; recognition of the professional capital that new teachers bring to the system; flexibility to respond to personal, professional and contextual diversity; encouragement of practices that build professional communities, by opening classrooms, transcending boundaries across faculties and year levels, and using communication technologies; and district- and state-wide policies and practices that complement local school sites.
Global Now: Searching for Meaning

Julie Dyer

How do teacher educators prepare students to become teachers for a world which is global in its outlook and influences? All curriculum statements in Society and Environment area in Australia include 'global' in their rationale. It is not however curriculum statements, nor textbooks that are the carriers of global education but teachers themselves their own stories and narratives and the meaning attached to these. The role of teachers' lived experiences in teaching global education is often silenced in teacher education courses and classrooms. "Teachers must develop reflective cultural national and global identifications themselves if they are to help students become thoughtful caring and reflective citizens in a multicultural world society." (Banks, 2001, p. 5). Teacher educators who wish to embed global perspectives in their teaching require reflective practices on their own identities, prejudices, choice of curriculum and pedagogy. Teaching global education requires a conscious understanding and reflection to begin the journey of self, located in the classroom. In searching for meaning in global education it is the capacity of the teacher to reflect not only on their own multiple identities but on the nexus between their local and global worlds and the struggle often evident here. This presentation will converse with these issues.

Futures Now: Teaching Futures Education

Debra Bateman

"Unexpected things can happen to us. The future contains an element of uncertainty . . . some people seem to do it better than others" (Bell, 1996).

In the post-modern world, it has been said that there is now greater uncertainty in life than in any previous period, simply because so much has changed as a result of the speed of technological change. From the educational view point, Futures education is a necessity as times continue to change, in regards to both the sustainability of the person and that of the environment. It is true that uncertainty will always remain an aspect of thinking about the future, however in order to make what is ahead more accessible to everyone, educators have a duty of care to their students to facilitate or educate in regards to tools, concepts and understandings which will help students to become world shapers, and shapers of their own personal futures. This must occur as part of ongoing educator training.
Teaching SOSE Beyond The Classroom:
The Role Of Cultural Institutions

Catherine Harris

Cultural institutions such as museums, galleries, archives, and heritage and environmental sites provide primary teachers and teacher educators with a rich variety of resources and pedagogical opportunities. This is particularly the case for Primary and Secondary SOSE teachers. Whilst political calls to "get school kids into their communities" (NSW Premier Bob Carr) and the growth and development of curriculum departments within cultural institutions evidence partnerships between cultural institutions and schools, there is a need to more fully theorise these partnerships, particularly from a pedagogical point of view. To address this need, this paper has three interconnected aims. First, the paper overviews the range of cultural institutions available at a local and national level. Second, the educational orientation of three national cultural institutions (National Museum of Australia, the National Film and Sound Archive, Australian War Memorial) and two local cultural institutions (Tower Hill nature Reserve, Flagstaff Hill) will be explored with a view to identifying areas of curricular and pedagogical fit. Lastly, this paper will examine a range of partnership options for cultural institutions, universities and schools.
In this paper the authors discuss the growing trend in some countries to "outsource" teacher education to other countries. In the Australian context there are increasing numbers of overseas students undertaking pre-service teacher education in Australia rather than in their own countries. Canadian students form a large group of teacher education students who undertake their training within Australian Universities. There are a number of possible social, economic and political reasons for this practice of outsourcing teacher education and a discussion of those potential factors is a study in itself. However, in this study, an attempt is made to investigate the overseas students' perceptions of a number of issues related to their training situation and future career as teachers. An attempt is also made to ascertain what students perceive to be the needs of overseas teacher education students studying abroad and how Universities may be able to address these perceived needs. Prior to detailing the research study and the approaches taken regarding data collection, an interpretative theoretical framework will be provided giving a structure against which to interpret the data and allow for some tentative conclusions to be drawn.
Commonwealth and State bodies have made substantial investments into curriculum initiatives, research, and reform with a focus on middle schooling. To a considerable degree, the success of middle schooling is dependent upon teachers' preparedness to enact and embrace initiatives and research. Research has shown that the success of school improvement and reform initiatives hinges, in large part, on the qualifications and effectiveness of teachers (Killion, 1999; Garet, Porter, Desimone, Birman, & Yoon, 2001). While some research and professional development in Australia has targeted the school site, pre-service teacher education is clearly a vital yet under-researched area due to its relatively recent introduction. Recent research that includes middle years teacher education (MYTE) (Killion, 1999; Mertens & Flowers, 2004; NCES 2001; NMSA, 2003) and reports from a system that has been working with middle schooling for some time indicates that teachers need specific teacher preparation before they enter the middle level classroom and continuous professional development as they pursue their careers. In Turning Points 2000, one of the seven recommendations is to staff middle grades schools with teachers who are expert at teaching young people in their middle years, and engage teachers in ongoing, targeted professional development opportunities (Jackson & Davis, 2000). Given there are now two dedicated programs towards MYTE (Edith Cowan University and The University of Queensland), other institutions containing elements of MYTE, and others considering MYTE this symposium will summarise current initiatives and research in MYTE, critique the state and place of MYTE in Australia and begin discussions towards teacher education programs that improve the efficacy of middle schooling.

Preventing Middle Years Teachers To Meet The Needs Of Young Adolescents In New Times: The Story Of An Innovation In Teacher Education

In 2001 a small team of teacher educators at Edith Cowan University (ECU) proceeded to design a new Graduate Diploma of Education in the Middle Years of Schooling. The vision of this diploma is to prepare employable graduates with the knowledge, skills and values required to teach in classrooms at the frontier of middle schooling reform. The first of its kind in Australia, it aims to address community concerns for the needs of young adolescents through the training of beginning teachers specific to that age group. As an innovative program it has a strong social justice philosophy, and uses constructivist approaches within a community of practice to provide an effective learning environment and achieve high quality student outcomes. Three years after introducing the diploma, the team received the 2004 ECU Vice Chancellor's Award for Excellence in Teaching. In this paper, using our own teacher education
curriculum framework, we share some of our successes and current challenges in developing this course. We briefly present our vision of middle years teachers as agents for transformation across local domains and in global contexts, and in telling our story, we include the voices of our students by highlighting their commendations and recommendations in how well we 'practised what we preached'.
Teacher And Teaching Identities
In Global And Postmodern Contexts

Ninetta Santoro, Eileen Honan & Simone White
Deakin University
Joanne Reid
Charles Sturt University
Elizabeth Hirst
Griffith University

Individual symposium abstracts only.

'Cinders In Snow': Indigenous Teacher Identities In Formation

Ninetta Santoro & Joanne Reid

Questions about the identity work engaged in by Indigenous teachers in Australian school settings are of major importance in a longitudinal ARC Discovery project on the career pathways of these teachers. For many of the Indigenous women and men we have interviewed to date, the construction of identity in their home, family and community intersects with and can counteract the construction of identity in the workplace. In this paper we analyse data from a number of interviews with Indigenous teachers and student teachers. Our analysis explores the interplay between culture and identity as the teachers have experienced and reflected on it. Using the metaphor from Paul Kelly's "Little Things" to guide our argument here, we foreground the binary nature of racial assignment in schools and social settings and demonstrate how this offers contradictory and complex constructions of identity for Indigenous teachers. The data shows how the effects of history, culture and location are regularly at play in the process of forming a teaching 'self'.

The Construction Of New Teacher Identities
And New Collaborative Partnerships

Eileen Honan & Simone White

There are many different versions of partnerships between teachers and academics and both authors have themselves been involved in various collaborations with classroom teachers. This paper is concerned with the construction of teacher identity within such collaborative partnerships. We will focus on the problematic nature of some of these partnerships by examining the discourses that construct teachers as 'resistant', or 'unwilling' in accounts of collaborative work that was not necessarily successful. In particular we will ask: Why are the relationships seen to be problematic? In whose terms are they problematic? This critique of existing discourses within accounts of collaborative partnerships will allow a rethinking of the relations between teachers and academics. In the conclusion to this paper we will attempt to answer the
question: What are the features of particular relationships that can produce shifts in discourses so that teachers are 'truly' located and positioned as collaborative partners?

Teacher Identity: The Construction Of Difference

Elizabeth Hirst

In this paper I examine struggles to construct teacher identity in the light of data collected from a Language other than English (LOTE) classroom taught by an Indonesian born and trained teacher. Local struggles are significant sites of contestation that cannot be removed from the broader political and economic practices. Thus, this examination moves beyond a focus on the local and considers how programs designed in and for neo-liberal market places underpin discourses which 'celebrate diversity'. The celebration of diversity tends to remove the focus from issues of how those who are made different are often marginalised and exploited and the politics of difference become little more than enabling these differences to be on offer and available in the market place. Neglecting the economic and material dimensions of difference and viewing culture as "a separate and autonomous sphere, severed from its embeddedness within sociopolitical and economic arrangements" (Scatamburlo-D'Annibale & McLaren, 2004, p. 184) leads to the presumption that differences can be negotiated at local discursive levels and not at institutional or systemic levels. In this way the institutional and structural marginalizing practices become invisible endorsing explanations of failure which locate struggle and contestation only at the local level.
Squaring Off Within The Politics Of Inclusion:  
International Challenges To Local Approaches  
To Teacher Education

Roger Slee  
McGill University

Linda Graham, Mary Keefe & Suzanne Carrington  
Queensland University of Technology

Reform invites contest. The assertion of the reformist is a dissatisfaction with the way things are. Some reform imperatives in education are incremental in nature – they invite us to improve upon conventionality. Others call basic assumptions to account. The latter generate intense political heat. So it is for inclusive education. Inclusion encourages us to interrogate patterns of educational failure and exclusion with a view to dismantling all barriers to access, participation and success. How exclusion is understood is deeply contested. Not surprisingly therefore inclusion is a less than unified theory or political imperative. A great deal of what is passed off as inclusion is little more than incremental accommodation to maintain institutional equilibrium. At the heart of this is the way teachers think and behave. The traditional disciplinary canon will not assist teachers in the project of inclusion. This symposium will draw from international as well as local research to explore these issues.

Problematising Inclusion:  
What Is The Future For Inclusive Education - Local And Global?

Roger Slee & Linda Graham

The Department of Education in the state of Queensland promotes inclusiveness and states a commitment to ALL students achieving to their full potential (Inclusive Learning, 2004, p. 17). Paradoxically, on the whole statements and literature pertaining to "Inclusive Education" is predominantly consolidated within the area of assisting 'students with disabilities' (Inclusive Education: Students with Disabilities, 2004). The aim of this paper is to ponder the possible implications of conceptualising inclusive education via such an understanding of "inclusion" and to open the floor to innovative research that may inform and enhance the future of teacher education in this important area. Whilst "Inclusive Education" is a relatively recent advance in our thinking about schooling and pedagogy, it is a respected and rapidly establishing movement within both local and global contexts. Familiarity with this concept and its attendant terminology has grown considerably, however, there are various, competing discourses when it comes to speaking about "inclusion" and "inclusive education". The meaning of these terms may be different depending on who is speaking and via what discourse, however, on the surface these differences are concealed by the continued use of these generalised terms within inclusive education vernacular; terms which assume a benign commonality. This is perhaps what we see happening in Queensland, where the "inclusion" of students with disabilities is taken to mean that we have achieved "inclusiveness" and hence, an "inclusive" education system. We would like to contend that this points to a problem within the politics of inclusion itself. Education Queensland states a commitment guaranteeing inclusiveness (Ascertainment Procedures, 2002), however, what is problematic is the interpretation of what "inclusiveness" is, to whom it extends and the incidental effects of inclusion policy and resourcing mechanisms predicated on limited notions of "inclusion". It is hoped that this paper may provoke consideration of and renewed debate over what "inclusion" and "being inclusive" really mean.
From Global To Local: Internationalism And Diversity In Inclusive Education For Preservice Teachers

Mary Keefe

Universities and higher education programs are often criticized for their inadequate preparation of teachers to address the issue of maximizing learning outcomes for all students through an inclusive education. Further, the narrow focus on disability and special education in some Inclusive Education preservice teacher courses establishes an exclusive and local perspective that reduces the relevance of human rights and social justice issues in education. This paper emphasizes the importance of rethinking Inclusive Education at the higher education level to connect with global issues that relate to diversity, human rights, social justice and education. A trial was conducted at the Queensland University of Technology to reconceptualize the Inclusive Education course to include an analysis of human rights or social justice issues from an international perspective. The trial involved preservice teachers in the use of high level information technology literacies to critically analyze an international, human rights or social justice issue and to relate their findings to their role as a beginning teacher in Queensland. The web based research topics form a data bank of critical perspectives on numerous international inclusive education issues that provide students with valuable resources for further investigations and communication pathways as beginning teachers. The enthusiasm of the preservice teachers, the quality of their interrogation and the connectedness between international issues and local contexts demonstrates the relevance that inclusion and diversity have to the way beginning teachers see their role. The critical investigations also show how the principles of respect and dignity for all students are universal themes that require commitment, understanding and action if complex contexts of diversity are to be valued in learning communities.

Challenging Conventionality In A Local Secondary School: Listening To What Students Have To Say

Suzanne Carrington

Inclusive education has become well rooted in the general education reform agenda because both areas incorporate school change and improvement. For example, research on effective schools is increasingly addressing the ways that school staff can develop policy and practice to effectively meet the needs of ALL children. This approach to inclusive school development challenges the traditional focus on students with disabilities in schools. This paper reports on processes employed at a Queensland secondary state high school where students directed inclusive school development as part of a Triennial School Review. Usually, students have little involvement in school review and development despite being centre of the schooling process and organisation. The principal at this school noted, “Students are a vastly under-utilized resource. Not only must they be a part of the solution - sometimes they have better ideas for solutions”. A student forum process that ensured authentic student participation in school review and planning will be presented. Samples of interview and visual narrative data from the school principal, staff, parents and the students illustrate a growing understanding of what inclusive education means for members of this school community. The ongoing development of an inclusive school culture ensured students engaged with staff and parents by challenging, probing, arguing and expanding on the issues of exclusion to ensure that a real difference could be made to address the needs of students and staff. The questions for discussion are: 1) How can schools dismantle barriers to access, participation and success but avoid small adjustments to conventionality? 2) How can teacher education guarantee future teachers' active engagement in inclusive school development?
Papers
Regenerating Teaching And Learning:
Empowering Students Through Negotiating Curriculum In
History - Challenges For Education And Educators

Joe Alexander
A.B. Paterson College, Gold Coast

This paper explores how empowering students to have control over their own learning, through negotiation of
their history curriculum, can enhance their motivation, extend their learning, and develop positive
dispositions for life-long learning. The presenter, Joe Alexander, Head of the Social Science Faculty at
A.B. Paterson College, Gold Coast, argues that negotiation of curriculum can provide a means of regenerating the
teaching and learning process. Starting with the learner, and considering their interests and motivations, seems
the logical starting point for developing and extending student understanding. The presenter will provide an overview
of the approach he has used to allow students to truly negotiate their learning in History. Specific examples of
teacher practice, as well as examples of student learning, will be discussed and explored. The presenter will
consider the challenges and implications this approach to teaching and learning has for teachers, schools,
educational professionals and educational bodies. Although, the framework discussed uses history curriculum as its
vehicle, the use of a negotiated approach could easily be applied to other disciplines and learning areas.

The need for regenerating teaching and learning
One of the defining characteristics of contemporary education in Australia is the inevitability of change.
As teaching professionals we are constantly bombarded with quite radical changes in both state and
national government policy. Often these changes are inspired by little more than political opportunism
and some perceived need for ‘reform’. These changes are often heralded by the introduction of a new
lexicon, that somehow separates new innovative practice, from the old, the mundane and the archaic. As
well as grappling with changing political agendas, educational professionals also face some quite significant
paradigm shifts in thinking about their, bread and butter: the learning process. Profound developments
and research into teaching and learning, information processing and cognitive development, as well as the
social dimensions of education also impact upon the practice of educators. The challenge for teaching
professionals is certainly a difficult one. On the one hand teachers are challenged to be innovative, and to
be creative, and most of all to engage students. On the other hand schools can be notoriously conservative
places, where state and national government policy, as well as the growing popularity of testing regimes,
and reporting ‘student outcomes’ can limit innovation and creativity. There is no doubt regenerating the
process of teaching and learning is difficult amid these challenges, but one could argue, it is precisely
because of these challenges, regenerating teaching and learning in classrooms has become all the more vital.

Amongst this backdrop of apparent change and challenge, it is amazing to see how many both
experienced and young recently graduated teachers continue to teach using rather traditional methods in
the classroom. My observations across a number of Queensland schools suggest to me it is really difficult
to be innovative in school environments. Often there is much talk about it, but not much seems to
actually change in classrooms. I suspect the reality is that despite us thinking we are being creative, and
even innovative, often the practices we engage in as teachers and educators may not be all that different
from the teaching we received as children. I wonder how many students in schools across Australia are
still in rows, still have to work individually, still have to copy down from the board, still have to refer to an
unchallenged textbook, still have to answer teacher derived questions, still have to learn about teacher
selected topics and concepts, still have to memorise wads of meaningless information, and still have to
prepare for and sit stressful exams, that's only purpose seem to be as macabre rites of passage. The need
to regenerate interest in the teaching and learning process both in schools and tertiary institutions has
become increasingly necessary to me.
Negotiation as a means of regeneration of teaching and learning

Over the last couple of years I have become increasingly interested in the idea of students negotiating their own learning. I guess I initially saw it as a means of empowering students to have some control over their own learning. Since then I have also seen the results of this sort of approach on students learning. I have witnessed whole classes of Year 10 students writing Year 12 standard assignments. As a teacher of both Ancient and Modern History I have always agonized over what topics concepts, and issues to teach. I think I was always acutely aware that my selections were entirely subjective and put together probably would said more about me and my interests than the discipline of history. I was also aware that there was no way a teacher could ever begin to construct a program, without leaving out something important. The solution I came up with was to encourage all of my students to choose areas of history that interested them, and to let them make the big decisions, I had previously agonized over. In many ways I don't think this approach was all that radical; students had always undertaken some form of research assignment in history classes, and the idea empowering students is hardly new. However, over the last few years I have become increasingly aware that my approach to teaching history is indeed quite different to the way history is taught in most schools, particularly in the Southern states. I sincerely believe the notion of students negotiating their own learning can indeed be a means of regenerating the teaching and learning process, as it provides the learner to develop their own bridge to understanding.

To many teachers, there is something scary if not terrifying in empowering students with control over their own learning. Grille (2003, p. 5) ponders the possibilities:

Imagine for a moment, that your children were given considerable freedom to choose what to learn and how to learn, to some degree, even when to learn. What do you suppose would happen? Would they run amok, would their academic performance wither as they romp into frivolous pursuits? Would they ever bother to learn anything worthwhile? (Grille, 2003, p. 5).

How many teachers genuinely allow students to negotiate their own learning and their own assessment in the classroom? I don't imagine the idea of allowing students the freedom to negotiate their learning, and to investigate topics of interest to them would be particularly common in the majority of Australian schools. I am sure some teachers are happy to allow students to negotiate some aspects of their learning, but I wouldn't think there would be too many students in Australia negotiating their own areas of investigation, their own learning and their own methods of assessment. It seems that students are generally not trusted with making decisions about their own learning, when paradoxically, I suppose this is what we expect students to do as they mature and become life-long learners.

The educational benefits of empowering students to make their own decisions about their own learning has been clearly articulated across a wide range of educational and curriculum literature. Many of the philosophies emerging out of research into the middle years of schooling, have emphasised cultivating student interest and choice in teaching and learning. Barret (1998) in his seminal report into the needs of adolescent students in Australia argued that students needed real opportunities to negotiate learning that is useful to them in the present and for the future. Further, Barret (1998) included 'learner-centredness' as an essential component of middle schooling. He defines a curriculum as 'learner-centered' as being:

A coherent curriculum that is focused on identified needs, interests and concerns of students and empahasises self-directed and co-constructed learning (Barret, 1998, p. 30)

The idea of students negotiating their own learning has also been emphasised in the field of behaviour management. Many theorists (Glasser, Rogers, Adler, Dreibkurs) have argued that students need to develop a sense of real control over learning at school, and this empowerment ultimately motivates students towards meaningful learning. Brown (cited in Porter, 2000, p. 231) states:

Perhaps it is time to change our priorities from direct control aimed at stuffing the maximum possible amount of knowledge, skills and values into children to motivating them to manage their own learning (Brown, cited in Porter, 2000, p. 231).

If we want students to be motivated and excited about their learning than a negotiated approach to learning would encourage this in students. Grille (2003, p. 6) further states,

A fundamental principle is that children are more motivated to learn, and they learn better, to the extent that the have choice over how and what they learn (Grille, 2003, p. 6).

The notion of choice and negotiation has also been central to the growth of 'Democratic Schools' around the world. Grille (2003, p. 5) describes democratic schools as those in which, "each student is given as much control as is feasible over his or her learning." Indeed, there is a broad range of theoretical and philosophical support for a negotiated approach in teaching and learning.
Barriers to negotiating student learning

The idea of students negotiating their own learning appears particularly challenging for many teachers, especially in the field of history. Unfortunately history as a discipline in Australia has a tradition of being based very largely around students knowing masses of events, names and dates. Hoepper (2004) describes this 'old history' as:

The old history was Eurocentric and celebratory... Great deeds and national exploits intersected neatly. The textbook and the teacher were omniscient and authoritative. The students were compliant and accepting. And a moral purpose pervaded the classroom... (Hoepper, 2004, p. 14).

There is no question that the teaching of history has moved on since the 'old history' era of history teaching. Students are now encouraged to investigate issues through processes of inquiry, to analyse and evaluate sources, and to question once privileged 'versions' of history. I still wonder, however, how many students are still trusted to carry out their own process of inquiry into a topic of their choosing and to present their learning in a format of their choosing.

I suspect there are several other reasons why many teachers find it difficult to allow students choice in their classrooms. One being that often the requirements of the government bodies that regulate, assess and rank students, particularly in the senior years of schooling, make it very difficult to incorporate choice and flexibility into their programs. Indeed, many Australia states still require students to complete largely content based external exams. The pressure that large external exams place on students must be hard to justify. Masters (2004 a) states:

Learning research makes it clear the pressures of attempting to teach and learn large amounts of factual information are not conducive to the deep learning of subject matter... (Masters, 2004 b, p. 23).

Queensland has certainly been different to many other Australian states with the use of school based assessment, for some time. The use of school based assessment allowed for some slight flexibility, but at times rigid district and state panel requirements tended to limit the potential of such flexibility. With the release of the new Queensland Studies Authority syllabuses for Ancient and Modern History in 2004, I believe teachers have a real opportunity to allow students to truly negotiate their courses of study, including the modes of their assessment. This opportunity for flexibility, however, still seems limited in most of the other Australian states. New South Wales seems to have regressed to a tightly controlled curriculum that requires all students to undertake a compulsory history exam at the end of Year 10 (Clarke, 2004). It seems that political whims and requirements for tertiary entrance ranking seem to dictate the sort of history curriculum students receive. It seems that is often principally content based, rigid in its scope and sequence, and largely assessed using somewhat dated and arbitrary methods.

I think another reason why there seems to be such limited use of negotiated curriculum is because most teachers themselves believe either consciously or unconsciously that all students should gain the same understanding of a topic or concept. The concept or topic is often chosen because it is of interest to the teacher, or because it is mandated in a curriculum document somewhere. Through expecting the same outcome from every student, we soon find ourselves teaching masses of common content. How many teachers and educators still photocopy a class set of the same readings and worksheets, and expect students to read, understand and remember the details. This style of teaching often leads to the mere transmission of unproblematic information. I suppose you could call this the McDonald's approach to education—wherever you buy your cheeseburger it should taste the same! I wonder if the students in our classrooms are far more complex than the hungry masses. Masters (2004 a), in a recent article focused on the idea of personalised learning, states:

Educational research makes clear how inappropriate it is to treat all students of the same age or year level as though they are more or less equally ready to be taught the same material (Masters, 2004 a, p. 17).

There is no doubt the provision of a robust and stimulating curriculum that is flexible and largely steered by students presents a real challenge for teachers and school structures.

'Teaching for understanding' at A.B. Paterson College

The use of a negotiated approach to teaching and learning is part of the curriculum approach used at A.B. Paterson College on the Gold Coast. The College has embedded the 'Teaching for Understanding' framework within all areas of its P to 12 curriculum. 'Teaching for Understanding' is a framework that has emerged out the Harvard Graduate School of Education in the United States, and is used in a large range of schools, systems and contexts around the world. The Tasmanian Education Department has recently adopted this framework also. There are many complex aspects of this framework, but in short, the
framework emphasizes that students need to develop ‘understanding’ and not knowledge in their learning at school. Blythe (1998) states:

Consider the difference between knowing and understanding. We all have a reasonable conception of what knowing is: when a student knows something, he or she can bring it forth on demand. Understanding is a subtler matter... Understanding is the matter of being able to do a number of thought provoking things with a topic, such as explaining, finding evidence, and examples, generalizing, applying, analogizing, and representing the topic in new ways (Blythe, 1998, p. 12).

In order for students to seek their own understanding, and demonstrate their ability to understand through the use of a range of performances, it is necessary for students to negotiate their own learning path. Masters (2004 a) states:

Personalised learning requires a view of learning as a continuous, school long process through which learning experiences are tailored to the current attainments and interests of individuals, students are given greater control over what, how and where they learn. And are encouraged to plan and monitor their own learning (Masters, 2004 a, p. 17).

Over the last five years the College has implemented this approach across all curriculum areas. It has been a particular challenge to implement this approach into the curriculum in Years 11 and 12, and still adhere to syllabus requirements. There is no doubt the 2004 Queensland Studies Authority Syllabuses for Ancient and Modern History will provide an opportunity for us to further embrace this philosophy of learning in Year 11 and 12 History. Since 2004, the College has extended its 'Teaching for Understanding' framework to include the development of 'Intellectual Character' in students. Essentially, 'Intellectual Character' involves developing a number of dispositions effective learners possess.

There is no doubt the approach to teaching and learning adopted at the A.B. Paterson College is very different to those of many schools. It presents a real challenge to both teachers and students. However, teaching history through a curriculum that is flexible, and negotiated is an exciting venture. I guess you never really know where you or the student is going to end up. It is also pleasing to see students exercising control over their learning and taking responsibility for developing their own understanding. If we want students to be motivated and excited about the field of history, than a negotiated approach to learning would encourage this in students. Young (2004, p. 17) states,

Productive History teaching and learning lies at the interface between ‘vernacular’ histories or the lived experiences of the child and the curriculum documents that we interpret on a daily basis.

Keeping the learner as the focus for our activities actually challenges us to think about key issues in history teaching and learning...

Starting with the learner is the first and perhaps most important step in creating a supportive context for building historical understanding (Young, 2004, p. 17).

From my experience, students like the choices that history can offer them. Grille (2003) states:

A fundamental principle is that children are more motivated to learn, and they learn better, to the extent that the have choice over how and what they learn (Grille, 2003, p. 6).

Further, if we want students to ultimately be independent, resourceful, and resilient lifelong learners and thinkers, than, we could develop these skills more explicitly through the use of negotiated curriculum across our classrooms.

References
Continuing Professional Learning: What's Really Going On?

Melissa Bennett & Marilyn Cole
Board of Teacher Registration Queensland

The report of the Review of the Powers and Functions of the Board of Teacher Registration (McMeniman, 2004) includes Recommendation 4.9 (p. 65) which states: ‘Continuing Professional Learning (CPL) be a prerequisite for renewal [of registration] for those teachers meeting minimum practice requirements’. The Report suggests that CPL activities include: school-based and Queensland Studies Authority (QSA) in-service programs and seminars, conferences and external workshops, moderation meetings, mentoring of preservice and beginning teachers, relevant professional practice in non-school settings and independent studies in a relevant field. In response to the recommendations regarding CPL, the new regulatory authority to be established, (the Queensland College of Teachers) will need to determine what might constitute the requisite CPL leading to renewal of registration in Queensland and develop appropriate policies and procedures for implementation of the recommendations. This paper examines the parameters for CPL requirements which have been established by regulatory authorities across Australia and related international authorities, as well as drawing on work undertaken previously by the BTR. It aims to provide a starting point for the development of the policies and procedures to ensure that ‘the principal goals of Continued Professional Learning (CPL) are to maintain and improve professional skills and ensure practitioners are kept abreast of new developments in the profession’ (McMeniman, 2004, p. 62).

Introduction
The Queensland Board of Teacher Registration (BTR) is a statutory body, established by an Act of Parliament, whose purpose is to provide for regulation of the teaching profession by encouraging the highest professional standards and aspirations for teachers in Queensland schools. The Queensland Board of Teacher Education was established in June 1971 and in February 1989 became the Board of Teacher Registration. Currently teachers are required to pay an annual fee to maintain registration in Queensland, there is no requirement for demonstration of continuing professional learning. However the BTR has an ongoing interest in the area of continuing professional learning of teachers, and this is evidenced by the BTR’s commitment to the Queensland Consortium for Professional Learning in Education.

The Queensland Consortium for Professional Learning in Education is a joint initiative established in 1993 under the auspices of the Board of Teacher Registration. Membership of the Consortium includes government and non-government education employing authorities; higher education institutions; teacher unions; professional associations; parents’ organisations; education centres; the BTR and other statutory bodies. Its purpose is to support the advancement of continuing professional learning in order to enhance the effectiveness of learning and teaching in Queensland.

The Consortium has conducted research in the area of professional learning and has published a number of reports about issues relevant to professional learning in education. Including: Making Your Professional Development Count (1996); Work as Professional Development (1998); Networks@Work (2002); and A Way Forward: The Future for Teacher Professional Associations and Networks (2004).

In 2004 the powers and functions of the Queensland Board of Teacher Registration were the subject of a ministerial review. The report of the review made 84 recommendations, a number of which are related to Continuing Professional Learning (CPL) requirements for renewal of registration in Queensland.

The new authority to be established as a result of the review, the Queensland College of Teachers, will need to develop policies and procedures to implement the 84 recommendations. The aim of the investigation undertaken was to inform the future development by the Queensland College of Teachers of policies and procedures related to CPL requirements.
What's going on?
In an attempt to ascertain the possible parameters of CPL requirements for Queensland teachers, the CPL requirements of a number of interstate and overseas authorities were examined. Many of the organisations examined had previously implemented CPL requirements and policies, while others were in developmental phases.

It was felt that it would be extremely valuable to establish what is already happening in the development of policies and procedures focusing on continuing professional learning, what is recognised as professional learning, and how the professional learning is being evidenced and evaluated.

The information obtained demonstrates some similarities as to what constitutes CPL, however the methods of demonstrating evidence of professional learning differ significantly. Table 1 (See Appendix) provides an overview of the professional learning activities recognised by the authorities examined, whilst the information below provides a synopsis of the policies and procedures for the demonstration of CPL requirements.

The Australian context

Western Australian College of Teachers
Established on 15 September 2004, the Western Australian College of Teaching is an independent professional body which represents all members of the Western Australian teaching profession, with one of its primary roles being to 'promote and encourage continuous education'. One of the methods by which the College has chosen to promote and encourage continuous learning is to link the undertaking of ongoing professional learning with the process for renewal of registration.

Members of the College are required to demonstrate that they have actively undertaken or participated in a minimum of three activities that has assisted them to:

(i) keep up-to date in their area of expertise, or in education theory generally;
(ii) increase their understanding of a particular subject area or area of education theory; and
(iii) develop and consolidate their teaching skills and other skills relevant to the supervision and management of students.

(Professional Education and Development (section 41(3) (c)), Western Australian College of Teaching)

The College's professional learning requirements for renewal of registration are stipulated in Regulation 18 of the Act, Professional Education and Development (section 41(3) (c)). An extract of this regulation, is offered as an appendix in a number of their publications, such as their Membership Policy. The regulation incorporates an extensive list of professional learning activities that may be undertaken by members to be eligible for renewal of registration. The recognised professional learning activities are listed in Table 1 (See Appendix).

Upon application for renewal of registration, the College may request that the applicant provide evidence that ongoing professional learning has been undertaken since registration was previously granted. This evidence may take the form of notebooks, teaching plans, portfolios, diaries, conference papers, certificates obtained, assessments by colleagues or any other material showing the nature and extent of the applicant's participation in the activities.

The current focus of the College is on initial registration of teachers in Western Australia; however they are currently actively engaged in the development of a Professional Learning Framework that will assist them as they continue to develop and implement policies and procedures.

Victorian Institute of Teaching
The Victorian Institute of Teaching was established in December 2001 and given, as its primary responsibility, registration of teachers in Victorian schools. The institute does not currently have continuing professional learning requirements for maintaining registration; however, when provisionally registered teachers are applying for full registration they are required to demonstrate their competence against the eight standards of professional practice. This is demonstrated through the development of an evidence-based portfolio consisting of three components: an analysis of teaching and learning; collegial classroom activities; and a commentary on professional activities undertaken.

Assessment of the portfolio is a school based process, generally involving a panel consisting of the principal, a teacher nominated by the provisionally registered teacher and a mentor who has participated in the Institute’s mentor training program. If the panel is satisfied that the evidence provided demonstrates competence against the eight standards, a recommendation for full registration is made to the Institute.
However the final decision is made by the Institute and each year a number of teachers are required to submit their portfolios to the Institute as part of a quality assurance sampling process. Provisional registration may also be extended upon the recommendation of the panel for up to 12 months, to enable sufficient opportunities for the teacher to demonstrate their competence. The evidence provided to demonstrate competence is documented on the Application for Full Registration and may incorporate a recommendation to extend provisional registration. The form is completed collaboratively by the provisionally registered teacher and the principal.

 Provisionally registered teachers are provided with " to the Requirements of Full Registration" which not only outlines the process but provides examples of the evidence required and a recommended format for the structure of the portfolio.

Teach er Registration Board – Tasmania

The Teachers Registration Act 2000 (Tasmania) specifies that a person's application for renewal of registration should be accompanied by satisfactory evidence of:

(i) ongoing competence; or
(ii) professional development undertaken.

The Teachers Registration Board has stated that this does not imply that ongoing competence and professional development are mutually exclusive.

When selecting option (i) above, i.e. to provide evidence of ongoing competence, it is required that a teacher's Principal declares they have demonstrated ongoing competence as a teacher for the purposes of renewal of registration. Although the methods to be used to make judgements regarding a teacher's competence are not specified in detail, the Board suggests that Principals could focus on a teacher's content and pedagogical knowledge, their professional attributes and their professional practice.

If a teacher chooses option (ii) above, i.e. to provide evidence of professional development undertaken, they are required to keep a record of professional development undertaken and submit this to the Board. A Working Party of the Board developed the following definition of professional development, which the Board adopted:

Professional development consists of all those activities and practices which contribute to a teacher's professional competence, directly or indirectly enhancing teaching and learning.

(Registration and Renewal – A Consultation, 2003, Teachers Registration Board Tasmania)

A table format is provided for the recording of professional development, including details of the nature of the professional development undertaken, the hours spent focusing on the activity, details of the provider and the year the professional development was completed and an indication of the funding source for the professional development activity. The required format is outlined below:

<table>
<thead>
<tr>
<th>Nature of professional development</th>
<th>Time spent (in hours)</th>
<th>Provider, where relevant</th>
<th>Year completed</th>
<th>Funded by: self (S) or employer (E)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

The above record must be accompanied by a statement of support signed by another registered teacher who is the Principal or the Principal's nominee.

The Teacher Registration Board of South Australia, New South Wales Institute of Teaching and Teacher Registration Board of the Northern Territory currently do not have continuing professional learning requirements for renewal of registration or policies and procedures in this area.

The international context

General Teaching Council for Scotland (GTC Scotland)

The GTC Scotland worked with other education stakeholders to develop a national framework for Continuing Professional Development (CPD). The framework can be used by teachers and schools to plan for and record professional development. The framework is based around the three Standards: Standard for Full Registration; Standard for Chartered Teacher; and Standard for Headship. It provides descriptors which indicate development in a number of professional areas along a continuum from Beginning Teacher, through to Building Excellence and Headship.
The Scottish Executive (National Government) requires that teachers complete 35 hours of professional development in addition to that completed during school hours. CPD activities are described as:

Anything that has progressed, assisted or enhanced a teacher's professional practice and might include issues of personal development as well as specifically educational issues.

(Continuing Professional Development, 2003, Teaching in Scotland, Scottish Executive)

All teachers are expected to maintain a CPD Profile which includes planning for professional development and a record of professional development undertaken. They also need to describe how their PD has impacted on their practice. This is monitored at the school level by management during a teacher's Annual Professional Review. It is not a responsibility of the GTC Scotland. Refer to Table One for a list of recognised CPD activities.

The GTC Scotland is responsible for accrediting CPD providers and maintaining a national register of CPD providers. It also provides a tracking system to monitor teacher progress in meeting the Standard for Full Registration, the Standard for Chartered Teacher and the Standard for Headship. Beginning teachers are expected to meet the Standard for Full Registration by the end of their first year of teaching. They are supported in this by having a reduced teaching load to ensure they have the opportunity to access appropriate professional development. A comprehensive induction and mentoring program is also provided to assist in this process. Teachers who have reached the top of the pay scale for teachers may join the Chartered Teacher Program, when they meet the Standard for Chartered Teacher they receive a salary increment. The GTC Scotland accredits all programs that lead to the award of Chartered Teacher or the award of Headship. Chartered Teacher Programs are comparable to a Masters program.

General Teaching Council for England (GTC England)

The Statement of Professional Values and Practice for Teachers underpins the work of the GTC England. The Statement was produced in 2004 after wide consultation and states the following in relation to Learning and Development: "...[Teachers] understand that maintaining and developing their skills, knowledge and expertise is vital to achieving success. They take responsibility for their own continuing professional development, through the opportunities available to them, to make sure that pupils receive the best and most relevant education. Teachers continually reflect on their own practice, improve their skills and deepen their knowledge. They want to adapt their teaching appropriately to take account of new findings, ideas and technologies".

The GTC England’s Teacher Learning Academy (TLA) was developed to recognise teachers’ practice-based learning through a national, portable system. Teachers are able to develop a project which aims to investigate and enhance their practice. Work recognised by the TLA must address each of the six core dimensions which in summary are: engaging with a knowledge base; planning a professional learning activity; accessing peer support; carrying out a change activity; evaluating the impact of the change activity; and disseminating what has been learned. The TLA also offers the option of accreditation towards an academic award.

Teachers are asked to submit evidence for verification. It is expected that most of the evidence submitted would be selected from documentation kept in the normal course of a teacher's professional duties although it may also include audio, video and photographic evidence. Teachers are encouraged to keep a learning journal throughout the development of their project. A detailed template is available online. Collaborative learning is supported and encouraged, enabling teachers to work together on a project and make individual submissions.

The Teachers' Professional Learning Framework (TPLF) is a tool developed by the GTC England which can be used to plan professional learning for an individual teacher or a school. The TPLF offers a map of professional development experiences, it is flexible, encourages diversity and outlines a professional development entitlement for all.

In a speech at the North of England Education Conference in Manchester in January 2005, the Chair of the GTC England, Judy Moorhouse summed up the findings of research co-sponsored by the GTC England and the National Union of Teachers: “CPD is extremely effective when it is a collaborative effort by teachers, in their own schools or clusters of schools, with expert support.” She went on to say that the research results “... highlighted the importance of teachers having ownership of their own CPD”. She also said that “The Council's work on professional development is rooted in this recognition that teachers need to be in the driving seat when it comes to both their own CPD and the professional development agenda.”
New Zealand Teachers Council
For the New Zealand Teachers Council, the policy on maintaining teacher registration is underpinned by the principle of enhancing the quality of teaching and learning and the status of the profession. Registration with the Council is maintained by way of the renewal of a practising certificate, a license demonstrating valid registration, every three years.

The renewal process requires the submission of an affirmation signed by a principal or an experienced senior teacher, which verifies that the applicant is a satisfactory teacher according to the New Zealand Teachers Council ‘Satisfactory Teacher Dimensions’. These dimensions are clustered as professional knowledge, professional practice, professional relationships and professional leadership. The affirmation is based on information and processes generally determined at the school level, such as a performance appraisal, a testimonial, an observation or an interview.

The affirmation must also endorse that the teacher is engaged in professional development. Whilst no definitive list of professional development activities is offered, some examples provided include: undertaking higher qualifications; writing for teachers or about education; attending courses; use as a resource person; acting as a supervising teacher or mentor; and acting as an educational leader.

Institutions outside of the general education system may apply in writing for approval to be recognised for the purposes of maintaining full teacher registration. The application must be supported by evidence that demonstrates that the teaching and learning setting enables teachers to demonstrate all of the Satisfactory Teacher Dimensions and that appropriate ongoing supervision and appraisal is available, such as the monitoring of the impact of professional development opportunities and resources on the enhancement of student learning.

Ontario College of Teachers
On the 15 December 2004, the Ontario Legislature passed Bill 82 cancelling the requirement for members to complete fourteen Professional Learning Program courses every five years in order to maintain their licence to teach. The program was unpopular with Ontario’s teachers and received a great deal of opposition from the teacher’s federation, which urged its members to boycott the program and the providers of the program. The program became a political issue and the legislation was repealed when the Liberal Party was elected into office in 2004.

The Professional Learning Program (PLP) consisted of seven courses in specified areas and seven elective courses. Core courses focused on curriculum, student assessment, special education, teaching strategies, classroom management and leadership, use of technology and communicating with parents and students, while elective courses provided members with the opportunity to pursue their individual professional needs and interests.

The College acknowledges that professional growth and development can also be achieved from other forms of ongoing professional learning in its Professional Learning Framework. The Framework incorporates a table which broadly groups professional learning activities under eight categories: Academic Programs; Research Activities; Professional Networks; Professional Activities; Mentoring and Networking; Professional Contributions; Learning through Practice and Technology and Learning as well as encouraging members to access professional learning options beyond the examples provided.

While there is no longer a requirement for members to complete the professional learning program, the College encourages them to continue to engage in professional learning that is relevant to their individual needs and those of their students.

Education and Manpower Bureau, Hong Kong
The Education and Manpower Bureau in Hong Kong is not a registration authority, but is responsible for the formulation of policies and the introduction of legislation to ensure quality education, including the responsibility for human resources planning and development. The Bureau oversees the implementation of programs that are designed to ensure these objectives are achieved.

In June 2002, the Advisory Committee on Teacher Education and Qualifications commenced discussions and development of a framework for teachers’ continuing learning. This framework, supported by the development of a generic teacher competencies framework, provides teachers and schools with a means of enhancing their professional development. The framework is currently being trialled over a three year period enabling schools and teachers to explore the content, quality, planning, resources and record keeping of their professional learning activities.
The trial involves the completion of 150 hours of professional learning activities during the three year period. A minimum of 50 hours must be spent on structured learning activities such as attendance at local and overseas conferences, symposia, workshops and courses; offshore study tours; and tertiary studies. A minimum of 50 hours must also be devoted to other modes of continuing professional learning, which include activities that enhance a teacher's professionalism and improve student learning outcomes, being a mentor or being mentored, action learning projects and engaging in the school and education community.

The evidence of professional learning activities is collated in the form of a diary, which indicates the date and details of the activity, identifies who the activity was initiated by and who provided the activity and the number of hours spent on the activity. The format of the diary is outlined below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event/Activity</th>
<th>Provider / Organiser</th>
<th>Initiated by</th>
<th>CPD Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Structured mode</td>
</tr>
</tbody>
</table>

**Discussion**

During our research we examined the professional learning requirements of a number of organisations. The General Teaching Council for England, the General Teaching Council for Scotland, the Education and Manpower Bureau Hong Kong and the Ontario College of Teachers have developed frameworks for professional learning. These frameworks provide a tool for teachers and schools to plan and record professional learning and offer examples of activities that promote professional learning. The frameworks cater for the diversity of activities that stimulate professional learning, while encouraging teachers to be responsible for engaging in professional learning that addresses their needs and interests and those of their students.

The activities that are recognised as promoting professional learning are varied across the authorities investigated. While in most cases it is acknowledged that the examples of professional learning activities provided is not exhaustive, it is important to provide some guidance as to what constitutes professional learning and the variety of means through which professional learning can be achieved. In collating the information on recognised professional learning activities, we found it useful to map the variety of activities by organising them under six broad headings: Professional Practice, Professional Knowledge, Professional Relationships, Professional Leadership, Professional Collaboration, and Professional Contribution. An overview of recognised professional learning activities is provided in Table 1 (See Appendix).

In most of the authorities examined, policies, procedures and professional learning frameworks have been developed in collaboration with stakeholders. The aim of which was to enable the focus of continuing professional learning to be relevant to the local context, ensure consistent definitions of professional learning and meet the needs and interests of individual teachers while facilitating enhanced learning outcomes for their students.

The means of providing evidence of professional learning also varies across the authorities. The Education and Manpower Bureau Hong Kong and the Teacher's Registration Board of Tasmania have chosen to focus on the recording of the number of hours spent in professional learning modes, to demonstrate continuing professional learning. In such a model, concerns could be raised about a focus on the quantity of professional learning rather than a focus on the quality of the professional learning and its impact on educational practice and student learning outcomes. Participation in professional learning may be seen as tokenistic rather than a process to enhance the effectiveness of teaching and learning.

The Victorian Institute of Teaching’s process for obtaining full registration, the New Zealand Teacher's Council's process for demonstrating achievement of the 'Satisfactory Teacher Dimensions', completion of practice based projects as professional learning through the Teacher Learning Academy in England and the incorporation of a continuing professional development profile within the annual review process in Scotland were particularly engaging to us. These processes foster a community of practice approach, promote collaboration and recognise a diverse number of ways to demonstrate evidence of quality professional learning. They acknowledge that professional learning occurs in a range of contexts and while there are many professional learning activities that are relevant to all teachers, each individual has their own particular learning pathway.
Where to from here?

While we have undertaken to examine the approach to continuing professional learning of some of the prominent authorities, we acknowledge that many other stakeholders and authorities have also developed frameworks for professional learning specific to their context. Although the evidence required and the process for demonstrating evidence of professional learning is diverse, there are some similarities in what is acknowledged as continuing professional learning. It is useful to be aware of what is recognised as professional learning and of existing processes and policies related to continuing professional learning of teachers of other Australian and international authorities, but there is a need to ensure that the policies and procedures developed and implemented by the Queensland College of Teachers are appropriate for the Queensland context.

In the process of developing policies and procedures for continuing professional learning requirements for Queensland teachers, we consider it essential for the Queensland College of Teachers to ensure that:

- the definition of continuing professional learning be inclusive of the vast array of structured and unstructured professional learning opportunities for enhancing student learning and teacher's personal and professional development;
- the process for demonstrating continuing professional learning be reflective of collaborative processes and community of practice frameworks;
- the focus of documentation of continuing professional learning be on quality of learning outcomes, rather than a specified quantity of professional learning; and
- the nature of the policies and procedures emphasises the professionalism of teachers and promotes a culture of excellence within the profession.

In conclusion we would like to acknowledge the work that has been completed by the authorities examined and the accessibility of information on their continuing professional learning requirements, policies and procedures. We would like to encourage the Queensland College of Teachers to maintain a watching brief on the development and evaluation of these policies, procedures and requirements to assist in the development of their own requirements for continuing professional learning and to ensure the continued promotion of the professionalism of teachers in the local and global contexts.

References


52
Appendix

Table 1

Recognised professional learning activities

The table below provides an overview of the professional learning activities acknowledged by the authorities investigated. We have chosen to group the activities under the broad headings of professional practice, professional knowledge, professional relationships, professional leadership, professional collaboration and professional contribution. We acknowledge that this list is not exhaustive and that some of the activities listed may be applicable to a number of the headings.

<table>
<thead>
<tr>
<th>Professional Practice</th>
<th>WACOT</th>
<th>VIT</th>
<th>NZTC</th>
<th>OCT</th>
<th>HK</th>
<th>GTCE</th>
<th>GTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of educational research in classroom practice</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Arrange opportunities to observe exemplary practice</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collecting, interpreting and applying student feedback, data and outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Developing resources in response to students needs</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation, development and implementation of curriculum, assessment and instruction</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Integration of information technology into teaching practices</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflection and evaluation of personal practice to improve educational outcomes</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Professional Knowledge</th>
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<th>OCT</th>
<th>HK</th>
<th>GTCE</th>
<th>GTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance at formal professional learning events, such as seminars and workshops</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Conducting educational research / action learning projects</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Increase personal competency in information technology</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in off shore study tours</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postgraduate tertiary studies or further education in a relevant field</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Professional Reading</th>
<th>WACOT</th>
<th>VIT</th>
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<th>OCT</th>
<th>HK</th>
<th>GTCE</th>
<th>GTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergoing an induction process</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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### Professional Relationships

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<tr>
<th></th>
<th>WACOT</th>
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<th>NZTC</th>
<th>OCT</th>
<th>HK</th>
<th>GTCE</th>
<th>GTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting as a mentor to a person who has entered a new position of added responsibility (eg. Principal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Acting as a mentor to a preservice, beginning or re-entry teacher or colleague</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Obtaining advice and support from a mentor</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Parent teacher interviews</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Working in inter-agency teams</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Working with parents/carers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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</table>

### Professional Leadership

<table>
<thead>
<tr>
<th></th>
<th>WACOT</th>
<th>VIT</th>
<th>NZTC</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Acting as an educational leader or resource person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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<tr>
<td>Developing educational policy</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
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<td>✓</td>
</tr>
<tr>
<td>Establishing partnerships with business, industry and universities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>✓</td>
</tr>
<tr>
<td>Management of parent helpers, integration and teacher aides</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Organisation of excursions or guest speakers, school camps or special events</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Pilot new initiatives individually or with colleagues</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Undergoing management and leadership processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Professional Collaboration</td>
<td>WACOT</td>
<td>VIT</td>
<td>NZTC</td>
<td>OCT</td>
<td>HK</td>
<td>GTCE</td>
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<tr>
<td>Active membership of a professional education association</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Engaging in peer review</td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Informal professional learning activities, such as collaborative planning and problem solving, school based committees and collaboration with other professionals</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
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<tr>
<td>Peer Observation</td>
<td></td>
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<td>✔</td>
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<tr>
<td>Participating in professional online communities</td>
<td></td>
<td></td>
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<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Peer Review</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Participation in school-based collaborative inquiry</td>
<td></td>
<td></td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Sharing good practice or related topics to groups of colleagues</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Professional Contribution</th>
<th>WACOT</th>
<th>VIT</th>
<th>NZTC</th>
<th>OCT</th>
<th>HK</th>
<th>GTCE</th>
<th>GTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to education and the school community</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Contributions to professional journals and relevant publications</td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Involvement in extra curricular activities</td>
<td></td>
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</tr>
<tr>
<td>Maintain a professional portfolio</td>
<td></td>
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<tr>
<td>Participation in Education Week activities</td>
<td></td>
<td></td>
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<tr>
<td>Planning conferences and workshops</td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Presenting research finding to colleagues at seminars conferences or workshops</td>
<td>✔</td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Undertaking secondments</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Abbreviations:** WACOT – Western Australian College of Teaching; VIT – Victorian Institute of Teaching; NZTC – New Zealand Teacher’s Council; OCT – Ontario College of Teachers; HK - Education and Manpower Bureau, Hong Kong; GTCE – General Teaching Council for England; GCTS – General Teaching Council for Scotland
Beyond Cyber-Tooth Policy:  
Teacher Education, 'Old Times' Thinking, And Computing And Communication Technologies In Schools

Chris Bigum & Leonie Rowan
Quality Learning Research Priority Area, Deakin University, Geelong

From the early days of computer use in schools, teacher education practice concerned with computing and communication technologies (CCTs) has been consistent with or supportive of policies developed for school use of CCTs. While these technologies have developed significantly since those early days, policy has altered little. The maintenance of 'old times' policies is underpinned by, among other things, a limited theorising of school change, a flawed understanding of the take up of any new technology, and institutional amnesia in relation to the reality and rhetoric associated with over twenty years of CCT use in schools. Given the prominence of CCTs in most contemporary thinking about education, any professional regeneration of teaching and learning will need to move beyond these limited and limiting accounts of schooling and CCTs. This is no simple matter given the broad and consistent reproduction of 'old times' policies and practices across systems around Australia. This paper details the flaws in current policies, maps serious problems that need to be addressed and outlines a robust approach to moving beyond the cyber-tooth policies that inform current practices in schools, and hinder any professional regeneration of teaching and learning in teacher education.

In the beginning
In the late 1970's schools began to make use of a range of what were then called microcomputers. Through the 1980's, state and commonwealth governments invested in programs to train teachers and provide more computer equipment for schools. The speed with which schools purchased these new technologies and the speed with which various computer-related subjects colonised most school curricula was rapid (Bigum, 1990). This was a time when computer networks were not anywhere near as widely deployed as they now are. Using computer networks for email was relatively expensive and largely restricted to universities. The Web was years away. Few homes had computers and schools were one of the places you could go to find a computer. The most commonly cited rationales for using computers in classrooms were to improve student learning and to improve student chances for employment. This was a time when the patterns of economic and social exchange on the global scale that we know them today were largely non-existent.

Since that time the number of computers and computing-related technologies has increased enormously. The speed and capacities of these technologies has more or less followed Moore's Law which in its original form says that the number of components on chips with the smallest manufacturing costs per component doubles roughly every 12 months. (Tuomi, 2002). The deployment of these technologies globally has lead to a world in which global finance shapes the options of governments and global entertainment in its various forms impinge seriously on local cultures. In the past twenty five years since these technologies were first taken up in schools we have witnessed huge changes in the distribution of wealth, the creation and loss of employment and the production and distribution of various forms of entertainment. Despite these changes, the practices of schooling have remained largely unchanged. Schools, in this respect, have proven to be remarkably resilient to the changes that have developed in almost all other social institutions.

What I want to do first in this paper is map the patterns of interaction between schools and computing and related technologies. I suggest that these patterns were, perhaps presciently, described in the satire, The Saber-Tooth Curriculum (Benjamin, 1939). Benjamin's narrative tells the story of a Neolithic schooling system based upon skills appropriate to an environment in which fish-grabbing with the bare-hands, woolly-horse clubbing, and saber-tooth tiger scaring were useful and practical in the environment of the time. A large and, to some, a system reminiscent of today's systems of schools, teachers and teacher
education, emerged. It proved highly popular and became so much a part of that community's culture that when conditions changed and fish could not be seen, the horses moved away and the tigers died out, the importance of the "basics" was only reaffirmed, even though they now had no value in terms of the circumstances in which the community lived. Attempts to reform the curriculum were met with arguments about over-crowding, faddism and protection of the cultural values embedded with the now redundant knowledge and skills set.

The emergence of microcomputers in the late 1970's can be argued to mark the beginning of a new and different sociotechnical context for schooling, something I have, borrowing from Benjamin, playfully labelled cyber-toothed education. While perhaps not quite as fearsome as a tiger and certainly not as edible as the fish in Benjamin's scenario, the micro prompted a significant shift in resources and policies for schools in order to deal with what was variously represented as challenge, aid and threat. Computer literacy courses were developed at a number of levels in schools. Teachers' Colleges and Education Faculties developed post-graduate courses concerned with 'computers in education' and governments and schools developed policies that aimed to support and encourage computer use in classrooms. In this period, issues of integration of computers into classroom practice, teacher professional development and access and equity were important (Bigum, 1987). In many respects, schooling had to respond to what was clearly something that was unlikely to go away. The responses had to convey what schooling had always been about, certainty. So even though the outcomes from the deployment of these new technologies would prove to be unpredictable in many spheres (see for example, Strassman, 1997), schools were certain about what they were doing and why: the threat of the cyber-toothed artifacts was seen to be met.

A similar certainty could be found in tertiary computers in education courses. The uncertainty of these technologies in education settings was quickly rendered certain and assured. These technologies were just another medium, like other media previously studied and researched in education. School went on much as it always had. The strange technologies were no longer strange. Journals published research concerned with learning and computers, classrooms and computers, computers in education generally. Annual national and international conferences were held. Various professional associations to cater for teacher and researcher interest in computer use in education sprang up. From these foundations it then became possible for schools and teacher education to respond quickly and efficiently to each new cyber-toothed artifact that industry produced over the subsequent twenty five years.

As part of tracing the build up of a large responsive infrastructure around computing and related technologies in education, I want to establish an approach to thinking about technology generally to help further unpack the problems associated with what I have dubbed cyber-tooth policy and its associated thinking.

The T word

In tracing the history of computing and related technologies in education, a key consideration is how technologies are understood. Commonly, technologies that are labelled new are thought about as artifacts or objects although clearly things like gene manipulation technologies are better described as processes. Ursula Franklin argues that technology is best thought about as practice, formalised practice (Franklin, 1990, p. 15), or perhaps more colloquially, the way things are done around here. Franklin's framing confirms the importance of thinking about the social together with the technical, the language bearers with the non-language bearers. This approach is not far removed from the work of scholars like Bruno Latour, John Law, Annemarie Mol and others whose work is underpinned by an approach in which the social and the technical is rejected in favour of the sociotechnical, a view in which the social/technical binary is something to be explained rather than a given. There are various related forms of this approach to theorising technology that can be found in the cyborg literature, the work of Katherine Hayles, Donna Haraway and many others.

With this in mind it is useful to recall that when new ways of doing things are introduced into various settings that the first attempts at making sense of the new is to read it in terms of older, more familiar technologies. In retrospect, these understandings appear quaint, even humorous (Marvin, 1988). The automobile when it was first used was written about as a horseless carriage. The first motion pictures were made by photographing actors on a stage. It takes time, and for many technologies a great deal of time for mature or what might be regarded as sophisticated forms of practice to emerge.

A further point to make about computing and related technologies in particular was made by John Perry Barlow in an interview he gave during a visit to Australia (Tunbridge, 1995). He illustrated the difficulty of extrapolating the logic of atom-space into bit-space (Tunbridge, 1995, pp. 3-4):
When I first looked at this stuff I thought, 'Hey, great. I can get out of the cattle business and still stay in this nice place, Pinedale, Wyoming and let my mind roam the planet; just put my body down in this location and my mind will travel.' What's actually happened is that I put my mind down in one location, Barlow.eff.org, and my body roams the planet, precisely the opposite of what I expected.

He continues:

See, the problem there is, nobody really understands networked economy, but I can tell you up front that practically all of our systems and paradigms are not going to work there -- in fact, they're turned completely on their head. The basic one, of controlled economics in the physical world, is that you regulate scarcity to increase value. This works with physical goods. That's how the De Beers corporation makes its living. It's not that diamonds are rare, it's that De Beers owns all of them. That's the classic example, but precisely the opposite is true of most information. With information, familiarity has value, not scarcity. It's dispersion that has the value, and it's not a commodity, it's a relationship and as in any relationship, the more that's going back and forth the higher value the relationship. People don't get this if they're coming from the industrial-era model. If all you've got is a hammer then everything looks like a nail. (Tunbridge, 1995, pp. 3–4)

Maintaining an illusion of certainty

There are many instances in which strong cases can be made that when a new technology is deployed that things change and often in ways that are far from being predictable (see, for example, Tenner, 1996). Such outcomes are to be expected from a sociotechnical point of view in which the recruitment of allies to form durable networks of people and things is something that requires compromise, translation and constant policing (Bigum, 2000; Bigum & Rowan, 2004). However, in order to justify the deployment of a new technology, one usually has to make a case that said technology will improve things. Lee Sproull and Sarah Kiesler (1991, p. 4) describe such claims about improvements as 'first level effects', which they describe as ‘the planned efficiency gains or productivity gains that justify an investment in new technology'. When the new technology is put in place, what happens often bears little relationship to what was imagined to happen, Sproull and Kiesler call these ‘second level effects', '...people pay attention to different things, have contact with different people, and depend on one another differently” (Sproull & Kiesler 1991, p. 4).

It is against these considerations of technology as formalised practice, of early representations of new technologies and of the claims made to justify expenditure on new technologies that the twenty five year history of using computing and communication technologies (CCTs) in education needs to be viewed. It is a history of large expenditure, ongoing certainty and a strong focus on CCTs as such. What I want to suggest is that the initial thinking and policy responses have changed little from the early days when, arguably, they made sense given the novelty of CCTs and the many explorations concerned with support of teaching and learning. But the cyber-tooth mindset has persisted for over two decades now and shows little sign of changing. Indeed, the use of terms like "learning technologies" to describe computers while qualifying for what McDermott identified as wishful naming many years ago, reinforces a set of beliefs and practices firmly grounded in assumptions about CCTs and learning that are impossible to demonstrate. In what follows, I want to illustrate two types of consequences from the cyber-tooth mindset.

Having answers

One of the earliest responses schools made to the appearance of commercially affordable microcomputers was to put computer literacy classes in place and affirm the importance of all students becoming computer literate. This is a good instance of enacting certainty in relation to the uncertainty that these early computers generated. While what was done and claimed on behalf of such literacy does not bear close scrutiny, the importance of having a response to what had been affirmed as something of a crisis: students did not know how to use computers, was important. More broadly, the same can be said of having CCTs in schools. The rhetoric of the computer industry had positioned these new technologies as improvers of student learning and improvers of student life chances (Bigum, 1998). It was difficult for any school to resist taking them up. Having positioned themselves in this pattern of crisis and quick response, that is computer-based crisis requiring some kind of educational response, it became increasingly difficult for schools to respond in different ways. The rehearsal of this pattern, enacting certainty, is at the heart of the cyber-tooth mindset.

The emergence of the Internet afforded more crises. The ready availability of pornography, and to a lesser extent gambling and hate sites posed problems for schools that gave students access to the Internet.
The response was to deploy software that would limit or block student access to such sites. Leaving aside the technical limitations and stupidity of this response, the opportunity to develop an educative approach to these problems was largely lost. A quick, technical fix was something that could be explained to parents more easily than a more complex and slower educative program.

Another crisis that quickly came to the fore was the realisation that the Internet offered more and more data about more and more of the world. The problem that all students encounter when faced with multiple sources of data about a particular issue was multiplied many times. Prior to the Internet becoming the source of data it has become, there were practices in schools which taught students how to judge conflicting claims to truth. These were based on well established practices associated with print and to a lesser extent other media. In a more or less linear move from atom-space to bit-space, information literacy emerged as the solution to the crisis in Internet-based information. Like other responses, this solution relied on the assumption that bit-space is not very different to the familiar atom-space, in this case the assumption that the 'infosphere' is amenable to the kinds of search and enquiry methods that have been used in the past for books and for structured or ordered collections of data (e.g., Morgan & Batovsky, 1998).

There are many other examples to be offered that reflect the certainty that was first realised when schools, teachers and teacher educators constructed those first educational responses to the "crises" that were associated with the deployment of the early microcomputers. But there is a more serious consequence of cyber-tooth policies and thinking.

Fiddling while Rome burns
The focus on CCTs and the belief in a capacity to respond educationally to virtually any panic or problem that might emerge as new CCTs come onto the market has produced a highly localised view of the relationship between CCTs and various educational practices. Like Benjamin's Neolithic hunters the preoccupation with having plausible educational responses has not allowed any consideration of the changed circumstances in which schools, teachers and teacher educators now find themselves. Unlike the early 1980's, schools are not richer in computers than their local communities. Unlike the early 1980's, some students are likely to be more technically skilled than the adults who teach them. Unlike the early 1980's the global deployment of CCTs has resulted in very large changes to the economic, social and cultural lives of many people on the planet. These changes are well documented and theorised in a large literature that is concerned with the phenomenon commonly referred to as globalisation. The global phenomena with which we have become increasingly familiar would not exist without CCTs.

While there is recent evidence that school systems in Australia have begun to rethink curriculum in the light of some of these changes, the cyber-tooth mindset remains in tact. The solution it seems is to rework and restructure curriculum but to leave the approach to CCTs more or less unchanged. To help students come to terms with these new times (Kenway, Bigum, & Fitzclarence, 1995), it seems, is a matter of continuing the cyber-tooth practices that had their origins in the early 1980's, that is to work to integrate CCTs into the curriculum, to continue to address each new panic that accompanies each new CCT and to maintain the certainty that has characterised cyber-tooth policies for over twenty years. It is not unlike what Kling (1996) has described as heads-in rather than heads-up thinking. While I don't want to suggest that some technical capacities in working with CCTs ought to be a necessary component of most students education at school and in further education, such skills in the absence of a broader appreciation of the use of these technologies to powerfully shape the social, economic and cultural spheres is as meaningful as the teaching of fish-grabbing with the bare-hands, woolly-horse clubbing, and saber-tooth tiger scaring after the external environment in Benjamin's satire had made each skill redundant. The problem of cyber-tooth thinking is that it effectively engenders a complacency. There is no crisis for which we can't construct a workable educational solution.

I want to briefly explore a future scenario to further illustrate the problems we face. It is generally anticipated that Moore's Law will continue to work for a few more decades yet. By roughly 2020 processors will be able to carry out as many calculations per second as the human brain. While I am unpersuaded about the emergence of some superior cybernetic intelligence, I am more concerned about how this might play out in the field of robotics. The two major problems robots have at present are speech recognition and vision. It is not unreasonable to assume that even if there are not elegant solutions to these problems by 2020 that the sheer capacity of microprocessors will enable a kludge or inelegant solution to give robots these two capacities. Such advances will render virtually all of the current so-called service jobs susceptible to replacement by machine. From house cleaning, to fast food, to retail, robots
will have the capacity to do the work. The irony of this is that these are the very jobs that this current wave of computer deployment has produced. Even if this scenario only plays out partially, it means unemployment or under employment for a very large section of the community. The teachers currently being trained will teach students who will grow up in such a world. The place that CCTs currently enjoy in teacher training continue to mirror that which is found in schools. It is cyber-tooth thinking.

**Ways forward**

The characteristic of cyber-tooth policies and thinking is that of certainty. In a world which has now become dangerously uncertain this predisposition is not only foolish, it is dangerous. Schools, schooling and teacher education need a framing that reflects these circumstances. This, to me, means a number of things: a rethink of schooling and by implication teacher education which is linked to a rethink of curriculum. Instead of a predominance of certainty, of answers, there needs to be a prominence of questions. It is not difficult to imagine curriculum informed by such thinking. Indeed there are instances of such approaches, e.g. the International Baccalaureate.

The current period in education is characterised by considerable interest in curriculum. In most states and overseas there appears to be an unease about the suitability of current curriculum for preparing the young for a world that is much changed from the period when most contemporary curricula were developed. New curriculum initiatives can be found in many states. Debates that figures in these initiatives ask questions such as: what is worth knowing, what are ‘essential’ or ‘basic’ knowledges, and should there be more emphasis on process or content?

For education curriculum/policy makers, contemporary CCT-based resources such as the Internet appear to place an emphasis on knowledge (as per the knowledge economy) which subsequently slides into debates about content, i.e. curriculum is about content, and, more often than not, its consumption. Importantly, the social character of knowledge is largely ignored. The irony of schooling systems which place an emphasis on the consumption of various forms of knowledge at a time when the production and leveraging of knowledge and research skills are prized, appears lost in the current debates.

One view of curriculum is that it is the stories the elders of the tribe tell the young. I want to suggest that increasingly these stories, in this era, are less narratives and more questions, i.e. how should we live in the world? what does it mean to be an Australian? how do we relate to our geographical neighbours? how do we understand global phenomena such as finance, terrorism and entertainment?

As a way out of the problem of deciding in advance what is appropriate content to equip students to participate as active citizens, we might think about curriculum in terms of questions. Importantly, this device might be used to engage the Australian community in contributing to the construction of a set of questions. One way to operationalise this notion would be to poll a large subset of Australians to nominate, say 5 or 6 questions that they believe to be important to Australia now and in the future. A variety of events, protocols might be employed to arrive at a set of national questions, which would be the basis for curriculum across the country. The process might be repeated at regular intervals (3–5 years) to reconsider the question set.

How would the questions frame curriculum? Nationally they would constitute a statement of our priorities. Things that need to be investigated and thought about. A question, unlike a lot of content, can be contextualised at a national, state and local levels. This then would be the curriculum. Engaging the young and their communities in a set of national, locally nuanced, questions that have arisen after a process of debate and contestation would require them to engage in knowledge production/leveraging and research. It would mark the country with a curriculum that looks forward in a more pragmatic and potentially effective manner compared with current content-focussed thinking.

The same research/enquiring approach also can inform the way school and teacher education is done. In such approaches CCTs are not a focus. They can be used to do useful work where appropriate. Instead of doing pretend activities in a safe environment as is the case with current curricula, students are engaged in asking better questions, that is doing research, on issues that are valued by local constituencies such as schools in the case of student teachers or the local community in the case of students at school. There are a number of experiments of this kind currently being conducted in various parts of the world. A small project in which I have been involved and dubbed knowledge producing schools is working in this direction (see [http://www.deakin.edu.au/education/lit/kps](http://www.deakin.edu.au/education/lit/kps) and another paper presented at this conference). Teacher education, in this analysis, has a pivotal role in the professional regeneration and itself and schooling. It is only under these circumstances that new kinds of teaching and learning better framed to prepare students and teachers for a much changed world is possible. The choice is simple,
cyber-tooth thinking around CCTs can be allowed to continue to thwart attempts to explore the broad range of issues and questions that characterize the world or we can begin to remake things in a manner that will genuinely support students and teachers to make sense of and act in these new, challenging times.

References


Factors Influencing The Employment Experience And Aspirations Of A Cohort Of Beginning Teachers: Two Years On

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Contemporary beginning teachers have a diverse mix of ages and prior experiences and many are seeking teaching work beyond their own state in a rapidly changing national and international market. The purpose of this longitudinal study is to investigate the employment experience and changing aspirations of a cohort of newly qualified teachers (NQTs) who entered the teaching workforce in 2003 in a ‘tight teaching labour market’. The case study commenced with a sample of 174 beginning teachers from a regional Australian university. The purpose of this paper is to report on their employment experiences two years on and changes in their contemporary and medium term aspirations. The paper initially explores the current employment status and professional roles held of the 40 beginning teachers who responded to the second survey. Changes occurred in the two years in their preferred employment aspirations and their realistic expectations for the type, sector and location of teaching work. The second survey identified mentoring and a variety of experiences as a casual teacher promoted their confidence and effectiveness as a teacher. Student growth and interest in learning, positive relationships with staff and community gave the most satisfaction. Finally the paper reports that family, travel and undertaking further qualification were the most influential factors on beginning teachers’ medium term professional aspirations.

Introduction
The purpose of this paper is to report the second phase of a descriptive inquiry into the contemporary and medium term employment experiences and aspirations of a cohort of recently qualified teachers. These beginning teachers entered the teaching workforce in 2003 following their final year in a teacher education program at a regional Australian university. The long term purpose of this research project is to track as many of this cohort as possible through their emerging career paths.

The factors influencing this cohort’s initial professional aspirations and preferred teaching placements as newly qualified teachers have been reported by Booth (2003 and 2004). A comparative study of this group with a cohort of beginning teachers from a UK PGCE program has been reported by Booth and Timson (2004).

Theoretical framework
Young (1995) reviews two of the competing theories for occupational selection which will help frame this paper. Holland's (1973) theory of careers suggests vocational and careers choices are made by individuals based on the fit between their perception of their personality and the job environment. This view contrasts with Ochsner and Solomon’s (1979) market-responsive model which suggests that individuals make occupational choices based on demand and the level of compensation. The analysis will explore the extent to which these theories are reflected in the reported changes over the first two years in the beginning teachers’ expectations.

Context: Is there a teacher shortage?
The demand and supply for primary and secondary teachers at both the international (Longsdale & Ingvarson, 2003), national and state levels has been an issue of ongoing debate. The Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA, 2001) and Kemp when the Federal Minister of Education have argued that a significant shortfall [of up to 30,000] in the numbers of teachers was likely as the "baby boomer teachers" commence to retire from 2006. Preston (1999 and 2003) contends the magnitude of this claim while acknowledging there will be shortfalls in particular subject specialisations, in rural and remote areas and in specific types of school. The patterns are complex and
vary by state and sector. Preston (2003) concludes there will be “a generally tight teaching labour market” (p. 41).

The unions have argued the case for increasing the attractiveness of teaching in a number of state based wage negotiations. The Conference of Education System Chief Executive Officers’ (CESCEO, 1998) draft study counters the ‘grim’ supply projections and report that nationally there was “sufficient supply for both primary and secondary teachers be available to meet the expected slight increase in demand for teachers over the period 1998 to 2001” (p. i). The report argues that the growth in demand will come in part from increased retention in the upper secondary, shortages in particular secondary specialisations [Mathematics & Sciences, IT, LOTE and PE], strong growth in non-government enrolments [often with reduced class size ratios] and some reduction in average class size in the early primary grades in all sectors.

A background paper by Ainley and Underwood (2003) in the recently released Committee for the Review of Teaching and Teacher Education identified several conclusions. Several are highlighted:

- There are a number of uncertainties involved in projections of both the supply and demand for teachers;
- The projected deficit in supply is much more an issue for secondary than primary schools;
- New and improved data collection and qualitative research is required;
- Policy directions need to take account of teacher mobility, changing career expectations and competition form other sectors;
- Teaching now has a global market, at least among English-speaking countries.(pp. 96–97)

**NSW teacher employment context**

The mid 1990s was characterized by an oversupply of primary teachers in NSW. There is some debate as to whether the suggested pool of over 15,000 teachers in 1997 (CESCEO, p. 36) working outside education or not employed were effectively available in the specialisations and areas where vacancies occur. However the 1998 report suggests that the labour market for primary teachers will continue to be in oversupply in NSW with some difficulties in recruiting for some remote locations. In secondary the projected shortages in TAS [Technology and Applied Studies] the Sciences and Mathematics have prompted the initiation of special programs. The decline in the availability of casual relief would appear to be the most pressing issue in NSW, despite recent initiatives.

Ramsey (2000) argues that while initial supply can be in part be predicted, projecting demand is much more difficult and sensitive to government policy decisions, population cycles, retention rates, overseas and interstate teaching and non-teaching employment opportunities and changing resignation rates of the aging teaching workforce. On balance Ramsey argues that the "supply is tightening" and all school sectors either by location for primary teachers or secondary specialisation are having difficulty in attracting quality teachers.

In Preston’s (2003) comprehensive analysis the teaching workforce she postulates the likely career experiences of three teacher cohorts. She argues the current beginning and early career cohort enter schools with marked age-bifurcation. These young beginning teachers have had very high net separation rates. This is both a local as well as an international concern (Bobek, 2002). In part these new teachers are seeking; alternative employment when positions were not available, travel, further study and women in their late 20s and early 30s are planning to have a family. This study explores in detail the recent employment experiences and aspirations of an early career cohort.

**Method**

Three sub-questions have framed the design and reporting of the second phase of the inquiry:

1. What is the current employment and educational status of the respondents?
2. Have preferred employment aspirations and their realistic expectations for the type, sector and location of teaching work changed over the two-year period since graduation?
3. Have there been changes in the factors influencing recently graduated teachers’ contemporary and medium term professional aspirations?

A descriptive design using a survey with a combination of closed and open-ended items was used in the initial and the current study. A pilot survey was developed from issues identified from practice, Young’s (1995) perspective and question ideas from the career aspirations section of a survey developed
the Yarrow et al. (1995) in a Queensland study of final year pre-service teachers. The draft survey was checked by a representative group of research colleagues and piloted with a small number of final year students to check the format and coherence. The initial survey was completed by 174 final year students from a Faculty of Education’s four pre-service programs.

The initial survey had a range of biographical and eleven employment and professional aspiration questions. The questions were framed in terms of “in the next 1 to 2 years” and “in 3 to 5 years” they’d prefer and expect to be located. Two open-ended questions asked the respondents to describe the “factors influencing their professional aspirations” and the more general “influences on their immediate and medium term plans”. The survey had an attached confidential and coded invitation to participate in a follow-up survey. All the data were collected in the final week of the students’ on-campus program in November 2002.

The second phase survey was of similar construction with the addition of questions that explored the beginning teachers work and study record, the roles they had in schools, the factors that had developed their confidence, effectiveness and satisfaction as well as the influences on their contemporary and medium term plans. The second survey was forwarded to 75 beginning teachers who had indicated a willingness to participate in a follow-up survey.

Table 1
Respondent numbers in 2002 and 2004 by program and gender

<table>
<thead>
<tr>
<th></th>
<th>Diploma in Education</th>
<th>Secondary PDHPE</th>
<th>Bachelor of Education (Primary)</th>
<th>Bachelor of Teaching Primary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>21</td>
<td>3</td>
<td>17</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>8</td>
<td>17</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>10</td>
<td>34</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>% of the 2002 program</td>
<td>30%</td>
<td>52%</td>
<td>50%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>% of the 2002 sample</td>
<td>16%</td>
<td>24%</td>
<td>32%</td>
<td>26%</td>
<td></td>
</tr>
</tbody>
</table>

The survey was sent both as a paper document and as an email attachment to their last know email and residential addresses. A pleasing response rate of 53 per cent [40] was achieved given informal knowledge that many of the cohort were travelling and teaching overseas, had moved from their last university address [return to sender responses] as well as the cohort having had their university email address withdrawn. The second phase of the study has 23 per cent [40] of the original 2002 NQTs cohort [Table 1]. The Dip Ed group were the least likely to respond [16%] while 32 per cent of the BEd group returned their survey.

Results

Current employment experience

Only one person responding in 2004 had secured work outside the education sector and had become a journalist. Seventy per cent of the group [28] had secured full time work in schools or a related education industry within two years of graduation. A much smaller proportion of the newly qualified teachers [17%] have continued to work either part-time or casually as teachers since graduation. The balance of the group [13%] who were not working had been travelling overseas [3], having a family [1] and one was undertaking full time tertiary study [with some part-time university teaching].

Those with full time jobs had held these positions from six months to two years. Seventy per cent were in NSW government schools and the others had positions in a mix of CEO [Catholic Education Office] and independent schools. Seventy three per cent had positions within the greater Sydney Metro or Illawarra areas, twenty per cent were elsewhere in NSW and one overseas.
While the majority of those with full time positions had been working as primary or secondary class teachers, over sixty per cent had been given enhanced responsibilities. Four reported that they had the role of a subject or grade co-ordinator, three had been mentor teachers and seven others had additional roles to their regular work in the class room.

The newly qualified teachers working casually or part-time reported that they had worked across all school systems as well as in disability services and outdoor education. Those who had identified as being overseas and/or travelling had all undertaken some supply teaching in the UK.

**Formal professional development**

Just under half of the group [45%] had commenced or had completed a new qualification in the two year period since graduation [Table 2].

**Table 2**

Newly qualified teachers undertaking a new qualification by program of study [n=40]

<table>
<thead>
<tr>
<th>Program of Study</th>
<th>DIPLOMA IN EDUCATION</th>
<th>SECONDARY PDHPE</th>
<th>BACHELOR OF EDUCATION (PRIMARY)</th>
<th>BACHELOR OF TEACHING PRIMARY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undertaking a new qualification %</td>
<td>30</td>
<td>13</td>
<td>50</td>
<td>75</td>
<td>45%</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

The most frequent professional development activity was the three year BTeach [primary] graduates upgrading to a four year qualification at their own university. The BEd teachers were active in undertaking Certificates of Religious and Gifted Education. Two of the three Dip Ed graduates were working on a Special Education Diploma at another university and one had completed a Master in Educational Leadership.

**Changes in preferred and realistic employment aspirations since graduation**

The reported separation increased from a projected loss of 15 per cent in the next one or two years 20 per cent in three to five years of this group of newly qualified teachers [Table 3].

**Table 3**

Newly qualified teachers’ employment aspirations in 2 and 3–5 years by program of study [n=40]

<table>
<thead>
<tr>
<th>Program of Study</th>
<th>TEACHING</th>
<th>NOT TEACHING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 Yrs</td>
<td>3–5 Yrs</td>
</tr>
<tr>
<td>Dip Ed</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>PDHPE</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>BEd</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>BTeach</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Total %</td>
<td>85%</td>
<td>80%</td>
</tr>
</tbody>
</table>

The four year trained primary teachers would appear from this quite small sample to be the least likely to leave the profession. Being a mother or caring for a child was the most frequently cited explanation. When asked if they would ‘not be teaching’ in the future the four equally cited responses were; starting a family, travelling, looking for another or more stable job and starting a business. When asked for their preferred teaching mode in 2004 there were some significant shifts from the 2002 preferences [Table 4]. In the next 2 years there was an aspiration to move away from casual teaching [19% to 3%] and part time [17% to 13%] toward full time [64% to 86%] by the female beginning teachers. For the male teachers their short term aspirations were more or less the same as their initial teaching aspirations [casual 20%, part time 10% and full time 70%].

In the 3 to 5 year horizon female teachers had a steady interest in casual [7%], a three fold increase in part time [7% to 20%] and a commensurate drop in full time work in the medium term [86% to 73%]. This corresponds with family and travel plans reported earlier. The male beginning teachers had no interest in casual work, increased interest by some in part time work [5% to 20%] and 80 per cent were
looking for full time teaching work in three the five years [Table 4].

Table 4
NQTs preferred teaching mode by gender [N=173 in 2002: n=40 in 2004]

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>CASUAL % 1–2 Yrs</th>
<th>PART-TIME % 1–2 Yrs</th>
<th>FULL TIME % 1–2 Yrs</th>
<th>CASUAL % 3–5 Yrs</th>
<th>PART-TIME % 3–5 Yrs</th>
<th>FULL TIME % 3–5 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>22</td>
<td>20</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>3</td>
<td>7</td>
<td>17</td>
<td>13</td>
<td>7</td>
</tr>
</tbody>
</table>

The pessimism that was reported by Booth (2003) in the initial employment expectations of this case study group has not changed over their first two years in the workforce. When the teachers were asked for their 'realistic expectations' two years on the data by their pre-service program is still very pessimistic for some groups. Half of the BTeach group and third of the Dip Ed group realistically reported they'd be still working casually in 3 to 5 years [Table 5] despite their preference to be part time, but preferably full time.

Table 5
NQTs realistically expected teaching opportunities by program of study [N=126 in 2002: n=40 in 2004]

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>CASUAL % 1–2 Yrs</th>
<th>PART-TIME % 1–2 Yrs</th>
<th>FULL TIME % 1–2 Yrs</th>
<th>CASUAL % 3–5 Yrs</th>
<th>PART-TIME % 3–5 Yrs</th>
<th>FULL TIME % 3–5 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dip Ed</td>
<td>53</td>
<td>30</td>
<td>28</td>
<td>30</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>PDHPE</td>
<td>7</td>
<td>38</td>
<td>11</td>
<td>0</td>
<td>58</td>
<td>13</td>
</tr>
<tr>
<td>B. Ed.</td>
<td>42</td>
<td>10</td>
<td>19</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>B. Teach.</td>
<td>66</td>
<td>42</td>
<td>21</td>
<td>50</td>
<td>14</td>
<td>0</td>
</tr>
</tbody>
</table>

Only 63 per cent of the secondary PE teachers reported any chance for full time work in the medium term, the balance [37%] would realistically have to accept part time employment if they stayed in teaching. The realistic opportunity for full time work by the initially three year trained primary teachers did not improve significantly in the 3 to 5 year horizon [50% to 58%].

Shifts in the level of teaching were identified in the two year period [Table 6]. There has been increased interest in secondary and tertiary. However the numbers are small and the changes may not be representative. Across the cohort there was a 10 per cent drop in interest to teach primary by the primary graduates and a move to work in secondary schools. Anecdotal evidence suggests that work in secondary language support has fitted well with the experience of some primary trained graduates.

Table 6
Level of teaching preference by gender in the next 2 years and 3–5 years in 2002 [N=150] and 2004 [n=40]

<table>
<thead>
<tr>
<th>PREFERRED LEVEL OF TEACHING</th>
<th>TOTAL % 2 Yrs</th>
<th>3–5 Yrs</th>
<th>MALES % [n=10] 2 Yrs</th>
<th>3–5 Yrs</th>
<th>FEMALES % [n=30] 2 Yrs</th>
<th>3–5 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>57</td>
<td>63</td>
<td>52</td>
<td>52</td>
<td>38</td>
<td>30</td>
</tr>
<tr>
<td>Secondary</td>
<td>35</td>
<td>24</td>
<td>37</td>
<td>33</td>
<td>51</td>
<td>70</td>
</tr>
<tr>
<td>Tertiary</td>
<td>7</td>
<td>3</td>
<td>9</td>
<td>15</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Preschool</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The medium term interest to work in the tertiary sector has come from students undertaking higher degree studies following an honours degree or a masters after completing their Dip Ed [Table 6]. A disproportionate number of male teachers have indicated a shift toward a tertiary career. Sector preferences remained steady for government schools both between 2002 and 2004 for both the initial and 3 to 5 year periods [average 45%]. There was a slight drop in the preference for an independent
school for the initial period [24% to 18%] however in both the initial and 3 to 5 year preferences for independent school was 18 per cent. Not concerned was 35 per cent for both time periods in the current responses. Currently the males in the case study cohort would opt 60 per cent for a government school and 40 per cent were not concerned. For the female teachers they had a steady preference pattern across the two time periods with 43 per cent government, 23 per cent independent and 34 per cent were not concerned about the type of school they could secure work.

Location preferences have become more focused toward NSW since their initial preferences were identified in 2002 [Table 7]. There has been a shift from local [total NSW] to overseas and unconcerned in the 3 to 5 year period by the current respondents. While the initial urge [19% to 23%] to go overseas in the 2002 data is not obviously repeated in the current figures (as few overseas based responses were received), many teachers identified on their survey that an overseas trip and teaching was "on the cards - depending". It "depends if the full time job comes up, other wise I'm (we're) off!"

Table 7
Preferred teaching location in 1–2 and 3–5 years in 2002 and 2004

<table>
<thead>
<tr>
<th>PREFERRED LOCATION</th>
<th>1–2 Yrs</th>
<th>2002</th>
<th>3–5 Yrs</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td></td>
<td>80</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Total NSW</td>
<td></td>
<td>70</td>
<td>57</td>
<td>78</td>
</tr>
<tr>
<td>Interstate</td>
<td></td>
<td>7</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Overseas</td>
<td></td>
<td>19</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Unconcerned</td>
<td></td>
<td>4</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

Male teachers reflected a more mobile preference profile. The male teachers were more likely (30%) to be planning an overseas teaching experience than the female teachers (6%). Males were more likely to consider a move interstate [20%] compared to the female teachers [3%] in the sample. Preferences for total NSW and unconcerned were more or less the same for males and female beginning teachers.

Changes in the factors influencing recently graduated teachers’ contemporary and medium term professional aspirations

The survey provided a rich opportunity to explore a cohort of beginning teachers’ initial profession induction and work as a teacher. A wide range of factors influenced their teaching and professional choices. Specifically the inquiry sought to explore the factors that developed confidence and their effectiveness as a teacher.

Family responsibilities was a central node in a complex balancing process which was reflected in the beginning teachers responses. The availability of a position in a location that allowed family responsibilities to be met was a major concern for many. Several indicated that they had declined a targeted job because it was more than 100 km away. "I accepted mobile teaching position as I wanted full-time work, this was a second best alternative."

The enjoyment of facilitating student learning, "seeing their progress over the whole year" was a central to the some and balanced the family, financial and travel concerns. Coupled with this dimension was their reported involvement in extra curricular activities (e.g. Rock Eisteddfod, sport) as well as the school community. Positive and supportive staff relationships allowed experience in others classrooms and "watching a variety of experience and other experiment". For many the professional learning continued both at school and through formal studies they undertook during their first two years of teaching.

Teacher confidence and effectiveness

Specifically the beginning teachers were asked to identify the factors that assisted the development of their confidence and effectiveness as a teacher. Having mentoring support from fellow teachers and colleagues was cited by 80 per cent of the teachers. Mentors who provided support and compliments were identified as school colleagues as well as from outside their school. The second ranked factor was the experience and practice from teaching at a variety of schools as a casual. This included teaching a variety of subjects and an opportunity for some trial and error— "one day risk taking."

In rank order the 3rd to 5th influences were; professional development activities and continuing study,
supportive and empowering leadership from the principal, executive teachers or supervisor, positive feedback from students and parents and equally working as a team member.

Aspects of the workplace that encouraged satisfaction
Over half of the teachers mentioned the development of their students. "Seeing them grow and develop and students who all of a sudden clicked." The next four areas in rank order were; positive relationships with students [43%], staff and community [28%], positive and enthusiastic student attitudes to learning [25%], collaboration with colleagues for shared resources and experiences [10%] and having a regular income [5%].

Five areas that gave the least satisfaction were each cited by a quarter of the respondents. The most frequently mentioned area was 'work expectations' followed by classroom management issues. "Negative school politics", "other lazy teacher attitudes" and "lack of decisive decision making by uninspiring leaders" were components of poor work relationships. Dealing with parents was the fifth most frequently mentioned source of low beginning teacher satisfaction [10%].

Influences on future plans
The teachers were asked to identify the immediate and medium term [3-5 years] influences on their plans. For the immediate time their personal and family situation was equal to travel and having an overseas experience [30%]. These two influences were followed in rank order by completing a higher qualification [20%], securing a more secure position and a consolidation of professional skills.

While personal and family situations [having a baby, husband retiring or relocating] continued as the top priority in the medium term [35%], it was followed by higher qualifications or retraining and travel. Personal interests [art and music], lifestyle choices and variety of work and non-work experiences as well as continuing to make a difference with students emerged as more or less equal [15%] by group.

While being an effective class teacher was the medium term goal of most of the beginning teachers, more than a quarter saw themselves in an executive role as a grade of subject coordinator, deputy and one a principal. Several mentioned being a teacher mentor.

Discussion
The substantial gaps between the beginning teachers' preferred employment status and what they actually expected both initially and after three to five years (Booth, 2003) has persisted after two years in the workforce. The sense of 'realistic pessimism' was greatest for women seeking part time and full time work both initially and after five years. The data from this small cohort suggests a separation rate of 20 per cent after five years. Travel and family continue to be the most significant reasons for leaving, perhaps temporally, the profession.

Teaching was seen as an international or global vocation in their combined professional and personal life. Teaching overseas continues to be an important aspiration for a third of the male teachers. The female teachers two years on are more concerned to secure a local part time or full time position that fits with family responsibilities and or their partners work location. A desire by primary teachers to change to secondary or tertiary has increased over time. From this data the likelihood of teacher supply projections for NSW schools suggested by Ramsey may require some downward revision.

Is teaching primarily a fit of personality factors to profession role as Holland suggests or the Ochsner & Solomon's market responsive career based theory? The factors influencing the beginning teachers' professional aspirations in this study continue to clearly reflected a desire to develop and contribute as a professional in a career that inspired others and has opportunities for travel and cross cultural experiences. Young's (1995) findings from her sample of elite beginning teachers in Californian were reflected in this study. Initially professional aspirations were clearly moderated by the economics of financial security, repaying loans, working in a desirable location were reflected in the three to five year period toward family/partner, location of teaching work and financial priorities. Enhancing their professional skills through further study and shared professional experience were important influences.

The development of competence as a teacher and confidence and a capacity to make a difference were enhanced by the mentoring and the diversity of casual teaching experiences that most had experienced in their first two years of teaching. While the frustrations of getting an appropriate job are still clearly evident, the level of beginning teacher negativity so powerfully reflected in studies by Leong (1999), Lang (1999) and McCormack (2001) were not evident in the early career phase of this cohort. While the accounts were essentially positive about their continued commitment to being a teacher, up to a quarter of these beginning teachers indicated that they are unlikely to be teaching in Australia.
References


Use Of Digital Professional Portfolios To Enhance Pre-Service Teachers' Meta-Abilities

Carolyn Broadbent
Australian Catholic University

Introduction
The effectiveness of teacher education courses to prepare pre-service teachers for learning environments of the future has been the focus of numerous reviews and inquiries (Parry & O'Brien, 2000). These, along with ongoing concerns within the profession, have provided the impetus for change to professional practice. New learning, it is argued, should be increasingly interdisciplinary, requiring deeper engagement with knowledge in all its complexity and ambiguity (Kalantzis & Cope, 2001, p. 3). Ever changing environments require individuals who are 'able to navigate change and diversity, learn as they go, solve problems, collaborate, and be flexible and creative (ibid, p. 3). These changes are reflected in terms such as 'the knowledge society'... 'the high-tech economy'... 'the twenty-first century economy'... 'a culture of lifelong learning' (Kalantzis & Harvey, 2003, p. 24). Within this context, education, both formal and informal, provides the key for individuals to manage their future professional and personal development. At the heart of this process is a valuing of the concept of lifelong learning.

This increased emphasis on learning, including the information and communication technologies, and new conceptualisations of curricula and pedagogical practice (Beare, 2001; Gale & Densmore, 2003) have contributed to the re-design of pre-service teachers' courses and the way in which pre-service teacher educators conceptualise their role in the teaching, learning, and assessment components of their units. The challenge is to create learning environments that provide pre-service teachers with opportunities to become autonomous learners who are able to think critically, be open-minded, and capable of assuming an active role in the formation of their local and global learning communities (Bourner, Katz, & Watson, 2000; Latchem & Hanna, 2001; Broadbent, 2003; Hickling-Hudson & Ferreira, 2004). If pre-service teachers are to become dynamic leaders of schools of the 21st Century (Cumming & McCulla, 2000), they must develop the capacity to be creative (Jackson, 2003) in order to construct alternative visions of teaching and learning (Fullan, 2003).

Meta-abilities
To facilitate such action within complex environments, Butcher, Harvey and Atkinson (1997) argue for the flexible and appropriate use of knowledge and skills that are enabled through fundamental, generic competencies, or 'meta-abilities'. They define a meta-ability as 'an underlying learned ability' (p. 1), which assumes an important role in facilitating the effective use of a wide range of knowledge and skills. Cognitive skills, self-knowledge, emotional resilience, and personal drive are regarded as meta-abilities...
highly relevant to individuals involved in the management of others. The specific characteristics for each meta-ability are as follows:

<table>
<thead>
<tr>
<th>Meta-abilities</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive skills</td>
<td>Cognitive complexity and flexibility, visionary ability, gaining clarity, and perceptual acuity</td>
</tr>
<tr>
<td>Self-knowledge</td>
<td>Self-understanding and awareness, which allows individuals to deal flexibly with diverse and complex situations</td>
</tr>
<tr>
<td>Emotional resilience</td>
<td>Exerting self-control and discipline; managing emotions appropriately, having personal resilience and a balanced self-view</td>
</tr>
<tr>
<td>Personal drive</td>
<td>Having a personal achievement orientation and ambition for responsibility, being able to motivate self and others, and taking personal risks (adapted from Butcher, Harvey and Atkinson (1997, p. 1))</td>
</tr>
</tbody>
</table>

These meta-abilities appear particularly relevant to pre-service teachers who, on completion of their course, will be expected to effectively manage a classroom, while also contributing to the development of the school community involving students, staff, parents and other community members.

Strengthening meta-abilities requires a process of personal transition, 'which can include painful and confusing phases before clarity, confidence, and new skills are achieved' (ibid, p. 2). This process 'necessitates sufficient challenge through which self-insights are gained, and old habits 'unlearned' (ibid, p. 2). The integration of knowledge and skills emanates from a process built on personal performance, social learning and skillful tutorship. Such development, it is argued, enables individuals to operate more effectively in complex environments that are 'hot logical, controllable or clear' (p. 2).

Professional Portfolios
Professional Portfolios have increasingly been used within teacher education to measure professional growth and development, to assess specific learning, and to provide opportunities for self-directed learning (Barton & Collins, 1993; Loughran & Corrigan, 1995; Lyons, 1998; Shulman, 1998; Reid & Frid, 2000). As Reid and Frid (2001, p. 1) highlight, ‘the use of Professional Portfolios in teacher education has great potential for promoting education change in: university teaching and assessment practices; the content and processes of teacher education curricula and school experience; and conceptions of what it means as a teacher to be ‘professional’. Professional Portfolios allow both teachers and pre-service teachers to demonstrate their understanding of professional issues associated with effective teaching and learning, and support this with documentary evidence. Compilation of a Professional Portfolio, including digital portfolios, can effectively capture the individual's teaching style, philosophy, and accomplishments, which can then be made accessible to others. This is particularly relevant to pre-service teachers as they prepare to enter the profession through participation in employment interviews and other career related activities.

The research study
The research reported in this paper adopts a qualitative approach towards the analysis of pre-service teachers' reflections of their learning after compilation of their Digital Professional Portfolios (DPPs) for assessment in the core B.Ed unit Studies of Society and Environment (SOSE). A major aim of the research was to ascertain if the introduction of Digital Professional Portfolios (DPPs) proved beneficial in terms of developing pre-service teachers' meta-abilities. Fictional names have been created to protect the anonymity of the pre-service teachers.

Context
Pre-service teachers undertake the core B.Ed unit Studies of Society and Environment (SOSE) in the first semester of their third year of a Bachelor of Education (Primary) degree. For the past two years, pre-service teachers have been required to compile a Digital Professional Portfolio as a major component of the unit assessment. Development of a DPP is aimed at encouraging pre-service teachers to take responsibility for their own learning and become deeply engaged in the learning process. While the DPP is SOSE specific, the ideal is that pre-service teachers will create links between SOSE and other B.Ed units, and especially to their experiences when participating in the Professional Practice Program.
A structural framework comprising Aims, Getting Started, and Setting up your DPP was provided to facilitate the developmental process. The unit text by Gilbert, R. (2001) Studying society and environment: A guide for teachers. 2nd ed., NSW, Australia: Social Science Press, proved useful in the planning and writing process.

**Aims**
The DPP aimed to assist pre-service teachers to develop knowledge, skills and strategies for teaching and learning, while encouraging reflection on professional practice and personal development. More specifically, the DPP encouraged pre-service teachers to:

- express their personal vision of teaching and learning as it applies to SOSE;
- develop professional goals and professional development plans that enable the documentation of progress in achieving these goals;
- interact with peers and share ideas through the WebCT online discussion facility;
- reflect on their learning;
- form links within and across units within the B.Ed; and
- develop a collection of resources and artefacts relevant to professional practice.

**Getting started**
Pre-service teachers were asked to study the unit text Gilbert, R. (2001). Chapter 6: Language and information and communications technologies in SOSE as preparation for the development of their DPPs. The sections related to the World Wide Web, information sites, global education and professional development were particularly relevant to the DPP task.

**Setting up the digital professional portfolio**
The pre-service teachers were encouraged to select from a variety of forms (PowerPoint, Frontpage, html, Macromedia Dream Weaver, MS Word), using text, graphics and photographs for the development of their DPP. The DPP was submitted in CDrom format with a back-up hard copy included as well to counter any technology-related difficulties. The DPP comprised three separate sections. The first section required pre-service teachers to articulate their vision of teaching and learning, identify the pedagogies they would choose to teach SOSE and then provide a rationale for selection. They were also required to identify what forms of knowledge, strategies, and skills a beginning teacher might need to be an effective teacher of SOSE. Finally, pre-service teachers were required to identify and discuss the main challenges facing them as a new teacher of SOSE, including how they might deal with those challenges.

The second section required pre-service teachers to design a Professional Development Plan (PDP) focused on a specific area of interest relevant to SOSE; for example, Rainforests, Australian Heroes, the Environment. In developing the PDP, pre-service teachers were asked to include: a set of essential focus questions related to the area of interest; a set of professional goals; an Action plan and timeline to achieve the professional goals; a list of people who might assist in professional development process, such as teachers and community experts; an outline of planned observations, such as visits to schools; and strategies to assess and evaluate the PDP. Finally, pre-service teachers were asked to reflect on their learning process. A graphic organizer of SOSE-related resources and teaching materials, such as texts, videos, community resources, cultural centres, stories, and classroom activities formed the third section of the DPP.

**Online discussion**
In parallel to the development of the DPP, pre-service teachers were required to engage in asynchronous online discussions with their peers about issues and ideas related to the SOSE unit content. All responses were posted on the SOSE WebCT Discussion Board. As a beginning, pre-service teachers were encouraged to refer to the Preparation Questions included in the weekly outline of the unit booklet. A minimum of 5 postings was expected from each person. Refer Broadbent, Boyle and McLoughlin (2004) for an examination of pre-service teachers' asynchronous online discussions.

**Results and discussion**
Pre-service teachers regarded the development of a Digital Professional Portfolio as a worthwhile pursuit, and perceived the task as especially relevant to their future work in the classroom. Linda's comments highlight her personal drive to become an effective teacher and commitment to her future profession:
Having developed this portfolio allows me to have a hardcopy of the thing I believe in and desire to be. I am now able to use this as a stepping-stone into my career to ensure that I become all that I can be. (Linda)

Although pre-service teachers believed the development of a DPP encompassed an enormous amount of work, they all still regarded the task as preferable to an examination. The high quality of the DPPs submitted for assessment provided a clear indication of pre-service teachers' level of engagement during the learning process, and their ability to form relationships between and within other academic units and professional practice. Sarah's reflections on her learning while completing the DPP highlight the nature of the learning process and the range of emotions she experienced and managed while completing the task:

Creating this professional portfolio has involved considerable effort, time, assessment of information, reflection, frustration, achievement and personal growth. In constructing this portfolio I have learnt a lot about myself, information required, assessing useful information, surfing the Internet and organisation of information. (Melissa)

The structure of the Professional Development Plan (PDP) (Section 2) challenged pre-service teachers to take responsibility for and chart a pathway for their own professional learning and development. This required goal setting, identification of assessment and evaluation techniques, and the ability to create links between the local and global learning communities to access information, expertise, and resources. The following reflections provide evidence of pre-service teachers' growing awareness of themselves as learners and a deepening understanding of the nature of the learning process, for example:

The way this development is laid out makes it easier to glide through the process. In taking these steps I am able to decide on a topic, what I want to know about this topic, how I am going to go about finding out more information and a plan of attack. The plan of attack is the crucial aspect of the process. Rather than thinking about doing it, we actually do it; we set goals and we achieve them. This is how all plans should be set out, easy to follow and including everything. (Colin)

As I carry out my action plan and timeline, I will constantly be evaluating my progress to ensure I am getting the most out of the experience. I think that after new experiences, I need to reflect on what I have learnt and how I can further gain from these experiences. This will help me to become more aware of my strengths and weaknesses and work harder in the areas needed. It is important that I keep updating and reflecting on my portfolio; recording these reflections in a journal would be beneficial as I could look back and see how I have grown and developed in particular areas such as professional development. (Sally)

Further support for the development of pre-service meta-abilities, especially in relation to the development of self-knowledge, is evident in the comments of Melissa, Robert and Jane, who identify the development of new skills and greater self-understanding as positives in the learning process:

In relation to myself I discovered that I have a tendency to procrastinate and waste time surfing the Internet endeavouring to find the "right" information in relation to a topic. This can be a benefit in some respects especially when you know that the information you have finally found is valuable for the teaching and learning experience, but on the other hand it can be an ineffective way of gathering information. This portfolio strengthened not only my organisational skills but also my computer literacy. (Melissa)

This task has been quite a learning curve for me in terms of time management and organisational skills. There was no option, I simply had to use my time effectively due to the mammoth task that this Professional Portfolio is. (Robert)

I have worked long and hard on this portfolio and I am very happy with the final result. Having to complete this assignment has enabled me to take a look at myself as an undergraduate or even beginning teacher and understand the different and various aspects of teaching that I need to concentrate on to ensure that I fulfil all of my goals. (Jane)

The reflections provided by Robert and Josephine highlight the value of the task in terms of developing pre-service teachers' ability to devise new ways of thinking about their professional learning process and future contribution to the profession:
This process has allowed for me to prepare for a unit that I am passionate about and familiar with. Having visited the Daintree Rainforest on several occasions I can share with the class my experiences of the surrounding areas. (Robert)

I found the teaching reflection the most beneficial part of this assessment because the questions were broad and allowed for a variety of answers and deep exploration on my behalf. The visions and strategies I came up with in this part will form the basis of my development as a teacher but will change and grow with me as my ideas and values change with the more knowledge and experience I gain. It will be an interesting exercise to compare my thoughts when I become a teacher and then again five years after that against my current visions and ideas. (Josephine)

Rod's reflective comments provide insight into his thinking, especially the perceived need for ongoing change and refinement of ideas and philosophies as an important part of professional learning. He articulates well the challenges he faces in regards to his future responsibilities and professional development while also highlighting his commitment to becoming an effective teacher educator of the future:

It is all well and good for us to say, "Well I have compiled my professional development portfolio. Now I will just sit back and watch everything come together. Unfortunately it does not work that way. The process of developing a PDP required at least a small sense of commitment to following the plan. It is a useful process for reflecting and developing your ideas and philosophies about teaching in a concrete way.

Being set up digitally makes the PDP easy to change and adapt as your ideas and philosophies about teaching and SOSE change.

Developing a set of goals for future development has also been a hugely beneficial activity. Without some kind of focus for where and how you want to grow it is easy to get caught in doing things the same way without even considering whether there may be a new and better way.

It has also helped me cement my ideas and philosophies on teaching. I believe this is really important. As the old saying goes, "If you don't stand for something, you will fall for anything." We need to know what strategies and philosophies we believe in so that we can critique new ideas critically and not get swept along in an almost useless fad. (Rod)

Conclusion

This paper has reported on the learning outcomes resulting from pre-service teachers' participation in the development of Digital Professional Portfolios in the B.Ed SOSE curriculum unit. Overall, pre-service teachers expressed a high level of satisfaction with, and a clear sense of ownership of, the task, which had resulted in many now feeling more competent to teach SOSE in the classroom. Pre-service teachers' ability to form links across other academic and professional areas of the B.Ed course was evident in many of the comments and specific sections of the portfolio, while others highlighted their ability to manage time more effectively to achieve substantial outcomes. From a tentative analysis of pre-service teachers' reflections, there appears sufficient evidence to suggest the use of Digital Professional Portfolios encourages pre-service teachers to think logically, flexibly and creatively, to manage knowledge effectively, and to evaluate their own thinking processes through the use of meta-cognitive strategies. Through opportunities to become self-directed learners, pre-service teachers are challenged to think and rethink their beliefs, attitudes, and values through interrogation of their newly acquired knowledge and understandings in relation to their developing understandings of their future profession. Their reflections also articulate a growing confidence in their own developing abilities.

References


What You Need To Know About ICT In Schools: Why We Need More Critical Debate

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This paper asks some searching questions about the forces behind the current drive to infuse information and communication technology (ICT) in schools. It locates the current ICT-related school reform movement in the backdrop of growing international debate and illustrates through discourse analysis why teachers and teacher educators need to engage in a deeper level of critical dialogue over the move to plug schools into the so-called knowledge economy. The objective is to raise awareness of the hidden curriculum and non-educational intentions enmeshed within recent efforts to transform schooling through ICT and the so-called new ways of learning. Overall, the ICT movement is shown to be highly problematic and may be steering the teaching profession further away from the real goals of education.

Introduction

The intention of this paper is to challenge some of the taken-for-granted assumptions about the use of information and communication technology (ICT) in schools. In this context, the term ICT refers to the latest wave of policy initiatives that promote the adoption and implementation of new educational technologies for learning and teaching purposes. By telling tales out of school, the paper attempts to raise awareness of false consciousness and show how the current drive to wire Australian and New Zealand teachers is highly problematic. It is far more problematic than is evident in most professional magazines, education conferences, and state and national policy briefs, which typically celebrate the benefits of new computer technology in schools.

There are three parts to the paper. In the first section, the growth of ICT in schools is located in the backdrop of wider academic debate surrounding the role of new computer technology in education. This debate must be taken seriously in the face of several high profile attacks on the use of computers in schools. The second part of the paper illustrates how the ICT-related school reform movement has been dominated by celebratory discourses. It shows how the Australian and New Zealand policy discourse lacks critique and the overselling of ICT has been at the expense of deeper intellectual debate over the way in which new educational technologies may affect teachers' lives and work culture— for better and worse. In the final section, the paper goes beyond the current orthodoxy of optimism (Selwyn & Gorard, 2002) by asking some searching questions about the level of investment in ICT in schools. This section calculates the dollar value of the investment in new computer technology and raises some important questions about the real costs of the current ICT-related school reform movement.

The paper walks a narrow path. On the one hand, it is highly critical of the hidden curriculum and non-educational intentions behind the growth of ICT in schools. At the same time, concerns raised about the ICT movement should not be construed as further ammunition for a neo-conservative backlash. The position advanced is not neo-conservative. In a similar vein, there is a danger that concerns about the growth of ICT in education will be misappropriated to feed a new moral panic. It is not the intention of this paper to lend support to some of the unsubstantiated fears about the so-called dark side of technology. On the other hand, the points raised in this critique are often dismissed in the literature by techno-advocates as nothing more than a neo-Luddite response to technological progress. The views expressed here do not stem from neo-Luddism as the author was New Zealand's first Apple Distinguished Educator. Thus, the paper attempts to avoid the pedagogy of the depressed but promote the language of possibility— albeit from a more critical perspective. In this sense, the paper goes beyond a simple dichotomy of illusory hype verse pessimistic Armageddon (Abbott, 2001) as ICT is neither demon nor panacea. Such binary positions underestimate the complexity of the digital landscape.
The main objective is to bring into question some of the basic assumptions about why ICT is so important within Australian and New Zealand schools. In meeting this objective, the paper offers a more realistic perspective not so skewed by the hyperbole associated with new computer technology. This perspective is informed by a type of critical realism that locates ICT within the bigger picture of educational reform (Brown, 2003). The paper adopts the view that more talk and critique is required before blind faith in the potential of the ICT cloaked in the language of new ways of e-learning steers the teaching profession further away from the time-honored goals of education—that is, promoting equality, fairness and social justice.

The technology debate
There is no doubt that ICT is one of the most spectacular technological developments of the last century. A new digital revolution is underway that hi-tech proponents proclaim is poised to transform our classrooms. As Bill Gates (1995) once pronounced:

We stand at the brink of another revolution. This one will involve unprecedentedly inexpensive communication; all the computers will join together to communicate with us and for us. Interconnected globally, they will form a network, which is being called the information highway (pp. 3–4).

In all of its manifestations, the Information Highway is part of a new epoch of human civilization. It has huge implications for schools and enormous potential as a pedagogical innovation. This is without dispute. However, this revolution is far more problematic than is typically acknowledged by the proponents of the so-called Digital Age. The words of C.P. Snow (1971; cited in Owen, 2005) spring to mind, ‘Technology... is a queer thing. It brings you great gifts with one hand, and it stabs you in the back with the other’. In Postman’s (1993) terms, ‘every technology is both a burden and a blessing; not either-or, but this-and-that’ (p. 5). Rosen (1998) goes further by reminding us that ‘every great transformation leaves social debris in its wake’ (p. 37).

Thus, it is not surprising there has been a steady rise in the number of people and publications beginning to question the wisdom of the substantial investment in new computer technology. One of early critics, Armstrong and Casement (1998), claim that it is scandalous so much money has been allocated for computers and Internet access with so little serious evaluation. In their view:

A generation of children have become the unwitting participants in what can only be described as a huge social experiment (Armstrong & Casement, 1998, p. 2).

They went on to observe that our insatiable appetite for new computer technology is such that one would think nothing else worthwhile is happening in schools. Although no empirical evidence was offered to support this conclusion, Armstrong and Casement (1998) believe some basic questions about the educational value of computers remain unanswered. In their words, we suffer from “illusions of progress”.

In 1997, the level of public concern over the ICT movement was heightened originally when the Atlantic Monthly attacked the spurious evidence supporting the “computer delusion” in schools (Oppenheimer, 1997). After a thorough investigation of the literature Oppenheimer (1997) concluded:

There is no good evidence that most uses of computers significantly improve teaching and learning (p. 45).

While there is a grain of truth in this conclusion, it exaggerates the evidence in the opposite direction (Reeves, 1998). Such a blanket statement gives insufficient attention to the instructional context, as the computer is not a monolithic machine that teachers use in a uniform manner. Put bluntly, most teachers and teacher educators know it is technocentric to think that ICT alone can significantly improve learning. This is a vital point Oppenheimer (1997) fails to acknowledge in his critique.

What he also fails to acknowledge is ‘that such pedagogical enhancements would often be impossible without the capabilities of new technology’ (Reeves, 1998, p. 52). Therefore, Oppenheimer’s infamous attack on the use of computers in schools contains some serious flaws. Despite these, the computer delusion article helped to fuel a growing neo conservative backlash against the use of new computer technology in schools, which has gained renewed momentum since publication of The Flickering Mind: The False Promise of Technology in the Classroom and how Learning can be Saved (Oppenheimer, 2003).

Although the tendency is to dismiss these attacks as uniformed and poorly researched analyses of the ICT-related school reform movement, such publications contribute greatly to further critical analysis. The Flickering Mind was a timely reminder of the need for teachers to continually question and justify the faith they place in new computer technology. In this regard, attacks on the use of computers in schools offer teachers a rich source of critical reflection. They should not be dismissed out of hand; Oppenheimer (2003) helps to bring the spotlight on the fragility of the pedagogical rationale and the serious flaws of the
social, economic and vocational rationales, which together combine to form the language of persuasion championing the educational use of technology.

In terms of the pedagogical rationale, Oppenheimer (2003) ably supported by Cuban (2001), Ferneding (2003), Selwyn (2002), and so on, have raised serious questions about the overselling of new computer technology. These so-called critics have brought attention on an alternative body of literature claiming that computer use may be detrimental to our brains, bodies and spirits (Healy, 1998). This type of analysis, which lacks solid research evidence, is supported by Stoll (1999) who argues that computers send the wrong message by making learning appear colourful and fun when it actually requires hard work and discipline. On the surface, this observation may resonate well with some parents and teachers but there is an element of a new moral panic embedded in this recall to the protestant work ethic.

A similar reactionary response to the appeal of new computer technology is evident in the controversial Fool’s Gold report on the use of ICT in early childhood education. Cordes and Miller (2000) claim ‘The computer—like the TV—can be a mesmerizing babysitter’ (p. 3). They go to say that:

Those who place their faith in technology to solve the problems of education should look more deeply into the needs of children. The renewal of education requires personal attention to students from good teachers and active parents, strongly supported by their communities. It requires commitment to developmentally appropriate education and attention to the full range of children’s real low-tech needs—physical, emotional, and social, as well as cognitive (Cordes & Miller, 2000, p. 4).

Once again, there is an element of truth in this claim but what the authors fail to acknowledge is that teachers can use ICT to enhance the holistic education of their students (Abbot, Lachs & Williams, 2001). Thus, the Fool’s Gold report largely ignores the importance of the context of computer use. This oversight is repeated to a lesser extent in last year’s follow up Tech Tonic report (Alliance for Childhood, 2004) which claims ‘there is scant evidence of long-term benefits—and growing indicators of harm—from the high-tech life style’ aggressively promoted by business and government (p. 1). Although this report contains some salient lessons for policy-makers, ironically many of these critiques of ICT are guilty of assigning too much attention to the technology itself, which is exactly what they accuse the proponents of the digital revolution of doing.

In spite of this criticism, on another front, Oppenheimer (1997) and company remind us that it is extremely shortsighted to focus on today’s idea of what tomorrow’s jobs will be. Stoll (1999) takes the critique of the vocational rationale—a growing proportion of the workforce will require computer skills—one step further by illustrating how the adoption of new computer technology has resulted in the deskilling of many jobs. Arguably, most so-called “hi tech jobs” involve little more than passing a tin of baked beans over a bar code scanner in the supermarket. Far from being skilled technicians, Armstrong and Casement (1998) claim that the vast majority of computer operators are nothing more than typists doing mundane repetitive work. This line of argument requires further empirical analysis but it suggests that the Information Highway has created the demand for a large technical class that is highly trained to do “mind-numbingly boring” work (Roberts, 1998; cited in Healy, 1998).

While ICT is a powerful icon of the new knowledge economy, Kirkpatrick and Cuban (1998) question whether the use of computers in schools will help create the type of critically informed students and citizens we seek. They point out that schools are not simply agents of social and cultural reproduction where future workers learn how to earn. Put another way, the digital curriculum may be preparing students to make a living, rather than educating young minds to make a life that will contribute to creating a better society (Postman 1996). In a powerful analogy, Postman (1996) draws a parallel between the computer and the invention of the motor vehicle:

What we needed to know about cars—as we need to know about computers, television, and other important technologies—is not how to use them but how they use us (p. 44).

Postman (1996) writes what we really needed to think about when the motor vehicle was first invented was not how to drive them but what they would potentially do to ‘... our air, our landscape, our social relations, our family life, and our cities’ (p. 44). This analogy strikes at the heart of the debate surrounding the uncritical adoption of new computer technology in schools. It shows that the car is not simply an internal combustion engine with seats in a steel casing on wheels (Henwood, et al., 2000). Indeed, whether people own cars at all, and if they do, their ages, makes, and colours all provide meaning for them and others about who they are and what they value. The lesson is that ICT, just like the motor vehicle, is an inherently value-laden cultural artifact that must be understood as a social process.
In spite of this, the metaphor of the computer as neutral learning tool is widespread throughout the teaching profession. As Moss (2002) writes in a publication distributed by the New Zealand primary teachers' union:

"ICT is just another tool. You choose the best tools for the job—it might be the telephone, the Internet or a library book. If you get into that frame of thinking and your students have that frame of thinking, it is much easier to integrate ICT across the curriculum (p. 3)."

This conception of ICT reflects a form of social or cultural determinism in which the way the tool is used is far more important than the tool itself (Ferneding, 2003). There is no conception of the tool as having an effect—both good, bad and unknown—over and above how teachers use it. As Burbles and Callister (2000) write:

"Tools do not only help us accomplish (given) purposes; they may create new purposes, new ends, that were never considered before the tools made them possible. In these and other ways tools change the user: sometimes quite concretely, as when the shape of stone tools became a factor in the evolution of the human hand (...). Tools may have certain intended uses and purposes, but they frequently acquire new, unexpected uses and have new, unexpected effects. What this suggests is that we never simply use tools, without the tools also "using" us (p. 6)."

It follows that the conception of technology as progress, the second dominant metaphor in the ICT literature, has also been challenged seriously in the context of the above debate. Those critics who adopt an extreme position warn that the computer has become the new God and it has all the features of a dangerous cult (Postman, 1996). Roszak (1994) first drew this parallel over a decade ago when he wrote:

"Like all cults, this one has the intention of enlisting mindless allegiance and acquiescence. People who have no clear idea of what they mean by information, or why they should want so much of it, are nonetheless prepared to believe that we live in the Information Age, which makes every computer around us what the relics of the True Cross were in the Age of Faith: emblems of salvation (p. x)."

In sum, there is considerable debate in the international literature over the rise and the rise of computers in schools. There are serious concerns and well-articulated arguments both for and against the ICT-related school reform movement. In the backdrop of this debate, irrespective of one's position, the growth of ICT is contestable and must be viewed by teachers, teacher educators and policy-makers as problematic.

**Lack of debate**

This section shifts the technology debate to the Australian and New Zealand context. In light of the above debate, the paper explores the following question: How is the contested and problematic nature of ICT reflected in the Australian and New Zealand policy discourse? More straightforwardly, how does this debate manifest itself within state and national ICT policy initiatives?

Beginning with New Zealand, a closer look at Digital Horizons, the national ICT strategy for schools, reveals the uncritical acceptance and cultivation of the tool metaphor. In Digital Horizons The Honorable Trevor Mallard, Minister of Education writes:

"The Government has been quick to seize on the importance and practical benefits of digital technology as a key tool for 21st century teaching and learning (Ministry of Education, 2003, p. 2)."

In keeping with the pragmatism of Third Way politics, there is no acknowledgment of the non-neutrality of new computer technology. The potential negative and unanticipated effects of ICT receive no consideration in this strategy. Thus, politicians and policy-makers have actively promoted the metaphor of computer as tool by treating the growth of ICT as unproblematic. For example, it is highly misleading in the 2002-2004 iteration of the national ICT Strategy to read:

"The expansion of ICT is driving significant changes in many aspects of endeavour throughout the world (Ministry of Education, 2003, p. 6)."

Such technological determinism conveys a sense of inevitability that as technology changes so society follows. While the technology is having a dramatic effect, this type of statement ignores the powerful external forces that are at least partly behind the drive to equip students and workers with new types of digital literacy. The growth of ICT is not on an independent trajectory (Clegg, Hudson & Steel, 2003), as it is intertwined deeply with the globalization movement, the rise of neo-liberalism, the celebration of technology consumption, and ecologically destructive cultural patterns (Bowers, 2000). Put bluntly, the expansion of ICT in the context of these global forces is potentially brutal and socially destructive.

Yet, the New Zealand policy discourse continues to treat ICT as unproblematic. In last year's Schooling Strategy Discussion Document, teachers were told that:
To "future-proof" schooling, the government is currently committed to... continuing to support teachers, school leaders and boards of trustees to realise the learning opportunities presented by new technologies, through the ICT Strategy (Ministry of Education, 2004, p. 25).

One could equally argue that the concept of future-proofing in the context of ICT is an oxymoron. After all, you only have to look at the relatively short life of these ICT strategies. The problem is that politicians and policy-makers are presenting the adoption of ICT as one of the solutions to future proofing when technology consumption is a major barrier to long-term sustainability. Notably, the concept of sustainable education is conspicuous by its absence in the latest schooling strategy. The more people utilize new computer technology, arguably, and the more enmeshed New Zealand becomes in the global economy, the more dependent it becomes on changes to technology and the more vulnerable the nation becomes to global forces and threats.

There is no reference, nevertheless, to these concerns in the latest Digital Strategy (New Zealand Government, 2005) that aims to build further momentum in ICT to create a prosperous future for all New Zealanders. Rather than problematise the ICT movement, this pan sector initiative jointly written by a number of government departments states:

The Digital Strategy is about how we will create a digital future for all New Zealanders, using the power of information and communication technology (ICT) to enhance all aspects of our lives. In the digital future lots of things will change for the better (New Zealand Government, 2005, p. 4).

Although this vision acknowledges the need for all New Zealanders to enjoy the benefits of a digital future, there is an overly strong dose of techno-opportunism in the discourse of persuasion. Moreover, the strategy forecloses on a number of alternative futures by ignoring the way in which some technologies inhibit as well as enable progress toward the elusive goal of the Knowledge Society. So, the question is whose vision or conception of the future is promoted through the current New Zealand policy language?

In Australia, this question is more difficult to answer as policy operates at the national, state and territory level. At the national level, however, a shared vision exists that in theory complements rather than competes with the outlook of state systems. In March 2000, building on the Adelaide Declaration, the Ministerial Council for Employment, Education, Training and Youth Affairs (MCEETYA) endorsed Learning in an Online World (Schools Advisory Group, 2000). This policy framework states that:

All students will leave school as 'confident, creative and productive users of new technologies, including information and communication technologies, and understand the impact of those technologies on society' (Schools Advisory Group, 2000, p. 3).

In contrast to New Zealand, there is greater recognition of the need for students to understand how ICT might affect society—one assumes for better and worse. That said, the subtitle of this policy initiative—School Education Action Plan for the Information Economy—does not encourage students to go beyond 'understanding' by adopting a course of action that might build a more socially just future and very different type of global economy than the troubled one that exists today. The failure to reconceptualise the curriculum in this manner is evident in the Progress Report (MCEETYA, 2004) noted in the recent minutes of the meeting of the ICT in Schools Taskforce (2005, May). In short, Learning in an Online World appears to promote the goal of active participation in the Knowledge Economy rather than critical education for citizenship.

Of course, the new Pedagogy Strategy (MCEETYA, 2005) is the latest iteration of national policy aimed at providing strategic principles and an agreed framework for developing innovative pedagogies that exploit the opportunities made available through learning in an online world. The Strategy claims to provide an overview for both Australia and New Zealand of the professional support and leadership required to ensure teachers develop their confidence and capability to exercise professional judgement in utilising ICT to create new learning possibilities for students. While the adoption of the term 'pedagogy' reflects a significant shift of emphasis, the use of this phrase is disconnected from its rich critical tradition. For example, the Strategy states:

Pedagogies that integrate information and communication technologies can engage students in ways not previously possible, enhance achievement, create new learning possibilities and extend interaction with local and global communities (MCEETYA, 2005, p. 2).

This last point requires closer analysis. There is a fundamental tension in interactions between local and global communities as the ability to retain a strong sense of local identity and culture is problematic in the face of globalization. No community is neutral. The reason people oppose globalization is that a predicted outcome is the loss of nation-state sovereignty, the erosion of local autonomy, and a weakening
of the definition of the "citizen" as a unifying concept characterized by precise roles, rights, and obligations (Olssen, Codd, & O'Neill, 2004). Indeed, the Pedagogy Strategy is a fine example of the new 'global policyscape' (Selwyn, 2004) as this top down bi-lateral initiative has had little input from rank-and-file teachers. This raises the problem of alignment with local needs and illustrates how the policy formation process is not an educational process involving deeper ethical, moral and political questions.

At the State level, this apolitical conception of pedagogy is evident in most ICT-related government policy documents. In pedagogical terms, there is little or no appreciation of how ICT is the digital lubricant of the globalization movement. For example, in Queensland the recent School Information Kit 2004-2005 entitled ICTs for Learning (Education Queensland, 2004) continues to promote the neutral learning tool metaphor. The Honorable Anna Bligh, Minister of Education, writes:

This is a three-year transition strategy to support teachers and schools in creating the conditions where information and communication technologies (ICTs) are integrated as everyday tools for learning and delivering curriculum (Education Queensland, 2004, p. 4).

In sum, to answer the original question—how is the problematic nature of ICT reflected in the Australian and New Zealand policy discourse—largely there is no acknowledgement. The key point is that most politicians and policy-makers are enamored with the seductive appeal of what ICT can do for us (Nash & Moroz, 1997) and they give little or no attention to the unknown and potential negative effects of what new computer technology might do to us. The overriding impression is that teachers should be embracing ICT rather than thinking about the way in which the new pedagogy acts as a language of persuasion to legitimise someone else's hegemonic agenda. While globalization is not all bad, the new ways of learning through ICT are infected by the language of a kind of "enterprise pedagogy"—that is, the celebration of individualism, entrepreneurship and learning for the real (unjust) world. As a result, a lot of misinformation, dissembling language and even propaganda is preventing teachers and teacher educators from understanding the hidden curriculum and non-educational intention of the ICT-related school reform movement.

**Asking some critical questions**

This last section asks some critical questions by attempting to calculate both the visible and hidden costs of the investment in ICT in schools. In the 2005 budget, the New Zealand Government allocated another $14.2 million (NZ) to extend the Laptops for Teachers scheme to a total of 33,000 teachers. The Government allocated in the 2005 budget nearly $60 million (NZ) for ICT in schools, an increase of nearly 1800% since 1998 when only $3.2 million (NZ) was spent in this area (Mallard, 2005). Of course, there is no bulk purchasing of computer equipment in New Zealand and these figures hide the money schools have spent through their own governance and fundraising efforts.

Because very little is known about the actual problems that classroom practitioners face in their daily work, it is only possible to speculate on how New Zealand teachers might want to utilize this money—if they were asked. In the absence of this kind of basic information, the level of additional expenditure on ICT in schools is hard to defend as the major benefits continue to be in ICT confidence and capability rather than higher levels of student achievement per se (Education Review Office, 2005).

In the United States over $80 billion (US) has been spent on computers in schools over the past decade (Cuban, 2001). This raises the question how much money has been spent in Australian and New Zealand schools. Because the governance of schools is more complex in Australia, the following analysis is limited to New Zealand. Although there are few official figures for New Zealand, by dividing the current number of pupils in primary, intermediate and secondary schools by the latest student-computer ratio, and multiplying this figure by $2000 (the cost of a mid-level computer), the investment in hardware alone represents over $250 million (NZ).

Admittedly, this figure assumes that the computer inventory in schools is new and each Board of Trustees replaces these machines each year. The $250 million (NZ) does not include, nevertheless, hidden costs such as software, networking, maintenance, training, and so on. Thus, relatively speaking the investment in ICT in New Zealand schools is big, really big! Accepting this ballpark figure, how could schools spend a further $250 million? Well the money would employ an extra 5000 teachers based on the average salary of a teacher. This represents more than a 10% increase in the number of full-time teachers in the New Zealand teaching profession.

Put another way, the $10 million (NZ) committed by Government in 2004 to implementing the new Arts curriculum and the additional $3.5 million (NZ) for a long-term strategy to increase teacher confidence and competence in teaching the Arts is woeful in comparison. The point of this exercise is not
to lend support to a backlash against the use of computers in schools. ICT is not the demon. Instead, these comparative figures serve to remind the teaching profession that there are policy choices of where to spend money and the investment in ICT must be evaluated against these choices. While direct comparisons are simplistic as new computer technology can be woven throughout the teaching of the Arts, these data help to put the spotlight on the access, usage, frequency and types of computer activities with which students experience in the curriculum. In so doing they highlight the need for more serious evaluation of the risks, rewards and opportunity costs of investing in ICT in schools.

Conclusion
There are complex forces behind the drive to reform schools through ICT and rather than be lured by the political and economic spin of new computer technology the teaching profession needs to create a culture of activism and reconceptualism. Such a culture would ask the following types of questions:

- Who is telling the ICT story and why?
- How are they telling the ICT story?
- What is it they are telling / promoting about ICT?
- How are different people understanding and responding to the ICT message?
- What is missing? Whose voice is not being heard? Whose story is not being told?

By asking these questions, we may go some way to reclaiming the true status of pedagogy in our respective liberal democratic societies. In repoliticising pedagogy, teachers need to address the most basic questions of purpose and meaning. What kind of society do we want? What is the meaning of schooling in the Knowledge Society? What are the real problems confronting schools that need solutions? What conditions must politicians and policy-makers provide for teachers if the public education system is to be fair and equitable? Such questions bring issues of critical citizenship, democratic community, and social justice to the forefront of discussion. In this sense, the goal of teacher education is to raise political awareness and critical consciousness such that pedagogical activism becomes a moral imperative. As Fullan (1993) writes:

Moral purpose without change agency is martyrdom; change agency without moral purpose is change for the sake of change (p. 14).

References


A Culture Of Technology Critique: Low Tech To High Tech Teacher Education

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This paper describes how case-based scenarios are being used to help teachers better understand the problematic nature of information and communication technology (ICT) in schools. It argues that the ICT-related school reform movement is inherently political and teacher educators must encapsulate this basic principle in the design of professional development. A number of different case-based scenarios in which role-play has been used to problematize the ICT movement are presented and these are shown to offer considerable potential in exposing the tensions, contradictions and half-truths associated with the digital literacy movement. The objective is to demonstrate how low-tech innovations such as case-based scenarios can engage teachers in a deeper level of critical dialogue over hi-tech efforts to boost capacity, increase bandwidth and catch the knowledge wave—for better and worse.

Introduction

The growth of information and communication technology (ICT) is one of the most spectacular technological phenomena of the last century. A new digital revolution is underway that most hi-tech proponents agree is poised to transform our classrooms. In all of its manifestations, the latest digital wave is part of a new era of human civilisation with huge social, cultural and educational implications. This paper adopts a cautious approach to the digital revolution however, as the use of ICT in schools is not on an independent trajectory (Brown & Murray, 2003). It is intertwined deeply with globalisation, the rise of neo-liberalism, the celebration of technology consumption, and ecologically destructive cultural patterns (Bowers, 2000). There are powerful external forces behind the drive to use ICT in schools and teachers need to understand the way new digital technology is part of a wider political, economic and ideological agenda. In brief, this paper is based on the assumption that the rapid growth of ICT in schools is problematic.

In the context of this assumption, an innovative project is described which endeavours to engage teachers in a deeper level of critical dialogue over recent efforts to transform compulsory schooling through new digital technology. The paper explains how one teacher education institution is trying to dig beneath and peel away the current digital rhetoric in its specialised courses and qualifications for pre-service and in-service teachers. There are three parts to the paper. First, it begins by establishing the problematic nature of the ICT-related school reform movement and how our courses endeavour to raise teachers’ awareness of the competing and co-existing discourses that contribute to the technology debate. In the second part, we explain our general philosophy and discuss why the relatively low-tech combination of case-based scenarios augmented through role-play offers tremendous potential for establishing a hi-tech culture of technology critique. Lastly the paper takes a closer look at some of the specific activities students undertake as we strive to create an environment for rich critical dialogue. We share examples of how undergraduate and postgraduate courses are equipping teachers with the knowledge, dispositions and powers of analysis to expose some of the tensions, contradictions and half-truths of the digital revolution. Overall, the objective is to contribute to the problem of how teacher education can address local needs while at the same time promoting greater strategic knowledge of the bigger picture.

Competing mindsets

The so-called digital revolution is far more problematic than parents, teachers and other stakeholders often realise. Typically policy briefs in this area celebrate the benefits of new digital technology in schools with little concern for the unplanned effects and negative consequences. In Postman’s (1993) terms, ‘every technology is both a burden and a blessing; not either-or, but this-and-that’ (p. 5). In a similar vein,
Oppenheimer (2003) acknowledges in his no-holds-barred assault on the use of computers in schools that the ICT movement is a type of Chinese crisis—that is, it symbolizes both danger and opportunity simultaneously. It is this idea of seeing the different faces of the technology debate and the messy interplay between the competing mindsets that we encourage students to understand in our specialized ICT-related courses and qualifications for pre-service and in-service teachers.

There are many keen advocates of ICT in education as illustrated by the number of articles and glossy advertisements appearing in professional magazines. By and large these publications and infomercials reflect an unquestioning acceptance of the need to embrace the digital revolution. Notably, very few education conferences are designed with the explicit intention of casting a critical shadow over claims of how schools can be transformed through new digital technology. The key point is that most politicians and policy-makers are enamoured with the seductive appeal of what ICT can do for us (Nash & Moroz, 1997) and consequently they give little or no attention to the unknown and/or potential negative effects of what new digital technology might do to us. Drawing on history, Polese alerts us to the danger of blindly accepting the one-sided nature of the policy spin by drawing a parallel to:

...the 14th century development of a foot-pedal that freed the hands of European weavers at their looms. That created a shortage of thread that was solved by the importation of the Chinese spinning wheel, which caused a shortage of wool, which led to the use of flax. That made it possible for people to wear linen, but old linen then turned out to be cheaper material than pulp for paper, which made mass-marketing of books possible. And along the way gave rise to riots by weavers who feared loss of their jobs and protests from the cloisters where manuscripts were no longer unique property (cited in Willis, 2001, p. 306).

By analogy, the computer might be the loom and the Internet could be equivalent to the wheel that will inevitably lead to significant gains, losses, and transformations. Although the tendency is to dismiss such concerns as nothing more than a neo-Luddite response to technological progress, this type of analogy contributes greatly to further critical analysis. It provides a timely reminder of the need for teachers and teacher educators to locate the ICT movement in the bigger picture of social, economic and educational reform. Thus, attacks on the use of ICT in schools offer a rich source of critical reflection as they bring into question many basic assumptions about why teachers should be using new digital technology for educational purposes. Put another way, they engage teachers in a deeper level of critical dialogue over hi-tech efforts to boost capacity, increase bandwidth and catch the knowledge wave—for better and worse.

The point we want to underscore is the techno-advocates shaping the current ICT movement are seeing the world through digitally tinted spectacles. Not everyone accepts the future-focused digital rhetoric as the ICT movement can be seen through different lenses. As Willis (2003) states:

At the same time there have been advocates, even evangelists, of technology in education there have also been critics who doubted either the effect or the purpose of technologies in education (p.?).

At this point it needs to be said that adopting a negative or pessimistic perspective on the use of ICT in schools is not the same thing as being critical. This remains a common fault in much of the so-called critical literature. The dichotomy of advocates versus critics is overly simplistic and for this reason we challenge teachers to go beyond such binary positions by fleshing out some of the competing and coexisting mindsets.

To this end, we often introduce students to an adapted version of Bigum's (1995) framework for mapping the different perspectives evident within the educational computing discourse. According to Bigum and Kenway (1998), most techno-advocates can be classified as "Boosters". This category is used to describe a large group of general proponents of technology—parents, teachers and industry stakeholders—who uncritically see new digital technology as the solution to many of their problems. In contrast, another group of advocates fall within the "Antischooler" or "Deschooler" category, which loosely describes those people who are proponents of technology as the solution to dismantling the archaic institution of schools. This group believe schools are relics of the past and the curriculum needs transforming to bring it into the so-called Digital Age.

At the other end of this theoretical continuum is the "Doomster" who adopts a negative and often illogical response to the threat of a perceived technocratic nightmare. These people include reactionaries and nostalgic opponents of change who reject the use of new digital technology in favour of time-honoured approaches. Another major group that in our experience Bigum (1995) fails to acknowledge in his original framework is the "Toolster". These are teachers who simply view the technology as another tool in their pedagogical toolbox. In our view, the "Toolster is by far the largest group numerically in the teaching profession.
The smallest group is the "Critics" who do not automatically oppose all aspects of ICT but challenge the unrealised promises and taken-for-granted assumptions about the potential of new digital technology in schools. This group does not define the ICT movement in a binary fashion as demon or panacea as such bipolar thinking is not overly productive. Rather the Critics question proponents who justify the use of technology in schools just because it can be done (Bigum, 1995). They ask why ought it be done and who will benefit from its use? In this sense, the critics evoke a much deeper response by putting the ICT movement under a magnifying glass to identify the good, the bad and the ugly. Albeit an overly linear analysis of the competing and co-existing mindsets, when adopting this framework in our teaching the intention is to encourage students to see ICT through a more critical lens.

**Translating theory into practice**

At a philosophical level, the approach we adopt is akin to the Chinese proverb that you can either give a person a fish to feed their family for a day or teach them how to fish so that they can feed their village for a lifetime. In attempting to feed the minds, hearts and souls of our students to nourish their professional growth over the duration of their teaching career, as opposed to a quick technological fix, we attempt to embed ICT-related learning experiences in contexts and problems requiring deep thinking and complex reasoning. Typically, such experiences demand that students analyse educational theory, research and practice in order to define the precise nature of the problem and put forward for consideration well informed potential solutions. Of course, there are usually few clear-cut solutions as if there were these problems might have been solved long ago.

For this reason we want students to adopt critique as a permanent philosophical ethos. Such an approach fits neatly with the University's role in statute as 'critic and conscience of society'. In this regard, the aim is to prepare teachers, teacher educators and professional leaders who are both critical consumers and active producers of new skill, knowledge and understanding in this dynamic field of inquiry. Our philosophy is influenced, in particular, by the move to design learning experiences that model and promote active learning for critical citizenship. The following quote from a recent publication on this theme is indicative of the manner in which we design our teaching to engage students in rich critical dialogue:

> A 'critical' approach is frequently appreciated more than subservient accommodation. It is a question of making choices and knowing why you are making that choice, respecting the choices and opinions of others, communicating about these, thereby forming your own opinion, and making it known (Ten Dam & Volman, 2005, p. 360).

The challenge is to operationalise this philosophy in a pedagogically sound manner. One of the ways we attempt to translate theory into practice leading to a culture of technology critique is through the relatively low-tech combination of case-based scenarios—augmented through role-play. A well developed body of literature exists on the pedagogical value of these two teaching strategies (e.g., Errington, 2003; Jonassen, 2004). In the case of role-play, it is well accepted that:

> To read or hear about something is not the same as experiencing it, and it is often only by actual experience that understanding and change can come about (van Mentis, 1999, p. 11).

In recognition of this role-play is a very hands on form of pedagogy (Bender, 2005). When participants adopt a role different from their everyday viewpoint, they potentially acquire new insight by stepping into another person or stakeholders' perspective (Errington, 1997). Taking on a persona in a role-play with multiple perspectives that may be in opposition or alignment with the participant's own goals, helps to create a dynamic and reflexive learning environment (Linser & Jasinski, 2002). When used appropriately, this type of learning can help students better understand alternative points of view thereby allowing them to critically reflect on their own perspective.

In addition, the use of role–play can unpack hidden issues and add further flesh to the some of the deeper questions concerning a specific problem or case scenario. The particular strength of role-play over and above the use of traditional case-based scenarios is they require students to articulate their thinking processes for wider scrutiny (Errington, 1997). The focus is on engaging students in dialogue where different viewpoints are represented in the scenario under the spotlight. Ideally, there are no simple solutions to the scenario and the role-play activity generates heated debate, helping to underscore the problematic nature of the problem or issue.

By anchoring ICT teacher education in case-based scenarios that explore authentic problems, and enact real life situations through role-play, there is greater potential for deep learning and durable
knowledge construction. That is to say, this type of teacher education goes beyond surface learning and supports both low and high road transfer (Perkins, 1992). Importantly, there is also potential for knowledge deconstruction. Ideas are open to scrutiny and teachers are required to articulate and justify their thoughts in front of peers and colleagues (Errington, 2003). Well designed scenarios with no clear-cut solutions in which contrasting viewpoints are embedded can help to uncover the type of folk knowledge that is not easy to teach and well understood in the literature. Such experiences may assist teachers in identifying their own false consciousness and in so doing help dispel some of the common myths and misunderstandings about the potential of ICT in schools.

Notably, the combination of role-play and case-based scenarios are equally suited to synchronous and asynchronous learning contexts. In both contexts, they overcome some of the potential ethical issues that arise from using first hand experiences as the basis for professional critique. In short, they create a safer environment for critical reflection on problems and issues that may be too sensitive or unrealistic to discuss in other settings. Indeed, the use of role-play is a cost effective strategy in online teaching because a minimum of graphics are needed to convey the context and generate interactivity (van Mentis, 1999). The asynchronous nature of online role-play provides time for students to consider alternatives, craft their response and gather information relevant to the discussion. In addition, online role-play overcomes the problem of face-to-face role-play, where participants may feel shy about taking on another role. Anonymity allows free exchange of opinion without the risks associated with a face-to-face environment. And the sub narrative of taking on another persona and trying to figure out the identity of fellow classmates can be a lot of fun!

In sum, the use of role-play built around traditional case-based scenarios values “emptiness” in that students are expected to interact to create a learning experience for themselves (Errington, 2003). Ironically, the low-tech emptiness of role-play is a pedagogical advantage especially in the hi-tech environment of online learning. This type of teacher learning allows timely problems and issues to be investigated in a context that promotes social co-construction of knowledge through collaborative communication and collective decision-making. It has the potential to support a much deeper understanding of the actual problem or issue leading to better decision-making grounded in both teaching practice and evidence-based research.

Taking a closer look
The remainder of this paper takes a closer look at how we endeavour to translate the potential of role-play based on a number of specific case-based scenarios to create an environment for rich critical dialogue. Our attempt to problematize the study of ICT in schools in the above manner is supported by an award from the University's Fund for Excellence and Innovation in Teaching (FEIT). Although the innovation includes both face-to-face and distance courses for pre-service teachers, in this section we share just a slice of experience with using online role-play at the postgraduate level.

In keeping with the goals of advanced postgraduate study, the design of our specialised courses in this area is intended to encapsulate three key assumptions. First, teaching is a political activity. The curriculum—that is, content, pedagogy and assessment—lies at the heart of a political struggle over what teachers should do and how the curriculum should be taught. Second, the investment in ICT in schools is assumed contestable. There are policy choices of where to invest in education and the current emphasis on ICT in schools must be evaluated against these choices. As illustrated earlier in this paper there is considerable debate over the investment in ICT in education and dialectic exists between the pedagogy of the depressed and the language of possibility. Thus, the third assumption is that the growth of new digital technology must be viewed as problematic.

With these three assumptions in mind, we have designed a web-based simulated school environment with a twin purpose. This ‘virtual school’ helps to situate the case-based scenarios so students can investigate problems, interrogate the literature and develop their academic scholarship within authentic contexts. In this respect, the virtual school can be used for learning and teaching purposes independently of role-play. It follows that the second function is to enact role-play to encourage more talk and critique amongst students. The objective is for students to live the particular scenarios to identify the competing and coexisting discourses under the surface of the digital landscape.

The school
There are two variations of the virtual school to accommodate both primary and secondary teachers. The school is referred to as either Mallards Primary or Mallards Secondary depending on the course. The term
‘Mallard’ was chosen because it is the current name of the Minister of Education. Students access the virtual school through a link in their WebCT course environment. Although the school is illustrated as realistically as possible, the description is sufficiently generic so the same architecture can be used to support a range of different case-based scenarios. The description of the primary school reads:

Mallards Primary School is located in an established suburb within a large New Zealand city. The School has approximately 415 children and is classified by the Ministry of Education as Decile 3. This means that the School is part of a moderately low socio-economic community. The school community consists largely of blue collar and factory workers along with retail assistants, hospitality workers and a small number of self-employed tradespeople.

Despite ongoing resource constraints, since the arrival of the new Principal the School has steadily developed a reputation for its "Go Ahead" attitude. Indeed, the School's new mission statement is to prepare "hi-tech" students for the "hi-tech" knowledge economy of the future. There is a strong emphasis throughout the School on making learning authentic and meaningful to tomorrow's world.

This is why in recent years the School has invested heavily in the area of ICT. Most of the classrooms are now equipped with up-to-date PCs with Internet access. There is even a small computer lab attached to the Library where children can do more intensive computer and multimedia work. However, this facility is used currently by only a handful of teachers.

The School still has a number of deferred maintenance projects requiring attention (e.g., painting of the main classroom blocks). It also has a couple of major capital projects on the books such as the new school hall. On the whole, the School struggles for adequate resources including library books and sports equipment, and depends heavily on trust donations and several major fund raising ventures (e.g., school gala) in order to balance the budget. In short, Mallards Primary is not a wealthy school.

The scenarios

We have steadily added to the number of case-scenarios that can be selected from since developing the original concept. At present, eight reasonably well-developed case-scenarios exist that in one way or another have the potential to be incorporated into our courses. Each scenario reflects a real issue facing schools and involves a proposal to adopt a new policy and/or purchase a new type of ICT in keeping with the mission statement of preparing hi-tech students for the hi-tech knowledge economy. There is a proposal to:

- Purchase an integrated learning system to increase basic literacy
- Build a new computer lab for more intensive training of ICT skills
- Mandate the use of laptops and PDAs for students across the school
- Install electronic whiteboards in all classrooms throughout the school
- Participate in the ICT Professional Development School Cluster Programme
- Establish a digitally enhanced classroom for selected students on a user-pay basis
- Increase expenditure in the area of ICT by entering into a commercial partnership
- Provide unrestricted Internet access to students to make greater use of online resources.

In the case of the proposal to purchase an integrated learning system (ILS) known as SuccessMaker™ the students are told that a group of enthusiastic teachers have returned from the national ICT conference having seen the SuccessMaker™ software in operation. They were very impressed by the claims. Since then teachers have been investigating the ILS in greater depth and based on their findings and observations at a nearby school they are convinced that the individualised nature of instruction will lead to higher levels of literacy. Accordingly, the teachers are now keen to see the software purchased by the School to enhance basic literacy along with ICT skills. The teachers have put their proposal to the Principal and the Board of Trustees.

The people

Up to 30 individual biographical profiles have been written to represent the various stakeholders involved in the role-play. These include the principal, senior management, parents and Board of Trustee members along with the individual teaching staff. Embedded in these profiles are the different mindsets or perspectives discussed earlier in the paper on the role of ICT in education that have been identified in the literature (e.g. Boosters, Doomsters, Toolsters, Deschoolers and Critics). As can be seen from the example profiles and illustrates below a great deal of humour is woven throughout the description of the individual
stakeholders. For example, Dot Com, one of the Boosters, is described in the following manner:

 Dot is the most vocal of the so-called techie teachers. She has worked tirelessly to push this school into the Digital Age. Last year, Dot played a key part in the development of the computer lab. She strongly believes that teaching with technology is the only way to go. The school must prepare children for the world of the future. On the recent ICT bus tour Dot viewed the software in action at Nearby Normal School. In her opinion, it looks like a great way to teach the basics in literacy and numeracy. She was really impressed by what she saw and has spent a great deal of time reading about the software from various sources. If only Mallards Primary school could go that way too. Dot sees this as an important chance to truly transform the school by using new technology to enhance the learning and teaching process. This is another step toward bringing the school into the 21st Century.

In contrast, the profile for Irma Fossil, one of the Doomsters, reads:

Irma is one of the old guard teachers. She has taught at Mallards Primary School since before computers started making their way into schools. Irma likes well-behaved children who know the limits. She expects children to learn and they achieve high standards of work in her classroom. Irma had recently been given one of the new computers for her classroom. She felt compelled to at least try to use it with the children. But it seems that every other week it needs to be fixed - something about a 'user error'. Irma is sick of wasting her time on the computer in her classroom and she hasn't bothered to try to use the new computer lab with Internet access. She doesn't understand why this new software is necessary. It just seems like another thing that can go wrong. In her opinion, no computer can replace a good teacher.

Figure 1.

This humour sets the stage for the enactment of the role-play in a non-threatening and light-hearted manner. The individual profiles are available for students to familiarise themselves with before the role-play commences and typically they embrace their assumed persona by adding even more spice to the characterisation. Consistent with the principles of role-play wherever possible students are allocated to roles that are likely to differ from their own perspective. Students are asked to introduce themselves to one another in their persona using the anonymous function in WebCT before the role-play gets underway. In some cases, a special forum topic is created so that the different stakeholders and interest groups can talk privately in preparation for the community meeting to discuss the proposal in question.
The setting
The case-scenario is discussed in a community meeting following a preset agenda in which each group is allocated time to present their particular viewpoint and respond to questions. Unlike face-to-face role-plays, this meeting is conducted asynchronously over a period of two or three weeks. In the case of the SuccessMaker™ scenario after a brief introduction from the Chairperson, the local sales representative is asked to introduce the product and explain the benefits. Several digitised promotional videos on Successmaker™ are available through the course WebCT environment and these are often used in the context of this simulated presentation. In addition, students can incorporate information from background notes relating to the product and a list of relevant web-based resources including links to published research. Throughout the meeting, Phyllis Tator, the Chairperson, is required to maintain order and keep the agenda on schedule. At the end of the meeting participants vote on whether or not they support the proposal with a brief justification of their decision.

The lessons so far
A number of lessons are worth sharing from our experience. First, this type of teacher learning can be a lot of fun. The role-plays are highly engaging and because everyone has an allocated role, they appear to bring into the fold even those students who might otherwise be known as lurkers. That said, the success of each role-play depends on the nature of scaffolding and teacher intervention. In particular, we have found that staff can prime students for better quality contributions by sending them private email messages within WebCT with potential questions and relevant information. From time to time, the teacher can also take on an unallocated persona to scaffold the discussion and add to the debate—although this raises an interesting ethical issue. In contrast to face-to-face role-play, the teacher needs to adopt the role of chairperson. The online role-play requires students to check the WebCT environment on a regular basis and the chair is probably too demanding for teachers also working full-time. This point underscores the value of setting a clear time limit for the meeting from the outset and we have found that role-plays do not always have to run to full completion. It follows that the expectation to participate in the role-play and ensuing discussion relating to the case-scenario must be aligned with course assessment. Students expect some reward for their participation beyond enjoyment of the activity, which can create a tension with conventional assessment at the postgraduate level.

Ultimately, the value of the role-play depends on the quality of the debrief exercise at the end of the experience. To facilitate this debrief, out of role, we adopt the ‘FUN’ of reflection (Korthagen, 2001). That is, students are asked to respond to the following questions:

F = What were the fundamental points?
U = What was most useful in this for you?
N = What new approach or idea related to your work does this inspire you to do?
To date the press of the curriculum has limited what happens after the role-play experience. However, we recognise there is potential to extend the depth of reflection in relation to the chosen scenario by requiring students either individually or in small teams to prepare a written report for the virtual Board of Trustees with some clear recommendations. Thus, there is considerable scope to develop both the case-based scenarios and supporting role-plays in any number of directions.

Where to next...
We have a number of plans for the future. The FEIT award has provided money to further research and more professionally design the case-scenarios and produce these on CD-ROM with supporting templates. We may even use this award to transfer the innovation into a role-play simulation generator (Naidu, Ip & Linser, 2000), although our low-tech option still appeals to us. As time permits this award will also allow the development of other virtual schools to better represent those in which teachers work. The intention is to write a book that shows other teacher educators how they can utilise the case-based scenarios and related role-plays on the CD-ROM for professional development. In this regard, we are seeking to collaborate with people outside of New Zealand to refine and develop the concept further in other countries to suit their particular educational cultures. Finally, as scholar teachers we are committed to conducting further research on our own teaching to evaluate the effectiveness of case-based scenarios, augmented through role-play, as a pedagogical innovation.

Final comment
The innovation described in this paper is more a state of mind than a recipe for other teacher educators to follow. It encourages people to think differently about their work and helps to demonstrate the moral, ethical and political dimensions of teacher education. In our experience, this is not a real strength of current approaches to ICT-related professional development. If teacher education is to avoid the trap of becoming redundant as quickly as the technology itself, we need to blend these local case-based scenario experiences with opportunities for teachers to acquire more strategic knowledge of the bigger picture. In this sense, the focus needs to move away from the importance of how teachers use ICT in their own classroom to what teachers think about it. More than ever, teachers must not capitulate unthinkingly to the non educational intentions behind the ICT-related school reform movement; but they clearly cannot turn away from them either and leave the troubles of the new world order at the school gate. Thus, this relatively low-tech innovation helps teachers to view the hi-tech world through a different lens. For some it is like wearing sunglasses; up until this point they have been subjected to the bright lights of ICT and donning the sunglasses affords them a view of the wider technology debate without the dazzle and glare. For other teachers it is similar to borrowing a new set of glasses where what was once perfectly clear has become blurry. To this end, the innovation is highly successful in taking the edge off teachers’ blind faith and unquestioning acceptance of the use of ICT in schools.

References


during 2005 the Victorian Department of Education and Training will introduce the Victorian Essential Learning Standards (VELS) into government primary and secondary schools. This new curriculum will undergo a validation process in 2005. It has placed the key learning area of health and physical education (HPE) within the physical, personal and social learning strand, while other key learning areas of the Arts, Mathematics, Science, Humanities (Economics, Geography, History), Languages other than English (LOTE) and English have been designated as discipline-based learning. While it is disappointing that HPE is not considered a discipline under the new curriculum, this movement of HPE into this new strand may act as a catalyst for change within the current curriculum. This paper will present an introduction to the VELS and discuss a range of issues, including the implication of the VELS on current physical education curriculum and present an approach used in the training of future physical education and outdoor education teachers within the Monash University teacher education program at the Gippsland campus.

Introduction

In opening I want to highlight what one author has described about the process of curriculum reform in physical education, "Curriculum change can be likened to when a stone or a tree branch hits the iron roof of the chookhouse. There is a brief flurry of activity before the chickens settle again" (Macdonald, 2003, p. 1). This analogy highlights how curriculum reform is possible treated by educators and teachers alike. With this in mind, it is possible that the latest curriculum reform process conducted in Victoria, might result in physical education teachers running around after the Victorian Essential Learning Standards (VELS) lands on their desk, similar to the chooks. In this paper I pursue the implications of the "new" curriculum on the key learning area of health and physical education (HPE). I will explore the development of VELS, its relation to the national curriculum, how HPE may or will be affected and what teacher education institutions are currently doing to highlight the introduction of such a document.

'National' curriculum in Australia

To place the introduction of VELS into the Victorian school curriculum, it is important to look at the implementation of the 'national' curriculum, or its equivalents from over a decade ago. In June 1986 national collaboration in curriculum began to make the best use of scarce curriculum resources and to minimize unnecessary difference in curriculum between states. This led to the Hobart Declaration when the Common and Agreed National Goals for Schooling in Australia were ratified which included health and physical education as one of eight key learning areas along with English, mathematics, Science, Technology, Languages other than English, Studies of Society and Environment and the Arts (Australian Education Council, 1994). It should also be noted, that the statements and profiles which were generated for each key learning area were not mean to syllabuses or programs and as such should be used as the scaffolding of the school based work (Tinning, Macdonald, Wright, & Hickey, 2001). Furthermore, Penney (1997) notes implementation of the agreed goals for schooling could be adapted, adopted or rejected by the individual states, and in Victoria's case was adopted, the document became known as the Curriculum and Standards Framework (CSF). In the foreword to the CSF it states that

"...is a landmark document in Victorian school education. It provides Victoria's schools with a framework on which they can build a curriculum tailored to meet the needs of individual students. It also provides a set of standards which it is expected students across the State will attain at different stages in their schooling" (Board of Studies, 1995, p. iii).

To achieve this statement, the key learning area was broken into three strands for levels 1-3 (preparatory grade – grade four) and seven strands for levels 4-7 (grade 5 – grade 10). The three strands
for the early year levels were a combination of the seven strands for older school students. The seven strands included: human movement, physical activity and the community, human development, human relations, safety, health of individuals and populations and people and food (Board of Studies, 1995).

In 1999 and partly in response to the Common and Agreed National Goals for Schooling in the Twenty-First Century the Curriculum and Standards Framework II draft for consultation was published. The key features of the CSF II document were:

- Identification of essential learning in each key learning area
- Greater consistency between KLAs in strand and substrand structure and degree of detail
- A simpler, clearer design, easier to use for course planning and implementation
- A reduction in the number of strands, substrands and learning outcomes, especially in the early years (Levels 1–3) and at Levels 3–6, strands generally branching to become more specialised in higher levels
- Stronger linkages between the CSF and stages of schooling" (Board of Studies, 1999, p. 2)

For health and physical education this resulted in the number of strands being cut from seven to three; health of individuals and populations, self and relationships and movement and physical activity (Board of Studies, 2000). For each of the strands it was now evident that two or three ‘conceptual organisers’ (core knowledge and processes) were identified which had one learning outcome for each level. As such the CSF II defined what was considered to be essential learning (their emphasis) for each strand within the health and physical education key learning area.

The VELS

The VELS are a framework of essential learning (their emphasis) which have been developed for students to meet the demands of a modern, globalised world. So beginning with a fresh template the Victorian Curriculum and Assessment Authority (VCAA) asks "what do students need to know and be able to do to succeed in the future?" (VCAA, 2004a, p. 2). In overview students need to create a future which:

1. is sustainable
2. is innovative and
3. builds strong communities (VCAA, 2005b, p. 4)

The educational principles which VELS is based are:

1. Learning for all
2. Pursuit of excellence
3. engagement and effort
4. respect for evidence
5. openness of mind

These are achieved through three components:

- "processes of physical, personal and social development and growth
- branches of learning reflected in traditional disciplines
- interdisciplinary capacities needed for effective functioning within and beyond school" (VCAA, 2005b, p. 1).

Which in the VELS curriculum document these three components become three core strands: physical, personal and social learning, discipline-based learning and interdisciplinary learning.

The development of VELS has also placed the notion of values at the forefront of curriculum change. This is noted by the statement "the CSF is less helpful in describing values on which our schools are founded" which appeared in the draft consultation document released to teachers and educators in the middle of 2004 (VCAA, 2004b, p. 3). The ten values identified are:

1. tolerance and understanding
2. respect
3. responsibility
4. social justice
5. excellence
6. care
7. inclusion and trust
8. honesty
9. freedom
10. being ethical

However, these usefulness of published values by a government agency has been questioned by at least one author. Webster (2004) states that the values published by the VCAA are not educationally valuable but are in fact mis-educative, to use a term coined by Dewey. His argument is that for educative value to become apparent, an interaction needs to occur between the learner and his/her environment, how the environment is established by professional teachers and is not something that should be determined by governments attempting to control the curriculum, as it is with the VELS document.

There are no longer key learning areas within the VELS document. The eight KLAs which were ratified as part of the Common and Agreed National Goals for Schooling are now known as domains. As previously mentioned three strands exist, physical, personal and social learning, discipline-based learning and interdisciplinary learning Four domains constitute the physical, personal and social learning (health and physical education, interpersonal development, personal learning and civics and citizenship), six constitute discipline based learning (the arts, English, languages other than English, humanities, mathematics and science) and 4 constitute interdisciplinary learning (communication, design, creativity and technology, information and communications technology and thinking). Within each domain further divisions are known as dimensions. For health and physical education two dimensions exist: movement and physical activity and health knowledge and promotion.

Why the change? According to the Reform paper a new curriculum would give schools:

- Greater local control of the curriculum
- Use innovative teaching practices
- Use a curriculum which is less prescriptive, yet focused in its outcomes
- Focus on depth, not breadth
- Provision of generic, cross-curricula skills, values and attributes which promote lifelong learning and active citizenship
- Assessment and reporting system which clearly links student progress to curricula frameworks" (VCAA, 2004b, p. 3).

For curriculum documents the underlying premises about why a new curriculum needed to be introduced are not new. Several of the assumptions which were the rationale for changing the curriculum were also used in previous curriculum changes in Victoria see (Board of Studies, 1995, 1999). Perhaps the main reason could be overtly political. The CSF and CSFII documents are products of Liberal minded governments, whereas the VELS document has been produced by the Labor Party. Obviously when political shifts occur, education and its curriculum are often the first areas of social policy affected.

**VELS and the Physical, Personal And Social Learning strand (and Health and physical education)**

The key learning area of health and physical education now appears as a domain of the physical, personal and social strand of the VELS document. It is designed to complement the other domain areas of interpersonal development, personal learning and civics and citizenship. The domain of Health and Physical Education is designed to give students the knowledge skills and behaviours which will enable them to achieve their own physical, mental, social and emotional health (VCAA, 2005a)

This can be achieved through,

"engaging in physical activity, games, sport and outdoor recreation that contributes to a sense of community and social connectedness. These are vital components of improved wellbeing." (p. 6).

It is important to realize that this 'new' curriculum document is not without problems. As succinctly discussed by Tinning et al. (2001) a curriculum document is constructed by certain people for certain purposes, in otherwords it privileges one group over another group. This is no different for the VELS document in health and physical education. Games, sport and knowledge about the natural body (my emphasis) continue to dominate the curriculum. For example,

"It promotes the potential for lifelong participation in physical activity through the development of motor skills and movement competence, health-related physical fitness and sport education" (p. 6).

and goes on to highlight the importance of the areas of strength, flexibility, endurance and important components of fitness and physical performance (VCAA, 2005a). This emphasis on the natural body and
the expense of the social body within this curriculum is a potential concern for why physical education is considered a contested subject. Kirk (2003) writes in his work titled Sport, Physical Education and Schools that physical education is a contested subject because of a number of issues including, the marginal educational status of physical education, the issue of physical education versus sport, and girls and gender. Let us look briefly at each of these topics and compare them to the new VELS document.

**The marginal status of physical education**

Kirk (2003) writes that the educational philosophizing of Hirst and Peters during the 1960s through to the 1980s reinforced within educational policy that physical education should not be included in the core curriculum of schools. Interestingly this is now where (health) and physical education finds itself placed within the ‘new’ curriculum of VELS, as domain within the physical, personal and social strand NOT the discipline-based learning strand as it found itself in the CSF.

This contention also raised concerns with the main professional body responsible for health and physical education teachers, the Australian Council for Health, Physical Education and Recreation (ACPER) who were concerned that health and physical education would be devalued in some schools. They mounted a campaign that included a series of actions including a petition of over 15000 people which was presented to the Minister responsible for Education asking for physical education to be restored as a discipline. While this was not successful the Minister did meet with ACHPER representatives to assure the profession that physical education would not be marginalized via the following actions:

- "Mandated times for physical education and sport to remain see (The Directorate of School Education, 1993)
- An accountability process to ensure schools implement these times;
- Consultation on the standards and an accountability process for HPE
- A range of system-wide advocacy initiatives such as development of best practice advice, feature stories in Education times and advocacy training for teachers" (P. Reichenbach, personal communication, December 16, 2004).

This narrative provides a further example of the marginalization of physical education within the current education curriculum reform process. Furthermore as Kirk raises while some within the physical education tried to defend physical education using the same philosophical terms as Peters and Hirst, there was little interest from teachers or teacher educators, who were predominately exercise scientists, in arguing the importance of physical education to education. Perhaps we have come full circle in where and how we are to debate the importance of physical education to current educational practice. Although much political lobbying were conducted by ACHPER, physical educator teachers, teacher educators and professional organizations need to further discuss, debate the educational value of physical education within twenty-first century school curricula.

**Physical education versus sport**

Another often raised issue is the difference between what is physical education and what is sport. Kirk (2003) raises the issue, correctly I believe, that the aims of physical education and the aims of sport are different. However physical educators have increasingly used sport as the main and sometimes only channel for teaching physical education. If we now contrast the VELS to the discussion, sport is inherently part of the ‘new’ curriculum. While, as Kirk raises, some physical educators do not define everything they do in physical education as sport (for example, outdoor recreation activities, dance, gymnastics, yoga, and pilates) the notion of rules, games and sport is apparent even at Level 1 of the new curriculum. However as early as Level 3 (Grades 3 & Grades 4) the relationship between physical education and sport becomes blurred with students as part of their physical education curriculum needing to "explore basic games tactics and participate in competitive activities through intra-school sport" (VCAA, 2005a, p. 12). While I do believe sport is an integral component of physical education, I have serious concerns about its domination of the school physical education curriculum. And as such, I agree with authors such as Penney and Jess (2004) who advocate for a physical education curriculum based on themes or the ideas conducted by Kirk and Gorely (2000) who promote the ideals of clearly articulated pathways, modified games and sports, teacher and coach education and intelligent policy development.
Girls and gender
Many physical education teachers refer to physical education as gender-neutral. As such when both girls and boys participate in the same activities, they therefore take away the same meanings and assumptions (Tinning et al., 2001). As Kirk (2003) highlight this is far from the truth. Humberstone (2002) states that physical education is a formal site that is associated with forms of masculinity and inferiorated forms of femininity. Research has demonstrated that gender inequity is a serious problem (Lyons and Lyons, 1998; Williams and Bedwards, 1999; Institute of Youth Sport, 2000 in (Kirk, 2003). While Kirk implores physical educators to develop anti-sexist pedagogies that challenge hypermasculine practices unfortunately Flintoff (1990, 1993) in Kirk (2003) has indicated that teacher education institutions fail to challenge prejudices among teachers and teaching in PE. Harris and Penney highlight that curricular content and staffing are responsible for this gendered provision within physical education. If we look at the VELS for content of curriculum the documentation is dominated by sport, fundamental motor skills, competitive games and movement competence. These are all examples of curricula which are designed for boys. Very little in the 'new' curriculum are designed for girls with two lines within the whole document directed at possible activities which girls consider to be important. As such I agree with Tinning et al. (2001) that girls become constructed as problems because of their reluctance to participate in male dominated competitive team games.

Giving credit where credit is due – maybe?
While I have been overtly critical to this point about the introduction of the VELS and its implications for health and physical education, I must give credit where credit is due, maybe. Outdoor education and outdoor recreation has become more explicit in the VELS documentation. This may be considered to be a good thing it may be considered to be a bad thing, a little more on this later. The CSF II document referred very little to outdoor education and the educational goals which can be achieved through outdoor education in the health and physical education key learning area. However with the VELS at Level 3 the first description about outdoor education becomes apparent,

"students learn about outdoor adventure activities to enable them to better understand the nature of outdoor environments and how they can prepare themselves for safe involvement in such activities" (VCAA, 2005a, p. 12).

At Level 4, "students learn about and experience a variety of outdoor adventure activities in natural environments" (VCAA, 2005a, p. 14).

Level 5 "students participate in a range of outdoor recreation and adventure activities, students further develop skills, knowledge and behaviours which enhance safe participation in these activities," (VCAA, 2005a, p. 16) and Level 6 "engage in a variety of recreational and outdoor adventure activities...and investigate how environmental factors influence health behaviours of individuals and populations" (VCAA, 2005a, p. 18).

There is literature which discusses the position of outdoor education within the physical education curriculum. The two schools of thought for this are as follows:

1. Students learn physical skills within the context of the classroom within health education and physical education, and students also learn physical skills such as navigation, putting up a tent, loading a pack and paddling a kayak, however it is learned in a different environment, predominantly the outdoors. This example, according to Lugg (1999)would primarily focus outdoor education in personal/social objectives of education. While this in itself Lugg argues is not a bad thing, she states that these objectives could be achieved through health and physical education, NOT outdoor education.

2. Outdoor education is not physical education. Broader educational goals exist for outdoor education if it chooses educational outcomes which are not skill development based. As such the goals of outdoor education should be focused on environmental/cultural objectives (Lugg, 1999).

While these two schools of thought exist for outdoor education, one must remember that it is currently not a key learning area within the CSF II document and does not exist as a domain within the VELS documentation. The question remains, if schools believe that outdoor educational experiences are worthwhile where will they teach this subject. I would have a guess that it may probably occur in the physical, personal, and social strand, probably at the expense of the environmental/cultural position Lugg (1999) has taken. However I do believe that a compromise might be able to be reached, using a model which inextricably links health, physical education and outdoor and environmental education. The model is known as the socio-ecological model (Wattchow & O’Connor, 2003).
A socio-ecological approach

Wattchow and O’Connor (2003) present a new paradigm in their paper re(Froming) the ‘Physical’ in a Curriculum/ Pedagogy for Health: a socio-ecological perspective. They have drawn on the work of educators in the physical education and outdoor education fields such as Tinning, MacDonald and Jardine in an effort to erode the paradigmatic boundaries which continue to exist in the literature. While physical education has followed a discourse of human public health and outdoor education has followed discourses of ecological health, these can be tied together using this socio-ecological approach. For this to occur two premises must be understood:

1. a lived educative experience, and
2. radical different approach to health, one which or does not separate personal and social health (an anthropocentric view) from the health of sustaining natural systems.

There is some support for the notion behind a socio-ecological approach in physical education and outdoor education. The New Zealand Ministry of Education’s Health and Physical Education key learning area has the socio-ecological perspective along with Well-being (Hauora), Health Promotion and Attitudes and Values as underlying concepts in their curriculum. It is clearly identified within the curriculum document that students should:

• “identify and reflect on factors which influence peoples choices, behaviours relating to health and physical activity (social, economic, environmental, cultural and behavioural)
• recognize the need for mutual care and shared responsibility between themselves, other people and society
• actively contribute to their own well being, to that of other people and society, and to the health of the environment that they live in” (New Zealand Ministry of Education, 1999, p. 33).

SO the question needs to be raised how might a socio-ecological perspective work within the VELS? The answer to this appears to be rather straightforward. It requires teachers to question the status quo, the importance of curriculum documents they receive and their importance to their pedagogy all utilising a professional approach to this process. As Wattchow & O’Connor (2003) succinctly state “the work of HPE teachers sympathetic to a socio-ecological perspective will be to challenge the existing set of assumption, including those implicit in both public health and socially critical agendas, in terms of an extended physical/embodied, social and sustaining natural systems conceptualization of health” (p. 12).

A course approach

The Bachelor of Sport and Outdoor Recreation (BSOR) has now been in existence at Monash University since 1998. Most students combine BSOR with either a Bachelor of Primary or Secondary Education. Those in the secondary stream as a majority end up teaching outdoor education and physical education as their predominant teaching methods.

As part of a course restructure undertaken during 2004, staff questioned the need to tie conceptually the areas of sport and outdoor recreation. As such EDF1606 Introduction to Sport and Outdoor Recreation was developed for teaching to first year students in 2005. The basic underlying concept behind this unit was the socio-ecological approach and its applications to education both within traditional (school) and non traditional systems. As an example of how conceptually sport and outdoor recreation were tied together, all first year students attended a 1 day mountain bike experience in the state forest immediately adjacent to the university. While students engaged in a lived educative experience, issues which covered social/personal objectives were discussed in context (for example how their body responded physiologically to each type of activity) alongside issue related to environmental/cultural exploitation of the land (tracks ridden on used by log trucks and felling of trees). Anecdotal evidence suggest students have a greater conceptual understanding about their own health and are beginning to understand how their own physical activity may impact positively and negatively on the natural sustaining system.

Conclusion

To end I want you to reflect on the opening sentence of this paper. While the flurry of activity may continue for a brief period, unfortunately I do not see change imminent on the horizon for health and physical education. As discussed the introduction of VELS continues to deliver curriculum which privileges the gifted minority, utilises sport and competitive games as main teaching pedagogies, while keeping activities such as dance, gymnastics, and other movement forms away from the mainstream.
While I am yet to be convinced about the explicitness of outdoor education in the physical, personal and social strand, I am convinced that the work of Wattchow and O'Connor will provide for exciting and interesting pedagogies in the future for health, physical education, outdoor and environmental education. In conclusion while change is apparent across the Victorian school system now is the time to rethink how health, physical and outdoor education is implemented and pedagogies are used to define its future. I would also see that other teacher education institutions look towards Monash and its BSOR course as a 'flagship' for a socio-ecological practice and pedagogy.

References
A reflective task was used to observe changes in teacher self-awareness and to monitor sensitivity to classroom interaction before and after a master's course on socioemotional development. This intensive 3-week summer course was focused on how teachers established positive everyday plans for their classroom even when interactions were socially difficult and emotionally charged. As part of coursework, 76 fee-paying international students wrote pre- and post-course reflections of approximately 100 words on their “people skills.” Their responses to specific “emotional competencies” prompts were compiled into two text files and content analysed for high-frequency terms and patterns of word associations spatially represented in a two-dimensional field. Collated pre-reflections revealed conventional views of the people skills required in teaching (e.g., as handling situations in terms of the social rules of classroom and with feelings about the pressures and time constraints in dealing with difficult people). In contrast, postreflection views about feelings and situations linked specific teaching about positive environments with being prepared to deal with emotionally difficult problems. In relation to the construct of emotional intelligence, these analyses support the instructional view that this construct is a highly trainable output rather than an inbuilt personal attribute.

Introduction
The literature on emotional intelligence (EI) posits some combination of nature and nurture such that the trace elements of EI are laid down very early in childhood (Goleman, 1995). According to this view, EI should be largely fixed by adulthood, able to be measured and used predictively much like the intelligence quotient (IQ). It follows that some people are more socially effective than others and bring to bear established talents in social skills, communication, and empathy to social situations. Teacher goodwill towards students has been “a given”, with individual differences in teacher practice tacitly accepted as the province of individual teachers and related to personal interest, motivation, and personality (Ackerman & Heggestad, 1997). What is a matter of individual differences in the general community is becoming a topic for professional training in teacher education. Teaching is an interventionist profession that, by its nature, is about making change happen. People attracted to teaching might be expected to have some socioemotional strengths. Yet classroom interactions remain one of the most problematic and stressful aspects of teaching and one in which teachers cling to unhelpful beliefs and practices. The study of emotional competence refreshes existing perspectives on teacher practice and, in particular, challenges unconscious, naïve, and nativist or nature-based beliefs about development and behaviour.

The combined influences of ability, personality, and motivation on teacher practice are complex and uncertain. Implications for classroom practice have been addressed in various ways in educational literature. Much discussion has been couched in terms of problems (e.g., teacher stress and burnout and behaviour management). Much reform has been espoused in terms of alternative views of effective learning environments such as student teams and cooperative learning (Slavin, 1996, 2004) and collaborative teaching teams and co-teaching (Hargreaves & Dawe, 1990). However, debate is moving on to the emotional curriculum for students and, more recently, to the emotional curriculum for teachers (Davies & Bryer, 2003, 2004a, b, c; Jarzabkowski, 2002).

It is clear that socioemotional skills feature in teacher practice to an extent not manifested in teacher education. Experienced teacher practitioners have indicated that they regard themselves as competent in curriculum and pedagogy but that, well into their careers, they place great value on personal skills in which they see room for improvement. A large sample of 4,000 Australian teachers generated a comprehensive list of school and classroom competencies (Hughes, Abbott-Campbell, & Williamson, 2001). They
targeted specific personal and practitioner skills that relate to the teacher-learner relationship rather than administrative and organisational competencies, on which they expressed universal agreement about competence (e.g., daily administrative responsibilities, accessing curriculum resources, and, in the classroom domain, effective timetabling). Across primary and nonprimary teaching, important competencies on which they saw room for improvement included social interactions with colleagues, parents, and the community; self-awareness and reflection; and interactions around teaching, learning, and individual differences.

There is increasing concern that teachers need to engage in some kind of emotional self-help to improve professional effectiveness. Richardson and Shupe (2003) urged teachers to get in touch with their own feelings, thoughts, and behaviours in order to respond and relate more effectively to their students, particularly those students with frequent, intense episodes of disruptiveness. Self-awareness included understanding one's own emotional triggers, ways of managing stress, and tendency to offer positive reinforcement of other teachers' efforts. Mosca and Yost (2001) argued that automatic and holistic teacher reactions to negative interactions with students could affect students cumulatively (see, also, Dodge & Pettit, 2003). Teacher reactions to troubling students also entrench routine ways of thinking, which draw on self-protective cognitive schemes developed over time and personal biases acquired through prior experience. Their reactions not only unconsciously escalate conflicts but also deflect teachers from making more adaptive change to their classroom conditions, selecting helpful decisions about how to improve student behaviour, and providing active support to student learning.

Davies and Bryer (2004b) found high levels of social awareness in graduating special education teachers at Griffith University on the Emotional Competence Inventory (Boyatzis & Goleman, 2002). Self-awareness was rated significantly higher than self-management and relationship management, which was significantly lower than the top two clusters. In particular, these students were cautious about skills in managing intrapersonal and interpersonal challenges even thought they'd completed intervention-oriented courses in interpersonal psychology, counselling, behaviour support, and communication that were not offered to regular classroom teachers. These data raise issues for program revision not only in special education but also for the curriculum-oriented program in regular education.

Many preservice teachers might be passively resistant to ideas of change in themselves, in the nature of professional knowledge about behavioural support, and in their approach to practice (Pajares, 1992). "They believe that problems faced by classroom teachers will not be faced by them, and the vast majority predicts that they will be better teachers than their peers" (Pajares, 1992, p. 323). Beginning teacher education students have been found to hold prior beliefs about the fixed nature of human behaviour, development, and learning. Nativist and innate beliefs about how children develop and static, reproductive views about how students learn have been recognised as barriers to nurture-oriented active, constructivist, and interventionist practice acquisition (Joram & Gabriele, 1998; Klein, 1996; Pajares, 1992).

Emotional intelligence in teacher education is about improving teacher effectiveness in relation to socioemotional skills by enabling them to perform professional roles in classroom and school and to handle difficult situations. It has become increasingly apparent that teacher education needs to offer conceptually and empirically strong alternatives to established training in behaviour management. Such a reframing of teacher education program will need to encourage teachers to engage in nonacademic skill teaching for their students and to provide a active, universal approach (i.e., for all students in a classroom). Preconceptions about either a teacher's natural capacity to influence learning by creating interest or about a child's natural capacity to grow independently, to develop responsibility, and to cope with adversity without active support can distort the way in which teacher education students frame issues in behaviour management. "The teaching of responsibility is no less demanding a task than the teaching of any other curriculum area; it requires careful thought and reflection, complex instruction starting at the earliest ages and continuing through the school years, and patience (Villa, Udis, & Thousand, 2003, p. 141).

Reflection as a tool is often recommended to improve teacher effectiveness (Bain, Ballantyne, Mills, & Lester, 2002; Brookfield, 1995) in relation to socioemotional skills. Mosca and Yost (2001) encouraged teachers to use reflection to make a thoughtful, rational, "professional" response to an emotionally tense social interaction between teacher and student in the classroom. They referred to the Dewey concept of a reflective practitioner as someone with personal attributes of open-mindedness, responsibility, and wholeheartedness. They outlined ideas for stronger and more skilful use of these attributes. However, Laboskey (1994) argued that some types of people might be more able to engage in reflection and might be more responsive to learning how to reflect. She found that nonreflective people could still be skilful, organised, and productive teachers even when their attitudes and emotions interfered with reflection.
A reflective task in a master's course on socioemotional development provided a way to observe approach to teaching effectiveness at program entry and to monitor changed sensitivity to classroom interaction. A brief 3-week course provided an “intervention” in which participants learned they could use a model of antecedent-behaviour-consequence (ABC) strategies to understand and manage relationships in the classroom. Apart from the intervening coursework, this reflective process did not incorporate either guided, scaffolded, and structured reflection throughout an extended period of study or a formal process of critical analysis of actual practice in relation to relevant literature on ethics and evidence about strategies (Hole & McEntree, 1999). The prereflection task oriented students to the course focus on social aspects of teaching, emotional aspects of classroom behaviour of teacher and their students, and teacher capacity to change their behaviour and also that of students in the classroom. It was expected that reflection at course entry would reveal a characteristic view of teaching. The postreflection task was expected to indicate changes in understanding of effective teaching behaviour and role of a classroom teacher.

The current study examined the proposition that the pre-existing emotional competencies of student teachers are likely to affect teaching approach, irrespective of instruction, by asking a group of 76 postgraduate Canadian trainee teachers to complete pre- and post-reflections focussed on their “people skills.”

Method
An annual educational conference at Griffith University has invited addresses on educational strategies for inclusion (Anderson, 2003) and school-wide positive behavioural support (Jackson, 2004), and the education program has begun to include such courses in undergraduate and graduate education. The masters program has run this kind of strategy training course combining development and behaviour for several years.

The 3-week summer school outlined an approach to effective teaching that stressed positive, proactive planning to support students. The course shifted from “why” to “how” between the first and second weeks. Each week, there was a day of mass teaching and a day of workshops. In the first week, a day of lectures and videos outlined a developmental rationale of prevention for classroom behaviour (rather than a disciplinary model), which covered concepts of context and individual differences and processes of building resilience and providing an ABC support structure of teacher strategies for preventing problem behaviour. The introductory rationale explored empirical reasons why teachers should set students up for developmental success, why it was important to build developmental competencies in student relationships with teacher and peers as well as in academic planning, and why teachers’ social support was important to student development of resilience to stress. In the second week, a day of lectures and videos addressed how teachers could implement a developmental model of prevention, involving an ABC model of positive teaching strategies, socioemotional learning by students, and nonreactive teacher practice. In the third week, coursework examined students at socioemotional risk for anxiety, oppositional behaviour, and impulsivity, using an ABC approach to causation and intervention. It was argued that the everyday strategies planned in the second week could be extended to accommodate the more challenging problems of these children and that regular teachers could acquire effective skills to cope emotionally with these interactional difficulties (Bloomquist & Schnell, 2002; Walker, Ramsey, & Gresham, 2004).

The participants enrolled in this summer-school brought a variety of undergraduate degrees. Most were recent graduates in their early twenties. Their fee-paying masters degree program was accredited for teacher registration with the Ontario Board of Studies. There was also a small subgroup of north and south Asian students from Taiwan, China, Korea, Japan, Indonesia, and India. Most claimed some teaching-related experiences in classroom teaching, coaching sport, and paraprofessional roles. For most students, this summer school course was their first exposure to the 18-month teacher education program, although a small number had completed a 12-week semester of study on campus.

Instructions for the task focused attention on the nature and role of emotional competencies in effective teaching practice and, specifically, on knowing one’s own strengths and weaknesses and being able to use this knowledge in making changes. The simple nongraded task made it an opportunity to conduct a personal audit of existing and emerging strengths and preparedness for the classroom. The task presented early in the course explored the “people” skills that brought them to this course and engaged students with the goals of this course. After the course, the task revisited their views and their consolidation during prevention and intervention modules of the course.

An A4 page headed “People Skills” contained simple instructions and three sets of prompt questions that allowed each individual to think about their own skills. The first set of questions concerned ideas
about the advanced competencies that distinguish an outstanding teacher and awareness of personal strengths of personality, interest, and motivation required to become an effective teacher. The second set of questions concerned the capacity to assess the people skills of self and others, to identify important social skills in terms of value and self-confidence, and be self-accurate about "looking good" to others and detecting "putting on a show." The third set of questions concerned thoughts about changing the self and others in situations involving pressure (i.e., being prepared to "work with" socially difficult and emotionally charged interactions in the classroom).

Exchange of e-mails involved prereflections (n = 80) and postreflection (n = 76) from students and e-mail responses from the convenor to the postreflections of many students (n = 76). Convenor responses to prereflections were restricted to confirmation of the e-mail and social responses to personal details (e.g., family notes on military life or generations of teachers in family, sports interests such as figure skating, subject such as chemistry and languages).

Students e-mailed their preparatory reflection to the convener at the end of week 1. Students then e-mailed their postreflection after the end of the 3-week course, together with a copy of their prereflection, to facilitate reflection on changes in understanding of the nature of personal skills of the teacher throughout the course (viz., to highlight any major pre- to post-course changes).

The postcourse task was presented in three specific streamlined versions of the previous sets of questions. Participants wrote a paragraph of approximately 100-words covering the three core questions: (a) "How do your personality, interests, and motivations contribute strengths to the process of becoming an effective teacher;" (b) "At this time, how prepared are you to identify and manage heightened emotions in yourself and in students in a classroom;" and (c) "At this time, how prepared are you to work with socially difficult and emotionally charged interactions in the classroom?"

The convenor read the second reflection after finalisation of graded work, responded to individual students about issues raised in that reflection (e.g., reinforcing course themes in e-mails and encouraging intentions), and added the second reflection to a group text file).

**Results**

Participant pre- and post-reflections in response to specific "people skill" prompts were collated into two text files. These files were analysed using Leximancer (Smith, 2002). This software package was used to identify salient dimensions of discourse within a constructivist approach to data analysis. Leximancer computes the frequency with which a term is used, after discarding text items of no research relevance (such as "a" or "the"), but does not include every available word in the final plotted list. Constraints include the number of words selected per block of text as well as the relative frequency with which terms are used.

After computing the ranked list of terms, Leximancer computes the distance between each of the terms via computations equivalent to nonparametric factor analytic or cluster analytic procedures in quantitative data analysis. This analysis provided evidence of the range of issues identified through the focus groups. As with other factor analytic procedures, there is no single solution, and the quality of particular solutions is best judged in terms of interpretability. The result of this computation is displayed in a two-dimensional spatial representation (Figure 1). More frequent terms are more visible. Quadrants are numbered manually.

The software was run on default settings excluding all prompts and instructor feedback. Instructor statements were excluded because it seemed reasonable to assume that the instructor and students might be addressing different concerns.
Analysis 1: Prerelections

The two terms that appeared most frequently were “people” and “teacher.” The display was rotated so as to align the term teacher with the (x) horizontal-axis in between Quadrants 3 and 4. With teacher thus aligned, the terms “effective” and “think” and “situations” also aligned with this axis. In contrast, the term “skills” aligned with the (y) vertical-axis between Quadrants 2 and 3.

With these terms thus aligned, the high frequency term “feel” was situated towards the centre of Quadrant 1, the high frequency term “people” was situated towards the centre of Quadrant 2, the high frequency term “students” was situated within Quadrant 3, and the high-frequency term “important” was situated towards the centre of Quadrant 4. The tenor of these associations was gauged by examining the text from which they were drawn.

Student when pairing the terms think and feel (Quadrant 1) were largely talking about emotional challenges. For instance: I don’t put on a show or act like something that I’m not and I think I can tell when someone else is. I don’t think I get upset that easily. Under pressure, I don’t feel mean or upset or in disarray. It is of interest that other words in the same quadrant included deal, difficult, pressure, and situation.

Students when pairing the terms think and people (Quadrant 2) were largely talking about their ability to deal with people more generally. For instance: I think it is important to listen to what people are talking about and try to relate to the way they feel. Other words in the same quadrant included person, time, show, and skills (aligned with y-axis).

Students when pairing the term teachers with the term students in Quadrant 3 were largely talking about an idealised representation of the teacher-student relationship. For instance: Becoming an outstanding teacher would involve being able to relate to the students, including developing a strong rapport, in a friendly, yet professional manner. Other terms in the same quadrant included teachers, learning, ability, classroom, and skills (aligned with y-axis).
Students when pairing the term teachers with the term important in Quadrant 4 were largely talking about important skills and attributes required by teachers. For instance, teachers require many skills similar to those individuals whose jobs involve people skills. First, educators need a large knowledge base on the subject that they are teaching. More specifically, attributes such as being calm, cool, and collected when faced with frustration and aggression from students are very important. Other terms in the same quadrant included teaching, student, feelings, should, and individual.

One way to summarise this prereflection analysis is that, when students initially were asked to write about their people skills, they did so in terms of internalised attributes exhibited by them under difficulties (Quadrant 1), when dealing with people more generally (Quadrant 2), in terms of the communication skills required or acquired to deal successfully with students (Quadrant 3), and in terms of the internal attributes and skills required by teachers (Quadrant 4).

**Analysis 2: Postreflections**

![Figure 2. Postreflections of Canadian students as a group.](image)

The three terms that appear most frequently were "students", "classroom", and "teacher." To maintain consistency with the previous analysis, the Figure 2 display was rotated so as to align the term teacher with the (x) horizontal-axis in between Quadrants 3 and 4. With teacher thus aligned, the term "teaching" and "deal" also aligned with this axis.

The arrangement of terms within quadrants was otherwise similar to that in the prereflections. Terms related to difficult relationships clustered in Quadrant 1. Terms related to being able to deal with people more generally clustered in Quadrant 2. Terms related to quality of teacher-student relationships clustered in Quadrant 3. Terms related to the professional role of the teacher clustered in Quadrant 1.

It is also clear that exposure to new ideas in the classroom setting has influenced the group’s choice of terms. Terms related to dealing with difficult situations in Quadrant 1 now included "prepared." Terms related to dealing with people more generally in Quadrant 2 now included "identify." Terms related to the teacher-student relationship in Quadrant 3 now included "help." Terms related to the professional role of the teacher in Quadrant 4 now included the terms "positive", "learning", and "environment."
In short, the discourse of these students on the topic of people skills has been influenced by exposure to new ideas. More specifically, the language of these students has shifted to include terms derived from the active lexicon of positive behavioural support and reinforcement (Anderson, 2003; Jackson, 2004).

**Discussion and conclusions**

The interest in analysing the reflections of these Canadian students prior to and subsequent to exposure to relevant course material is the extent to which a more precise vocabulary with a capacity to analyse (identify) and manage learning environments permeated prior musings about self and relationships with others in terms of innate attributes and generalised people skills. The shift of the term “deal” from its location within Quadrant 1 to its pivotal alignment between Quadrants 1 and 2 embodies this shift from the passive attribution of qualities to the notion of being able to deal with difficult events and a range of people in terms of a well-defined theoretical framework.

The two sets of reflections captured linguistic elements of the student change to a more active view of teaching during this brief period before the first practicum. The initial enthusiasms and affirmations of interest changed to an increased confidence in their ability to cope rationally and “unemotionally” and to temper their self-identified apprehensions with a strategic awareness of relevant environmental factors. Perhaps the graduate status of these international students and their major commitment to a teaching career made them more receptive to “interventionist” course arguments. Such changes might take longer for undergraduate students (e.g., Brownlee et al., 2001) and might need to be extended over progressive semesters to support a shift from a passively reactive approach to a more proactive and actively preventive approach to teacher practice.

Future work might take the direction of (a) comparative reflections about before-after statements and critical, literature-based reframing of approach to practice; (b) addition of further reflections after first practicum to explore the effect of experience on approach to practice; and (c) rewording of reflective task to sharpen the focus on strong emotional responses (feeling, thinking, response tendencies), views about disruptive student behaviour brought to and taken from this course (positive-negative; past-present-future, etc.), and specific situations or people that have shaped these strong feelings.

Educational researchers need to examine in more detail how teachers and teacher education students feel about their practice, why they feel that way, and what impact it has on their classroom actions towards their students in classrooms. Researchers need to ask teachers how their emotions affect their thinking and actions in both personal and professional areas of their lives, how they identify and generate their positive and regulated emotions, and how to use those emotions to energise their approach to student learning and behaviour.

Affirmations of goodwill remain an important value-base for all teacher professionals. However, teacher education preparation needs to equip the beginning teacher for a shared journey into this helping profession. When beginning teachers enter the classroom without emotional and social support and skills, they often begin a journey from early distress about the ineffectiveness of their efforts to achieve learning goals to increasing self-awareness and self-discovery of personal and professional limitations, perhaps culminating in disillusionment with teaching. Changes made during brief exposure to this course have indicated that training in emotional competencies should be a part of the curriculum of teacher education if only because nurture-based experiences can increase teacher sensitivity to these issues (Zeidner, Matthews, Roberts, & McCann, 2003).

More generally, this study suggests that EI, far from being a inbuilt feature that potential teachers bring with them and that determines their success or failure in terms of their ability to manage socioemotional aspects of the classroom environment, is a relatively plastic aspect of makeup, able to be modified by exposure to relevant instruction. This conclusion, in turn, suggests that programmatic attempt to develop measures of EI (e.g., Gardner, 1983; Goleman, 1995) equivalent to those for IQ or personality need to take into account the relative fluidity of this construct. Moreover, these attempts tend to misconstrue EI as a causal factor when, in fact, it appears to be at least in part yet another outcome of good or bad instructional (and other) environments.
References


Keeping Teachers In The Classroom:  
Taking "Responseability" To Increase Professional  
And Personal Resiliency Among Pre-Service Teachers  

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Increasing resiliency among pre-service teachers with respect to children’s mental health and wellbeing issues may assist in the retention of novice teachers in the teaching profession. Teachers’ face many student health and wellbeing issues (e.g., bullying and depression) that may affect student learning and impair the teacher’s ability to teach in a sustainable and effective manner. “ResponseAbility” is a purposefully designed program to promote mental health and a positive and healthy school environment. It was developed by the Hunter Institute for Mental Health and is used to some degree in most Education Faculties across Australia. The kit includes an instructor’s manual, student materials, 5 video clips and CD-ROM accessed resources. The primary purpose of the “ResponseAbility” program is to better prepare pre-service teachers to recognize and deal effectively with mental health and wellbeing issues that affect student learning. Evidence suggests that “ResponseAbility” training has a positive effect on student learning and wellbeing. In addition to this, there is some evidence that pre-service teachers who are exposed to the “ResponseAbility” material demonstrate increased personal and professional resiliency. This paper will explore the factors influencing novice teacher retention and how building personal and professional resiliency towards mental health and wellbeing can contribute to a positive and prolonged teaching career. In addition, the author will review some of the “ResponseAbility” implementation strategies being employed by educational institutions around Australia.

The building of teachers’ professional and personal resiliency is important if pre-service teacher education; school induction programs and ongoing mentoring programs are to have an impact on reducing teacher stress and burnout and to slow the tide of teachers exiting the profession (Martinez, 2004). Resiliency is often described as the ability of an individual to bounce back after adversity, frustration or misfortune (Janas, 2002). A teacher’s personal and professional resilience is their ability to recover from internal and external stressors found in the school environment and the classroom (Henderson, 1998). This paper will explore the hypothesis that building both professional and personal resiliency and self-efficacy in pre-service teacher education programs will assist in the retention of early career teachers in the profession. The hypothesis will look at the intuitive link between providing student teachers with knowledge, skills and strategies to effectively deal with classroom related mental health issues (self-efficacy) and teacher retention. ResponseAbility is a purposefully developed resource for pre-service teachers designed to provide supportive strategies for dealing with the mental health issues in the school community while promoting a positive learning environment for all students (Hunter Institute for Mental Health, 2001).

Second hand reports of teacher attrition due to stress and burnout are numerous. Stress is often defined as the response the body makes to any demand on it while burnout is an emotional exhaustion where the body can no longer effectively deal with stressors (Kyriacou, 1987; Schafer, 1996; Croucher, nd; National Occupational Health and Safety Commission, nd). Robert Wainwright (2002), a reporter with the Fairfax group reported on the NSW Department of Education and Training and WorkCover statistics that claim stress leave among teachers in New South Wales reached 23,000 days in 2001 with an anticipated jump of 27% in the two year period 2001–2002. The NSW Teacher Federation reported that work-related stress is a significant occupational health safety problem for teachers and that approximately 30% of Workers Compensation claims were for psychological injuries (NSW Teachers Federation, 2004). Similar patterns are reported elsewhere. A BBC News report (2004) indicated that United Kingdom teachers missed 213,300 days of school in 2003 costing $46,605,489 AUD.

Howard and Johnson (2002) synthesize the literature on teacher stress and highlight eight factors that contribute towards teacher attrition. These include:
Teacher Education: Local and Global

- Poor student teacher relationships*
- Time pressure
- Role conflict*
- Poor working conditions
- Lack of control and decision-making power*
- Poor colleague relationships
- Feelings of personal inadequacy*
- Extra-organizational stressors.

Four of these (marked with an asterisk) could easily be related to problems associated with working with students who are experiencing mental health and well-being issues. For example, a student suffering from depression may not respond appropriately to the teacher thus incapacitating the student teacher relationship, which may lead to a role conflict as the teacher may try to become a counselor which may lead the teacher to feeling inadequate because the teacher feels he/she has failed the student. Howard and Johnson (2002) also indicate that from an operational point of view there is a significant loss of both new and experienced teachers from the workforce. A longitudinal study beginning in Sydney 1978 followed a cohort of Education graduates and found that after 15 years the majority of those who left the profession did so in the first five years (Wilhelm, Dewhurst-Savellis et al., 2000). Jarvis (2002) describes a 1997 study conducted for the Times Educational Supplement where 37% of secondary school vacancies and 19% of primary vacancies were due to ill-health, as compared to 9% in nursing and 5% in banking. Ruth Reese (2004) reports that 40-50 percent of new U.S teachers leave their first jobs within five years. Martinez (2004) reports that American teachers are leaving teaching in their first two years in the classroom at more than double (15%) that of the general teaching population (6%). Education Queensland (1999) confirmed that the teaching workforce is losing at the highest rate the very teachers it has the most difficulty attracting (maths, science, special needs, those willing to work in rural and remote areas).

There is evidence which shows that teacher education programs prepare teachers well with respect to pedagogy but it is the school culture and the expectations put on teachers by administrators, parents and the community that leads to stress and burnout (Wilhelm, Dewhurst-Savellis et al., 2000; Manuel, 2003; Patrick, 2003). One aspect of this is the expectation of teachers to deal effectively with students experiencing psychosocial health problems in addition to the normal behavioural issues of adolescents (Slade, 2001). The pedagogical side of teaching is pretty solid but many teachers feel let down and inadequate when it comes to dealing with mental health issues in the classroom and while creating positive learning environments in real classrooms given the broad range of students. There is a gap or transitional period between pre-service teacher preparation and continuing professional development (McCormack and Thomas, 2003). McCormack and Thomas (2003) also report that induction and mentoring programs help fill this gap but the incorporation of sound mental health education training at the pre-service level will enable teachers to be better prepared to recognize students at risk of mental health problems while creating learning situations in the classroom that promote positive mental health. This is the intuitive link between teacher training in mental health and promoting classroom environments that encourage positive mental health and the teacher’s own personal and professional resiliency.

The Hunter Institute for Mental Health (Hunter Institute for Mental Health, 2001) concluded from its research that between 10 and 20 percent of children and young people in Australia experience a mental health problem. A mental health problem is defined as a disruption in the interactions between the individual, the group and the environment, producing a diminished state of mental health. They also claim that many young people are reluctant to seek help and do not receive the help they need.

There is evidence to support that effective mental health promotion initiatives in schools can develop a student’s resiliency and bolster self esteem (Hunter Institute for Mental Health, 2001; Janas, 2002; Lynagh, Perkins et al. 2002; Pellegrini, 2002; Grothaus, 2004; Shepard & Simms, 2004). To this end, many teacher education programs in Australia have introduced mental health issues directly or indirectly into the teacher education curriculum. Those studying Health and Physical Education as majors or minors are exposed to Mental Health Education, as it is an obligatory component to most state teacher accreditation criteria for HPE teachers (Victorian Institute of Teachers, 2003). For the rest of the pre-service teachers, mental health education is less formalized. While reviewing teacher preparation programs in Australian and Canada, this author has found that every teacher education institution strives to enhance student mental health and well being by building into its course a major emphasis on classroom management and
strategies to promote positive learning environments. This is also reflected in outcomes expected by teacher accrediting bodies. This recognized need for mental health promotion in schools is being addressed and there exists one Australian produced mental health resource purposefully designed for teacher education.

ResponseAbility produced by the Hunter Valley Institute for Mental Health is a purposefully designed program for student teachers to promote mental health and the creation of positive and healthy school environment. The ResponseAbility material is copyrighted by the Commonwealth of Australia and is supported by the Australian Department of Health and Ageing; the Hunter Institute of Mental Health, Hunter Health, NSW; National Mental Health Strategy and Life (Living Is For Everyone). The ResponseAbility Kit is available to Teacher Education facilities and includes an instructor's manual, student materials, 5 video or DVD case studies, and Instructor's CD ROM and a Student CD ROM. There is also a Web site that supports the print or CD ROM material.

By viewing the vignettes and working through the discussion items, pre-service teachers are better able to recognize mental health issues in the classroom and are better equipped to effectively respond to them. At the same time, the program hopes to promote positive learning environments that reflect good teaching practices that support the mental health of students. The premise of vicarious learning and self-efficacy from Alfred Bandura's Social Cognitive Theory underpin the hypothesis developed here (Bandura, 1986). That is if pre-service teachers are able to recognize mental health problems in the classroom and are able to effectively deal with them while maximizing the quality of learning for each student in the classroom, then that teacher will likely feel less vulnerable (stressed) and experience increased self-efficacy and resiliency (Labone, 2002). Labone (2002) describes that pre-service teacher's personal teaching efficacy can be increased over time making them more confident in their ability to manage student related issues and alleviate personal stress and burnout.

According to Karen Vincent the Special Projects Manager for ResponseAbility, there are currently 19 campuses using the material in the health curriculum area or in an elective unit. Another 23 campuses use the material in a core or foundation subject that is taken by all students. In some cases, the material is used to supplement units on adolescent development. It is reported that only Southern Cross University currently incorporates the material with the student's practical experience in schools. It is reported that Newcastle University and the Australian College of Physical Education employ the ResponseAbility material as the primary resource for units on adolescent resiliency development.

The ResponseAbility Resource for Teacher Education is an excellent resource that has a huge potential to enhance the beginning teachers classroom experience. As reported in the literature, stress and burnout among early career teachers is serious issue that will have a significant impact upon the teaching profession as the teaching workforce ages and an increasing number of teachers retire. The shortfall of classroom teachers is already being felt around the world. Employers and teacher educators must tackle the problems faced by early career teachers and strive to enhance personal and professional resiliency by better preparing pre-service teachers for their complicated multi-faceted role in classroom. This combined with effective induction; mentoring and professional development will hopefully reduce the attrition levels among early career teachers.

References


Managing Diversity And Difference: 
Developing Support Initiatives For NESB Students 
In Teacher Education Programs

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The majority of Australian universities have well documented policies and strategic plans that clearly support the inclusion of students from non English backgrounds (NESB) into all programs. Whilst the inclusion of students from NESB backgrounds acknowledges issues of equity and reflects a commitment to greater inclusiveness in higher education it is not without its problems. Studies by Batorowicz (1999), Pantelides (1999) and Robertson et al. (2000) argue that the majority of NESB students experience problems in the areas of oral language competence and in understanding colloquial language. In the case of teacher education (TE) students graduating from Queensland universities this can be problematic because the Board of Teacher Registration (BTR) requires that:

Graduating teachers will exhibit a high level of personal proficiency in oral and written language and numeracy. […]. They will demonstrate communication skills in a range of social and cultural contexts. […]

While TE students often receive support in academic programs they frequently experience difficulty in school professional practice. These students begin to experience difficulty in the first or second practical experience and often fail later practicums. It is not uncommon for such students to leave the program before completion. This paper will critically evaluate current university policies that relate to equity issues and discuss their impact on practicum experience of TE students. It will then briefly report on an ongoing mentoring program conducted by one university to support an NESB teacher education student in their practicum.

Within the last twenty years we have witnessed the rapid changes brought about by globalization of the world's economic, political, technological and environmental systems. At the same time there has been increasing demands on teacher education (TE) programs to prepare teachers who will recognize the challenges within multicultural education settings and have the skills and expertise to work with these. In turn schools are expected to be staffed by teachers who will be able to teach for equity and diversity and interact effectively with colleagues, parents and children who are different from them in race, ethnicity, class, language and national origin.

The commodification and globalisation of education and the widespread introduction of policies informed by rhetoric of internationalisation and equity have introduced a mounting pressure on universities to successfully manage the increasingly diverse student population. However the decline in government funding to universities has made it more difficult to work with the diverse needs of students. Changes brought about by university policy and strategic directions have influenced the management of universities and have impacted on the main education business of universities. Since 1995, Commonwealth funding per university student has continually declined (NTEU, 2002). In order to overcome this shortfall, universities have been forced to adopt an entrepreneurial approach through increased commercial operations and partnership arrangements to expand their sources of funding. Many are responding by broadening their student base with full fee paying domestic and overseas students and other commercial partnership arrangements.

As a result of the globalization of education, in the twenty-first century, teaching has evolved as a profession that requires members to have higher education qualifications that ensure theoretical knowledge as well as a practically grounded expertise. Pre-service teacher education is now only available as a university degree program defined by both theory and practice that must first be accredited by the discipline's regulatory authorities. Regulating bodies such as the former Queensland Board of Teacher Registration (now known as Queensland College of Teachers clearly define the professional standards of practice that graduates are expected to meet by the time they have graduated from their pre service program. Here the emphasis is on developing graduates who will become members of the teaching
profession with the unique characteristics, the knowledge, skills and attitudes required of teachers working in a multicultural society.

A complex set of interrelated factors are preventing the full realisation of this occurring because we are not encouraging or supporting the development of a teaching profession that clearly reflects the growing changes in society. While there is an increased emphasis on professional standards and accreditation at the same time the emphasis on developing a consumer-based university culture has meant that frequently university policies take precedence over professional and industry requirements. At times the teaching profession itself fails to reflect the composition of a multicultural society because of its attempts on the one hand to satisfy the standards of employing authorities and regulating bodies and on the other hand to meet the diverse needs of its clients.

In this paper I locate and examine the tensions that exist between the political agenda of the university and the development of professionalism of pre-service teachers. I question how well university policies support and reflect the professional standards and requirements of teachers in current TE programs. I describe an ongoing small-scale project introduced at a university campus that attempts to overcome some of the challenges faced by TE students who come from a Non English Speaking Background (NESB) as they negotiate their way through the demands of everyday school life during their teaching practicum.

Historically, from the beginning of the mid 1980s, extensive and complex changes to Australian universities in general, and teaching began with a series of government reviews and reports (Dawkins, 1988, 1989; Nelson, 2003; Vanstone, 1996; West, 1998). For example, Dawkin's Green and White papers (1988, 1989) foregrounded the development of mass education that led to increased university places, increased the emphasis on the economic value of higher education, and introduced the vocationalisation of higher education accompanied by corresponding industry demands on higher education. The government of that time considered these educational changes would lead the push for economic reform. More recently, Brendan Nelson's Our Universities: Backing Australia's Future (2003) signalled the intention of the current government to use legislation as a means for driving the cultural, educational, social and economic change they argued was necessary for the 21st century. Many of these amendments have introduced significant changes to policies, strategic directions and plans and to the governance of universities that have led to a commodified, globalised and technologised higher education system.

The major driving force for the changes to Australian higher education has been a concern to increase full fee paying students. The importance of international students to the Australian economy is highlighted by Myton's (2002) report that in the year 2000, international students generated $3.7 billion for the Australian economy of which $2 billion went to university budgets. According to Batorowicz (1999) by the end of the 1990's Australia was the third largest exporter of education in the world after the USA and the UK. At this time international students represented 10% of the total student body (Gatfield et al., 1999). Gatfield et al. point out that the historically higher education managerialist approach on the issue of quality (that is it is the responsibility of the supply organisation to define, measure and evaluate quality standards) is now being challenged by a consumer approach which sees the market determining what quality is required. Margison and Considine (2000) argue that frequently the market, particularly for international students, is driven by a commercial and entrepreneurial spirit rather than academic excellence. The result of this is the rise of what Margison and Considine refer to as the "Enterprise University" (p. 4) described as a one-dimensional institution dominated by the business of profit seeking.

The effect of globalisation on universities has been a significant growth in student numbers, increasing flexibility in course delivery and structure as well as a move to integrate students within a diverse multicultural environment. Singh (2002) claims that the importance of globalisation lies in the opportunity it has presented for active participation of students from different linguistic backgrounds whilst enabling students and academics to build a cosmopolitan identity. This has enriched the university culture itself by raising an awareness of the new skills required to negotiate these differences and diversity society in the 21st century. Globalisation has also meant that both the student and academic university population has grown in indigenous, cultural and ethnic diversity.

The changing nature of student populations has introduced with it the legislative responsibilities and commitments that Australian Universities have to fulfil in areas of equity and social justice to ensure that specific groups that have previously been disadvantaged through past practices and policies are included in and provided for by higher education. Since 1990 five equity groups in addition to Indigenous Australians have been recognised as being disadvantaged in their access to higher education. These include people from non-English speaking backgrounds (NESB) as well as people with disabilities. The groups are
supported under the Higher Education Equity Programme. As a result of equity practices the student population of universities consists of a diverse range of people that reflect the diversity of the community they serve. Students are now drawn from a diverse range of ethnic, cultural and soiciocultural backgrounds. The emphasis on equity acknowledges a commitment to greater inclusiveness in higher education and this is witnessed by the plans and programs universities have developed to address the previous disadvantages. The policies of internationalisation and equity bring with them a growing number of students who either have English as their primary language or are second or third generation children from an NESB. However, these students frequently require a diverse range of learning needs. This diversity increases the complexities that are met with in developing an inclusive learning environment. It is often the case that students, in this case I refer to TE students, experience considerable difficulties meeting the requirements of their academic program. Here the requirements are in the teaching practicum, where proficiency in English language is crucial to success as practicing classroom teachers.

For example, university admission policies provide an area of tension particularly in the selection of students for TE programs. Admission to this undergraduate program in universities is often based on the admission level of the applicant, target numbers and/or quotas, where admission level is the basic measure of academic merit for tertiary admission purposes determined by the relevant tertiary entrance procedure authority. Other admission criteria may be specified, for example a pre-requisite of year 12 English. Overseas NESB applicants need to demonstrate that they have a satisfactory command of English before being considered for entry into these programs. Such admission requirements reflect the academic ability of applicants to undertake the program.

Despite students having to satisfy English language requirements before they can gain university entrance various studies have found that many NESB students experience a range of difficulties in coping with their academic program because of poor English language proficiency. For example, Ramburuth (2002) concluded from the study that English language competence might not be the sole issue. Rather there are a number of complex issues related to managing the language and learning of students within specific disciplines and subjects. Ramburuth, unsurprisingly, found that a significant number of international students scored lower in a test of English language competence and required extra support in this area. Further, those students with poor language competence tended to receive below average academic results. The major outcome of the study was the recognition of the need for an increase in strategies to assist these students in their language and learning. Although generic support services were beneficial the study concluded that students require help in learning within specific courses and disciplines. Thus, support needs to both faculty and subject specific.

Pantelides (1999) found that despite international students meeting the English language admission requirements of the university, many students discover their English language proficiency is inadequate to meet the requirements of their program. A study by Mulligan and Kirkpatrick (2000) found that fewer than one in 10 NESB students were able to understand the content and intent of their lectures very well. Of particular concern for TE students are studies that have found that students many students are experiencing difficulty understanding everyday language. Batorowicz (1999) analysed the problems faced by international and non-English speaking students, and found the main problem was that of language particularly in the area of oral language. Robertson et al. (2000) report that language comprehension and competence as well as understanding colloquial language pose the greatest problems to NESB students. Importantly it is not only those students who come from overseas that are experiencing difficulties with English language proficiency. As well students who come from migrant families also experience difficulties. Many university students have arrived in Australia as children or adults without English as their primary language. Cahill (2002) cautions that we are not responding appropriately to the needs of students from immigrant and refugee families. Nor do we respond adequately to students who are Australian born and have NESB parents. Both these cohorts of students that are growing in numbers seldom seek support in their programs. Moreover their language difficulties are hardly ever recognised and understood. Despite the policy directives universities are generally unable to value and promote cultural and linguistic diversity within the institution because the Commonwealth government is not funding programs under the multicultural umbrella. Therefore, the move towards greater internationalisation as a means of enhancing university revenue and broadening the cultural interchange and experience of both domestic and international students raises a number of concerns that to date have not been adequately addressed. Some of these concerns relate to student performance in professional practice settings. We discuss these issues in a later section. The following discussion now focuses on the importance of
professional standards for the teaching profession and why these must be incorporated in curricula and relevant university policy.

At the beginning of the 21st century the Review of Teaching and Teacher Education (2003) signalled the need for further support for higher education providers offering teacher education courses. Following this reviews, Brendon Nelson's White paper, Our Universities: Backing Australia's Future (2003) set out the government’s blueprint for reform in the higher education sector. Four key principles of sustainability, quality, equity and diversity underpin the reforms and built around these are a number of measures to reflect and support the reforms. Of particular relevance to teaching is the additional funding support to be provided by the Commonwealth to teaching which is identified as one of the areas of National Priority. The increased funding goes to institutions offering programs in teaching and is to be directed towards the enormous additional costs associated with teaching practicum. The extra funding signals an emphasis by the government on the importance it places on teaching practicum in the preservice education of teachers. In response to the current and anticipated shortage of teachers the Commonwealth government has also introduced other initiatives to attract more people into the profession. The initiatives include exemption for teaching students from HECS increases. However, while universities are being pressured and encouraged by the government to provide increased places to a wider range of students professional bodies are demanding strict observance of standards and regulations. While there is a community expectation that graduates from accredited university teacher education programs will be competent, ethical and trustworthy in all aspects of their practice, the question is how well are the complexities of these disciplines' professional practice reflected in and supported by current university policy?

I argued earlier that the rapid economic, political, technological and environmental changes of globalisation influences the expectation that teachers will prepare children to take their place as responsible citizens in a complex and diverse world. Following this, TE programs are faced with the challenge of embracing vocational as well as traditional educational aims while TE students are expected to become both competent practitioners and knowledgeable, life long learners. The theory practice nexus is an ongoing concern for teacher pre service education, with much attention given to how well graduates are able to bridge the gap between academia and industry and "fit into the system". The nexus is achieved by offering TE programs that are not only grounded in theory but also provide students with significant and quality teaching experiences. Further, the pre service programs require that students satisfy the standards set by their profession. Key stakeholders throughout Australian states such as the Queensland Board of Teacher Registration (2002) view comprehensive industry experience for teaching as extremely valuable and essential, and consider experience central to all TE courses that receive accreditation. In addition, teachers, once registered, have a professional responsibility to maintain the standards in order to renew their licence on an annual basis.

The demand for standards at both a pre service and post service level by the relevant regulatory body follows Bruhn et al's (2002) argument. He argues that it is essential for professions to be self-policing so they have the capacity to establish expectations, evaluate the profession's contribution to society and monitor the conduct of its members. Hence they are left with the ultimate authority to govern and regulate the profession and protect the profession and the constituents it serves. The professional standards required by the Queensland Board of Teacher Registration (BTR) of graduates from TE programs reflect both a national and an international concern regarding expectations of the level of skills, knowledge and level of professionalism of the teaching profession. Thus the BTR Professional Standards for Graduates (2002) serve

... as a measure of accountability of the readiness of graduating teachers for potentially fulfilling teaching careers... (and indicates)... what graduating students will know, understand and be able to do as a result of their pre service preparation (p. 5).

The standard most relevant to the thesis of this paper states that

Graduating teachers will exhibit a high level of personal proficiency in oral and written language and numeracy. [...] They will demonstrate communication skills in a range of social and cultural contexts. [...] (p. 6).

The important point here is that the Professional Standards ensure that the person applying for registration to teach has gained relevant qualifications, and has competency in English language. Furthermore the expectation is that

Graduating teachers from non-English speaking backgrounds .. (will) .. be proficient in English language at the level of 7 on each area of IELTS (International English Language Testing System) (p. 6).

The assumption is that students will reach the specified level of English proficiency by the time they
finish their TE program. However as I discussed earlier many students fail practicum as well as academic courses, become disheartened because they do not receive adequate support and frequently do not complete their TE program. Thus the opportunity to enrich the teaching population with teachers from diverse ethnic and cultural backgrounds is lost.

If the core business of universities is to provide a quality educational product then it becomes a responsibility of the institution to support all students. In particular if universities wish to commodify education so that it is a major export item they must ensure that they support those students who come from other countries. I argue that despite the implementation of university policies informed by equity and internationalisation they frequently run counter to ensuring that the diverse student population they attract will be offered programs that will ensure success. In what follows I elaborate on the attempts made by a School of Education on one Queensland university campus to overcome some of the challenges that are faced when both international and local NESB students enrol in TE programs. I discuss some of the challenges and barriers that had to be dealt with and outline the ongoing program that is has evolved.

The project developed because reports over a two-year period, from 2002 to 2003 (Table 1) indicated that a number of NESB students enrolled in undergraduate TE programs (Primary teaching) in the specific School of Education frequently experienced difficulty in their teaching practicum. Most of these students had been identified as requiring support in English language proficiency. In 2002 four of the eight NESB students enrolled in a TE program failed the teaching practicum. The other four experienced difficulties such as poor behaviour management and literacy and language difficulties. The result was that a significant number of the NESB students eventually failed to complete their TE program. It appeared that only a minority of NESB students were graduating as teachers. This raised equity concerns.

Table 1
Practicum Results 2001–2003

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# = International Student; P = Passed; F = Failed; AR = At Risk; WD = Withdraw; L = Language difficulties; L/N = Literacy & numeracy problems; TP = Teacher presence; GE = Graduate Entry; G = Graduated; CP = Continuing program

The needs of these students while at times specific to circumstances and pathway to university shared some commonalities. Each student experienced difficulty communicating with children because of accented English language. Further, the students had difficulty managing the culture of schooling as well as the expectations placed on them during the practicum. Each student experienced a level of ‘shock’ when confronted with the realities of classroom life especially with regard to behaviour management and what at times they perceived to be a relatively noisy, demanding and ‘uncontrolled’ Australian classroom.
Each professed a strong desire to teach and has an ardent concern for children’s welfare and development. The specific difficulties that the students experienced were usually identified in the earlier practicums. Despite many of these students receiving support in the academic component of their program it was not unusual for them not to receive the same level of support during the practicum. In fact, in some cases practicum schools refused to take a TE student if they believed that the student could have some difficulties with English language proficiency. Some schools cited reasons such as children’s inability to understand the TE student which led to disruption to classroom management and complaints by teaching staff and parents. Some other schools were unwilling to take the student if that student had failed a previous practicum.

In second semester 2003 a small University Teaching Grant was obtained to provide support for identified NESB students. The university awards Teaching Grants with the objective of supporting innovative teaching and learning projects of up to two years duration. The objective of the project was to plan and trial a support program for NESB students during their teaching practicum through the use of supportive supervising teachers during the teaching practicum as well as the introduction of a mentoring program. At the end of 2003 an audit of identified NESB students was conducted to determine their progress during their teaching practicum. At the beginning of 2004 informal discussions were had with those students who were identified as experiencing difficulties in their practicum. They reported difficulties not only with language but also with the culture of schooling. That is, understanding the expectations of and managing classroom behaviour. Most students agreed that it would be useful to have someone to talk to other than their supervising teacher about their teaching practicum because frequently their supervising teacher did not have time to talk to them and they did not feel comfortable in approaching them.

During the 2004 an effort was made to place students in schools with supervising teachers who would support the needs of the students. However of the total number of identified NESB students who undertook a teaching practicum in 2004 a significant number either failed or were "at risk" which means they were identified by their supervising teacher as experiencing major problems in at least one area of teaching during their practicum. Of the 7 NESB students who enrolled in a practicum in first semester, one passed, three were identified as being at risk, two failed, and one. In semester two, 3 of the 4 students enrolled in a practicum. Therefore it became apparent that TE students required more support than what they received from their supervising teacher.

With this in mind a mentor who was independent of the university and the practicum schools was employed. The mentor was an ex teacher who had extensive experience working in the area of TESOL.

The mentor began work with one student, AC, at the end of 2004. The student was one of a small group of first year students who had been identified by lecturers in 2003 as experiencing difficulties in spoken and written English. In second semester 2004 AC failed her third practicum. She indicated that she required more work in the area of classroom management and planning. AC also stated she was very interested in becoming a teacher and would appreciate extra help in the areas she had nominated. She agreed to become involved in the pilot mentoring project.

The mentor and AC began the project at a Primary school that had in the past worked in several successful partnerships with the School of Education. A classroom had been chosen where the class teacher was willing to have the mentor and AC come in and observe for half an hour each week. AC and the mentor then spent half and hour outside the classroom reflecting on what had been observed. AC then went back into the class and taught a small group and assisted the classroom teacher so that she could practice techniques she had observed. AC was then asked to write her reflections on what she had seen and learnt. These reflections were then given to the mentor the following week so that the mentor as a way of revising what had happened and so the mentor could assist AC with her written expression. The routine was repeated over 5 weeks. During weeks 3, 4 and 5 AC and the mentor viewed some short videos of two graduate teachers discussing how they went about planning and teaching literacy lessons. AC and the mentor were able to discuss issues that arose regarding planning. As well one of the teachers was recorded teaching a lesson she had planned. The benefit of this was that the class was one that had many behaviour problems so this provided a rich source of discussion for AC and the mentor. Each week the mentor reported back to the academic project leader to evaluate AC’s progress each week. By the end of week 5 which was toward the end of the Primary school year it was decided to terminate the project.

At the end of the 5 weeks both AC and the mentor were individually interviewed to discuss how they perceived the program. Both believed the program had been supportive and successful. AC stated that she
had learnt a lot of ideas about managing and working with small groups because most of the classroom work was organised group work. AC said:

*I used to look for hard and complicated activities when I taught at prac. Now I’ve learnt that activities don’t need to be hard for children to learn. They need to be related to children’s prior knowledge.*

She also stated that she now had a picture of how she wanted her classroom to be. The thing she liked most about the way the class was managed was that the teacher dealt with misbehaviour in a quiet way so the rest of the class was not disturbed. AC found that the written reflection helped her with her written expression because her mentor would suggest examples of different words to use. As well it was a way that the mentor could help her with her spelling. AC said that she learnt from viewing the videos that some teachers plan around process and other teachers plan around content. She observed that a teacher needs to know both her children and what she has to teach before she can plan. For AC the main strengths of the project was having a mentor who she could ask for advice, feeling relaxed in the classroom and working with small groups where she felt she had “a teacher presence”. She observed that

*I got more from this than prac. There's a tension at prac. You're being observed. When I went on prac I stood back. It was the teacher's room. I didn't want to disturb her.*

Many of these observations indicated that AC had developed some insights and understanding about the business of teaching.

When asked what she could have been done differently during the 5 weeks AC replied

*I wouldn't change anything. It was perfect. It was what I needed.*

AC’s mentor was also enthusiastic about the project. She was of the opinion that all the activities were beneficial. However she suggested that some slight changes could be made to the content of the videos so that the covered both literacy and numeracy lessons. She observed that AC’s positive attitude as well as the friendly and efficient classroom that they observed contributed to the success of the project. She was of the opinion that other students who came into the project would require an understanding of the meaning of teacher presence so that they would know what to observe in the classroom.

In first semester 2005 the project has continued and two more students have been included. AC will repeat her third practicum and arrangements have been made for the mentor to visit her several times to discuss planning requirements and other issues that may arise. Two other students have been included in the project. PN is a graduate entry student who has experienced difficulty in each practicum during her two year program. PN is now entering her internship. She will receive at least two visits a week from the mentor for the first 4 weeks of her internship. The mentor will support her with her planning and with other issues that may arise. The other student, RS, who will be involved in the project is enrolled in the 4 year Bachelor of Education- Primary program and is on her second practicum. This student has been referred to the program by her program convenor because of difficulties she experienced in her first year academic courses as a result of difficulties in spoken and written English. The mentor will visit RS during her practicum to ensure she understands what is required of her during practicum. As well she will ensure that RS is aware of what she needs to observe in the classroom in areas related to class management. The mentor will remain in weekly contact with the academic project leader. This will allow the needs of each student to be closely monitored and the number and nature of each of the mentor’s visits to be adapted to suit individual needs.

This paper began by arguing that while the inclusion of students from NESB backgrounds acknowledges issues of equity and reflects a commitment to greater inclusiveness in higher education it is not without its problems. The small scale project I describe highlights many of the problems and challenges that inclusivity brings. If Australia is to compete successfully in the globalised education market then many of the problems and challenges that inclusivity brings must be addressed at many levels ranging from government through to practicum schools. More government funding is required for universities to support the needs of NESB students. Universities need to carefully assess the faculty and discipline specific needs of NESB students so that adequate resources are provided to support students. Regulatory bodies and employing authorities may need to acknowledge the value of a multicultural teaching profession by taking an increased responsibility for supporting in particular the practical component of TE programs. Finally, there must be a space for NESB students to voice their experiences so that educators can learn what is required to prepare teachers for a multicultural society.
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Reflective Writing For Preservice Teachers
In The Practicum Setting

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To develop the much acclaimed attitude of teacher-as-continuous-learner, beginning teachers will need to develop resilience, self-knowledge and a strong sense of professional identity. Teacher identity includes the development of beliefs and dispositions in addition to knowledge and skills. Furthermore given that the formation of identity is an ‘internal process’ influenced by ‘social or cultural processes’, (Winslade, Crocket, Monk, & Drewery, 2000) it is important for pre-service teachers to receive explicit support in identity formation. Whereas reflective activity is often encouraged for the honing of teaching skills there is an additional argument that reflective writing can play an important part in the development of teacher identity. This paper reports on a study in which pre-service teachers reflected, during their second practicum placement, upon their observations of professional activities and school structures such as daily classroom interruptions and staffroom activities. The purpose of this study was to determine whether a reflective writing task was a suitable and sufficiently explicit process for supporting pre-service teachers in the development of their understanding of the nature of teachers’ work, while forming a sense of professional identity. The paper reports on the levels of reflective writing attained by the students, using a specific framework (Campbell-Evans & Maloney, 1998) and also on the nature and topics of their reflections.

Introduction
The motivation for this study emanates from observations that pre-service teachers need to develop a strong-sense of self in order to benefit from the critiques they receive from others, such as their mentor-teachers, or from their self-evaluation, during their practicum experiences in schools. Pre-service teachers, that is student-teachers, need to be able to respond positively, viewing the critique as a learning opportunity if they are to begin the journey towards the acclaimed attitude of teacher-as-continuous-learner, (Cattley, 2003; Cattley, 2004).

Previous studies have identified the influence of a variety of factors in the journey towards a professional identity. These include the importance of self-confidence of pre-service teachers, the power differential in practicum placements, the high influence of emotions and the paradoxical notions of teachers as both the expert yet at the same time a continuous learner, (Bloomfield, 2004; Bullough & Young, 2002 p. 429; Cattley, 2004, Hargreaves, 1998; Graham & Phelps, 2003). Other studies have highlighted the high drop-out rate of beginning teachers and the need for beginning teachers to have an understanding of specific school cultures and their place within that (Ewing & Smith, 2003; Martinez, 2004; Darling-Hammond, 2003). It can be argued that in order to develop the much acclaimed outlook of teacher as learner, beginning teachers will need to develop resilience and a strong sense of identity as a teacher.

This paper focuses on the potential for the use of reflective writing upon the nature of teachers' work and school cultures, during the pre-service teachers' journey in developing a professional identity as a teacher. Professional identity may be described, by borrowing from the narrative literature, as the fostering of ‘self-descriptions’ (Winslade, 2002, p. 35), an ‘internal process that students must go through’ but which are verified by the social and cultural norms within their context, (Winslade, Crocket, Monk, & Drewery, 2000).

Reflection
This study focuses on the role of reflection in relation to the purpose of the development of teacher identity rather than in relation to the honing of teaching skills. Valli (1997, p.73) suggests that reflection on teaching skills and the use of reflective judgement should be taught ‘simultaneously’. Much of the teacher-education literature summarises the meaning of reflection (Jay & Johnson, 2002; Valli, 1997). Reflection in
the context of this study, that is in relation to the development of teacher identity, involves the contemplation on and management of uncertainty and ambiguity experienced in the wider culture of the school community leading to 'changed dispositions' (Jay & Johnson, 2002 p. 76). This includes effectively handling 'the unexpected in relations' (Bloomfield, 2004). Further, 'reflection involves intuition, emotion, and passion' (Jay & Johnson, 2002, p. 75). This view of reflection is supported by Ojanen (1996) who suggests that internal growth and self-knowledge is strengthened through self-study, that is the self-evaluation and feedback received from critiques by mentor-teachers referred to earlier. This self-study is an 'important aspect of reflective practice', (Ojanen, 1996, p. 11).

The nature of teachers' work is very complex. Teachers need to be deep thinkers and skilled problem solvers if they are to be able to live with tension that arises from uncertainty and unpredictable situations (Valli, 1997) much of which have legal and ethical implications for them. This is a far cry from the sole ability to present a series of well planned lessons. Rather, teaching is a profession which requires a synthesis of abilities, intellectual pursuit, management of a range of intense relationships including those with colleagues (Smagorinsky, Cook, Moore, Jackson, & Fry, 2004) and all are open to public scrutiny. As Cochran-Smith (2004) suggests this is in addition to 'generating and utilizing local knowledge' which gives rise to different interpretations of what is needed in each school setting. Teachers need therefore to develop a strong sense of professional identity which can withstand the questioning of their beliefs and which requires a continual refining of their dispositions if they are to avoid what Connelly and Clandinin (1999, p. 85) describe as the 'despair at professional incompatibilities encountered'.

The question arises as to how best to have reflection happen? The literature describes the adoption of reflective practice through journaling, both written and interactive through web-based activity, (Maloney & Campbell-Evans, 2002; Spalding & Wilson, 2002; Stier & Phillee, 2003). Others suggest the 'storying of professional identity' (Winslade, 2002, p. 35) and may include reflection with colleagues in discussion about video-tapes of their work (Clarke, 1995).

The development of the skills of reflection encourages a pattern of self-questioning which can strengthen inner growth and professional identity. This in turn leads to a resilience to the critiques of others whereby other viewpoints are considered at a deep level and taken as opportunities for possible self-change. McLean acknowledges the difficulty inherent in 'self-probing' and the paradoxical nature of it by pointing out that self-reflection 'requires a level of personal confidence and a tolerance for multiplicity' that is a challenge for the most experienced professional McLean (1999, p.77). Yet the development of self-efficacy is such an important element of good quality pre-service teacher education (Darling-Hammond, 2003) that ways of developing this, such as through reflective writing, while not easy, should nevertheless be encouraged. The practicum setting is surely the place for this to start.

The study

Connelly and Clandinin (1999, p. 171) suggest that teacher identities can be formed as 'an amalgam of children, curriculum, beliefs, values and personal histories.' Given the complexity of the development of professional identity in teachers, it was considered to be important in this study to focus on non-teaching elements of teachers' work in order to expand the pre-service teachers' notions of the range of teacher responsibilities (Valli, 1997) and the nature of school culture, if they were to develop a strong identity as a teacher professional.

This study uses a framework for reflective practice from Campbell-Evans and Maloney, (1998, p. 31). This framework was chosen after considering other frameworks offered by Jay and Johnston (2002, p. 77) which consists of a three stage typology and after considering Spalding and Wilson's (2002, p. 1401) framework which is based on Valli's (1997) framework.

Method

Pre-service teachers were asked to reflect upon their observations of elements of teachers' work by writing a log. This was at the risk of being 'reflected-out' (Loughran, 2004, p. 212) as this cohort of students had kept a journal throughout an immediately previous thirteen week topic which also included a four week practicum. In order to encourage 'ownership of their learning' (Loughran, 2004, p. 212) students in this study, were required to choose two elements of teacher's work or school culture during the practicum, selected from these six suggestions: decision making; questions asked of teachers; teachers as a school community member; staff room activity; parent liaison; daily interruptions to programs.

This was a deliberate decision not to focus on teaching skills in order to avoid a focus on 'technical reflection' (Valli, 1997, p. 79) even though it is suggested that this aspect of reflection is a pre-requisite for
other types of reflection such as ‘deliberative reflection’ (Valli, 1997, p. 82). Rather, the focus was aimed on a type of reflection that would support the pre-service teacher in considering what it means to be a teacher and the nature of teachers’ work, hence directing the focus on their identity as a teacher and professional.

The students were provided with a short easy to read article on reflective practice (Corcoran & Leahy, 2003), to act as a motivator. They were also informed that the Campbell-Evans and Maloney (1998) framework that would be used to analyse their reflective statements but were not given the article as they had already experienced exposure to the framework in a core topic in the previous semester.

The prompts shown in Table 1 were placed on each Reflective Log Proforma:

<table>
<thead>
<tr>
<th>Reflection on elements of school life as a teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision making</td>
</tr>
</tbody>
</table>

Here are the reflection prompts to guide you.

**Reflection on Observations**
- What impact have these observations had upon you?
- Have you been surprised by the outcome of any of your observations? How were things different to what you had expected?
- What sorts of self-talk have you found yourself having during or as a result of your observations?
- What emotions have you experienced during your observations?
- Have these changed over time?
- What has influenced these changes?

**General Reflections**
- What makes you feel ‘like a teacher’ during this prac?
- Does anything threaten your sense of self as a teacher?

**Summary Reflection**
- What are your views, philosophy or vision about what is involved in being a teacher? What has influenced you to come to these viewpoints?

**Data analysis & results**

Data from 9 students was used, selecting students who met the criteria, having made log entries for a minimum of 4 weeks out of the 6 weeks of their second practicum placements.

I recorded 58 sample statements. I listed these in alphabetical order rather than categorising them according to the Campbell-Evans and Maloney, (1998) framework and coded this alphabetical list in line with their four levels of reflection. I trained an independent rater, using the Campbell-Evans and Maloney, (1998) framework and asked the rater to code the data according to its four levels. The rater used the examples and definitions given by the Campbell-Evans and Maloney (1998). The first rater and I gained 40% consistency. I then selected statements that we had agreed upon, and selected three statements which fell in each of the four Campbell-Evans and Maloney, (1998) levels to use as exemplars for another independent rater. I subsequently gave training to the second rater using the Campbell-Evans and Maloney (1998) framework but this time gave the examples that the first rater and I had agreed upon. Table 2 shows one example, given to the second rater, from each of the 4 levels. The second rater coded with 59% consistency with my codings.

Taking the second rater's analysis alongside this my ratings, we agreed upon 34 statements, 18 of which were in the two highest levels of reflection, that is analysis and reconceptualising and 16 were in the lower two levels, that is reporting and review and focus. Twenty statements fell in the middle two levels with 7 in each of the lowest and highest levels. In summary, 80% of the 34 agreed upon reflective statements of these pre-service teachers were in the three highest levels of the Campbell-Evans and Maloney framework. The reflective statements written by one student fell into the lowest two levels only, while all other students' statements ranged across all four levels.

Following the completion of the practicum, the researcher invited the pre-service teachers to a debriefing session. Their feedback included suggestions as to how the reflective writing task could have been improved.
Table 2
Examples of responses from each of the 4 levels of reflection

<table>
<thead>
<tr>
<th>Level 1: Report</th>
<th>Level 2: Review and focus</th>
<th>Level 3: Analyse</th>
<th>Level 4: Reconceptualise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description, factual recount</td>
<td>Parents communicate through their children's diaries</td>
<td>It did make me wonder how teachers cope with &quot;getting through&quot; the required curriculum when plans are constantly changing.</td>
<td>I have to continually remind myself not to get anxious about &quot;falling behind&quot; with the teaching program. I have to be careful that this anxiousness does not cause me to cover work too quickly and therefore disadvantage some students.</td>
</tr>
<tr>
<td>Level 2: Review and focus</td>
<td>Simple suggestions or alternatives, plans for action, explaining cause and effect, low level questions, reworking intentions and outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3: Analyse</td>
<td>Interpreting events, making sense of a situation or event</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4: Reconceptualise</td>
<td>Reworking views and ideas, stating philosophy or vision of teaching, image of teaching and teachers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nature and topics of reflections
The nature of the pre-service teachers' reflections centred around three main elements being emotions, general teaching issues and what is involved in being a teacher. There were a range of complex emotions expressed covering elements of surprise, confusion, annoyance and enjoyment. In the main the emotions expressed were strong and negative. Various aspects of teaching issues arose such as the tiring aspect of continuous lesson planning, pace of lessons, differences in challenges within different classes and keeping track of students who go out of the classroom for various reasons. The pre-service teachers also commented on what being a teacher involved such as the importance of encouraging peer relations, the need to have an understanding of complex family issues, diplomacy with parents and the paradoxical need to be organised yet fully flexible.

Discussion
Clearly, the richness of the pre-service teachers' reflections demonstrated their ability to 'analyse actual consequences of the decisions and judgements made on student learning' (Corcoran & Leahy, 2003, p. 31). The expression of emotions supports the notion of passion and emotional qualities involved in teaching (Hargreaves, 1998; Dewey, 1933).

While some of the reflections were in the 'report' level, many of these were clearly stated to describe the context for their higher level reflections. A way to overcome this would have been to provide a section for describing the context on the Log Proforma. This has been achieved in other models of recording reflective writing in that they invite the explanation of the situation under a heading such as 'description of a recent experience'(Cross, Liles, Conduit, & Price 2004, p. 16).

The exemplars used by the first rater, were those provided in the framework of Campbell-Evans and Maloney (1998). These examples of reflective statements were focused on teaching skills, whereas the statements provided for analysis in this study were focused on other aspects of school life as a teacher. Therefore, generalising from the exemplars provided in the Campbell-Evans and Maloney (1998) framework, would have been more difficult for the first independent rater than for the second independent rater. The latter was provided with exemplars with more specific relevance, given that they consisted of the pre-service teachers' statements written in this study and had been selected on the basis of 100% consistency of analysis between the researcher and first rater.

A shortcoming of the method was inadequate rater training. Further in-depth training, with a trial test of rating, followed by discussion with the researcher, may therefore have resulted in higher consistency between the raters. In addition, it may well be a difficult task to analyse such statements, as so much is open to interpretation. It was interesting to note that 12 of the statements received a different level rating from all three raters, supporting the notion of the subjectivity of interpretation.
The data from this current study indicated a somewhat sophisticated skill in reflective writing given that there were a high number of reflective responses in the two highest levels of reflection, that is analysis and reconceptualising. These are considered to be 'more substantial forms of reflection' (Campbell-Evans & Maloney, 1998, p. 37). Their high occurrence, which would not have been anticipated after considering the findings of the Campbell-Evans and Maloney (1998) study, may be explained by examining the nature of the group of volunteers.

The 9 pre-service teachers in this were placed across a range of practicum settings from junior primary through to secondary school level. They were female and all but one was sufficiently mature aged to have had several years of previous employment. Only one was a graduate entry student having an undergraduate degree and previous profession in health. These pre-service teachers frequently recorded high level reflections. These results support therefore the suggestion by Campbell-Evans and Maloney, (1998, p. 37) that the reconceptualising level requires 'substantially more experience and professional knowledge than that of an undergraduate teaching degree', given that all but one of these students were mature-age.

The pre-service teachers made several suggestions as to what would have enhanced their reflective writing task. These included: no limit as to how many topics they could reflect upon, limit reflective logs to 4 weeks of entries rather than the whole 6 weeks, provision of sentence stems to start them off with reflective type statements. This and other studies (Maloney & Campbell-Evans, 2002) have found that pre-service teachers are motivated to write reflectively during the practicum when they are requested to do so by the university. Feedback from the students involved in this study suggested that they would have written even more often if the request to write had been linked to an assignment for which they received a grade, rather than as an optional activity for which they volunteered. It would seem that they did not 'suffer from a sense of vulnerability that may discourage reflection' (Corcoran & Leahy, 2003, p. 31).

Limitations
These pre-service teachers involved in this study were volunteers and could therefore be assumed that they felt reasonably comfortable with the notion of reflective writing. They had also been exposed to a motivating article and were already familiar with the analysis framework and therefore of the notion that there were different skill levels in reflective writing, through a previous university topic. If such a task were to be given to all students during practicum, the same enthusiasm and motivation may not exist and furthermore, explicit teaching about reflective practice and reflective writing would need to be addressed first, as proposed in other studies (Maloney & Campbell-Evans, 2002; Valli, 1997). In fact this would have been advisable in this situation, even with the inherent high motivation levels, in order for the pre-service teachers to have gained the maximum personal benefit from their involvement.

Conclusion
This paper has demonstrated the potential for the key role that reflective writing can have in the development of professional identity for the pre-service teacher on practicum. Clearly, applying a structured framework for analysis of reflection levels would be valuable for the purpose of explicit teaching of reflective writing skills. It is highly recommended however that the application of the framework itself, does not become the focus nor purpose of reflective writing as so much other richness emerges from the writings that is not necessarily captured by the framework analysis. For example the range of emotions that emerged in the data in this study supports the notion of the vital role of emotions in a 'teacher's dignity' and identity (Bullough & Young, 2002 p. 429; Hargreaves, 1998). Valli (1997, p. 86) suggests that 'reflection should not be an end in itself but for the purpose of action, communal dialogue is essential'. I would take this further in that reflective writing, when combined with discussion in the education community, manifests in a major role in the individual's development of teacher identity.

References


Preservice Primary Teachers Experiencing Effective Mathematics Communities

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Many preservice primary teachers lack confidence in their personal mathematics abilities. In addition, they often have very traditional beliefs and experiences concerning mathematics' pedagogy. Mathematics education associations, education policies and major curriculum documents advocate a constructivist approach to teaching mathematics with particular emphasis on conceptual understanding and real-world applications. In this study, a questionnaire of beliefs, attitudes and affective characteristics was administered to 127 preservice teachers prior to their first mathematics curriculum studies topic. The topics endeavored to build effective mathematics communities that allowed the preservice teachers to actually experience a range of mathematics learning activities in a supportive and challenging manner. Small groups of preservice teachers met periodically during the topic, as focus groups, to discuss their beliefs and attitudes towards mathematics, and the impact of the topic on their personal development as teachers. In addition, all preservice teachers kept reflective journals during the semester. Preliminary results indicate positive growth in preservice teacher attitudes and in characteristics such as confidence and persistence. Many preservice teachers developed a deeper understanding of the meaning of mathematics and experienced personal success in solving mathematics problems. In general, the preservice teachers expressed an eagerness to learn more about mathematics and its pedagogy.

Introduction

Preservice teacher education

According to Ball and Cohen there are four main areas that teacher education programs need to emphasize (1999). The knowledge base is summarized as follows:

- Teachers need to know their subject matter in depth. A deep understanding allows teachers to make rich and meaningful connections for their students.
- Teachers need knowledge of how students learn. This includes knowing that children learn in different ways, being able to engage students, and being able to challenge all students at an appropriate level are all crucial for effective teaching.
- Teachers need a good understanding of diversity and the impact that it has on student's background experiences and learning.
- Teachers need to differentiate instruction in order to meet the needs of all students.

Teacher education has the difficult task of undoing many behaviors and restructuring beliefs that have been learned through many years of schooling (Ingersoll & Kinman, 2002). This must be addressed, because research has indicated that preservice teachers' background school experiences strongly influence their teaching (Lee & Krapfl, 2002). "What ... becomes vital then, for the preservice teacher, is to undo all that they have learned and observed through their apprenticeship of observation" (at www.scs.unr.edu/~hartman/knowledgebase.htm, 2003).

Teacher education programs have tended to use a transmission approach to learning. Research indicates that theoretical knowledge is not sufficient to ensure a real understanding of pedagogy (Stuart & Thurlow, 2000). Szabo, Scott, and Yellin summarize the current position on teacher education that encourage opportunities for preservice teachers to construct their own knowledge concerning effective teaching (2001).

What can be concluded is that learning to teach is a highly complex process that is very personalized and contextualized. Therefore, while no firm generalizations are applicable across all education contexts for all preservice teachers, there is rich and diverse knowledge base that informs preservice teacher education programs (Mayer, 1999).
Learning to be a mathematics teacher

The last few decades have seen a renewed interest in preservice teacher education in mathematics. At the same time however, Graham, Li, and Curran found that mathematics programs for preservice teachers have changed little from the mid-1900s (2000). Brown and Borko discussed documents that indicate that teacher education programs were not preparing students to teach mathematics according to the reform movement (1992). This has prompted more research into the nature of teacher education programs. Much of the research has investigated content and pedagogical knowledge, although it can be difficult to distinguish between knowledge and cognition because of the nature of teachers' work (Brown & Borko). Ball determined that many preservice teachers have inadequate knowledge of the 'underlying principles' of mathematics (1989).

It is important to realize that teacher education is not the beginning of students' exposure to teaching. "In fact before they take their first professional course, future mathematics teachers have already clocked over 2,000 hours in a specialized "apprenticeship of observation" (Lortie, 1975, p. 61) which has instilled not only traditional images of teaching and learning but also shaped their understanding of mathematics" (Ball, 1989, p. 1). The role of methods courses in addressing beliefs, ways of thinking, content, and pedagogy is daunting given the small amount of time allowed for this learning.

Concerns

The daunting task faced in mathematics methods course is further highlighted by Hembree's 1990 meta-analysis of 151 studies. Analysis revealed that preservice elementary teachers have the highest level of mathematics anxiety of any major at universities. This assertion is supported by Battista's 1986 study and Rech, Hartzell, and Stephens' 1993 study (Quinn, 1997). This data is of concern because of links that research has found between students' attitudes and the anxiety of their teachers (Trujillo & Hadfield, 1999). Evidence of poor mathematical content knowledge in elementary preservice teachers has been found in numerous studies (Steven & Wenner, 1996; Quinn, 1997).

Research continues to indicate that regular university mathematics courses have little influence on either knowledge level or positive attitude toward teaching (Steven & Wenner, 1996). This is of particular concern because a strong link has been established between mathematics anxiety and poor conceptual understanding (Quinn, 1997).

Sloan, Daane, and Giesen's study of the relationship between mathematics anxiety and learning styles in elementary preservice teachers provided new information (2002). While only accounting for 8% of the variance a relationship between global learners and mathematics anxiety was found. Global learners are described as 'right-brain dominant' people who are holistic, divergent and intuitive. Sloan, Daane, and Giesen suggest that the link with mathematics anxiety may be due in part to the systematic, sequential approach given to mathematics in many traditional courses.

According to research, most preservice elementary teachers have been exposed to traditional mathematics instruction that emphasized procedures and primarily consisted of direct instruction (Battista, 1999; O'Brien, 1999). Alsup cites research to suggest that this approach to mathematics learning has contributed to the poor understanding observed in many preservice elementary teachers (2003). Furthermore, Alsup favors an active, student-centered approach to mathematics methods in university. He cites numerous studies that indicate an increased likelihood for preservice teachers to use a constructivist approach to teaching mathematics if they have personally experienced it.

Learning to be student centered

Part of the role of methods course should be to model a mathematics community like that in their future classrooms (Alsup, 2003; Ball, 1989). Methods course must prepare preservice teachers in accordance with the NCTM standards. This includes attention to mathematical knowledge, commitment to students' learning, self-efficacy, professional attitudes, and pedagogical knowledge that is aligned with the reform movement (Hughes, 1999).

According to Brindley (2000) and Holt-Reynolds (2000), it is beneficial for preservice teachers when they are provided with an active, learner-centered environment with authentic activities. Ellsworth and Buss determined that preservice teachers felt more confidence in their abilities when they were given some responsibility for their own learning (2000). These students indicated that class discussion was extremely valuable in a methods course. Alsup states that exposure to student-centered teaching increases the likelihood of preservice teachers teaching in this way in their own classrooms (2003).
A study at the University of Nevada investigated the impact of a mathematics methods course, designed according to NCTM standards, on preservice teacher content knowledge and attitudes (Quinn, 1997). Overall there was significant improvement in the number of questions answered correctly but there was little improvement seen in four specific questions that related to fractions, long division, geometry, and probability. Preservice teachers attitudes towards mathematics increased significantly during the study.

Preservice teacher beliefs
It is essential to consider beliefs along with knowledge, understanding and practice. Teacher beliefs have a major impact on pedagogical practice (Thompson, 1992). For this reason, development of appropriate beliefs in preservice teachers is vitally important.

Emenaker investigated the impact of a problem-solving based mathematics course on preservice elementary teachers' beliefs (1996). He began his study with a concern that "the beliefs these teachers hold about the nature of mathematics and what it means to do mathematics actually interfere with their ability to help students become successful problem solvers" (Emenaker, p. 75). The methodological approach was associated with positive changes on the belief scales. Analysis revealed a relationship between level of achievement and change in beliefs.

Simply exposing preservice teachers to new ideas is often insufficient to cause change. Studies have revealed that teachers often incorporate seemingly conflicting information into their current schema (Thompson, 1992). However it is possible to expose teachers to ideas that do alter their thinking and practice. Thompson cites studies by Carpenter, Fennema, Peterson, Chiang and Loef (1989) and Cobb, Wood and Yackel (1990) that found evidence of a change in beliefs and action. Cobb and colleagues determined that teachers need to be able to reflect in and about their own classrooms.

Brown and Borko give evidence, from a longitudinal study at Michigan State University, that preservice teachers' beliefs about mathematics and teaching can be significantly altered through participation in methods courses (1992). The impact on actual classroom teaching however, was not totally clear in this study. Quinn found that preservice teachers developed positive attitudes towards using manipulatives in their teaching after exposure to a manipulatives-based methods course (1998).

Preservice teacher beliefs about mathematics learning are frequently challenged by a constructivist approach (Steele & Widman, 1997). The impact of a mathematics methods course on conceptions about mathematics teaching and learning was investigated through ethnography. The preservice teachers in the study broadened their view of mathematics from being primarily computational to a deeper conceptual understanding and they became more willing to take risks during the course. By the end of the study, participants described their future classrooms using a constructivist philosophy.

Kelly refers to a premise, proposed by the mid-continent regional educational library in Colorado, that in order to teach in exemplary way teachers must understand how students learn (2001). In Kelly's study 83 elementary preservice teachers undertook an inquiry-based mathematics and science course using a spiral approach. Data analysis revealed a significant positive change in the following areas: (1) confidence to use an inquiry-based science curriculum to support the learning of mathematics, (2) confidence in teaching mathematics and science, (3) in belief concerning the use of hands-on activities. Conversely negative changes were found in: (1) belief concerning the importance of direct instruction, (2) anxiety towards doing and teaching mathematics.

Methodology
A close examination of preservice teacher's beliefs and attitudes provides an important starting point for curriculum studies topics. As teacher beliefs and attitudes are closely connected to pedagogical choices, it is important to gain more information about their development during curriculum studies topics. The research questions to be addressed in a year long study are as follows:

- What are preservice teachers beliefs and attitudes towards teaching mathematics prior to taking curriculum studies? What factors have influenced the development of these beliefs and attitudes?
- What are preservice beliefs and attitudes towards teaching mathematics in response to curriculum studies topics taught in a constructivist learning environment?

Participants and location
The 127 preservice teachers who participated in this study were either third year Bachelor of Education students or first year students in a Graduate Diploma of Education. Most students had completed core
content requirements but had limited knowledge of education theory. During this year, students in the junior primary/primary course undertook various topics in curriculum studies, child development and teaching for special needs, and specifically studied two mathematics curriculum topics over the whole academic year.

**Structure**

During this study, students engaged in the following activities associated with the mathematics curriculum studies topics:

- Students completed a questionnaire (mathematics teaching efficacy beliefs instrument) related to their attitudes and mathematical dispositions at the beginning and end of the year.
- Students engaged in regular lectures and workshop activities according to the normal topic format.
- Students were asked to write a reflection on the activities and their learning from the activities.
- A group of six students met to discuss their beliefs and experiences in more detail in a focus group four times during the year.

The Mathematics Teaching Efficacy Beliefs Instrument was used by permission of the authors. The instrument was statistically analysed for reliability and validity by Enochs, Smith and Huinker (2000). Reliability analysis produced an alpha coefficient of 0.88. In addition, the instrument was determined to have construct validity in terms of mathematics teaching efficacy and mathematics teaching outcome expectancy.

**Results**

**Mathematics teaching efficacy**

Two main factors were measured from the questionnaire data, one of which was labeled as mathematics teaching efficacy. The questions validated as relating to this factor were grouped together and a cumulative score recorded for each participant. Scores range from a possible low of 11 to a possible high of 55. Table 1 summarizes the teacher efficacy factor for the cohort of preservice teachers at the commencement of the study.

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</thead>
<tbody>
<tr>
<td># of Preservice Teachers</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>39</td>
<td>50</td>
<td>22</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>% of Preservice Teachers</td>
<td>0</td>
<td>0.8</td>
<td>7.8</td>
<td>30.7</td>
<td>39.4</td>
<td>17.3</td>
<td>2.4</td>
<td>1.6</td>
<td>0</td>
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</table>

The data indicates that none of the preservice teachers are completely confident or totally unconfident. Most of the participants displayed a mathematics teacher efficacy between 26 and 35. Seventy per cent of the participants gained a score lower than the middle possible score of 33. In fact only four per cent of the preservice teachers scored higher than 41 (top one third of possible scores).

It is perhaps not surprising that the vast majority of preservice teachers lacked confidence in their mathematics teaching efficacy at the commencement of the study. The cohorts of students, as previously described, have had little education-based instruction at this stage of their study. In fact at the beginning of this study, the students were beginning their initial exposure to curriculum studies topics.

Analysis of responses to individual questions, revealed further details of student beliefs and attitudes. Question 11: I understand mathematics concepts well enough to be effective in teaching primary mathematics received an average score of 2.8 on a scale ranging from one (the most confident) to five (the least confident). One quarter of the participants rated this question with a four or five, indicating a lack of confidence in primary mathematics content knowledge.

Question 5: I know how to teach mathematics concepts effectively. The average score for this question on a scale of one (most confident) to five (least confident) was 3.6. Analysis of related questions indicated that the majority of preservice teachers lacked confidence in their pedagogical skills. In fact, fifty-five per cent of
the participants scored this question with a four or five, indicating a lack of confidence in their ability to teach mathematics in primary school.

**Mathematics teaching outcome expectancy**

The second measurable factor in this questionnaire related to preservice teacher beliefs concerning the correlation between teaching methods and student achievement. In a possible range from 8 (high correlation between teacher and student input) to 40 (no correlation between teacher and student achievement), the average score was 19. Table 2 summarizes the preservice teacher scores for this factor at the commencement of the study.

Table 2
Mathematics teaching outcome expectancy

<table>
<thead>
<tr>
<th>SCORES</th>
<th>8-12</th>
<th>13-17</th>
<th>18-21</th>
<th>22-26</th>
<th>27-31</th>
<th>32-36</th>
<th>37-41</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Preservice Teachers</td>
<td>2</td>
<td>36</td>
<td>51</td>
<td>29</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>% of Preservice Teachers</td>
<td>1.7</td>
<td>30.2</td>
<td>42.8</td>
<td>24.3</td>
<td>0.8</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

This data indicates that all preservice teachers attribute student achievement to teacher input to some degree. In fact, one third of the participants rated teacher impact on student achievement as high to very high. Over ninety per cent of the preservice rated teacher impact on student achievement in the first half of the factor scale. In general it is clear that this cohort of students believe that the teacher has a major impact on student achievement.

**Preservice teacher philosophy**

**Student background**

As part of a reflective paper on mathematics teaching philosophy, students were asked to discuss personal experiences that have shaped their beliefs. The papers were sorted into three categories, positive experiences, neutral (or a mixture of positive and negative experiences) and negative experiences. Table 3 summarizes students' background experiences as written in their personal philosophy paper.

Table 3
Students' background mathematics experiences

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>NEUTRAL</th>
<th>NEGATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.4 %</td>
<td>33.3%</td>
<td>37.3%</td>
</tr>
</tbody>
</table>

Knowledge of students' previous experiences with mathematics provides invaluable information for planning the curriculum studies topics. An examination of the responses helps build profiles of the basis for preservice teachers' beliefs and attitudes.

A few examples of positive background experiences included the following. "I believe that the best teaching method that I experienced as a student were the constant use of practical activities. These activities allowed us to see the relevance of mathematics...I was one of the few students that found mathematics enjoyable and fairly easy". "Many of the teachers that I encountered on my journey through primary school were enthusiastic about all subjects, particularly maths". Many of these students discussed a desire to use pedagogical methods that they had personally experienced in primary school.

Some typical examples of negative experiences included the following: "... the teacher would often ask each of us to raise our hands to show the rest of the class what mark we received for the test when the score was called out... these experiences... resulted in a lack of confidence with mathematics". "Mental, speed and accuracy and being selected to answer problems in front of our classmates was a regular humiliation. Not only did this type of activity destroy our confidence in mathematics, but also in ourselves". Many of these students were adamant that students in their classroom would never feel fearful of mathematics and indicated that they would do everything possible to ensure that all students have positive experiences.
Discussion
Both positive and negative experiences have influenced preservice teachers' beliefs and attitudes about teaching mathematics. While the scarring from negative experiences takes visible forms in lower mathematics teaching efficacy, positive experiences can also predispose students to certain pedagogical preferences at the expense of others. In fact, students with less confidence in teaching mathematics are often very open to a constructivist approach to teaching mathematics. More confident students may be doubtful about adopting different forms of pedagogy, preferring to use a method that worked well for them in their own education.

Within the mathematics curriculum studies topics, a balance of pedagogical approaches ranging from direct instruction to constructivist is used. Students become part of a supportive mathematics community within their workshop group. Activities within the groups allow students to personally experience mathematics in a wide variety of contexts. Students are encouraged to share ideas openly with one another. In this way, students engage in a variety of strategies and learning styles. Group and class discussions also enable all students to be exposed to a range of beliefs and attitudes.

Conclusion
Preliminary results indicate that many preservice teachers lack confidence in their personal ability to teach mathematics effectively in primary school. As stated by Lortie (1975) students come with hundreds of hours of mathematics experiences prior to their introduction to mathematics curriculum studies in teacher education programs. Acknowledging the significance of these positive and negative experiences is an important starting point for teaching curriculum studies. Carefully coordinated activities provide opportunities for students to reshape their understanding of mathematics and to develop more confidence in their ability to teach mathematics.

In some ways, preservice teachers are allowed to view mathematics pedagogy through a much larger lens. Coming to terms with their own background and experiencing new strategies that afford them personal success and even enjoyment in doing mathematics, can gradually lead to increased mathematics teaching efficacy. It is clear that even after only a month; some students are altering their initial philosophies to include the experiences and beliefs of their peers.

One student wrote: "Since year three, I have been afraid of mathematics and avoided it at all costs, now faced with the challenge of being able to teach it things need to change. Being introduced to mathematics again in a different setting using different teaching methods seems to be having a good effect on me and I plan to never let a student go through the frustration and fear that I did in year three".

Students will be asked to reflect about their personal journey in mathematics education throughout this year. At the conclusion of the two curriculum studies topics, students will be asked to complete the same questionnaire on teaching efficacy and student achievement beliefs. This further information will provide a detailed picture of the development of preservice teachers' beliefs and attitudes about teaching mathematics in primary school.

References


As an outcome of research undertaken by Clarke (2004) several critical issues related to the preparation of student teachers for their professional experience in schools became evident. The study highlighted the need for teacher education programs to focus student teacher learning in the field in specific areas such as concentrating on routine procedures in the initial stages of teaching practice, management of classrooms and behaviour management techniques and at a later stage developing skills that cater for individual student needs. The study also emphasised the need to monitor student progress and learning in relation to the sequence in which learning occurs, that is from the routine procedures to the more complex tasks and skills associated with teaching. These issues were addressed in 2004 through the introduction of a 'Focus Days Initiative' in the Bachelor of Teaching Secondary Professional Experience program. This paper describes the development and implementation of this initiative and reports on the responses from student teachers on the value of their 'Focus Days'.

Background to the study
A previous study by Clarke (2004) investigated professional learning. This study had the particular focus on the practice of reflection as a powerful and effective means to promote student teacher learning. It reported on the process undertaken to assist B. Ed fourth year primary internship students (interns) to understand the reflection process. The internship program was a compulsory requirement of the fourth year of the B.Ed course conducted in term three of the school year for three days per week for ten weeks. There were thirteen interns in the 2004 cohort with only one male forming part of the cohort. The interns took on the full responsibility of a teacher during this time without the teacher being present in the classroom whilst they were teaching. During the internship the interns were asked to respond to a series of reflective questions and their responses were analysed in relation to their professional learning by using a framework described by Dietz (1998). The study revealed that reflection implemented through a variety of strategies can provide evidence of professional learning. A synthesis of each of the strategies used, that is, focus questions, specific reflective questions and journal responses and shared group discussion revealed that the student teachers followed to some extent a pattern of learning during their internship.

Dietz's four levels of learning provided a useful scaffold for analysis for identifying the learning that was evident by the interns during their internship. During the early stages of the internship the interns' learning was focused on the levels Dietz described as exploration and organisation. Initially, they were keen to learn about school and classroom routines and procedures. They involved themselves in exploring the school in an attempt to orient themselves to their new work and learning environment. Once the routine aspects such as administration, school and classroom routines and procedures were learnt by the interns their reflections revealed that their learning became more focused on their teaching and their students. The interns became more adaptable in the ways they responded to interpreting and modifying their teaching plans and lessons to accommodate individual student needs. From the interns reflections it was shown that they started to make connections between what and how they taught. More importantly, they began to see how their teaching impacted on their students' learning. One of the greatest areas of concern for the interns was to learn how to manage their classroom on their own without the presence of their colleague teacher. For many of the interns managing a classroom and improving their classroom confidence was one of their greatest challenges.

Reflection was seen as pivotal to the interns' learning. Reflection was viewed as a strategy to assist them in raising their awareness of their learning. They felt that by talking to their colleague teacher and working collaboratively with them they would come to a fuller understanding of their learning, their students' learning and their teaching. By being able to identify and cater for individual student learning needs the interns revealed in their journals that throughout the internship they were continually reflecting on their teaching practice and modifying their practice to achieve improved student outcomes.
The reflective process made learning more explicit by enabling student teachers to take time to think about their experiences and their subsequent action based on these experiences. This research showed that student teacher learning clearly benefits and is strengthened through reflection on practice. Reflection enabled them to confront issues, look for solutions and solve problems and in doing so the student teacher's knowledge and professional learning were enhanced. A deeper understanding of teaching practice was evident as a result of the interns developing their reflective skills.

Specifically, this study highlighted the need for teacher education programs to focus on student teacher learning in the field in specific areas such as concentrating on routine procedures in the initial stages of teaching practice, management of classrooms and behaviour management techniques and at a later stage developing skills that cater for individual student needs. The study also highlighted the need to monitor student progress and learning in relation to the sequence that learning occurs, that is, from the routine procedures to the more complex tasks and skills associated with teaching. For the internship program at the University of Western Sydney this study emphasised the need to articulate and increase the student teachers' and colleague teacher's awareness that learning is achieved in stages.

The findings from the study provided the catalyst for the introduction of the 'Focus Day Initiative' in the Bachelor of Teaching Secondary Professional Experience Program in 2004. The B.Ed secondary program can be studied as an end-on program for twelve or eighteen months. The rationale for the implementation of the focus days was to provide a directed and guided introduction to teaching designed around reflection through reflective questions, based on observations on teaching practices and interview responses from teachers.

Literature

Professional learning
Kolb, 1984; Boud, 1993 and Dietz, 1998 all identified learning as a cyclic model where learning occurred through experience and through reflection. My understanding of professional learning is grounded in Dewey's philosophy (1938, 1966) that we learn from experience and reflection on that experience. Dewey (1966) has described the act of learning as "one of continual reorganising, reconstructing [and] transforming experience" (p. 50). This paper relates professional learning to a person's experiences and the sense that is made of that experience for future action.

This study was framed around the theories related to experiential learning (Kolb, 1984). Kolb's theory explains learning as being of a cyclic nature progressing through learning from experience, reflection on the experience, conceptualizing action to be taken and on to further experience. Arends (2004) explains that there are three facets of experiential learning, those being "learning as the nature of experiential learning, developing the receptive skills – listening and observing... and critical review and reflection" (p. ix). These facets of learning as described by Arends provided the framework for the activities undertaken by the student teachers during their focus days. The basis of the experiential learning and hence the focus days activities was to begin with "concrete experiences or activities and then by observing their own [student teacher] behaviour and that of others, formulate concepts and principles that can be applied to new situations" (Arends, 2004, p. x).

Dietz explained the professional learning cycle as consisting of four levels with key characteristics indicative of each of these levels. In the first level of exploration, identified by Dietz, the key characteristics were learning the territory, inquiring about a specific focus in the learner's teaching, assessing information, observing students and listening to others. The next level, organisation, was where the learner starts to make sense of things in the workplace such as practising routines, putting procedures in place, recognising pedagogy and learning theories in their day-to-day practice of teaching. It was at this level that the teacher-learner begins to place things in sequence and starts to make sense of the teaching environment. In the third level learners began to make the connections between one teaching situation and another. In this level the learner began to move out of the constraints of a plan and modified and altered plans to accommodate student needs. Reflection was the fourth level where the learner made informed decisions based on the ability to reflect on their practice and responded to issues emerging from this reflection. Teaching responses were made based on these reflections.

Reflection and reflective journals
To examine if professional learning could be identified through reflection a review of the literature pertaining to reflection in general and specifically to reflective journals was undertaken. Smyth (1992) advocated that posing a series of questions to be answered in written journals could enhance reflective
thinking. It was this reason that reflective responses to directed questions were introduced into the B. Teach secondary focus days.

Journals have been widely used in teacher education as a strategy to promote reflection (Freidus, 1998; Carter & Francis, 2000 & Yost, Sentner & Forlenza-Bailey, 2000). Friedus (1998) in her research on reflection states that "...students learn to look for patterns and connections within and among the educational experiences they have found meaningful for themselves and their students” (p. 56). In a study undertaken at the University of Western Sydney, Macarthur in 1995, 35 students responded to a questionnaire on the impact of reflective journal writing. Sinclair and Woodward, (1997) stated in their findings from this study that 40 percent of the “students answering the questionnaire reported that journal writing affected their own learning most commonly by encouraging reflection upon that learning and their experiences and developing their ability to think more critically” (p. 53). This study also found that students reported “an increased awareness... of their own learning or of their own strengths and weaknesses” (p. 53). Sinclair and Woodward concluded, from their study, that reflective journals promoted professional development of student teachers, enabled them to make links between theory and practice and encouraged them to evaluate their teaching performance.

The introduction of the focus days initiative

As a result of the findings of the internship study on reflective practice three consecutive focus days were implemented in 2004 in the B. Teach secondary program. Prior to the focus days, student teachers were thoroughly briefed on the requirements of the focus days in their professional experience lecture program and were asked to complete readings prior to them. During week three of the University of Western Sydney autumn session the students spent three days in a designated school carrying out focus tasks. The schools who participated in the program had expressed interest in providing placements for student teachers to undertake their professional experience. The schools ranged from independent, religious and New South Wales Department of Education Schools including co-educational, comprehensive and selective schools and segregated boys and girls schools. The schools were retained for the student teachers’ four week block professional experience later in the semester. The purpose of the focus days was to immerse the student teachers in an Australian contemporary secondary school environment, observe teachers in practice and carry out directed activities. The focus days provided the student teachers with a whole-school perspective of teaching, school organisation and management. During these days they were required to visit as many faculties as possible, observe teaching in a variety of classroom environments, subject areas and settings and with a variety of learners.

The tasks were specifically aligned to the Dietz framework of professional learning and the findings from the internship study. Tasks were based on visiting the school's main resource facilities such as computer laboratories, library, observations of lessons, lesson structures, classroom environments including management and reinforcement structures used by a variety of teachers, observing students with special needs and students from culturally diverse backgrounds and interpreting school policy and practice and the ways in which these policies were implemented at the faculty and class level. A textbook and workbook manual (Arends, 2004) provided the scaffolding for the activities and tasks that the student teachers were to undertake on each of the focus days. Activities included identifying learning related to the Dietz level of exploration. Student teachers were required to find their way around the school, seek out specific information, location of specific areas within the school, observing classes and lessons. The second level of Dietz 'learning framework related to organisation. Student teachers were asked to observe the day to day routines of the school and the classes and the procedures put in place both at the school level and classroom level. They were specifically asked to observe classroom management and reinforcement techniques. A specific example of this task was to observe teachers' management skills. The task required the student teachers to observe such features as 'with-it-ness', over-lappingness, smoothness, momentum and group alerting. They were asked to respond to questions related to each of these features of behaviour management and provide examples of how students behaved when these features were present in the lesson. With all of the focus tasks the student teachers were asked to analyse and reflect in writing on their experiences and observations. They were also requested to visit classes with students with special needs and students with culturally diverse backgrounds. Many of the tasks involved the student teachers responding to specific reflective questions. The tasks were bound together through the student teachers reflecting on and analysing their observations in a journal.
Methodology
A qualitative paradigm was used in this study. Specifically, an interpretive methodology was used. "Interpretivist sees the goal of theorising as providing understanding of direct lived experience... The interpretivist attempts to capture the core of these meanings" (Glesne & Peshkin, 1992, p. 19). This study aimed to provide understanding of the lived experience of the student teachers during their focus day visits in schools which formed the initial stages of their first professional experience. The meaning and value of the student teachers' lived experiences were interpreted through the written responses by the student teachers to a focus question. These interpretations of meaning of the student teachers' lived experience of their focus days are reported later in this paper in the analysis and discussion of the data.

Participants
The participants in this study formed part of the cohort of the 2004 B. Teaching Secondary Program. The program is a twelve or eighteen month end-on course designed for students with an undergraduate degree in an appropriate area who wish to gain a teaching degree. In 2004, the cohort consisted of 210 students enrolled on the Penrith campus. A total of 298 students were enrolled on the Penrith and Bankstown campuses in this program. The students came from a diverse range of socio-economic and cultural backgrounds with ages ranging from 23–55 years.

Data collection
The core of this study was to examine student teachers' immediate responses to their three focus days experiences. The data for the research were drawn from written responses to a focus question posed to the student teachers. At the first lecture immediately the week after the focus days the student teachers were posed a focus question. They were asked to respond to the question "What was the value of the focus days to me?" The students were asked to hand in their responses which were anonymous and 168 responses were received. All responses were read and from this first reading specific areas were identified by the researcher. These responses were then tallied.

Analysis and discussion of the data
Figure 1 indicates the areas identified as being of value during the focus days and the number of responses commented on by the student teachers in each area. A total of 168 student teachers responded to the focus question with students identifying a number of areas of value to them on their focus days within their responses. Key words and phrases were used to identify areas presented by the student teachers as of value to them. For instance, responses which stated that they valued learning about whole school organisation were tallied in the area identified by the researcher as 'whole school perspective including organisation, layout, policies and procedures'.

A number of key areas were identified by the student teachers with four areas being discussed most frequently in the student teacher responses to the focus question.

The opportunity to develop a whole school perspective was discussed by 67 of the student teachers who responded to the focus question. In their responses they made a point of emphasising the value of being able to become familiar with school organisation, layout, school policies and procedures before the block professional experience. They related that having time to become familiar with facilities, building organisation and rooming made them feel more comfortable and more confident to begin their professional experience.

Several typical responses that exemplified the comments made by student teachers regarding the value of the focus days to contribute to their understanding of school's from a whole school perspective included:

"It was an excellent experience, I learnt a lot about the school environment from a teacher perspective."

"The focus days allowed me to familiarise myself with the school layout, the staff and procedures before professional experience begins later this semester."

Another key area discussed was classroom management with sixty one of the student teachers commenting on the value of observing different classroom management strategies being used by a variety of teachers across a range of subject areas. Typical responses included:

"I was able to observe the management strategies used by class teachers in different scenarios."

"Helped me learn A LOT about classroom management through viewing a range of strategies."

"Classroom management strategies were explained and I had an opportunity to establish my own ideas and rules."
The third area most frequently (n=47) discussed as being of value was the opportunity to observe different teaching styles and strategies and the impact the different styles had on student learning. Student teachers explained that:

"Seeing several different types of teaching styles helped me evaluate what I value and what I think will work for me."
"I benefited by observing many teaching styles and strategies."

Forty three students indicated that the opportunity to observe the students they would be teaching was valuable to them on their focus days as they:

"Got to know the students and became a familiar face."
"Now know the level the students I will be teaching are at so I can direct my lesson plans accordingly."
"Had an opportunity to view students I will be teaching in a variety of situations and how they composed themselves in different learning environment... holistic view of student."

Students overwhelmingly supported the focus days and the value of them to their professional learning and included general comments such as:

"I didn't know if I really wanted to be a teacher... but I really enjoyed the week and I am now more confident."
"The focus days provided me with the inspiration to become a fantastic and interesting teacher."
"The focus tasks gave me specific areas to observe and think about."
"The focus days were significant to me as it helped me to determine that teaching is what I want to do. To be able to help and make a difference to a student."

The focus days confirmed for many, their desire to teach and begin teaching as a career.

Only two students who responded to the focus question provided any negative feedback about the value of the focus days. Their comments included

"Too many days... should have just been one day."
"Teachers thought the tasks were irrelevant."
"Tasks took time away from time in class."

**Figure 1.**
Frequency of value of focus days as identified by student teachers.
Findings

The rationale for the implementation of the focus days was framed around the theory of experiential learning. The focus activities provided opportunities such as listening, observing, critically reviewing procedures and practices and reflection. These activities formed the basis of experiential learning for the student teachers during their introduction to teaching. The findings suggest that the student teachers learnt through observing directed experiences and activities and through listening to responses from teachers they interviewed. From these facets of experiential learning they were able to formulate concepts and principles that they may be able to apply to their own first experiences of teaching.

The focus days and the tasks were organised for students to concentrate on three main areas for their learning. These areas were school organisation, classroom management and students with specific needs. The responses from the students confirmed that their learning followed a particular pattern and that they were concerned with particular aspects of teaching. The four areas that were identified most frequently by the students as being of value to them followed the pattern of learning suggested by Dietz. The findings from this study confirmed that student teacher learning could be identified using the professional learning cycle framework suggested by Dietz. The initial levels of learning described by Dietz, that is exploration and organisation, were discussed most frequently by the student teachers as being of value to them. Their responses indicated that they wanted to learn about the school, school procedures, school routines and school layout.

The next two most frequently discussed areas by the student teachers in their responses to the focus question were classroom management and teaching strategies. Dietz’ framework asserts that once the routine aspects of organisation and administration are learnt by student teachers they then turn their concentration to teaching and their students. The student teachers in their responses indicated the value of observing a variety of teachers and the multiplicity of methods used by teachers to manage their classrooms. Not only did they comment on the management strategies but they also focussed their responses on the value of observing a variety of teaching strategies.

Also of value to the student teachers was the opportunity to observe the classes that they would be teaching. They commented on the value of seeing the same students across a variety of subject areas and with a variety of teachers. In some student teachers’ responses they made connections between the teaching strategies used and the consequent classroom behaviour.

Although not most frequently commented on, nonetheless, twenty six students commented on the value of observing special needs classes. Some typical responses included:

"Allowed me to meet many students, all with different abilities and different learning needs."
"The special needs students were an invaluable experience."
"Experienced the inclusion policy of students with disability, which was really worthwhile."

A number of significant benefits of the Focus Days were evident from the study. The Focus Days provided opportunities to:

- orient student teachers to their school and classroom learning environment allowing them to gain knowledge of the procedures, routines and physical layout of the school;
- observe a variety of classroom management strategies across a variety of faculties with a number of teachers;
- observe a variety of teaching strategies in faculties other than the student teacher’s own method subject.

It was confirmed by student teacher responses that having school information and layout allowed them to feel comfortable in their new work and learning environment before the beginning of their block professional experience. Student teachers commented on the value of observing a variety of classroom management strategies and teaching strategies as it enabled them to see the value of their university work in action and in practice in the classroom. Students commented on their return from their focus days that what they were learning at university had begun to make more sense to them as their experiences in schools had enabled them to draw together the theory of university and the practice of teaching in schools.
Conclusion
The positive comments from the student teachers confirmed that the Focus Days Initiative was an extremely powerful tool and worthwhile activity. The directed activities and observations provided opportunities to experience experiential learning which enabled the student teachers to formulate concepts and principles based on their observations, analysis and reflection.

This study has captured the evidence provided by student teachers involved in the focus day experiences. To further explore their value, data will need to be collected from the teachers involved in the focus day activities.

Note
'Focus days': An initiative of the Bachelor of Teaching Secondary Professional Experience Program at the University of Western Sydney.

References
Parent Involvement In Children's Education:
Implications Of A New Parent Involvement Framework
For Teacher Education In Australia

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In 2004, the Federal Government initiated the development of a Family-Schools Partnerships Framework, declaring parent involvement in children's education as an educational policy priority (Nelson, 2004). The Federal Government's commitment is envisaged to extend to funding 'the trialling of the Family-School Partnership Framework in Australian schools in order to identify which practices or strategies are most effective' (Nelson, 2004). In the light of the overwhelming evidence indicating the value of parent involvement in their children's education, this initiative to provide new impetus for the consistent inclusion of parents in their children's education in Australia's schools should be widely applauded. With the release of the draft framework due in early 2005 it is evident that, increasingly, our future teachers will need skills and understandings for effective involvement of parents in education policies and programmes. Although initiatives for increasing parent involvement in children's education are not a recent development, the field is, however, not unproblematic. In 2002, Jordan, Orozco and Averett warned that, internationally, policy development in this area was running ahead of its knowledge and theoretical base, and this meant some fundamental considerations were yet to be addressed. Drawing on current literature and the presenter's own research this paper explores some of these issues, highlighting in particular issues relating to the equitable implementation of parent involvement in schools. Although the paper questions some assumptions that appear to inform Government's aims that frame the development of the Framework, it is suggested that these aims might be usefully applied to inform the study of parent involvement in teacher education courses as well as form the basis in evaluating the success of parent involvement practices in schools.

For more than three decades, Government inquiries and education professionals in Australia, and internationally, have called for increased opportunities for parent involvement in schools (see for example reports by Karmel, 1973; Scott, 1990; and meta-analyses by Henderson & Berla, 1994; Henderson & Mapp, 2002; Xitao & Chen, 2001; Jordan, Orozco, & Averett, 2002). In 2004 the Federal Minister for Education, Dr Brendan Nelson, affirmed the Australian Government's commitment '…to strengthening the role of parents (or families) as partners in school education' (DEST, 2005 p. 4; Nelson, 2004). There are, however, concerns that parent involvement policy and practice are running ahead of the theory base, with fundamental considerations still to be fully addressed (Jordan et al., 2002). This presents challenges for programme developers, policy makers and for teacher educators in identifying the skills and knowledge teachers required to develop effective parent involvement practice. This paper explores several issues which are important in informing teacher's understandings of parent involvement in children's education.

Parent involvement in children's education is advocated from philosophical and pragmatic positions. These discourses relate to the conceived purposes of parental involvement and thus the forms of involvement advocated for parents. Philosophical advocacy is based on democratic, individualistic stakeholder, consumer, and 'economic/ market' discourses (Jordan et al., 2002; Crozier, 2000; Dimmock & Hattie, 1994; Soliman, 1994). Pragmatic advocacy is based on the considerable volume of research linking parent involvement to academic and developmental benefits. All positions draw on the improved outcomes (academic, social or emotional) linked to parent involvement practices.

The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century (MCEETYA, 1999), endorsed by all Australian Education Ministers, acknowledges this important role for families and the community in the education of children. The implementation of parent involvement practices in Australian schools has remained slow, however, and is marked by differences in the status of involvement structures, roles, rights and responsibilities between States (Smart, 1988; Scott, 1990; Nelson, 2004). In 2004 the Federal Minister for Education, Dr Brendan Nelson initiated a process to develop and trial a
Family-Schools Partnerships Framework in around sixty schools (DEST, 2005). This project included a review of the current literature, prepared by the Australian Council for Educational Research (ACER) (McKeand, 2003), and round table conferences with stakeholders (Nelson, 2004). The intention of the project was to:

'... provide an informed basis for encouraging all schools to develop close partnerships with families on behalf of students learning (DEST, 2005 p. 10). The final draft of this framework has been prepared by Australia's key Parent Councils, the Australian Council of State School Organisation and the Australian Parents Council (ACSSO & APC, 2005).

The research literature

The benefits of parent involvement have been widely documented in research and drawn together in a number of meta-analyses (Thompson, 2001; Jordan et al., 2002; Henderson & Berla, 1994; Henderson and Mapp, 2002). These benefits include improvements in children's academic performance, social skills, emotional and social development. Benefits for involved parents, teachers, classmates, and the wider school community have also been identified.

Thirty years of research studies show that when parents are engaged in their children's learning, their children do better in school and the schools get better (Henderson, Jacob, Kernan-Schloss, & Raimondo, 2004, p. 3)

Improvements in student attitudes and performance have been linked to parent involvement in schools irrespective of the parents' socio-economic status, race, employment, or marital status (Snodgrass, 1991). These benefits have been identified as continuing through and beyond the completion of high school (Kellaghan, Sloane, Alvarez, & Bloom, 1993; Trusty, 1999).

Joyce Epstein in the 1980's developed a typology of parent involvement based on the ways in which parents might become involved in their children's schooling (Epstein & Becker, 1982; Epstein, 1987; Epstein, 1989). The six types of parent-school partnerships identified by Epstein (1987, 1989) include:

- **Parenting** – involving the establishment of ‘... home environments to support children as students” (Epstein, 1995 cited in McKeand 2003, p. 3);
- **Communicating** – involving developing open and regular two-way communication between parents and schools;
- **Volunteering** – activities in schools under the guidance of school staff;
- **Learning at home** – assisting students in learning activities at home;
- **Decision-making** – including involvement in decision-making processes in schools relating to parent's own children or in school governance; and
- **Collaborating with the community** – two-way mutual support between parent, school and community such as in parent learning, drawing on community resources and contributing to the school's community.

The typology developed by Epstein is often cited as the framework for school programs, particularly in American research (Desforges with Abouchaar 2003, p. 19) and has been applied as the basis for the formation of the Australian Draft Family-School Partnerships Framework (ACSSO & APC, 2005). The adopting of Epstein's typology as a 'model' has resulted in researchers and schools developing programs that attempt to include all types of involvement. Although many of these programs are highly successful in improving results, building community and empowering parents in working with their children's education (Haynes, Comer & Hamilton-Lee, 1989; Madigan, 1994; Workman & Gage, 1997), their research value is compromised by the homogenising of results due to the masking of individual contributions in the overall observed improvements.

Edwards and Knight (1997, p. 70) emphasise the need for policies built on sound theory if parent involvement is to become widely accepted in schools. Research on the effectiveness of different forms of involvement is essential to the development of this sound theory base. Such research relies on clear and specific definitions and robust research design. The problem of the homogenisation in measurements of results in parent involvement programmes and the lack of specific definitions in the field of parent involvement lead to difficulties in comparing, analysing and drawing conclusions from much of the existing research (Jordan et al., 2002).

When studies do investigate particular forms of involvement, a deeper understanding of the impact of specific involvement strategies emerges. Cairney (2000) and Cairney and Munsie's (1995) research on parent involvement and literacy development are good examples of research on specific types of parental involvement identifying specific outcomes. Research investigating homework as a form of parental involvement identified positive effects for younger children but negative effects on socio-emotional and
academic outcomes for adolescent (Muller, 1993; Madigan, 1994). Investigations of involvement in school decision making processes have revealed negative effects on school innovation and school operations (Birenbaum-Carmeli, 1999; McKibbin & Cooper, 1995).

Much of the existing research is also based in the United States of America, where parent involvement has also been established as a national priority (McKeand, 2003). Australian research on parent involvement has been described by the Department of Education, Science and Training as ‘at best threadbare’ (DEST, 2005, p. 8). The federal government’s commitment to the trialing of parent-school partnerships in schools offers an important initiative in developing the Australian research base.

**Parent involvement, parent participation and family-school partnerships**

In the field of parent involvement there are three prominent terms, often used in different ways in literature and policy documents, that are in need of clear and precise definitions. The term ‘parent involvement’ is often used to refer to any form of involvement in children’s education. The draft Family-School Partnerships Framework draws a distinction between parent involvement which involves parents in activities at home or in school under the supervision of school staff, and parent participation, seen as a specific form of parent involvement, which is used to refer to forms of involvement that encompass decision making roles for parents (such as in school councils) (ACSSO & APC, 2005).

The third construct that of family-school partnerships, draws on a more social-democratic notion of participation than the participatory and representative democratic models linked with parent participation. These partnerships involve:

...collaborative relationships and activities involving school staff, parents and other family members of students at that school. Effective partnerships are based on mutual trust and respect, and shared responsibility for the education of the children and young people at the school (ACSSO, APC, & DEST, 2005).

At the heart of the partnership model, then is the building of relationships. Research identifies collaborative relationship as one of the strong elements of effective schools (Masters, 2004). Cuttence and Stokes (2000) describes parent-school partnerships as involving:

• a sharing of power, responsibility and ownership, with each party having different roles;
• a degree of mutuality, that begins with the process of listening to each other and that incorporates responsive dialogue and ‘give and take’ on both sides;
• shared aims and goals based on a common understanding of the educational needs of children; and
• a commitment to joint action in which parents, students and teachers work together.

Drawing on this definition from Cuttence and Stokes (2000), the draft Family-Schools Partnerships Framework describes parent-school partnerships as collaborations which:

• view each partner as making equally valuable contributions, while respecting different contributions;
• respect student needs and preferences;
• actively help previously uninvolved families to become involved;
• create better programs, opportunities and learning for children and young people; and
• give families appropriate opportunities to contribute to school decision-making and governance (ACSSO, APC, & DEST, 2005, p. 3).

Critics challenge the feasibility of partnerships between teachers and parents, citing the time requirements and the potential for difficulties in meeting meet the diverse wishes of families. One Canadian study of parent involvement and participation in schools described the diversity of interests as a major source of conflict (Kasting, 1994). Clabaugh (1998, pp. 7–8) states the implication of these differing demands thus:

Put simply, then, public educators are expected to satisfy an astounding range of contradictory parent expectations ... But by attempting to become all things to all people, our public schools will become incapable of focussed, purposeful activity.

Another challenge to implementing a partnership models in schools will be defining what is meant by terms used in describing these partnerships, such as ‘shared aims and goals’, ‘common understanding’ and ‘appropriate opportunities to contribute to school decision-making and governance’, as used by Cuttence and Stokes (2000) and ACSSO and APC (2005). Partnerships may also prove difficult to establish within the hierarchical structures of schools and industrial issues of roles rights and responsibilities will need to be addressed.
Addressing social justice and equity concerns

Many studies have identified barriers that discourage or prevent parent involvement in children's education, particularly in-school involvement. These studies highlight barriers caused by physical factors (such as transport cost and time), parental beliefs and experiences, and school staff beliefs and practices (Kalantzis, Gurney, & Cope, 1992; Leitch & Tangri, 1988).

Of particular concern for teachers are the barriers that prevent involvement of families from minority, marginalised and disadvantaged groups based around issues of class, ethnicity, gender, aboriginality and culture. These barriers are often based around classed, gendered and radicalised identities (McInerney, 2002). According to Australian research, the involvement of parents from these disadvantaged or marginalised families is an important factor in school success (Kalantzis, Gurney, & Cope, 1992; Golby & Brigley, 1989; Fernandes, 1990).

While the involvement of families from minority, marginalised and disadvantaged communities in parent involvement activities may be discouraged or prevented, middle class parents often have the cultural, social and economic capital to take up the opportunities for involvement in their children's schooling (Mills & Gale, 2004, p. 272). The disparity in ability to take up the opportunities for involvement schools present may create a situation of double-disadvantage, where the benefits of these additional involvement opportunities are limited to those from already advantaged families. McKeand's review of parent involvement literature concludes most educators in most countries are under-prepared in understand and working with diverse families (McKeand 2003, p. 23). Effective parent involvement programs then will need to address these barriers to involvement.

Reconceptualising parent involvement

Traditionally non-involved parents might have been characterized as 'don't care' (Mills & Gale, 2004, p. 269). Involvement activity is linked to a parent's sense of efficacy and role conception (Swick, 1987; Swick, 1988; Mallory & New, 1994; Vincent, 2001). These role conceptions may be socially or culturally informed (McInerney, 2002). Referring to social class, Soliman (1995, p. 162) reminds us that differences in culture:

"... may explain how separate from or how connected the school families feel and what action they can take on behalf of their children, but not how much they value education".

Working class parents have been identified as being as involved in their children's education, though in ways that may sometimes differ from middle-class parents and which are not as visible to schools (Fan, 2001; Keith, Keith, Quirk, Sperduto, et al., 1998). Indigenous parents are more likely to make contact with schools and become involved through informal activities and social occasions than through formal channels of communication and involvement (Harslett, Harrison, Godfrey, Partington, & Richer, 1999).

Workman and Gage's (1997) 'Family Strengths' model of parent involvement in children's education encourages schools to focus less on participation or attendance in schools and instead to emphasise issues of partnership, holding that "... the most important and effective form of involvement that parents can engage in is involvement with their own children, in their own homes" (Workman & Gage, 1997, p. 10), reflecting Fullan (1982, p. 139), who suggested: "[t]he closer the parent is to the education of the child, the greater the impact on child development and educational achievement".

Other researchers have also suggested that the involvement of parents at home might be the most critical to improved students' learning. (Epstein, 1987, 1994; Finn, 1998; Griffith, 1996; Lee & Croninger, 1994). Some researchers suggest it is the endorsement and validation of the school and the interest in the child, rather than the form of involvement, which had positive effects on children's self-esteem, self-discipline, mental health and long-term aspirations (Greenberg, 1989; Haynes et al., 1989). The interest of the parent in their child's education, Snodgrass (1991) asserts:

"... is a more potent influence on children's learning success than parents' educational background, parents' occupation, parents' cultural background or family income level.

Further support for these assertions comes from an analysis by Singh, Bickley, Keith, Keith et al. (1995) of the data collected from 24,600 8th grade students from 1500 schools by the US National Educational Longitudinal Study (1988). Singh et al. (1995) analysed this data for links between student performance and four specific modes of parental involvement. Their analysis identified no correlation between parental involvement in at-school activities and achievement. Home structure (supervision of homework and restrictions on activities such as television watching) had a slight negative association with performance, while a slightly positive correlation between parent-child communication and student performance was identified. Parental aspiration, the fourth involvement attribute, however, indicated a
strong influence on student outcomes. These aspirations, whether communicated directly, or indirectly, were as strongly linked to student performance as other strong indicators such as past performance. Sacker, Schoon, and Bartley, (2002) found similar results in analysing similar longitudinal data from a United Kingdom database in the process of investigating how social class influences school outcomes. The conclusion to be drawn is that the form of involvement may not be critical.

The parent-school partnership model has been criticised as being heavily based on middle class conceptions, and so consequently maintaining inequalities De Carvalho (2001). There appears to be a need then for a re-conceptualisation of parent involvement to be more inclusive of the many ways in which families might engage in their children's learning and lives. This reconceptualisation will require focused research investigating the outcomes of a broad range of specifically defined involvement practices.

**Implications for teacher training**

The skills and support of classroom teachers and the school principal have been identified as critical in the successful implementation of parent involvement programs (Cullingford & Morrison, 1999; Goos et. al., 2002; Thompson, 2001; McKibbin & Cooper, 1995). McKeand (2003) noted a lack of preparation of contemporary teachers for working with parents. McKean concludes further training is important so that teachers have the knowledge and skills to establish and maintain successful partnerships with parents (McKeand, 2003).

The critiques of the existing theory base for parent involvement highlight the need for research founded on clear and specific definitions to inform teaching practice and thus teacher training in parent involvement. As a way of developing and evaluating parent involvement practices, teachers might apply the ACSSO & APC (2005) description of partnerships which lists components of effective and equitable practice including: respecting each partner's contributions; respecting the individual needs and preferences of students; being active in enabling the involvement of previously non-involved parents; improving teaching programmes and learning opportunities to make them more inclusive and effective; and enabling parents to contribute participate in decisions that relate to their own children and their school.

Effective teaching also requires teachers to have a critical awareness of the existing research and its implications for educational practice. An awareness of barriers to parent involvement and the implications for equitable practice, as well as ways of addressing these issues is also necessary. A broader conceptualisation of parent involvement is advocated as one component in attempting to address these inequities and improving overall parent involvement practice.

**Conclusion**

The field of parent involvement is one of contested definitions and an incomplete theoretical understanding (Jordan et al., 2002). The existing research base is problematic and raises questions about current constrictions of parent involvement. This paper argues for inclusion in teaching training of more than a toolbox approach, but instead the development of an understanding of the theoretical underpinnings of parent involvement to inform decision making and classroom practice.

With the skills of parent involvement recognised as part of teachers' professional practice in quality teaching frameworks (see for example NSW DET, 2003), productive pedagogies frameworks (Queensland Department of Education and the Arts, 2001) and in Institute of Teachers professional attributes (NSW Institute of Teachers, 2005), and with the release of the Draft Parent-School Partnerships Framework, it is important that teacher educators consider the issues of parent involvement in teacher training courses. The Australian Federal Government has also signalled its commitment to reinvigorating parent involvement policies in schools and supporting the development of an Australian research base. These initiatives present teacher educators with an opportunity to develop curricula that enable the inclusion of effective and equitable parent involvement in their professional teaching practice.

**References**


How do teacher educators prepare students to become teachers for a world which is global in its outlook and influences? There are now strong imperatives for teacher educators to develop pre-service students' understandings about a world which is ‘global’. It is not only curriculum statements, textbooks, films, videos, that are the carriers and resources in global education but teachers themselves through their own stories and narratives and the meanings attached to these. The role of teachers' lived experiences in teaching global education is often silenced in teacher education courses, policy documents and school classrooms.

In searching for meaning in global education, it is the capacity of the teacher to reflect not only on their own multiple identities but on the nexus between their local and global worlds and the struggle often evident here. A resource teachers have to teach global education is their own stories, lived experiences of being in a global world. This comes from giving meaning to travel, of living in a multi-cultural multi-faith world of viewing and noticing similarities and differences and giving meaning to these.

Despite increasing demands from education systems and governments for teachers to teach with a global focus, many teachers do not feel confident or prepared to do so. Importantly curriculum policy statements are carrying imperatives to teach to a global world that is rapidly changing. Curriculum statements in Society and Environment area in Australia include ‘global’ in their rationale. However this does not mean that global education is taught nor understood by teachers who translate these documents to practice. In curriculum documents such as those produced by the state and territory governments there is some inclusion of global education. Singh (1998) argues that there is a marginalisation of global education in official curriculum policies in Australia. Integrating global education into different subjects is really up to the creativity, expertise and experience of teachers. If it is up to teachers to teach global education as stated by Singh then it will be the capacity of the teacher to draw on a range of resources, pedagogy and approaches to teach global education. One resource is teachers' stories and narratives and students own lived experiences and stories.

Banks (2001, p. 5) states that “teachers must develop reflective cultural national and global identifications themselves if they are to help students become thoughtful caring and reflective citizens in a multicultural world society.” Teacher educators who wish to embed global perspectives in their teaching require reflective practices on their own identities, prejudices, choice of curriculum content and pedagogy.

Teaching global education requires a conscious understanding and reflection to begin the journey of self as located in the classroom. The central issue of this paper is to bring forth emphasis on the lived experiences of teachers and teachers educators in order to develop deeper global understandings in students.

Global education: The search for meaning

In searching for meaning a starting point is to look for meanings and definitions of global education. Global education definitions throughout the literature have changed and continue to change over time. Definitions have included a series of elements that make up a whole such as learning emphases, aspects, concepts or issues that are part of a global education approach or framework. (Hanvey, 1976; Kirkwood, 2001; Calder & Smith, 1993)

Hicks (2003, p. 274) suggests that “global education means that term used internationally to designate the academic field concerned with teaching and learning about global issues, events and perspectives”.

The meaning of global education from the 1970s to 2005 shows a field grappling with definitional ambiguities (Kirkwood, 2001). Global education highlights a continuum between a knowledge paradigm to a more problem based, values approach to a present day interdependent approach to learning. The 1970s saw the development of education frameworks to respond to world issues and a shift away from a knowledge approach characterised by teaching about countries, people and places. Richardson (1976) developed a global education framework and approach to curriculum and resource development which included,
Richardson's (1976) work highlighted that it was no longer possible to view the world through knowledge of a series of unrelated facts. Education was the vehicle to empower students to understand beyond facts about the world and to develop values in social justice. The world was being positioned as a problematic place with education charged with responsibility for solutions. Hanvey (1976) was instrumental in the field and developed a definition of global education that incorporated five dimensions based on achieving global 'awareness' for students rather than action or participatory reform. This definition does not acknowledge an emphasis on values which was to come in subsequent definitions.

They include:

1. Perspective consciousness: awareness and appreciation of other images of the world.
2. State of planet awareness: in-depth understanding of the defining characteristics of world cultures and the emphasis on similarities and differences.
3. Cross cultural awareness: a general understanding of the defining characteristics of world cultures, with the emphasis on understanding similarities and differences.
4. Systemic awareness: familiarity with the nature of systems and an introduction to the complex international system in which state and non-state actors are linked to patterns of interdependence and dependence in a variety of issue areas.
5. Options for participation: a review of strategies for participating in the issue areas in local national international and international settings.

The inclusion of values came with work undertaken by Pike and Selby (1988). They further developed global education through a four dimensions model that included:

- Issues dimension – this includes inequality/equality, injustice/justice, conflict/peace, environmental damage/care alienation/participation
- Spatial dimension – local global connection
- Temporal dimension – past present and future interconnections
- Inner dimension – values.

This model included an inner dimension as an element and acknowledged the importance of values to teaching and learning in global education. Hicks (2003) notes that each of these four dimensions needs to be present to claim teaching in global education.

Calder and Smith (1993) further developed the Selby and Pike (1988) model. A global education paradigm includes unity and interdependence, empowerment, social progress, a sustainable and just world and active participation. Global education is about social action and should focus on the participation alongside a strong emphasis on interdependence. Global education should focus on:

- Global Concerns. It recognises that we live in an interdependent world and aims to develop understanding of the interacting factors that cause poverty, social, economic and political injustice, inhumanity, conflict and environmental abuse locally, nationally and internationally.
- Powerful and powerless. It is concerned about how things happen, who decides, who has power and who does not. It promotes enquiry into contentious issues such as prejudice, discrimination, racism and sexism.
- Critical awareness. It is concerned with a critical awareness regarding one's own society and culture, as well as others, is developed. It includes a search for alternative views perspectives, experiences and methods that acknowledge equality of peoples within and among nations. It recognises diversity of views, complexities, experiences, and approaches worldwide. (To be consistent you would need to start this paragraph/blurb with "It . . . ."
- Participation. It aims towards developing the relevant skills, values and attitudes necessary for the commitment to responsible action for change towards the preservation and fair distribution of the earth's resources and a more just, fair and accountable society locally as well as globally.

Global education therefore has a moral purpose (Pike & Selby, 2000). This moral imperative requires a shift from the individual to the collective, from sameness to diversity, from greed to equity and from
passivity to action. It is the moral purpose that will drive the success of global education programs for it is in students seeing relevance and purpose for action and participation that will inspire and transform.

Merryfield is one of the leading scholars in global education in the USA and has developed a list of eight elements drawn from other writers in the field. Kirkwood (2001) lists Merryfield's eight elements of global education which include:

- Human Beliefs and Values
- Global systems
- Global issues and problems
- Cross cultural understanding,
- Awareness of human choices
- Global history
- Acquisition of indigenous knowledge
- Development of analytical evaluative and participatory skills.

These changes to global education definitions over time show the increasing complexity of the field and the problematic nature of definitions. There is a problem of meaning in global education, the term is not universal nor has a common meaning across countries let alone schools (Selby, 2000; Kirkwood, 2001). Calder (2000) argues that global education is about action that results from the knowledge and understanding. Selby (2000) states that the meaning of global education comes from practice not just theoretical understandings alone, with the inclusion and purpose global education in curriculum being consistent across scholars.

Notions of controversy, problematic nature of the world and interdependence, sustainability were however limited in all definitions of global education. The definitions and understandings of global education could be described as an inclusion model i.e. certain elements, perspectives, issues, needed to be included to ensure global education. The focus is on the student as the recipient to be made 'global' and to achieve global awareness and ultimately understanding.

However the role, influence, background and lived experiences of the teacher are not acknowledged in these definitions. It is assumed that all teachers have the capacity to translate these definitions into practices that will teach students aspects of global education. Teachers are the critical change agents in this field, more than curriculum or content. So what do these definitions mean for teachers and for teacher educators? Surely it is the choice of pedagogy, content, approach and the meanings attached to these that also characterises teaching with a global focus. For students it is seeing a world through eyes other than the dominant or the privileged in terms of class, background, identity, race and culture. For students it is also about drawing on the experiences of their class to teach issues of racism, privilege, inequality that is important. Definitions alone will not embed a global focus in teacher education courses but a greater emphasis on teachers educators own identities, stories and meanings attached to these.

One such lived experience, I have reflected on and searched for meaning is my first trip to Nepal in 1996. This is an excerpt from my own reflection on this time in Nepal. It is titled Behind the Door

**Behind the door, 1994**

The red and green stripes shoulder bag hangs behind my bedroom door... a little tattered but still shapely and sturdy enough to be a companion on frequent visits to my local fruit shop. It holds memories of time, in another country - Nepal immersed with communities of people settled on the slopes of the world's tallest mountain range. A three week trekking experience prompted and transformed my view on the world and myself. It was in this place - Nepal that I began to see a world outside of myself... I began to see identity, race, class, privilege and background ...... my world was 'developed', 'white', 'middle class' and above all else 'extravagant'.

The Nepalese appeared so untapped in their existence on one level- the level of possessions, but trapped in others of poverty, illiteracy and environmental degradation.

I struggled with the poverty seen almost everywhere, I struggled with the waste strewn over what seemed like everywhere, I struggled with the world's inequities and the political diversions that stops greater equity, I struggled also as I climbed the mountains - myself and Mary were always last, but we always made it.

I struggled with the sherpas, the shoes they wore whilst I had $150 shoes that will be worn less that the sherpas who were wearing thongs.
Had my world become global? Was my identity being shaken .... my comfort dislodged, my view of the world forever changed? I rested and was comforted in the privilege of class, however was restless. I was comforted in my uncomfortableness, I was forever shadowed however by the enormity of the mountains and the enormity of the inequity in the world.

However .... I saw me ... my own whiteness, background, identity, privilege and class, visible...... trekking along the slopes of the Himalayas. I had never really seen me located in a society and privilege before.

This is about travel, struggle, inequality the 'haves' and the 'have nots'. It is seeing the world that I had taught - there were faces to the statistics and they were there before me. The lived experience became the lived curriculum. It was also about power and the powerless. I was questioning the inequalities and the wealth that was in my country. No longer was there one culture but many. No longer could I be dismissive of the world's inequalities because I don't know or have never experienced. I now know. I had the responsibility of knowledge upon me. This story is about raising the consciousness and critical awareness of global concerns.

I remember for a long time after I returned from Nepal, every morning in the shower I thought about the people I had met only trek, they washed over me and stayed with me long after the towel. Even now during this morning ritual I think of those people on the slopes of Nepal.

Enter teachers

The meanings and definitions of global education silence teacher's lived experiences, stories and narratives to make sense of their own global education. There is an omission in the definitions as stated earlier between teachers' own stories and experiences and their capacity and confidence to teach global education.

In 2005, there is an imperative to imagine the world and teach through a series of complex and interrelated lenses - environmental, political, social, economic, historical, religious, spiritual, geographical, and linguistic. No global issue can be seen in isolation or through a single lens. The complexity of global issues offers challenges to teachers to construct global education for students that critically reflects and analyses inter-relationships in a rapidly changing world. One prerequisite to teaching global education is an analysis of this complex world through lived experiences.

Teachers of global education need to develop reflective practices (Banks, 2001) on their own identities, prejudices, choice of curriculum content and pedagogy and this needs to be ongoing, embedded and shared. Teachers' understanding of their own journeys as a teacher and what they bring to the classroom is critical for teaching global education, more than any other curriculum area. My experience in Nepal has shaped the choice of content I make in developing teacher education courses, I try to include visuals, content, stories, from countries such as Nepal or African countries to break the view of the world through western privileged lives.

Teachers bear important responsibilities to ensure that students become global citizens. Teachers need to do this by themselves being reflective practitioners. The more teachers develop these qualities the easier it will become to develop such qualities in students. The depth and quality of the teacher understanding are significant factors in what and how global education is taught, Pike (2000). In all the definitions associated with global education, it is the teacher that translates the definition into meaning and is enhanced through reflective identities across local, national and global contexts. Tucker (1990) stated that "teachers not textbooks appear to be the primary carriers of the global education culture" (p. 114). If a literature teacher only uses novels from their own nation to deconstruct text, then potential understandings about cultures and people is limited. Students need to see and read about multiple perspectives and viewpoints, that there is more than one way, more than one understanding or approach and the world is made up of different ways of seeing and doing.

Global education is teaching beyond facts and comprises a rich tapestry of stories, people, places, experiences and meanings attached to these. Teaching global education can be sterilised and bland, lacking in personal focus and often defaulting to a knowledge and facts paradigm. To draw on the wealth of experience of students as well as teachers is an imperative in making teaching real and engaging and this will add to greater understanding and meaning. This position is affirmed through the work of Buchanan and Harris, (2004) where they state "as a general rule, it emerged that schools in more multicultural communities had a higher degree of global awareness than did schools in more mono-cultural areas" (p. 10).
Through teachers developing skills to interrogate their own global education, stories and narratives this will shape and influence the type of global education they teach in classrooms.

**Implications for teacher educators**

One approach and starting point is to refer to policies that call for a greater internationalisation of the curriculum. At Deakin University there is one such paper which provides guidelines for the development in International and Culturally Inclusive Curricula. An excerpt of this appears below.

Faculties and course teams should review course and unit content descriptions to ensure that, where appropriate, they reflect diverse Australian and international perspectives on economic, political, environmental and social issues of global significance, and enable students to understand the implications of cultural difference and diversity for academic and/ or professional work within their specialisations. Following are some examples of appropriate types of content descriptions that can be adapted to specific courses and units.

Subject content should:

- include explicit references to both international and Australian subject matters;
- avoid superficial, monolithic and stereotypical descriptions of other nations or cultures;
- address issues such as social justice, north-south equity, human rights and related economic, social and global environmental issues;
- address diverse Australian perspectives on global issues;
- address Australian Aboriginal and Torres Strait Islanders' perspectives on global issues, particularly those that concern other indigenous and minority peoples around the world;
- include topics on ethical issues in globalisation;
- include examples and case studies from other countries;
- include accounts of the historical background to current international practices;
- include information on academic and professional practices in other cultures;
- include explorations of how knowledge is constructed differently in diverse cultures in the subject area concerned;
- encourage students to reflect critically on their own cultural identity and its social construction (Deakin University, 2002).

This list provides clear examples of content, examples, references, topics to include within teacher education courses at Deakin University. Many teacher educators would readily include such in their teaching programs through films, books, videos which present a culturally diverse and inclusive curriculum. Importantly students are encouraged to reflect critically on their own cultural identity and its social construction from this list of examples. This can only occur through the intervention of the teacher educator. This reflection provides opportunities to move beyond a mere inclusion model of teaching global education or including international examples to a more thoughtful, reflective model that includes acknowledgement of student's identity and the constructions of this identity.

However I would argue that critical reflection needs to be developed for teacher educators to focus on their own identities, experiences and stories of self to build the capacity of the teacher educator to feel confident about teaching an international inclusive curriculum or teaching to include and embed a global focus.

Many teachers are not prepared or feel confident about teaching global education. In my own experience with pre-service teachers, their life experiences are often narrow characterised by little travel, living in one suburb or area of Melbourne and being surprised in global education sessions at the world 'out there. This resonates with Merryfield, (2000) who states that "unfortunately most of today's teachers have not been prepared to teach for diversity, challenge inequities or even recognise the effects of globalisation in the lives of their students and communities." (p. 430)

Ritchie and Wilson (2000), in their study of teacher education, comment on the difficulty in transforming teachers from a traditional to progressive approach. What they did not consider in their study was consideration of their own lived experiences of school, stories of family and the cultural representations of teaching and learning literacy. They failed to take into consideration the view of self and subjectivity. The binary between traditional and progressive was a series of complicated layers that needed to acknowledge complexity of identity and the forces that shape this identity.

If this is the case that the progression between traditional and progressive is complex with acknowledgement of multiple identities and their social and political ideologies considerable, then a greater
acknowledgement of the self needs to be included in pre-service education and teacher professional
development. For teachers who are preparing students for a 'global' world, then their own constructions of 'global' their understandings about what is global and how it is enacted in their own lives and the increasing impacts that globalisation is having on their local lives is important.

Telling stories of students’ and teachers’ global lives, their local lives and making connection to teaching with a global focus can unlock the social, political environmental and cultural forces that shape their own lives. The work of Ritchie and Wilson (2000) working with language teachers has implications for working with teachers in global education. They comment that

“... change is made possible and becomes sustainable when teachers gain critical perspective on how their identities have been constructed by/ in the culture and how the cultural narratives of teaching have shaped their personal and professional subjectivities” (p. 24).

Merryfield (2000) in her study of teacher educators describes the influence of power, identity and experience in shaping the lived experience. This resonates with the lived experiences I have recorded. These experiences have had a transformative influence on my teaching now in teacher education. An example of this is my choice of case study to illustrate authentic learning and assessment. This is a deliberate attempt to move outside of the dominant narrative. I use an excerpt from the film Not One Less – set in rural China, with real village residents as actors. For pre-service students, this is engrossing, challenging and breaks the assumptions about education, China, classroom management, authentic learning. The differences students see in this film to their own lived experience of classrooms, school, authentic learning and teaching, community interpersonal relationships give responses that are raw and energetic. Students remember the film on end-of-unit teaching evaluations – “I enjoyed the film from China”.

• Why did students remember this film?
• Is it a connection to the profession and craft of teaching or is it such a stark contrast to their own lives and experiences that it is noticed?
• Is it the global connection of teaching across borders?

I actually want students to do more than enjoy the viewing of this film. The film offers a stark contrast to their own worlds and also to the worlds of teaching and learning they have been part of and familiar with. I want them to see, notice and observe another country to contrast their own country. As a result of this viewing, I want students to become uncomfortable to see that the world of teaching learning is not restricted to the dominant one they have been a part. My choice of this illustration came from a visit to China, seeing the juxtaposition of rural and urban, skyscrapers and villages, modern schools and rural buildings. I had confidence to show this film as part of my story could relate to this landscape. I had seen such landscape and could visual this and speak with authority about this place.

It is also beyond just telling the story it is interpretation and continual thinking about the stories, the meanings that they now have and give signposts to. For teacher educators this making meaning of stories and narratives is important for students to see beyond the immediate and narrow views of the world

Global education introduces students to a new way of viewing the world, fosters intercultural understanding and takes students beyond their own worlds. Teachers who are reflective practitioners who can give meaning to their own lived experiences, identities can develop rich global education classrooms in SOSE and to other curriculum areas in the school. The challenge is to provide spaces for such reflection and meaning making to occur for teachers to prepare students for a world which is ‘global in its outlook and influences’. Merryfield (2000) states it is “not the experiences that shape and contribute to teaching with a global perspective it is the interpretation of these and the interrelationships of power, identity and lived experience that lead to a consciousness of other perspectives.” (p. 10)

In summary some ways forward in teacher education.

1. Seek out relevant policies that refer to building international or culturally inclusive curricula.
2. Look for opportunities to build and include a global focus to the curriculum.
3. Develop your own critical reflection on your own experiences that have shaped your view of the world and seek meaning behind these stories.
4. Develop for students story telling that will build reflection and noticing to their own lives.
5. Embed within assessment tasks notions of critical reflection on self and a description of meaning behind this.
6. Encourage experiences which will expand and enrich lives of students.
7. Be explicit in teaching guides and course development about the importance of a global education.
8. Become a critically reflective teacher educator of your own lived experiences and the meaning attached to these.
9. Share your stories with others.
10. Travel more!

Conclusion
The pedagogy around teaching global education in the classroom cannot be isolated from the teacher's identity, background experiences, thoughts and approaches to teaching. The methodology of teaching global education today needs to be shaped with the teacher and the teacher needs to be central to this understanding.

How can teacher educators, who have never examined their own privilege or who have no personalised learning of what it feels like to live as the 'other' prepare K-12 teachers to teach for diversity, equality and interconnectedness (Merryfield, 2000 p. 441).

There is a strong link between the preparedness of teacher educators to teach students about diversity, multiculturalism and global education if they themselves have seen themselves outside of the dominant powerful, or seen with a range of identities and have shared and reflected on their lived experience.

Global education demands that teacher reflection occur on a sophisticated level due to the complexity of the influences and lived experiences on teachers' lives located in cultural and national contexts. Teaching global education requires a conscious understanding and reflection to begin the journey of self located in the classroom. In searching for meaning in global education in teacher education, it is in the capacity of the teacher to reflect not only on their own multiple identities but also to share their lived experiences alongside encouraging students to reflect and share their own journey that becomes a new way to teach global education in a changing world.

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Computer Mediated Communication Networks Can Support Supervision / Mentoring And Preparation Of Pre-Service Teachers But E-Moderation Techniques Are Vital

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This paper identifies the power, place and significant role of teacher education within society and the ameliorating influence of a Computer Mediated Communication (CMC) network as a tool to facilitate supervision / mentoring, within a pre-service teacher education (PSTE) program. This account presents an insight into the innovative practices within an internship of implementing a CMC network. The internship places primary and secondary interns in Professional Development Schools (PDS) (Darling-Hammond, 1994) for two days a week for twenty school weeks and maintains university links through a seminar and lecture program for the remaining three days. The links, and supervision / mentoring, were intended to be enhanced through the implementation of a Web-based CMC network used to facilitate communication, resource sharing and learning. The model draws on the theories of e-moderation (Buchanan, 2000, Salmon, 2000, Schrum, 1997) which supports networking via CMC. The evidence presented over a two-year period, although potentially beneficial for those involved in this collaborative process of teacher education, was never fully realised. The research has determined some areas of benefit; areas that could be changed; and presents some emergent thinking about the use of CMC in PSTE.

The society we live in

In this age of post modernity, as suggested by Bauman (2001) "the feeling of crisis", or "the living at the crossroads feeling" or the living under the hammer feeling that many of us experience may not be because of failure or negligence within education but rather to do with the following characteristics of a post modernistic world:

... the universal melting of identities, with the deregulation and privatisation of the identity forming processes, the dispersal of authorities, the polyphony of value messages and the ensuring fragmentariness of life (Bauman, 2001, p. 127).

Our humanity, in the early years of the third millennium, has the potential to learn much by critically reflecting about the past one hundred years or so of enormous social, political, economic and technological change and about the kind of future we would like to leave for our successors. It is with regard to this reflection, within this particular context, or circumstance, that this study is situated. Wolcott (1983) in describing his use of story presents the need of the anthropologist to illustrate the real events bounded by time and circumstance. "The effective story should be 'specific and circumstantial,' but its relevance in a broader context also should be apparent. The story should make a point that transcends its modest origins. The case must be particular, but the implications broad" (Wolcott, 1983, p. 202).

Part of the 'Big Picture', teachers and the power of technology

One of the broad implications, or part of the 'big picture' with respect to teacher education revolves around the question of how the future is to be, and can be, prepared for our successors, and by whom? Firstly, this preparation, within the Western World, would seem to at least partly occur through the steps, processes and procedures implemented over time, in and by our educational institutions. What takes place in our educational institutions is conducted through and guided by our teachers. Teachers, following on from parents, are major contributors to the success of, and the preparation of, our successors. Secondly, this preparation of our successors is influenced in a unique way in this age by the pervasive power of technology. The educational institutions of today are not only big business in the financial sense, they are also very powerful organizations and are being driven to embrace the technological revolution (Department of Education Victoria, 1998, DfEE, 1997, United States Department of Education, 1996).
We live today in the "Digital Age" (E. Dyson, 1998) and the new currency of this age is knowledge. This knowledge is the 'new wealth' of the 21st Century. However as early as 1957 Arendt (1958) issued a warning applicable to the current digital age and the forthcoming genetic age.

If it should turn out to be true that knowledge (in the modern sense of know - how) and thought have parted company for good, then we would indeed become the helpless slaves, not so much of our machines as of our know - how, thoughtless creatures at the mercy of every gadget which is technologically possible, no matter how murderous it is. (Arendt, 1958, p. 3)

Without providing answers Arendt encourages people in the plural, that is, people living and moving and acting in this world, to do one simple thing that all of us as humans can do. What she proposes is that, "we think what we are doing" (Arendt, 1958, p. 5).

The growth and prevalence of technology in the digital age
Living in and immersed in the 'Digital Age' impacts on all of our lives. So much of what occurs in business and communication throughout the world would seem to be the result of the seamless development of digital technologies. These digital technologies that first appeared toward the end of WW II have intruded and impacted substantially, in every area of modern Western Civilisation. Over the last fifty years, there have been significant changes in record keeping and all forms of data management, retrieval and storage, publishing, banking, global communications, on-line shopping, electronic commerce, employment and, of course, the many forms of entertainment. Many of these, as listed above, did not exist previously, except in the minds of the sci-fi writers. Moreover many workplaces, including educational institutions, have significantly changed the way in which they do things as a result of the use of digital technologies. It is within these organizations that the teachers of the 21st century need to be able to point to knowledge and resources, they need to encourage thinking and reflection. They need to be flexible in their own thinking and operations, adaptable to the changing demands of an evolving society and to be the creators of new knowledge.

A further dimension of personal and professional learning that would seem to be required and necessary for ongoing growth, development and expertise in teachers is in the area of information and communication technologies (ICT). As suggested by Leach (2000) "it is the people and the uses to which they put technology, not simply technology itself, that have the power to transform education….new technologies can be used to support, extend and indeed transform professional development " (Leach, 2000, p. 304). Such technologies are tools such as Computer Mediated Communication (CMC) networks. Such networks have been used at the Open University (OU) in the UK for the delivery and facilitation of flexible learning courses in many faculties including teacher education. During the 1990s as teacher education in the UK was moved into a school - based system the need for facilitated CMC networks further increased in initial teacher education. Salmon (2000), a long time supporter of CMC, developed as the result of her extensive research within the business faculty at the OU, a five stage structured model, or framework, to facilitate the introduction and effective use of electronic conferencing with CMC. In particular Salmon researched the work of the conferencing facilitators, who were referred to as e-moderators. Salmon (2000) found that for e-moderation within CMC networks to occur successfully, the e-moderators of conferences needed a framework for contact; needed to recognise the various stages of development; and needed to consciously move through the stages.

In a study conducted by Hoban and Lockyer (1999) CMC was used to support process outcomes and to supplement face-to-face teaching by providing discussion forums. In perceiving CMC in this way the purpose in providing the Network was to enable and facilitate the sharing of knowledge and good practice throughout the 'Community'. The experience of Mayer (2000) supports this notion of support and communication. In the study that Mayer (2000) conducted, with secondary interns, it was found that the interns valued the technology as a link to other interns and advisors during the time of their internship. The CMC network in Mayer's case consisted of a bulletin board and email and became the electronic lifeline for many of the interns. Sringam (1999) further supports this notion and indicates that his research, "suggests that CMC technologies, which are used to support collaboration, discursive interaction and the building of relationships, can provide the scaffolding that guides, supports and develops the construction of knowledge leading to quality learning outcomes" (Sringam, 1999, p. 4). In my study I anticipated that a mutually supportive community would develop and that the members involved would progress through stages of the Salmon (2000) model, moving beyond just using the network for communication, to a stage of collaborative development and the construction of knowledge within a community. To develop an active on-line community, it was considered necessary to return to the
essentials of a community as identified by Leach (2000) to establish the purpose in conducting a CMC network community at all. These dimensions or essentials of a community are seen as enduring, regardless of the time, or technologies of the age. Leech and Moon (1999) cited by Leech (2000) claim the following:

Despite diverse technologies and widely varied products across time and locations, these images enable us to locate some enduring dimensions of community

- goals and purposes
- knowledge (acquired and valued)
- activities (including the use made of technologies)
- differing roles and relationships
- discourse (Leach, 2000, p. 313).

These five dimensions of community provide a useful framework to examine the functionality, purpose and need of CMC as a component of the support network for the members involved in this study.

However, I was also aware of the study conducted by Pearson (1999) whose experience of computer conferencing, using FirstClass, within the context of the school based program, in 1995–1996, which indicated that the potential of conferencing was not realised for the teachers, or for the trainees (student teachers). The three major stakeholders, the trainee teachers, the mentor teachers and the liaison lecturers were encouraged to embrace the use of the CMC network and use it to build the learning community. Although the opportunities existed for communication, for resource sharing and for multi-site connectivity and access, the take up was rather limited. This network, as documented by Pearson (1999), consisted of a network using the conferencing software known as FirstClass. This CMC Network provided ‘client’ access to the FirstClass server, via a dial-up modem. However, the student teachers, in the 1995–96 cohort, rarely used the network for the purpose that was intended and the mentor teachers and the liaison lecturers almost never used it. Pearson (Pearson, 1999) acknowledges that a lack of clarity and purpose of the network and of the nature of collaborative partnerships between the university and the schools contributed to the under-utilisation of the network. In part it was my reflection about these experiences, which kindled my research interest in the areas of pre-service teacher education (PSTE) and the use of computer mediated communication (CMC) in PSTE. Pearson (1997), in the conclusion to his study, notes that he experienced difficulties in establishing a comprehensive audience, which at that time essentially involved the liaison lecturers and the interns. He further notes reluctance on the part of the participants to be engaged in using the CMC network. Although expressing the claim that computer conferencing had the potential to foster reflective stances to teaching, professional problems and issues, he recognised that this had not been realised in his study.

The focus of this study in PSTE, reflective mentoring and CMC

In spite of Pearson’s lack of success in establishing an on-line community I intended to make a further attempt at implementing a CMC Network, as part of a school-based program, and establish a collaborative on-line community. It is within this paper that I present my study, which was focused on exploring a different way to conduct teacher education and identify the power, place and role within teacher education of the ameliorating influence of a CMC network as a tool to facilitate communication, resource sharing and learning. In particular this study, centred on the Gippsland Internship model, specifically uses the process of 'Reflective Mentoring' (Dyson, 2002) and the use of a CMC network, as tools to facilitate new ways of conducting supervision / mentoring. The internship model, initially based on the 'Gippsland Model' (Cairns, 1995), places primary and secondary interns in Professional Development Schools (PDS) (Darling-Hammond, 1994) for two days a week for twenty school weeks and maintains University links through a seminar and lecture program for the remaining three days. The redeveloped model was founded on the theories of reflection and mentoring (Ballantyne, Green, Yarrow, & Millwater; 1999; Fletcher, 2000; Gori, 2001; Korthagen & Kessels, 1999; Shulman, 1994; Yarrow, 1998; Zeichner, 1996) leading to the process of ‘reflective mentoring’, which was developed specifically as part of this internship model.

The process of 'Reflective Mentoring' a key component of the 'Internship' was developed from the work of Korthagen (1999) who linked reflection to teacher competencies. Reflection has long been associated with the process of 'mentoring' which is a term that "reflects the potential of a one-to-one professional relationship that can simultaneously empower and enhance practice" (Fletcher, 2000, p. xii). According to Korthagen (1999) 'Reflection', refers to "the mental processes of structuring or restructuring
an experience, a problem, existing knowledge and insights” (Korthagen, 1999, p. 192). It is within the Gippsland Internship model that ‘Reflective Mentoring’ became seen as central to the work and the life of the interns, the mentor teachers in the Professional Development School and the University lecturers (Liaison Lecturers). It is a crucial factor in teacher effectiveness. ‘Reflective Mentoring’ within this internship model is not a stand-alone single event but part of an ongoing cyclical process involving the mentor teacher and the intern, the liaison lecturers and the intern, the mentor and the liaison lecturer. ‘Reflective Mentoring’ involves:

- support and guidance
- relationships built on trust
- frequent conversations
- a non judgemental environment
- returning to issues for further discussion.

It is within this context that learning may occur for both the intern and the mentors. In this process the intern is seen as the protégé of the mentor but the mentor is also a learner. They are therefore co-learners within the school setting where collaborative learning takes place.

The internship model also draws on the theories of e-moderation (Buchanan, 2000, Salmon, 2000, Schrum, 1997) which supports networking via computer mediated communication. A potential significance of this research is the streamlining, re-development and re-conceptualisation of pre-service teacher education, including the school-based component, which is recognised as a vital part, but not the only part of PSTE. This study also provides valuable current data about partnerships in education and contributes to the theoretical and practical application of the process of ‘reflective mentoring’, and the use of CMC in future internship programs.

The reasons for including the CMC network in the internship program were three-fold. First, it was established to provide a private network for the stakeholders in order to facilitate communication. Second, it was designed as a resource-sharing network enabling all the stakeholders, but especially the interns, to access and to share digital resources from anywhere at anytime. Third, as an intervention tool influencing and changing the way in which supervision / mentoring could be conducted in the “Digital Age” (Dyson, 1998). It was my argument that the potential existed for a dedicated, inter-connected resource bank to be developed by each intern, facilitated by connectivity from anywhere, at anytime. This connectivity included the home, the school site (PDS) and the university. Resources could be up-loaded and downloaded to and from the network by the various individuals and became available from everywhere at anytime. The network ideally had the potential to become the personal and professional ‘electronic briefcase’ for each intern. The ‘electronic briefcase’ can be considered akin to the teachers’ cane basket. It is the place where they can store the things they want to keep and look at a second time at a later time, or when needed.

The research questions
The research questions that are at the core of this study are the following:

Firstly, how does the application of a process of ‘reflective mentoring’ and the use of a CMC network impact on the learning outcomes of pre-service teachers, involved in a one year Pre-Service Teacher Education Internship facilitated through a partnership between schools and a university? Secondly, how do the interns, the mentor teachers and the liaison lecturers see the use of the CMC network as a viable and useful tool to facilitate communication, resource sharing to assist in teaching and learning and as a method of monitoring (supervision)?

Data gathered when looking for answers to the questions
The intern group of 2001
Although the primary interns of 2001 stated that they understood the purpose of using the CMC network, 34 percent of the primary interns never used the network at all and a further 31 percent only used the network once or twice. Seven, of the thirty-two primary interns in the cohort, indicated that they used the network on a monthly basis. However, unlike the primary interns the secondary group appeared to lack an understanding of the purpose of the network. Fifty percent of the secondary cohort never ever used the network at all and 33 percent used it once or twice. Only one intern used it monthly and no secondary interns used it weekly or daily.
The mentor teacher of 2001

It is also apparent that not all elements of the systemic changes being promoted, were embraced, accepted, or used by the mentor teachers. Whereas 87 percent of the mentor teachers considered skills in ICT to be vital for teachers in today's schools, and 17 percent indicated that they considered the use of CMC and ICT to be a viable means to conduct supervision, only four percent used the CMC network at all during the 2001 year. Twenty five percent indicated that they had no need at all for a network. However, they did request ongoing support from the university both in terms of professional visits - not to supervise but to be supportive. They wanted preparation programs for mentor teachers and they wanted more concise documentation about the expectation on the schools and mentor teachers. They also stated that they were willing to try new levels of connectivity, including electronic networks such as the CMC network. However in 2001 the mentor teachers saw little value of this innovation to PSTE.

Better and more frequent communication with the University is vital. Perhaps using the CMC network. I am willing to give it [the CMC network] a real go, but I need clear guidelines (Megan, mentor teacher 2001).

Regular professional development sessions for the mentor teachers were recognised as necessary and desirable. However, the mentor teachers did not believe that the CMC network was necessarily the way to do this. In fact many stated that they saw no value in the CMC network for them at all and that the existing means of contact with the university was all that were required.

A summary of engagement

The mentor teachers, the liaison lecturers and the secondary interns of 2001 made little use of the network. Part of the reason for this low level of use can be attributed to the technical fact that the network would not initially operate between the Virtual Private Network (VPN) of VicOne and the university. The limited access restricted the use of the FirstClass network to home and university usage by the interns. These delays, at critical times, perhaps led to a slow uptake in the use of the software and a high degree of frustration for all concerned. To overcome a perceived lack of lack of information about the internship, and the purpose of the CMC network, an information session was offered to all mentor teachers and for the faculty staff early in the semester. However uptake of the CMC network remained slow and attendance at the session was minimal. The lack of use of the Network, especially by the mentor teachers and the liaison lecturers, was disappointing. I make the observation that it seems likely that when people try and use new technologies, like a CMC network, for a first time, and it does not do what they think it should do - or anticipated it would do - they give up.

The interns of 2002

The interns of 2002 indicated that they had a clear understanding of the systemic changes being implemented as part of the internship, i.e. reflective mentoring and the purpose of the CMC network. However, less than half of the group 42 percent indicated that they had a clear understanding of their use of the CMC. This indicates that even though 75 percent of the interns knew the purpose of the network only 42 percent perceive that they made good use of it. However, the same cannot be said about the recognised purpose and the use of the CMC network, by the secondary interns. Only 17 percent of the secondary group were clear about the purpose of the CMC network and 22 percent were clear about their use of it. The CMC network worked for many of the primary interns and this mostly occurred in the later part of the year when a growing awareness of its value to them started to emerge. It is of interest that a number of them also wanted to continue using the network after they left the university so that they could continue with their established peer support.

FirstClass was absolutely essential [her emphasis] to my growth as a teacher beginning my last year of the degree. If only we could have had this communication system throughout the degree. The role of the liaison lecturer was virtually non-existent for me this year. No fault indicated, but I think that this role would be more beneficially served if there were team meetings (once) between the liaison lecturer and the interns to "touch" base and provide more explicit and personal support (Monica, intern 2002)

As I was a D.E. [Distance Education] student I often felt isolated. If it weren't for the information gained at seminar days, or through FirstClass, I wouldn't have known what was going on. (Madeline, intern 2002)

Carol explains why she didn't make much use of the CMC network.

I tried it. I went on a few times but I didn't like it. I played around a bit and thought that I didn't really have a need for it. I couldn't see it directly helping me so I just stopped using it (Carol, intern 2002).
The primary interns of 2002, in particular, used the CMC network as a tool to facilitate their learning, provide an avenue for communication and as a depository for resources. Some interns would have liked to see additional collegial and mentoring support from liaison lecturers in a mentoring role.

**The mentor teachers and liaison lecturers of 2002**

The following comments relate some of the perspectives, with respect to the CMC network, as expressed by the mentor teachers and the liaison lecturers.

I'm sorry. I would've liked to have used the CMC, but in day to day teacher's life, you get so swamped with jobs that take a higher priority that you never get to it (Tony, mentor teacher 2002).

Time is a major consideration. I'm really not into chit chat with people I am barely familiar with (Maggie, mentor teacher 2002).

I really didn't see the need for the network. If I needed to I would use the phone. Anyway we had enough contact (Donald, mentor teacher 2002).

You know people won't access it unless they know there's value for it (William, mentor teacher 2002).

As noted the mentor teachers rarely used the CMC network. They have provided their reasons for not using it such as a lack of PD and support from the university, no time to access it, no need to use, no ongoing support in using it and finding no value in it for them. One of the interesting comments made by one of the mentor teachers was the comment that she was not into chit chat on a network with people that she didn't know. Overall it would seem that there were other forms of contact, other than the CMC network, that met the communication and contact needs of the mentor teachers. Some of the Liaison lecturers made the following comments.

I did see value in the CMC network but it was under utilised because it was not a priority for some students, mentor teachers or lecturers (Henry, liaison lecturer 2002).

From the students' perspective I saw the CMC network as an advantage. It was easy access and it allowed them to at least put something down any time during the day. For me, I could get a message to them at any time and they could collect it at their leisure. (Larry, liaison lecturer 2002).

I found that when I logged onto the CMC network I had some terrific discussions. There some were problems in schools, with technical things, but I saw terrific things going on (Marie, liaison lecturer 2002).

Although the CMC network is seen by the liaison lecturers to have value and potential but was essentially under utilised. Perhaps one of the most disturbing aspects of the lack of use of the network is that the staff had agreed that the internship program, including the CMC network and the seminar program would take the place of traditional school visits and supervision. However, most of the lecturers remained uninvolved. They did not support the internship seminar program, gave little or no support to the interns and made no visits to schools.

Although the CMC network was intended to facilitate the mentoring process by facilitating communication and resource sharing, it assisted little in this task for the majority of the stakeholders. Many mentor teachers felt that they really did not have the time for another communication network. They had their own email at school that they would use to contact the university if it was required, or they would use the telephone. Most saw little value for them in using the CMC network.

**Engagement and the development of an on-line community**

My developing understanding of the use of CMC has led me to believe that an on-line learning community cannot be maintained, or function effectively, without a critical mass of engaged participants. From the perspectives of the mentor teachers, the liaison lecturers and secondary interns, this critical mass did not exist and the network was not functional or useful to them. Insufficient numbers of active participants prohibited further development or engagement. When secondary interns logged on, nothing had changed – because of the low level of interaction, resulting in even less interest. The reverse happened with the primary interns who, by their continued engagement, facilitated ongoing engagement and immediate value in using the CMC network. As noted earlier the mentor teachers rarely used the CMC network and therefore could not form a community. Overall it would seem that there were other forms of contact, other than the CMC network, met the communication, contact, and community needs of the mentor teachers. The CMC network, although recognised as potentially useful for all involved in the internship, was essentially under utilised and largely of no value to the mentor teachers or the liaison lecturers. It would seem that the contacts established with the university and the existing communication lines were expressed as sufficient to meet the needs of these busy mentor teachers. Perhaps the liaison
lecturers needed to be further encouraged to let go of their traditional supervisory role, not because of workload issues, but because they could recognise the need to facilitate partnerships, based on effective communication and regular contact with schools. This in turn would mean that they would work with their interns, whom they would get to know personally, and mentor their interns, rather than supervise them. It is of interest to note that even though the liaison lecturers had ‘networking at their fingertips’, with fulltime high-speed Internet connections, they did not avail themselves the opportunity to use the CMC network.

**Actuality model of engagement with ICT (Cairns & Dyson, 2001)**

Arising out of this study in pre-service teacher education, a review of relevant literature and in the observation of students at the Alpine School (Dyson et al., 2002) five key elements seem to be necessary if people are to effectively ‘take up’ and use information and communication technologies within educational contexts. These have been described as the five elements as the Actuality Model of Engagement with ICT. The effective use of computer technology (engagement) requires all five elements to be present. The five elements are: Opportunity, Propinquity, Necessity, Sagacity and Sanity.

- **Opportunity** Accessibility, availability and reliability of hardware software and connectivity.
- **Propinquity** Nearness of others, peer support, study group network, immersion with others, modelling of use and participatory involvement.
- **Necessity** Only means of completing tasks in a reasonable time. Only source of up to date information. Requirement or imperative need to use.
- **Sagacity** Providing satisfaction through understanding, insightfulness and wisdom. The task is important and rewarding to do or perform.
- **Sanity** Reasonable and achievable. Not an unreasonable thing to be doing or being asked to use.

In light of this study implementing the CMC network, as a tool to support the stakeholders in the internship program, i.e. the interns, the mentor teachers and the liaison lecturers, an additional element has emerged. This is the element of Practicability. The tasks, activities, or engagement requested, or thought to be of value, need to be of a practical nature, i.e. the engagement needs to be feasible and useful to the doer of the action. In reviewing the implementation of the CMC network over the two years of the investigation it is apparent that rarely were all six elements present all the time.

The **Opportunity** was absent during the time of the lack of connectivity or when the server went down.

**Propinquity** was absent when little had changed on the network between visits and no one was logged on.

There was no **Necessity** to use the network by any of the stakeholders. It was not a requirement and who does what they don't need to do.

There was little opportunity for **Sagacity** when little very little satisfaction was gained from using the network.

At times, and with certain stakeholders, it is apparent that they recognised little **Sanity** for them in being involved, i.e. it was not reasonable for them to be involved.

**The Practicability** of the network and engagement with it was not always recognised as being practical. There were simpler and more readily available technologies and contact that met immediate needs.

**A summary of my reflections into the use of the CMC network suggest the following:**

- **Professional development opportunities for all participants are vital** if those participating in CMC conferences are to take up and use the technologies to their advantage. The Mentor teachers and liaison lecturers had not been well enough 'skilled up' to use the network, i.e. they had not received what they considered as sufficient professional development in the use of the network. It is also apparent that many interns did not support the mentors, in learning how to use the network, because they were not using it themselves. In fact the mentoring personnel had not been prepared in the vital role of e-moderator.

- **Small group conferences are labour intensive and require a number of trained tutors taking the initiative, rather than the tutees. One e-moderator for 200 conference users is unrealistic and does not work. I really was the only e-moderator.**
• There is a critical mass required if a vibrant online learning community is to become established. The critical mass needs to be over eighty participants to ensure that there is something there for everyone as they log on to engage.

• The use of CMC networks can have an influence on the way that teaching resources are developed and released to students. A CMC network can help to change the traditional resources development model that had its roots in the industrial model of learning, i.e. the assembly line production of all learning materials prior to engaging in the task of teaching [that is delivering a set body of knowledge]. The use of the web and CMC has the potential to facilitate a process approach to teaching and learning, delivering what is required, when the individual learner requires it. This appears to be a more realistic way of meeting the needs of an adult learner.

• It is a major challenge to get faculty members and teachers in schools familiar with the whole concept of conferencing on a network as distinct from email.

• It is useful to keep administrative / regular e-mail separate from conferencing to assist in maintaining the unique environment of conferencing which does consist of working closely with other people and taking risks. However, some faculty staff and teachers will view conferencing as just another thing added to their own growing list of things to do each day.

• A structure with established routines and requirements is necessary. Participants of conferences have to be required to log into the conferencing space, at least weekly, and contribute ideas to a conference. A degree of necessity is required. The ideas thus contributed are discussed, added to, and then after further reflection and time resubmitted as a further contribution.

• Those who contribute do so because they want to contribute and want to belong to the community of learners. Perhaps on-line learning communities are built best by those people who want to be in them.

• And, finally why would you use what you did not need to use? Everyone has enough to do without learning something new, especially if you don’t think that you need it.

References


What Value Do Student Teachers Place On An Internship
And What Can Teacher Educators Do To Improve This
Experience In The Post Modern World?

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This paper records some narratives from a group of fourth year, primary and secondary undergraduates involved in an internship. The shared thoughts and perceived challenges of this cohort of students are reflected upon with the intention of improving the way teacher education is conducted. It would seem that the forces and demands upon student teachers in the higher learning institutions in this post-modern digital world are far different from the forces encountered by previous generations of student teachers. This leads to some key questions about teacher education, as conducted in a rapidly changing social, economic, political and technological world. Is it even possible for teacher educators to meet the concerns of a totally different generation of student teachers? What changes can be made, or should be made, in teacher education to ensure quality teachers are at the coalface of education and what might constitute a quality teacher in this age? The stories shared by the interns have formed the bases of a new project recording the narratives of a group of student teachers as they journey through the four years of their teacher education degree. It is anticipated that some of the ‘big picture’ issues will emerge leading to ‘big picture’ systemic changes.

The world we live in

The world we live in today no longer presents the clear patterns of a structured society, or a defined body of knowledge, as assumed under modernism. All authority is now questioned, perhaps due to the individualising of values and beliefs and the importance of what can be referred to as personal freedom. Morality seems to have lost its power to ameliorate the human condition. The power to create, and the power to destroy everything organic, including the Biosphere itself, now appears to be in the hands of humankind. All of western culture, of which Australia is a part, appears to be afflicted by this new human condition. Mackay (1999) in introducing what he refers to as the kaleidoscope of Australian society has this to say about the constant turning in society over the last 30 years.

We have already been forced to think in new ways about everything from the job prospects of the young to the nature of our Constitution: from our history of abuse of Aborigines to our economic and political place in the world; from our relationship with the fragile physical environment to the role and function of the family in a society where one million dependent children live with only one parent, where 60 percent of preschool children are cared for by someone other than a parent, and where an epidemic of adolescent depression raises disturbing questions about the signals we are sending to the rising generation. … Some of the signs—such as the sickening gulf between rich and poor—have challenged our beliefs about the kind of place Australia really is. … We have only just begun to understand that some of our most cherished ideals make no sense in a society so harshly divided on economic grounds (Mackay, 1999, p. xi).

It seems that what we want, what we get and what is forced upon us is for the most part determined by economics. We could also say that our society, and our values, are now controlled, dictated to, or strongly influenced by a discourse of the economy in a very different society.

Certainly over the last two centuries, and in particular over the last fifty years of rapid technological change, it would appear that humankind has arrived at the brink of little, or no control of change. Ward and Dubos (1972) explain it in the following way

... the power, extent and depth of man's interventions in the natural order seem to presage a revolutionary new epoch in human history, perhaps the most revolutionary the mind can conceive. Men seem, on a planetary scale to be substituting the controlled for the uncontrolled, the fabricated for the un-worked, the planned for the random. And they do so with the speed and depth of intervention unknown in any previous age of human history (Ward & Dubos, 1972, p. 3)
Arendt (1958) in writing “The Human Condition”, at the cusp of this new phase of human evolution, also expresses the belief that as scientists have continued to dabble in the making of life "artificial" they seem to be “possessed by a rebellion against human existence as it has been given, a free gift from nowhere (secularly speaking), which he (sic) wishes to exchange, as it were for something he has made himself” (Arendt, 1958, p. 3). Arendt's perception, at this time in history was extraordinary. She went on to state that humankind’s ability to accomplish this exchange and the ability to destroy all organic life should never be doubted. Herein resides the central question, or that which is at the crux of the conflict between the worlds of humankind – human decision-making and judgement. Who decides how, for what purpose, or even if we will use our scientific and technological knowledge in particular ways? Mackay (1999) suggests that we are not yet even prepared to hear the murmuring of a closely associated moral question. "What is the likely future impact of genetic engineering?" (Mackay, 1999, p. 247) Arendt (1958) suggests that these kinds of questions cannot be decided by scientific means. "It is a political question of the first order and therefore can hardly be left to the decision of professional scientists or professional politicians" (Arendt, 1958, p. 3). And, the type of politics that Arendt is talking about is not the commonly held perception of politics. As explained by Canovan (1990), Arendt's conviction was “constantly reiterated in her writings, that our fullest and most reliable knowledge of reality can only be gained from the plural perspectives of many persons, moving about freely in a common public space and viewing objects and issues from all sides” (Canovan, 1990, p. 156). This type of politics would seem not to be commonplace within present day western democracies where action and decision making often seem devoid of ‘big picture’ thinking altogether. Also, what further appears to be lacking in western politics and political decision-making, is the examination of issues in the company of others, from many perspectives, or in terms of the long-term consequences to our world, of the decisions made. The age-old binaries – thought versus action, the individual versus society, philosophy versus politics, given birth by Plato at the death of Socrates, seem to still wield their power today. Some evidence of this can be seen in the work of Singer (2002) in his writing after the terrorist attack on the World Trade Centre in New York, 2001. He directs his book ‘One World’ to arguing, "that how well we come through this era of globalisation – perhaps whether we will come through at all – will depend on how well we respond ethically to the idea that we live in one world" (Singer, 2002, p. 14).

Perhaps unity within humanity is only possible through the recognition that we are social beings, within a defined space, and that we have a responsibility to the space, to each other and the world if which we live. Mackay (1999) adds to this thought in the following way. "Once we recognise that moral sensitivity is the product of social interaction, we can appreciate the importance of nurturing our personal relationships and our communal life“ (Mackay, 1999, p. 106). A world-centred communal life begins with interpersonal relationships. Perhaps this is only possible if humankind come together with a shared sense of ownership, loyalty, and commitment and with a sense belonging to planet earth. Ward and Dubos explain it in this way:

It is only in our own day that astronomers, physicists, geologists, chemists, biologists, anthropologists, ethnologists, and archaeologists, have all combined in a single witness of advanced science to tell us that... we do indeed belong to a single system, powered by a single energy, manifesting a fundamental unity under all variations, depending for its survival on the balance and health of the total system. If this vision of unity - which is not a vision but a hard and inescapable scientific fact – can become part of the common insight of all the inhabitants of planet earth, then we may find that, beyond all of our inevitable pluralism, we can achieve just enough unity of purpose to build a human world (Ward & Dubos, 1972, p. 219)

The view of society as noted by Bauman (2001) Mackay (1999), Ward and Dubos, (1972), Arendt (1958) and Singer (2002) raises many questions in my mind. How do we educate children in a society of haves and have-nots and how do we prepare teachers to teach in a society of haves and have-nots? How do we educate a society and achieve a balance between what Mackay (1999) refers to as the hundreds of thousands of households crippled by overwork and the hundreds of thousands crippled by unemployment? How can we prepare the teachers of tomorrow to be able to handle, live with, and perhaps change for the better our society, for the future generations that they will have in their care? - and to take up Singers (2002) challenge to live ethically?

Providing quality pre-service teacher education programs are an essential way of trying to address these issues. Although real power exists in teachers to be key change agents in society this can only be realised if student teachers are challenged to change, and view ‘the world’ and ‘their world’ differently, throughout their pre-service programs. One way to do this is to offer the widest possible variety of experiences and opportunities to student teachers so that world experiences can be experienced first hand and reflected...
about. A graduate leaving a teacher education program should be able to view their life, their chosen career, their spheres of influence and their personal contribution to planet earth, and its people, in a totally different way, to that which they perceived it, when they entered their teacher preparation course. If this were the case then the graduates from teaching degrees, from anywhere in the world, would emerge with a keen sense of educational judgement (Coulter & Wiens, 2002) founded on a unity between thought and action.

The framework for narrative data organisation

As a result of research in pre service teacher education Dyson (2004) developed a framework for narrative organisation. Dyson (2004) found that to organise the volume of narrative data generated, and to monitor the emerging interpretations, a framework was useful to sort and filter the data into some major themes, which emerged as significant when educating in, and for, the 21st century. The framework is based on the following four major elements, or building blocks.

- self
- social/others
- ecosystem
- systemic change.

Briefly the element of ‘self’ is significant because as Giddens (1984) acknowledges "Human agents or actors... have, as an inherent aspect of what they do, the capacity to understand what they do while they do it" (Giddens, 1984, p. xxi). The ‘self’ would therefore appear to be in a state of ‘becoming’ and perhaps as Bauman (2001) suggests is engaged in "the feverish search for a new self-definition and, ideally, a new identity as well" (Bauman, 2001, p. 127). The ‘self’ is intricately linked to others. According to Mackay (1999) "Morality is the expression of community" (Mackay, 1999, p. 256). Thus it would appear likely that the ‘self’ becomes formed in the company of ‘others’, i.e. the ‘social’: “It is through the process of forming and nurturing relationships with each other... that we gradually evolve our understanding of what works and what doesn't work (Mackay, 1999, p. 256). It is perhaps only in examining the vastness, complexity, inter-relatedness and interdependence of these relationships that it is possible to recognize the ecosystem of humanity. Singer (2002) places a 21st century emphasis on this concept and identifies what he believes to be the major challenge for this century: "Now [humanity] the 21st century faces the task of developing a suitable form of government for that single world. It is a daunting moral and intellectual challenge, but one we cannot refuse to take up" (Singer, 2002, p. 219). Facing this challenge is, in reality, facing the reality of systemic change in this post-modern world. Giddens (1991) suggests that

Processes of change engendered by modernity are intrinsically connected to globalising influences, and the sheer sense of being caught up in the massive waves of global transformation is perturbing... change is intensive: increasingly, it reaches through to the very grounds of individual activity and the constitution of self... Achieving control over change, in respect of lifestyle, demands engagement with the outer social world rather than retreat from it (Giddens, 1991, p. 184).

The four elements, forming the framework developed by Dyson (2004), are used in this project to analyse the narrative data gathered from the cohort of interns who participated in an internship program.

- The story of self - presented as an individual journey in space and time.
- The journey intricately involves the social / others - through partnerships and relationships, communication, interaction and engagement.
- Education, like the world of the Biosphere, is an ecosystem - a network of interdependence and inter-relatedness.
- Learning within a single system can be a journey of discovery and can involve systemic change, which is change from an existing practice, experience or perspective and recognises that change to the parts changes the whole.

It was anticipated that the interns would become 'world aware', not just self-aware, and through a developing awareness of their personal choices, recognise that they have a responsibility to themselves, to others and to an interdependent world ecosystem. In this transforming landscape the 'oneness of humanity' is recognised and rather than looking to transforming others, with their teaching, they transform themselves, in relation to a 'worldview' in the first instance, and in doing so guide others to transform themselves.
The narratives of the interns

It is of interest to note, especially in light of the above discussion, that the first response from the intern group, when asked what they considered to be the important attributes of a capable teacher in the 21st century, referred to the importance of relationships in educational settings. Their responses clearly identified the following as essential attributes of a capable 21st century teacher and present the self in relationship to others. Teachers need to be

- patient and understanding with children in dealing with their problems
- able to speak and interact with parents and staff members both formally and informally
- able to work with others in harmony through offering and receiving support.

This group of interns also identified, what they considered to be, the personal qualities of a capable teacher. Capable teachers in the 21st century have

- a sense of humour
- the ability to readily establish rapport with students
- the necessary skills to be well organised
- recognised the need to be flexible and are able to cope with the constant changes to their daily program.

A third theme presents elements of the education ecosystem revolving around the acknowledgement that teachers of the 21st century need to

- be aware of student strengths and weakness and be able to cater for individual differences
- present positive attitudes to children and educate the whole person
- be prepared to extend the quick learners and support those who struggle.

A fourth theme focused on systemic change is best presented in the words of one of the interns, who together with the entire group, identified the need for teachers of the 21st century to be well versed in social work.

We are, as teachers, often required to try and teach children who have been affected by many of the problems facing our society. Loss of, or lack of, parental supervision and support- parents affected by drugs, alcohol, poverty and child abuse themselves. A teacher in the schools of today is a care - giver as well as a teacher (Elizabeth, intern 1998).

The fifth theme also focused on systemic change, is focused on what it is to be professional as a teacher. The intern voice of Clare presents a clear understanding of this theme

As teachers we need to be up-to-date with the latest trends in education and be willing to better ourselves by attending Professional Development (PD) sessions so that we can come back to our classrooms and provide our students with the best education possible. (Clare, intern 1999)

Further examples present the interns as 'actors' and as 'spectators' as they engage in thinking and judging (Arendt, 1958) and bring into consciousness that which was below the surface.

During this year I have been able to grow as a teacher and my confidence has risen considerably. My time with these students has also made me understand and appreciate that I have a long journey ahead of me in becoming an effective teacher. I now recognise that the process of education is dynamic and I will need to be constantly aware of the changing society in which these children are growing up. My career in teaching will involve continual change and my professional development will occur through my constant research, trying out of new processes and reflecting on my practice (Marie, Intern, 2001).

In this short passage Marie has conveyed, in her own words as a spectator, a deep and mature understanding of where she was at on the completion of her internship year. She has presented herself as a confident and self-efficacious beginning teacher who recognises that it takes time and effort to establish confidence and that the students in her care have also contributed to her development and growth. She makes it clear that education, learning and society are not static but dynamic and, as a teacher, the journey of personal and professional development can never be considered as complete. She seems to recognise that research needs to be a vital part of her career facilitated through the trialling of different processes, as needs arise, and continual reflection about her practice. All in all Marie has successfully completed her pre-service teacher education and is where we would like a beginning teacher to be upon completing this
component of teacher development. Marie has highlighted the key elements as parts of her personal and professional journey.

**Self** - I have been able to grow as a teacher and my confidence has risen considerably

**The social/others** - I will need to be constantly aware of the changing society in which these children are growing

**Ecosystem** - I recognise that the process of education is dynamic

**Systemic Change** - My professional development will occur through my openness and constant research, trying out of new processes and reflecting on my practice.

In presenting the stories of the interns I also make use of the dual landscapes of ‘action’ and ‘consciousness’. These landscapes were initially developed by Bruner (1986) and extended into narrative therapy by White (1998). According to White (1998) the landscape of consciousness, occurs along with the landscape of action. It is within this landscape of consciousness that the thinking behind [beneath] actions comes into consciousness and is revealed. The stories related in this research attempt to blend and present the two landscapes simultaneously, each with their own unique, yet essential characteristics and therefore should not be considered as binaries. The Landscape of Action (White, 1998, p. 31) presents the processes and occasions of change and learning, the description of events and the experiences encountered by the interns themselves within particular situations or environment. The landscape of consciousness (White, 1998, p. 31) is derived through reflection on events in the landscape of action to determine what those events might say about desires, preferences, qualities, characteristics, motive, purposes, wants, goals, values, beliefs, commitments, of various persons.

**William’s story**

William, a secondary intern of 2001, is a mature age male who has already worked a number of careers. He chose teacher education, with a major in Sport and Outdoor Education, because he recognises that this is where he wants to work. In completing his internship in a rural secondary school he had a primary goal of finishing the year with a job in hand. William has formed the belief that secondary schools have not yet caught up with the changes that have occurred in society. He sees a lack of discipline as the biggest issue facing formal schooling and teachers today. He makes this claim founded on his understanding that unless a relationship exists between the pupil and the teacher then the pupil will not be able to be disciplined or engage in learning activities.

The school system is half the problem because it is not catching up or keeping up with kids needs. The school system is teaching the way it did 20 years ago and they now have kids who don’t want to be there, don’t want to be learning and you [as a teacher] have to try and occupy those kids, keep them contented, otherwise they are going to disrupt classes and you have behavioural problems (William, intern 2001).

What William, through his reflection appears to be highlighting in this statement, is what he sees as a failure by schools to embrace the changes that have taken place in society at large. His experience is telling him that the kid's needs are not being meet because of an 'out of balance' ecosystem. William doesn’t think that this problem will go away and that the only solutions he can see are the development of positive teacher-pupil relationships, based on mutual respect and extra curricula activities that meet the needs of the secondary school pupils. William clearly expressed his concern that schools needed to be re-structured if they are to be successful in today's very different society.

It's a different social structure these days. The kids are growing up without fathers and they have little discipline. Many have no guidance from home. I think that the influence of church groups and religion isn't as strong these days. Kids are fairly lost if they don't have a good structure at home and the churches don't pick up the pieces anymore. They are not going to mature and grow up unless you [teachers] can build relationships with them (William, intern 2001).

William certainly felt that his internship year had provided for him the opportunity to experience in some depth school life, as it exists. He recognised personal growth in himself but he also recognised the need for strong interpersonal and intrapersonal relationships within the whole school community. He was pleased by the way the school welcomed him and enabled him to become part of the school community.

When I went to the school I was introduced, as a teacher and that I would be there two days a week, as a teacher. This was the first time that I had heard that in four years. I was given all the privileges of a teacher;
photocopy cards, keys to the building, my own workstation and computer Internet access (William, intern 2001).

William felt that these things helped to give him a sense of identity as a teacher and a sense of belonging and had occurred because there was a long-term commitment, by him, to the school for the entire year. William made many very positive comments about his entire internship year and he felt that he gained so much from the year because he was willing to put in. He also acknowledged that he put in because he recognised the importance of making a good impression of the school. A good impression would assist him in getting a job - and that was his primary goal. William felt that on campus support was desirable for all secondary interns and that a similar mentoring seminar program, to that of the primary interns, for the secondary interns should be introduced.

However, another perspective of the experience of some interns was the perceived lack of direction provided by the university. The interns felt that there was insufficient information presented to them or to the schools.

In the past we had been given a lot of direction and we got used to thinking that we knew what we were doing, but we didn't [in this case] and we had to work it out. Once we changed our mindset and realized that for us to get something out of this internship we had to make it happen. We had to negotiate our role (John, intern 2001). Everything was very vague at the beginning. There was no structure and we received conflicting advice that resulted in even more confusion (Kim, intern 2001).

When we turned up on the first day we didn't exactly know what to tell our mentors. The mentors weren't sure either. We basically spent the first term figuring it out amongst ourselves (Jason, intern 2001).

Whilst these points could be viewed in the negative there is a very positive side to the experience, which has also been expressed by the interns. They came to the realization that they were responsible for the success of their internship year and that they had to make it work and make the most of it. They came to understand that this was a long - term experience, over a whole year and an opportunity was being provided for them to do things differently than in previous placements. The internship started to work for them when they realised that to make this year work for them they had to negotiate their role and their work as adults. Perhaps also they started to recognise that everything was no longer black and white and that if it was, the opportunities for growth, and options for personal negotiation, would not exist either. To recognise these elements time out and thinking was essential.

We learnt how a classroom would be set and made operational at the beginning of the year and we had the opportunity to see the progression of students through the year (Bob, 2001).

The internship left the door of growth open. We made choices and once I had established my role I developed both personally and professionally (John, intern 2001).

These interns are presenting their emerging understanding of their personal growth, which they see as becoming established in relationships to other people within the school system - an ecosystem. Mary makes a strong point about the quality of the mentor teachers and the internship.

The internship only works if you have strong and supporting staff around you. I have not seen parent teacher interviews, I have not written reports, I have no desk and no computer access, I have not been to a staff meeting and I have made inquires about things that have never been answered (Mary, intern 2001)

Perhaps in Mary's case the fault does not lie entirely with the school, the mentor teacher or the internship model. Perhaps it was up to Mary to make some of these things occur, and part of her growth as a teacher was inhibited by her inability to take a proactive stance. Mary appears to be the one who didn't make things happen for her.

Despite some negatives the overwhelming and pervasive attitude towards the internship was very positive. A sample of positive comments is as follows:

Being able to do what you want with your teaching. There is flexibility and room to negotiate. (Kim, intern 2001).

It was good to have the time to prove yourself in a hands-on way, being treated as a teacher, being part of the staff and given responsibly (Anne, intern 2001).

I liked working with a mentor teacher for the whole year and the gaining of hands-on experience of what would be expected of me as a full time classroom teacher. I also liked the structure of the program with the combination of two days in schools and two to three days a week at the university (John, intern 2001).
Debbie makes the point that communication should be always seen as two-way and in particular the communication from the university should make clear what and why the interns are doing what they are doing in an internship model rather than in block placement model. Debbie also had this to say:

The interns need to feel that they are really a part of the school for the year. They should be formally welcomed, given access to resources, provided with professional development, provided with a desk and a pigeon-hole. In other words given a place to park and a place to belong (Debbie, Intern 2001).

The following vignettes present the four key elements in the words of the interns themselves. This first one is focused on self.

I have learnt a lot and even though I've had ups and downs my confidence has gone up and down along with it. I would have to say that these have really taught me about myself, areas that I am good at and areas that I still need to develop and work on. After all it is a journey. Of course our journey will keep going when we have our own class and our skills and best practises will develop and grow as our experience grows (Marie, Intern 2002).

Marie relates her real-life journey, which she recognises as just that, with its ups and downs and self-discovery. Her openness and recognition of imperfection can be considered as a gift that enables her to view teacher education as an ongoing process of development. Marie has reached a point of transition in her development and is now empowered, and ready to embrace the next stage, and the challenges of her chosen career.

Cathy in this following vignette explains how important others have been to her as she has grown through her internship year.

During my Internship year I have undergone many transformations as a facilitator of learning. I have watched my confidence grow in dealing with students, parents and staff, which I believe is due to the support given by my mentor teacher and her encouragement of me and get into 'teaching'. In doing so, I have learnt so much, about the children, about school life and about me, as a teacher (Cathy, Intern 2002).

Cathy makes it clear that the act of teaching out in front has enabled her to learn about herself, children in her care and school life. She gives much of the credit for her success to her mentor teacher who supported her and gave her the opportunity to get into 'teaching'. Christine, centred on the impact of systemic change, emphasising the impact of the seminar program conducted on job preparation.

This seminar was, as I was expecting, the most important of them all. Helen, the visiting school principal, spoke to us about many of the aspects of applying for jobs and made things so much clearer. Reality hit really hard after this seminar because I am now so close to finishing my degree and getting a job. This is so exciting and so scary! My only big worry is the interview, being an introvert interviews are very intimidating to me (Christine, Intern 2002).

For Peter it was focused on the ecosystem of the school.

I am also beginning to see more of the differences in teachers within a school. People who I thought were easy going, are not what I first thought they were. The more time I spend at the school, the more I notice the little things like this happening. Little cliques I had not noticed before are beginning to show themselves and the attitudes some teachers have towards one another are becoming more apparent. It is interesting to see the inner workings of a school, especially a school which you first thought was perfect and free from bitchiness and hostility (Peter, Intern 2002).

Peter has seen for himself and recognized the ecosystem of a school. This kind of reality that Peter describes cannot be told to interns or to beginning teachers. It can only be fully appreciated through the encounter of such experiences, and through subsequent reflection about them. Room to grow, being allowed to make mistakes and being trusted all seem to be key components. This idea of having room to make mistakes and embracing a sense of personal responsibility are also emphasised by Carol who felt that she had to make the year work for her.

If the university helped me out along that way I wouldn't have done it by myself. It was good. I hated it, but in hindsight it enabled me to actually take the responsibility for my own self. Otherwise, if I had relied on uni I would not have done it. The beauty of being in the deep end is that after a while you start swimming. But, before you get into the water you panic, but once you're in the water, you cannot fail. I've done it this year. I had to. It's my last year and I was not going to waste it (Carol, Intern 2002).

The picture emerges that the interns are initially very concerned with the self, but as their journey continues they start to realise the significant importance of others, as they negotiate their journey, or role
and work within the **ecosystem** of the school. All the various parts, or **systemic changes**, that they are consciously and unconsciously involved in, begins to build a 'worldview' that is open, flexible, caring and forever changing.

**The challenge of the future**

As a result of the preceding data collection I have formed the view that there are other, and perhaps different ways than we have used in the past, to prepare quality teachers for this now digital, bordering on the genetic, age. I have also formed the view that there are necessarily special requirements, or unique characteristics vital to be present in a quality teacher for this age - such as the following: quality teachers are self-efficacious and capable in their own right, are willing and able to take responsibility for the various tasks at hand, are able to thoughtfully manage their own existence but are also able to recognise that they are not alone, are moral persons recognising the rights of others, are willing to put the needs of others, especially their students, before their own and recognise that through collaboration and resource sharing the power of one becomes the power of many. Over the year the interns came to recognise their own personal and professional development and their entry into the profession of teaching as 'a teacher'. They recognised over time the value and the support of their mentor teacher who became a very significant 'other' in their lives. They appreciated the innovation of the internship model with its close partnerships and opportunities for networking and communication in a variety of ways. Ultimately they recognised that they were responsible for how they reacted to what happened in their life and in the lives of those around them. Indeed they were the ones responsible for their learning. This type of learning that these interns are engaged in can be considered as 'Tertiary Learning' Bauman (2001), which consists of the learner acquiring the skills to modify the set of alternatives that they have learned to expect and handle in the course of learning to learn. This type of learning becomes an imperative in the post-modern world where everything seems to be in a state of flux.

Every single orientation point that made the world look solid and favoured logic in selecting life strategies: the jobs, the skills, human partnerships, models of propriety, and decorum, visions of health and disease, values thought to be worth pursuing and the proved ways of pursuing them - all these and many more stable orientation points seem to be in flux (Bauman, 2001, p. 125).

'Tertiary Learning' according to Bauman (2001) consists of breaking regularity, preventing habitualisation and rearranging the fragmentary experiences into patterns; which exist only until further notice can guide learners in the essentials of adaptability, flexibility and willingness to break free from habit. To Bauman "the life success (and so the rationality) of post modern men and women depends on the speed with which they can manage to get rid of old habits, rather than on the quick acquisition of new ones" (Bauman, 2001, p. 125). This understanding of post modern men and women, perhaps holds even more importance when the role and work of all teachers in educational institutions, of one kind or another is taken into consideration [by all teachers I am referring to teachers at all levels of education]. Bauman makes the observation that those in educational institutions, especially higher education, are heavily endowed with primary learning i.e. the direct instruction, and give at least some lip service to secondary learning or the process of thinking about learning. However he also claims that real preparation for life, the perennial role of all education, comes about best through tertiary learning which cultivates the ability to live with uncertainty, without clear-cut goals and with a multiplicity of viewpoints. To embrace this process of tertiary learning means that the work of the teacher educator, and indeed the work of all teachers, becomes one whereby the endpoint is not known, cannot ever be fixed and remains an open-ended formative process which is more important that any specific end product. With this view in mind quality teaching and facilitating learning is not about performing certain tasks, or performing a particular role. Quality teaching and learning is about relationships and the facilitation by teachers of the changes that are occurring, on an ongoing basis, in their students. Arendt, cited it Britzman (2003) views education in the following way.

For education belongs among the most elementary and necessary activities of human society, which never remains as it is but continuously renews itself through birth through the arrival of new humans beings. These newcomers, moreover are not finished but in a state of becoming (Arendt, 1993) cited in (Britzman, 2003, p. 9).

It is the parents of the young and their teachers who are charged with the responsibility of assisting and guiding this process of 'becoming'.

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173
Preparing teachers in an age of uncertainty

In education in general, and in teacher education in particular, it would seem vital in this age that systemic change be anticipated, encouraged and become implemented through the shifting of existing perspectives and a revision of existing, or thought to be held belief systems. ‘Future Age’ thinking, rather than ‘Present Age’ thinking can guide the holistic shaking down of all that is thought to be known by the individual preparing to be a teacher. As referred to earlier in this account, humanity, throughout time has been engaged in a struggle to improve the human condition. Surely then a major reason for education in our post-modern digital world is to improve our society and make the world a better place for all of us to inhabit. If this were accepted as a non-negotiable attribute of our world then in teacher education – the place where new teachers are prepared to facilitate the learning of another generation – the ‘big picture’ issues of our time would become essential components of a PSTE program. Failing to address these issues centres teacher education on the maintenance of the status quo and promotes a ‘self-view’ rather than ‘worldview’. The following ‘big picture’ issues could form a useful starting point for discussion, political debate and transforming discourse:

- Greenhouse gases
- Global Dimming
- Genetic engineering
- Global and national distribution of wealth
- Poverty in the world
- Terrorism
- Social inequality and materialism
- Social welfare in 21st century schools
- Global warming

In my opinion it is vital that these ‘big picture’ issues, facing mankind at this point in history are addressed in open and honest discussions in which the differences of all of us are recognised and accepted as givens. If our graduating students are not encouraged to, or prepared to, engage in meaningful debate about some of these key issues, and be open to world issues, then it would seem that there is little future for humanity standing at the brink of an epoch of crisis. The quality of our teachers determines the quality of our schools and impacts on lives lived.

The landscape of transformation

My own thinking, learnings and judgements over the years that I have been involved in teacher education have led me to new insights about education, pre-service teacher education and the world at large. One of these is a re conceptualisation— which adds to Bruner (1986) and White’s (1998) landscapes of action and consciousness— a third landscape, which I refer to as the ‘Landscape of Transformation’. It is within this landscape that we start to see things differently to that which we first thought. We start to live differently because we see another way of looking at the world and the ‘others’ within this world in which we live. This landscape comes about because of a major shift in consciousness and the development of a new ‘worldview’. This state of ‘transformism’ names a changed humanity with human beings embracing the state of being ‘transformed’ and ‘becoming’. The means to bring about this transformism already exist within all humans because all humans have the gifts, or the faculties of thinking and judging. To Arendt (1990) all of humanity have the ability to conduct what she refers to as a “two in one” (Arendt, 1990, p. 446) dialogue. That is, in solitude, and away from the immediate concerns of the world, we examine in our own mind, as a spectator, the invisibles, the abstract and the unknown. The other essential faculty, possessed by each one of us, is our faculty for judging or what Arendt (1990) refers to as that which “realises thinking, making it manifest in the world of appearances” (Arendt, 1990, p. 446), that is, the actualisation of thinking. The landscape of transformation can only become realised through our thinking and our judging as both actors and spectators in the world in which we live. When we act in the world we do so after thought, and in thought. In this way thought and action become one and are balanced. Each of us in the landscape of transformation has the potential to accept that we are in a ‘state of becoming’. We have in the words of Chardin (1959) the potential to create a new ‘spirit of the earth’. This new ‘spirit of the earth’ is about the development of the mind, or the human psyche. Since education and teaching is “of the mind”, as Swanson (1973) reminded us, this new ‘spirit of the earth’ is particularly relevant for teachers, who are significant guardians and challengers of the young. This is perhaps in contrast to traditional, or formal schooling, which is very much about the shaping of the character of students through control of their body.

- No longer in this post-modern world can teachers say that you need to learn this, or, this is what you have to learn, or, this is how you will learn. However, what teachers can do is to ask their students to think what they are doing and to think about what is being done to the ‘others’ within their ecosystems and within their world. When teachers and students don’t engage in thinking beyond themselves they remain locked up within themselves and removed from potential
transformative experiences that enlighten and develop new levels of consciousness, i.e. a transformed and super conscious 'worldview'.

- Initiatives such as internships for final year students have the potential to establish synergy and create real partnerships between universities and schools. As such they also have the potential to build a community of learners in this post-modern digital world with the explicit intent to improve the learning outcomes for the youth of the nation.

**The proposal to conduct a longitudinal study in PSTE**

The purpose in conducting this research with a group of student teachers through the four years of their pre service degree, and into their first year of teaching, is to ascertain what changes the students are able to recognise about themselves as they progress through the years of the degree. It is anticipated that the future study will provide empirical evidence of transformism as PSTE is restructured along these lines.

**References**


Learning To Be A Teacher In A Global Community: Beyond The Boundaries

Janet Fellowes and Helen House
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Eight years ago Edith Cowan University commenced taking groups of students to Mauritius for a unique teaching and learning opportunity. This two-week teaching and learning experience, which places students in Martian classrooms, has been a popular final year education elective with students. They value the opportunity to work in an ESL context, developing their pedagogical knowledge for the teaching of English to speakers of other languages combined with the experience of living and working in another country. However, the outcomes of the program have been far more reaching than the acquisition of a set of teaching strategies. This unique internship with its international and intercultural dimension has worked to enhance students' cultural understanding, personal skills and social ability in ways that will better equip them for the cultural realities and the ever-changing nature of their future classrooms and school communities. This paper outlines the various components of this education elective with particular emphasis placed on the importance of the university's strong partnership with the Mauritian Institute of Education in building up the different dimensions that contribute to the success of this comprehensive intercultural program. Further to this, a discussion of each of the significant student outcomes resulting from the program will be delivered. The paper draws on findings from an investigation into the effectiveness of the programme.

Introduction

The Mauritius programme is a fourth year elective unit within an education degree. The principle goal is to provide students with the skills and understanding necessary for teaching in a multicultural and linguistically diverse society. The programme is intended to contribute to the graduation of teachers who are well suited to the blend of features of a society characterised by cultural diversity, globalisation and change. Teachers in a global community and an ever changing society will need to be internationally knowledgeable, interculturally competent and able to learn and employ this knowledge to solve new kinds of problems.

Mauritius

The tiny island of Mauritius on the Southern African coast in the Indian Ocean is often referred to as a 'melting pot' of people and languages. Of the 1.2 million people living in Mauritius there are a number of different ethnic groups and accordingly there are a variety of languages spoken. The main ethnic groups in Mauritius are the Indo Mauritian (68%), the Creole-Mauritian (27%), the Sino-Mauritian (3%) and the Franco-Mauritian (2%). The six officially listed languages in Mauritius are English, Creole (Morisyen), French, Hindi, Urdu, Hakka and Bhojpuri. Other languages spoken include Tamil, Mandarin Chinese, Yue Chinese, Gujarati, Marathi, Eastern Panjabi and Telugu.

The linguistic situation in Mauritius is complex. While English is the official language of parliament, traffic regulations and school administration, it is spoken as a first language by only 3% of the population. French, the native language of Franco-Mauritians (about 2% of the total population) is the language used by the mass media and the advertising field. Eighty percent of the newspapers are written in French.

The majority of Mauritians speaks Mauritian Creole. It is the first language of fifty percent of the population and the second language for another seventeen percent; however, nearly the entire population knows and uses Creole for communication. It is lexically based on the French language and includes word derivatives from English and various Indian languages and consists of many dialectical forms. Despite its predominance, Creole has lower prestige in Mauritius than English or French.

The schools in Mauritius reflect the diversity of ethnicity, religion and linguistic characteristics of the population. The languages of English and French are taught but because the children's first language is frequently Creole this language quite often becomes the language of instruction and is the social language...
of the playground. The teachers regularly "code-switch" by moving between the languages of English, French and Creole while teaching. Many students also attend extra classes in a Hindi language, either Tamil, Urdu or Bhojpuri.

The structure of the Mauritius programme

The Mauritius programme has a number of essential components necessary to achieving programme aims. Before going to Mauritius tutorials are conducted to prepare students for the overseas living and teaching experience. The theoretical frameworks and principles underpinning the teaching of English as an additional language are presented in these tutorials. The communicative approach to English teaching is fore-grounded and the role of the teacher within this approach to English teaching is considered. Although this knowledge is imparted, it is not intensely examined because the premise of the programme is that, until the students' experiences the unique teaching situation of the Mauritian classroom their understanding will be cursory. It is through attempting to apply the principles and strategies as they teach the children in Mauritius that students will have the experience upon which to reflect and fully engage with the fundamentals of this teaching approach. This becomes clearer to students as they participated in the teaching in Mauritius:

We only learn and pick up what it is that we need to learn at that time. Although we thought [before traveling] that we wanted as much information as we could lay our hands on, the truth of the matter is, we probably did not use a lot of it in our planning because we did not really understand what it was that all this extra information was about. It was not until we were placed in this environment, where we were ready to learn and discover that a true understanding of all these wonderful teaching strategies really came into fruition.

One student aptly reflects on the degree of learning that occurs because of the nature of the programme as she writes:

The Mauritius trip demonstrated and clarified many theories and beliefs that previously had not been fully understood. In the academic world of university it is hard to see various strategies in action, in essence to fully understand their meaning. They can be talked through, written up and even described coherently in multiple assignments, however when immersed within them and their associated environments they become very real indeed.

These pre-travel tutorials are also used to prepare students for the challenges with which participation in the programme will present them. Due to the often-difficult classroom and teaching conditions in Mauritius, the intensity of the programme requirements and the closeness of the groups' living and working circumstance, students draw upon different personal resources in order to cope.

The experience in Mauritius is challenging, concentrated and tiring and students need to be prepared for this. They carry out their class teaching each morning, participate in tutorials each afternoon and join in with regular group excursions and outings on a regular basis. Additionally, they reflect on each day's experiences by writing entries into a learning journal. They must also prepare the next day's lessons and teaching materials.

For the teaching aspect of the programme the students work in pairs and although they have prepared lessons they have not had the opportunity to develop knowledge of the children in their class or of specific language teaching strategies. They teach English for a series of ten half-days in a class of up to forty-five children. After the first day's teaching they inevitably return to the hotel with a feeling of failure and a sense of inadequacy brought about by the application of teaching techniques and learning tasks that have yet to be adapted to the needs of a specific group of English language learners. It is at this moment that students' development as teachers and their understanding of teaching English as a second or additional language can begin. The students' feelings after their first day's teaching are well illustrated through one student's journal entry where, halfway through the programme, she reflects on her progress:

It's strange to reflect on my initial feelings... This time last week, I felt lost, inadequate and clumsy and wondered what I was doing here. One week later, I feel that I have learnt more than sitting in any tutorial for six months back home.

The practical teaching experiences are supplemented with afternoon tutorials where the goal is to rapidly and effectively develop students' understanding of, and skill in, teaching English as a second or additional language. These tutorials are rarely pre-planned but are designed in response to the learning needs arising from the mornings teaching and questions raised by the students. Despite this spontaneous approach to tutorial content, a comprehensive body of theory and teaching principles and practices are
introduced over the two weeks. The speed at which students grasp the new teaching skills is thought to be attributable to the proximity and relevance of the tutorials to the classroom teaching experience and to the students’ high level of motivation for learning. Tutorial activities call for students to reflect on their teaching in light of new information. The effectiveness of tutorials organised this way is illustrated by the following comment:

The chart that I completed during the tutorial to see how it worked was I suppose what really hit home for me. Until that moment I thought that what I had planned was extremely interesting and fun and exciting. However I realised that almost everything that we had done that day was teacher-centred or teacher directed. If you had asked me after my lesson that day I would have said that my students had a great time and were avidly involved in student centred activities. However it wasn’t until I sat down in that tutorial and went through the activities that I realised how far off the student centred mark I was.

Following each day’s tutorial, teaching pairs work together to consider the application of new learning to the next day’s teaching. Students are sometimes given specific tasks to assist them in applying new skills. For instance, after a tutorial focusing on instructions and the use of comprehensible input, students might be requested to explicitly delineate each instructional phrase, action and comprehension cue, to be used to introduce a learning task the next day.

The learning journal is yet another component of the Mauritius programme. It is a daily writing task aimed at directing students to critically think about their learning - to formulate, clarify, evaluate and reframe their thoughts, feelings, ideas and actions in the light of their experiences in Mauritius. General reflective topics are provided so as to facilitate students’ reflections and to assist them in creating personal meaning from the different areas of learning available to them.

Regular excursions and outings are planned and these provide an opportunity for students to relax and take time out from the intensity of the teaching and work requirements of the programme and to engage with the local community and its people and historical and natural features of the country.

The unit is an assessed component of the Bachelor of Education degree and therefore requires students to submit two assignments; these are a learning journal and a written report. The learning journal, written over time while in Mauritius is submitted on return to Australia. It is evaluated in terms of evidence of deep learning and clarity and variety in the understandings expressed. The written report necessitates students summarise the main principles and practices of ESL / EAL teaching and demonstrate their understanding of these by providing classroom examples from their teaching in Mauritius. For this assignment evaluation is based on evidence of students' knowledge of the principles and practices and the appropriateness of the connections made to the Mauritius teaching situation as well as Australian teaching situations.

### A partnership: ECU and the Mauritius Institute of Education

The Mauritius programme entails shifting the location of students' learning from the traditional educational process of the tertiary institution, across the globe, to the overseas teachers' workplace. The realisation of the programme is dependent on a strong collaboration between Edith Cowan University and the Mauritius Institute of Education. This partnership is essential not just to the organisational aspects of arranging schools, transport and accommodation but also to the facilitation of the unique experiences, which stir students to reflect on their cultural and social values, their approach to teaching, their interpersonal competence and their personal characteristics such as adaptability and resilience.

The partnership allows for ease in selecting schools, which provide our students with experiences of an appropriate level of challenge for ensuring depth of learning. The schools chosen for the practicum experience are especially selected to provide our students with teaching experiences that comprise working with children of extremely varied levels of English language proficiency thus providing the stimulus for them to question and reflect on the social, political, educational and historical reasons for such difference.

The schools chosen are often those classified as being socially and economically disadvantaged. These schools, which are frequently without basic resources such as books, paper, pencils, chalk, electricity, and on occasion adequate classroom space and seating, are purposefully selected for our students so as to provide them with an opportunity to strengthen their understanding of the factors impacting on children’s education. Furthermore, the challenges of such a teaching experience provide an opportunity for them to recognize their own personal capital as a powerful resource in being able to adapt to different situations, deliberate on problems and create solutions in addressing children’s educational needs.
The partnership makes available the chance for our students to teach in collaboration with students from the Mauritius Institute of Education. The experience of sharing the teaching tasks with peers from a different country with a different culture, educational experiences and understandings about the teaching of English provides insights into diversity and an appreciation of daily teaching problems of others and their methods for tackling these. Intercultural relationships and an associated appreciation of difference and similarity between cultural groups are further extended through the scheduling of various social functions for the two groups of students. The diversity of learning opportunities this situation provides is strong. It generally results in strong friendships and it is in the depth of these new relationships that insights into ethnic and cultural diversity occur.

The partnership also calls for ECU to support the work of the MIE and the education department in the professional development of their teachers. Over past years ECU has run specialist-training sessions for their students, presented at seminars for school principals and regional superintendents, worked with the Department of Education in providing input into their new national literacy strategy for schools and worked with the MIE to develop training videos about the communicative approach to the teaching of English.

The role of the Mauritius programme in preparing beginning teachers

Introduction
The programme is principally effective in developing students in three main areas that will benefit their teaching in an Australian community. The areas of effectiveness have been determined as a result of observations of students in the classroom, interviews, surveys, questionnaires and an examination of journal entries. They encompass teaching skill and competency, cultural understanding and values and personal and social qualities.

Teaching skill and competency
A major outcome of the programme is the development of our students' competency in ESL/EAL pedagogy. As they work with the children in Mauritius they start to question the efficacy of their standard practices and of the notion of learning a second, third or fourth language. They begin to open themselves up to the possibility of doing things differently. The success of the programme as a unique component of teacher education particularly in regards to its role in developing students ESL/EAL teaching skills and practices is supported by students' comments and feedback:

Certain concepts about teaching that are taught to us over and over again at university finally made sense.
I would have to say that I learned most from the forty-two little faces who smiled warmly every day that I wandered into their classroom. They made the learning real. It was through them that I was able to see how and why these principles [EAL] worked, not only in language learning but in content learning as well.
Before I started the unit I thought that I would be all right teaching ESL students in Australia, but now that I've started this unit, I realised how much more I can offer to those students.

The main teaching competencies effectively developed through the Mauritius programme include:

- the application of the communicative approach to teaching English
- the understanding and application of various scaffolding techniques for building up the language learners' proficiency
- the exploitation of demonstration and modelling for different language teaching purposes.
- the regulated use of teacher talk' that includes comprehensible input
- predictable daily routines
- lesson pace.

The communicative approach to teaching English comes to be gradually understood and applied by our students in the Mauritius classroom. It is a language teaching approach characterised by the provision of purposeful communication contexts for the practicing of the target language. Our students take some time to develop an accurate understanding of all the features of a communicative language classroom but over time they adapt and apply a teaching approach incorporating authentic, meaning based learning opportunities. As they grasp underlying principles they identify the need to design learning tasks that integrate speaking, listening, reading and writing and that introduce grammatical structures and vocabulary in a natural language setting. Students' reflections and comments in the early stages of the Mauritius experience illustrate their developing understanding of this approach to language teaching:
While teaching in Mauritius, [my] initial attempts to teach basic nouns were at times slow and laborious. Pictures of nouns were presented to the children while words were matched. Simple question-answer type structure was provided for the students and some understood the pattern and the goal. However, this process seemed isolated and somewhat disjointed. It did not have a visible purpose for the students and was therefore hard to follow. The next lesson conversely demonstrated the effectiveness and reality of the communicative approach. This lesson was a picture sequence where the students had to tell their partners the sequence in which nouns appeared in the story. The students had pictures and would place them on the desk stating 'first came... then came the...'. The partner would respond to this by saying whether they were correct or not. At the completion of this lesson all students knew the new vocabulary. But they learnt it while achieving a communicative goal, instead of just by rote. Through communication they had to convey meaning and therefore use appropriate language. They took risks to achieve a purpose.

An activity we did was a mystery bag. An object is hidden in the bag and the speaker must be very descriptive and specific about the object when describing it to help the others to guess it. The students were motivated by the game and consequently oral language development occurred.

The communicative approach would be extremely applicable in mainstream Australian classrooms. ESL students would be able to gain proficiency through constant communication in the second language... However this use of the target language would need to be supplemented with the recognition and understanding of the students' first language, first language proficiency and cultural heritage.

The communicative approach still requires a strong knowledge of the target language and its component parts. Students are assisted to carefully plan learning tasks that target, and provide practice in, specific vocabulary, grammatical structures and functions of language. For many students the inadequacies of their own language knowledge is soon realised as recounted in the following comment: -

This trip has made me aware that you need to know the rules of English language and have formal knowledge of how English works if you are going to teach it. This is a weak side to my language teaching. However, as a teacher it only makes me eager to learn more about it here and when I go home.

The technique of scaffolding is crucial for supporting the language learner in learning new language and meaningfully applying it in a communicative situation. In Mauritius students' understanding of the scaffolding procedures of demonstration and modelling is reinforced and they learn to apply them more effectively to develop children's language knowledge. The importance of breaking down complex information or a difficult task into component parts is also emphasised as a fundamental scaffolding technique. As students experiment with applying these techniques in the Mauritian classroom they soon become aware of the benefits to language development as indicated by the following comments:

... The activity that immediately followed this[modelled writing] was an independent writing one and I saw first hand how powerful this strategy [modelling] is. The students were thinking differently, sounding out aloud, checking and correcting themselves. It was amazing. Modelled writing should be explained in one of our language units. It could be explained clearly and demonstrated at a lecture or in a tutorial. This strategy is applicable not only to ESL classrooms but also, all lower primary classrooms.

... This is a big feat for me as I expect things and I expect them now. I have realised that teaching ESL involves many, many baby steps and perhaps even some backward steps before a marathon can be attempted.

After learning how to properly do a modelled writing session we added this into our programme with great success. This helped the children to really understand what was being asked of them.

Working with the ESL / EAL learner necessitates the teacher consciously control his / her language in order to support the learners' access to meaning; their ability to follow instructions, carry out a learning task or respond to the teacher's comments or questions. It is often this lack of controlled and adapted teacher talk that initially causes problems for our students in their Mauritius teaching experience. In fact it is usually after the first morning's teaching that many students indicate their shock at being met with blank stares from the children after giving instructions for a task. Inevitably, the first tutorial addresses comprehensible input; teacher talk characterised by a slower rate of speech, momentary pauses between sentences, simplified or guarded vocabulary, clear enunciation of words, the simplifying of sentence structures, use of familiar sentence structures, rephrasing and repeating of messages, emphasis placed on key words and use of non-verbal cues such as concrete materials, visuals, gestures, facial expressions and bodily movements. The emphasis on this aspect of teaching continues throughout the programme and is one of the most difficult for students to address capably:

The words comprehensible input became the mainstay of our programme and one thing that we constantly had to work on as ESL teachers.
We needed to constantly repeat and remodel the language and the structures each day in order for students to understand.

**Predictable daily routines** are important to the ESL / EAL learner and our students are expected to establish these early in their teaching in Mauritius. They are assisted with methods for teaching functional chunks of language such as ‘sit down’, ‘thank you’, ‘come here’, ‘put away’, ‘please may I have…’ ‘I don’t understand…’, ‘I really like…’ to help their learners manage recurring and routine situations in the classroom. During tutorials students share their techniques and reflect on those, which were and were not effective. It does not take long for routines and functional language patterns to be established. Students reflected on the methods for, and the benefits of, these routines to their teaching.

The adjustment of **lesson pace**, where consideration is given to the aims of the lesson, the characteristics of the learning task and the supportive needs of the learner, often proves difficult for our students. They struggle to find the balance between providing the learners with adequate time for practice and reflection and maintaining a challenging and motivating lesson pace. This aspect of lesson implementation is regularly and repeatedly addressed in tutorials and eventually, is successfully applied by most:

Well I think that today went famously! Our lesson flowed really well and we created a great pace of the students in our class. The planning really paid off for us in this lesson. We actually almost had a script for this lesson. The activities were of perfect duration and the children were motivated enough that we had no children confused or off task.

**Values and understanding**

For two weeks students participate in an ongoing experience in a new country where that experience is characterised by difference. Students’ daily routines are different to those, with which they are familiar. The country they are experiencing has a different history, pattern of settlement and blend of cultural groups and languages. The people they interact with through the schools, the MIE and the local community may have different social practices, beliefs and life experiences. Students invariably come to develop a deeper understanding and appreciation of people and culture and an understanding of, and consideration for, difference. These values and understandings are necessary in preparing them to work harmoniously and respectfully with people from different cultural groups. Students reliably refer to these areas of learning when they reflect on their involvement in the programme:

This unit has exposed me to a way of life that is rich in history, culture, language and pride. Everybody should do this unit.

... It was through these children that I learned a lot about difference in lifestyles, beliefs, aspirations, expectation and so much more.

I believe that travel is essential and having the opportunities to experience different cultures and ways of life is truly eye opening and adds to the character of any individual.

My learning has intensified the need for security for the children in the class and within the school so that the children feel valued and not segregated. I am also more aware of how important it is to incorporate the children’s first language into the classroom and their learning experiences.

... All children need to be valued and their culture/background considered and treated with respect.

**Personal and social attributes**

The educational and life experiences provided by the Mauritius programme, when combined with reflective thought and willingness to change, provide students with the opportunity for personal growth and social development. There are many personal qualities that are potentially enhanced as a result of the programme and that this occurs is demonstrated through the following student comments:

Living in Mauritius for two weeks was amazing and my experiences were ones that will never be forgotten. I feel the experience has not only made me a better teacher but a better person.

... I thought it would be a really good experience and get me out of my comfort zone which it definitely has.

The structure of the programme requires that students work together to solve problems that arise (and they inevitably do) and to respond to the changing conditions that are their living and working situation in Mauritius.
I learnt that people have different strengths and this becomes clear in challenging situations. I also learnt that humour is a tool that combines people. I feel a new enthusiasm or direction in my teaching and my life. I hope that in the near future I will again work with a ‘team’ of people in a country where our individual strengths, and weaknesses will benefit the lives of children. If I do not go to another country I know I can accomplish the same here in Australia in a mainstream, ESL or special needs class.

Students develop skills in teamwork. They learn to compromise, debate, persuade, organise and lead as they work in partnership with others. At times teamwork proves to be a real challenge as one student describes:

What a day. It started with waking in a depressed state. I still wasn’t happy to be in Mauritius. After crying when my shower remained cold, I knew my first day of teaching was going to be difficult to get through. Team teaching for me has proved to be a painful and stressful experience. I feel confronted with problems and issues that are all becoming too much to handle alone. The support, help and bouncing off of ideas for programmes, planning etc. has not gone to plan. I decided to talk through my problems with Janet... So grateful that I spoke to her and I really feel that I have taken something away from this.

Another opportunity for personal growth is when students are required to respond to new situations, to accommodate new learning and to show flexibility of plans and intentions. Students are helped to let go of original plans and respond to the needs of a situation. For some students the "letting go" is sometimes difficult and tutorial conversations and journal reflections frequently concentrate on this:

I am one of those students who have never failed anything in my life. But I am quite often too scared to take a risk in case I stuff up my perfect record so far. The reflection session made me think about what it was that I came to Mauritius for. Was it for a holiday on a tropical island and to put in minimal work and still get results or was it to challenge myself in every sense of the word? I know that I came on this trip for one reason and for one reason only and that was to challenge myself, not just personally but professionally. I came to this island to experiment with different teaching styles that are available to teachers of ESL.

After the tutorial Jen and I sat down and looked very closely at our programme. It was not that we had not planned student centred activities but more that we were too scared to let go of the reins for fear of failure.

Today's activities went really badly as we attempted to let go of the reigns and allow the children to control the activity, we failed miserably in our attempts but all was not lost as we were able to take something away from the experience.

Although our first attempt at communicative child-centred methods was a complete failure, we will try again. After all, I am sure the great artists of the world did not complete their works of art in a day, or the great Architects of Rome succeeded in their first attempt. What matters is that we have learnt from this experience and that we will give it another go and approach it differently.

**Conclusion**

Teachers are faced with the challenge of educating an increasingly diverse student population and working in a school and community environment that is characterised by continual change and development. They need to be prepared for the realities of their future classrooms. Preparedness necessitates substantial learning about multiculturalism and multilingualism alongside critical analysis of one's own feelings, beliefs and attitudes. Preparedness requires an understanding of a pedagogy that can be utilised to cater for the language learning needs of students and with this, an ability to critically reflect and adapt to each new learner. And finally, preparedness entails the acquisition of personal qualities that benefit ability to respond productively to new situations, to make decisions and to solve problems. The Mauritius programme is a brief moment in our students' education as teachers, but the evidence suggests that, notwithstanding its brevity, it works:

The Mauritius trip was a valuable experience and will be reflected on for a long time to come. The strategies I have learnt and the personal qualities I have gained, will permeate every aspect of my future teaching.

The trip has been the experience of a lifetime. The learning curve that I experienced was so steep and involved so many other factors other than what I learnt about teaching.
ICTs And Teacher Education: Digital Portfolios – Digital Storytelling, Reflection And Deep Learning

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As school systems demand teacher education graduates to be competent ICT users and integrate ICTs effectively, schools often draw on new ICT ideas from student teachers, while Universities draw on students' experiences in school practicums to build authentic models of ICT integration. From this process, changing implications of ICTs for reform in curriculum, pedagogy and assessment develop. We have argued elsewhere that teaching and learning is now occurring in an increasingly online world. Subsequently, future teachers will require skills not currently emphasised in teacher education programs. After establishing the need for pre-service teacher education programs to go beyond replicating traditional learning and assessment practices, this paper explores digital portfolios. Although interest in digital portfolios is becoming evident in both schools and Universities, their benefits are uncertain because of their recent emergence, lack of conceptual framework and limited research guiding their use. In order to provide direction for the ICT teacher education undergraduate experience, this paper, through theorizing the purpose, content and process of developing a digital portfolio approach, proposes that deep learning can be promoted through digital portfolios which utilize digital storytelling and reflection.

Introduction

Two roads diverged in a wood, and I –
I took the one less traveled by,
And that has made all the difference.

(Robert Frost, cited in Covey, 2004; Barrett, 2004; Barrett, 2005)

Those lines from the Robert Frost poem are used by Covey in his recent publication The 8th Habit (Covey, 2004, p. 27) which is presented by Covey as – Find Your Voice and Inspire Others to Find Theirs. Covey argues that everyone faces choices of the road to mediocrity or the road to greatness and meaning. For Covey, the word which expresses the pathway to greatness is voice, not only finding your own voice but inspiring others to find theirs (Covey, 2004, p. 28). Through making the links between digital storytelling as narrative and the reflective portfolio, this paper theorises the use of information and communication technologies (ICTs) in teacher education to promote deep learning.

The use of ICTs has been the focus for teacher education in terms of defining and enabling effective teacher preparation in relation to developing ICT skills and knowledge, and ICT curriculum applications. As school systems demand teacher education graduates to be competent ICT users and integrate ICTs effectively, schools often draw on new ICT ideas from student teachers, while Universities draw on students' experiences in school practicums to build authentic models of ICT integration. From this process, changing implications of ICTs for reform in curriculum, pedagogy and assessment develop.

We have argued elsewhere that teaching and learning is now occurring in an increasingly online world (see Russell & Finger, 2004; Russell & Finger, 2005). Subsequently, future teachers will require skills not currently emphasised in teacher education programs. After establishing the need for pre-service teacher education programs to go beyond replicating traditional learning and assessment practices, this paper explores digital portfolios. Although interest in digital portfolios (or ePortfolios) is becoming evident in both schools and Universities, their benefits are uncertain because of their recent emergence, lack of conceptual framework and limited research guiding their use. In order to provide direction for the ICT teacher education undergraduate experience, this paper, through theorizing the purpose, content and process of
developing a digital portfolio approach, we propose that deep learning can be promoted through digital portfolios which utilize digital storytelling and reflection. Considerable reference is made to the theorizing and research being undertaken by Dr Helen Barrett from the University of Alaska (Barrett, 2005; see also http://electronicportfolios.org). As academics, both authors are exposed to many conference presentations and research papers. The keynote presentation by Dr Helen Barrett at the University of British Columbia in November 2004 (Barrett, 2004a) witnessed by one of the authors made an indelible mark through her portrayal of digital storytelling and theorizing the purpose, content and process of digital portfolios.

ICTs and teacher education – Cautions and confidence
In general, there has been both enthusiasm for and frustration related to the effective use of ICTs in learning settings. The tensions due to the quest for quality and effective use of ICTs are evident in recent literature. For example, Cuban has argued that computers are “largely incompatible with the requirements of teaching” (Becker & Ravitz, 2001, p. 3). Cuban’s early claims (see Cuban, 1986; Cuban, 2001) were that investing effort into having students use computers is often hardly worthwhile and consequently we should not expect teachers to make this effort. Similarly, in relation to flexible ways of teaching and learning using computing and communication technologies (CCTs), Bigum and Rowan provide a mapping and a debunking of some of the persistent and important myths or muddles that are associated with the use of technologies in education” (Bigum & Rowan, 2005, p. 215). Bigum and Rowan argue that those myths or muddles as have influenced the way in which new technologies have been theorized and hold implications for teacher education. In theorizing and justifying an approach which utilizes digital portfolios to promote deep learning, and accompanying this, the use of ICTs to enable the use of portfolios as a story of personal learning, those myths or muddles require acknowledgement. The three muddles proposed by Bigum and Rowan (2005, pp. 216–219) are that CCTs enhance or improve learning, innovations like CCTs diffuse through existing education systems, and CCTs are just tools.

In response, we also acknowledge the implications of their proposed framework for technologies in education drawn largely from actor-network theory (ANT) (Callon, 1986a, 1986b; Latour, 1988; cited in Bigum & Rowan, 2005, p. 223). Reflecting those muddles, school systems internationally (see, for example, Becta, 2005; ISTE, 2003; DfES, 2002; Kommers, 2000) as well as throughout Australia (see Finger & Trinidad, 2002; MCEETYA ICTs in Schools Taskforce, 2003; Education Queensland, 2004) have been embarking on a wide range of ICT initiatives. Those initiatives often have been underpinned by assumptions relating to improving student learning and by innovative approaches to teaching and learning. Thus, future teachers have faced the dual tensions of expectations of implementing effective ICT use in schools and the criticisms related to the lack of evidence of how ICTs might be effectively used to enhance teaching and learning. In particular, the recently released Becta Review 2005 in the United Kingdom (Becta, 2005) reported that:

There is a growing body of evidence relating to the positive impact of ICT on learner attainment and other outcomes, but we need to develop further our understanding of effective ICT pedagogies and how they can be supported. (Becta, 2005, p. 4)

Through examining digital portfolios and digital storytelling, this paper attempts to provide some guidance on the use of ICTs for promoting deep learning among student teachers.

Defining portfolios
The online forum managed by the Innovate Journal, entitled “e-portfolios: changing the management of learning” (Innovate, 2005) has defined e-portfolios in the following way:

An ePortfolio system enables individuals or organizations to effectively, efficiently, and electronically create a set of materials connected by a metanarrative, which can be made available to other individuals and organizations. According to the National Learning Infrastructure Initiative, an ePortfolio is “a collection of authentic and diverse evidence, drawn from a larger archive representing what a person or organization has learned over time on which the person or organization has reflected, and designed for presentation to one or more audiences for a particular rhetorical purpose.” In particular, ePortfolios seem equally suitable as educational tools that foster intense engagement with a learning process and as assessment tools that provide more comprehensive representations of an individual’s or organization’s abilities. The versatility of an ePortfolio system for authors and audiences invites a wide range of uses at all levels of education, in the workplace, and around the world.
We are particularly drawn here to the concept of portfolio as being electronic materials being connected by a metanarrative, as it resonates with the understanding of eportfolios as "story" that we discuss in this paper. Stories have been a powerful means of transmitting ideas from one person or group to another throughout human history. They have differed in form, and have included examples such as cave paintings in prehistoric times, oral stories told around campfires, stained glass windows in churches, novels, and the electronic stories of television and the internet. The metanarratives linked to these stories have included concepts of democracy, liberalism, socialism, and school education. That is, by reflecting on the stories around us and those that arise from educational systems we gain an improved understanding about ourselves and the world around us.

Notions of portfolios are particularly relevant to school education, and, as Barrett (2005) observes, as school systems define portfolio initiatives for their students, it is important to come to a common definition of portfolios. For Dyson (2005), they are an organisational tool for teaching and learning which he has trialled with final/fourth year degree teacher-education students in 23 schools. Dyson argues that digital portfolios have become an essential component of pre-service teacher education programs, and that they place the power of learning in the hands of the students. The use of portfolios for assessment in teacher education programs is becoming more frequent, and they are being used by teacher education graduates to provide evidence that they have met the specified criteria for teacher ratings and for job applications. In 2004, the first Conference called ePortfolio Australia (Results Unlimited, 2004; see http://www.eportfolio.editaustralia.com.au/) dedicated solely to digital and ePortfolios was held in Australia with conference strands relating to ePortfolios in Higher Education, ePortfolios for Learning, Professional Portfolios, Digital Storytelling, Mobile Learning, Blogging, ePortfolios Policy Issues, Knowledge Management, and ePortfolio Software.

Barrett suggests that a portfolio is a collection of work that a learner has selected, organized, reflected upon, and presented to show understanding and growth over time. In this way, reflective portfolios support a deeper level of engagement and self-awareness, making it easier for students to understand their own learning and to provide teachers and parents with a richer picture of what students know and are able to do, as well as their ongoing development. One primary difference between traditional and digital portfolios is that digital portfolios use electronic technologies as the container (CD, DVD, WWW), allowing students to collect and organize portfolio artifacts in many media types (audio, video, graphics, and text) and to use hypertext links to organize the material, connecting evidence to appropriate outcomes, goals or standards. (Barrett, 2005, p. 1)

This emphasis on reflection and digital portfolios is a recurrent them in the literature (eg Heath 2002). Together with observations on the nexus between digital portfolios and deep learning, these are positions that we support and explore in this paper.

**Purposes for digital portfolios**

Hartnell-Young and Moriss (1999, p. 11) provide a framework to conceptualise the purposes for portfolios according to the formative, summative and marketing purposes, as shown in Figure 1.

<table>
<thead>
<tr>
<th>Formative (Developmental) Purposes</th>
<th>Summative (Assessment) Purposes</th>
<th>Marketing Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Recording Continuing Professional Development</td>
<td>5. Meeting Course Requirements</td>
<td>9. &quot;Cold Calling&quot;</td>
</tr>
<tr>
<td></td>
<td>7. Professional Certification and Registration</td>
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</tr>
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**Figure 1.**
Purposes for portfolios

Ash (2000) identifies types of portfolios in terms of the use or purpose of the portfolio, and is in agreement with Hartnell-Young and Moriss (1999) in suggesting that the purpose determines the artifacts which should be selected and how they should be presented. The types identified by Ash include instructional portfolios, assessment portfolios, career portfolios, and display portfolios. Using these conceptualizations, we can locate the purpose for developing an electronic portfolio. Barrett, for example, in the REFLECT Initiative (Barrett, 2005) focuses on assessment portfolios and learning portfolios.
Respectively, Barrett refers to these as supporting both assessment of learning and assessment for learning (Stiggins, 2002). Barrett argues that research on assessment for learning provides firm evidence that “formative assessment is an essential component of classroom work and that its development can raise standards of achievement” (Black & William, 1998, cited in Barrett, 2005) more effectively than any other strategy. In making the distinction between assessment for learning, Barrett (2005, p. 2) cites The Assessment Reform Group’s definition of assessment for learning as the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there, whereas portfolios as assessment of learning is characterized whereby students submit required tasks in the assessment system, which are evaluated by an assessor, based on the performance tasks and rubrics (Wilkerson & Lang, 2003, cited in Barrett, 2005).

Provocatively, we are proposing that the high stakes assessment required by systems is often assessment of learning and in the pursuit of high performance, the powerful potential of the “learner-driven reflective portfolio that supports deep learning” (Barrett, 2005) is lost. Rather, we should be utilising a process of encouraging the personal stories of learning through learning for assessment. We agree with Kahne (1996) that educational policy makers have tended to shift from an earlier vision that focussed on an educated society to an interpretation that explores the best means of pursuing educational goals. Rather than deep learning and reflection on the way that goals can shape society, there is more likely to be a concentration on issues such as test scores or school completion rates. In our view, a pedagogy that promotes reflection through personal narratives (whether they are based on electronic or paper-based modes of communication) would be an improvement.

Making the case for digital storytelling – Pedagogy using narrative
Barrett (2004b) argues for the linking of the two dynamic processes of digital storytelling and the portfolio development process to promote deep learning. In this way, digital storytelling becomes a powerful means for the facilitating a reflective portfolio. Barrett refers to Mattingly (cited in Schon, 1991) in equating storytelling and narrative inquiry which can provide explanation, motivate students to tell their stories to “wrest meaning from experiences”, and enable stories to reveal the way that ideas look in action.

The importance of narrative is also evident in attempts to enhance student learning through improved pedagogy in Queensland government schools through Productive Pedagogies. The Productive Pedagogies is “a balanced theoretical framework enabling teachers to reflect critically on their work” (Education Queensland, 2002a). According to the Productive Pedagogies framework, the use of narrative in lessons involves an emphasis, both in teaching and in student responses, to include the use of personal stories, biographies, historical accounts, and literary and cultural texts. In contrast, the Productive Pedagogies framework identifies an expository teaching style as placing more emphasis on written, nonfiction prose, and scientific and expository expression, by both teacher and students (Education Queensland, 2002b). A continuum of practice is provided for teachers to reflect on their pedagogy with encouragement for almost all of the lesson processes and almost all of the lesson content to be narrative, rather than expository.

Content and process
Once the purpose of the portfolio has been established, teacher educators and student teachers could engage in the collection and selection of appropriate artifacts as initial steps in the portfolio process. The content and process require alignment with each other. Following the collection and selection of learning artifacts, reflection becomes the catalyst for engaging learners in deep learning. According to Barrett, the power of a multi-faceted portfolio system lies in the fact that it not only provides the means for schools to document progress, competency, and achievement but encourages learners to become engaged in a process that empowers them to take control of their own learning, and develop the self-awareness to articulate their own strengths, weaknesses, achievements, disappointments, learning experiences, passions, and hopes for the future. Later in this paper, we present examples which portray those qualities.

The content is built then through a process outlined by Paulson & Paulson (1991, p. 5, cited in Barrett, 2005) whereby:

A portfolio tells a story. It is the story of knowing. Knowing about things... Knowing oneself... Knowing an audience... Portfolios are students’ own stories of what they know, why they believe they know it, and why others should be of the same opinion. A portfolio is opinion backed by fact... Students prove what they know with samples of their work. (Paulson & Paulson, 1991, p. 2)
Portfolio stories and ICTs
ICTs now provide the access, facility and capabilities for learners to electronically and digitally archive, select, reflect and direct their portfolio construction and presentation. To demonstrate the potential for digital storytelling and the reflective portfolio process, we provide 3 examples to illustrate the use of ICTs for enabling the portfolio construction and presentation.

Example 1 – Web-based electronic portfolio – Curriculum evidence the portfolio
The first example is a web-based portfolio (Finger, 2004) developed by a fourth year Bachelor of Education student from an Australian University as a response to a Portfolio task for a course called Teachers as Curriculum Leaders. The portfolio is designed to provide artifacts and reflections related to a range of curriculum evidence linking the student’s final year practicum and Internship experience with more theoretical University coursework. The design provides evidence, stories, and reflections relating to pedagogy, student learning, resources, classroom organisation, assessment and reporting, curriculum design, culture, teachers’ ways of working, and students’ ways of working. Reflections on the implemented curriculum, intended curriculum and achieved curriculum are provided and substantiated with links to associated materials and web resources. Finally, the student provides a rationale for recommended directions for curriculum at the school in which he was teaching.

Examples 2 and 3 – Multimedia digital storytelling – Coming full circle and choices
The ability to collect, select, reflect, and now direct digital video is now available to teachers and students through powerful, low cost software. For some time, iMovie has been available for Apple computer users, and more recently, Moviemaker has been provided free for PC users. Both offer the ability to work with collections, edit images, video, sound and design digital stories. Two examples are provided here, both of which have been taken from Dr Helen Barrett's rich website. The first portrays a story called Coming Full Circle (available at http://homepage.mac.com/eportfolios/iMovieTheater14.html). The second is a personal story from Dr Barrett herself, called Choices (available at http://homepage.mac.com/eportfolios/iMovieTheater11.html) built around her personal life choices and The Road Not Taken by Robert Frost. Both examples capture the emotion and the reflection which both 'directors' of their personal stories portray. Both convey the presence of the 'learner's voice' as described by Barrett. These provide inspiring examples of the potential for digital stories as personal stories of learning.

Conclusion
We have traveled some distance in unraveling the infrastructure and accessibility issues relating to ICTs and the ability to collect and select artifacts of learning which enable use of text, video, sound and images. With the software, hardware and connectivity capabilities now available, this paper has provided some ideas and directions for learners to tell their personal stories of learning in which they can reflect and direct those stories through digital storytelling. We believe that teacher educators need to theorise and be informed by electronic portfolio research to ensure that they incorporate opportunities for future teachers to use digital storytelling as a means of assessment for learning. When that occurs, there is some chance that students in schools will also engage in digital storytelling which promotes deep learning. In terms of the muddles and the caution expressed by Bigum and Rowan that rather than closing down what is possible, hopefully, the promise of digital storytelling and digital portfolios can open up performances of teacher education through learners in the form of teacher educators, future teachers and their students telling their stories of learning... the choices they make, their reflections, their frustrations, and their aspirations with passion.

In returning to the opening quotation from Robert Frost, the urging by Covey to inspire others to find their own voice, and connecting these with the final example from the Choices presentation by Barrett, we conclude with the final statements by Barrett to “Go where no one else has gone... and leave a trail”. Digital storytelling enables a means for leaving the trail, and unleashing the means for empowering learners to go where no one else has gone.

References


Indigenous education in Australia faces continuing challenges in spite of gains made over the past decade in areas such as school completion rates and achievement levels for literacy and numeracy. This paper describes a recent project undertaken by the Queensland Board of Teacher Registration’s Professional Education Committee (PEC), the outcomes of which reinforce the importance of all graduate teachers having a solid foundation in Indigenous education which can be built upon and contextualised through induction into schools and communities, and ongoing professional learning. The PEC’s project drew on: recent literature; a scan of Queensland teacher education institutions and their offerings on Indigenous education; and the results of interviews with teachers, school principals, Indigenous parents and community members, para-professionals and district-level administrators, focusing on what they believed should be included in preservice teacher education and induction programs to prepare teachers for Indigenous education. The project findings highlight the need for universities, teacher employing authorities and the profession itself to share the responsibility for providing appropriate high-quality learning opportunities to Indigenous students.

Introduction

In spite of some gains made over the past decade in areas such as school completion rates, and achievement levels for literacy and numeracy, Indigenous education in Australia faces continuing challenges. General improvements nationally have been slow, and there remains unacceptable disadvantage across key indicators (DEST, 2003b, p. iii). There have been calls to bring about more rapid and significant benefits for Indigenous students (Australian College of Education, 1999, pp. 2–3), and to increase commitment through stricter accountabilities and performance management structures (QIECB, 2003, p. 4).

Initial teacher preparation, and teacher induction at the point of employment, are two areas highlighted in recent reports and studies on Indigenous education. The inadequate teacher preparation for teaching Indigenous students, and the low levels of employment of Indigenous people as teachers, are both cause for concern (Commonwealth of Australia, 2000). There has been no coordinated or comprehensive approach taken to ensure that preservice teachers are adequately prepared in the area of Indigenous education (Price, 2003). Calls have been made for all initial preservice teacher education programs to promote as a core competency in qualifying teachers an understanding of the diversity of students and their communities—most especially in relation to Indigenous students—and provide in-school experiences in a range of settings, including rural communities (DEST, 2003a).

Improved strategies are required of education authorities for targeting and screening quality teachers for schools in Indigenous communities (MACER, 2004). The Katu Kalpa report (Commonwealth of Australia, 2000) recommended that MCEETYA draw up guidelines for improved induction courses for teachers posted to schools with significant Indigenous enrolments, including those teachers who are appointed to positions during the course of a year. Price (2003) stresses that induction programs for teachers prior to their posting to schools with Indigenous students are essential, and indicates that they provide support to teachers, schools and communities.

The first part of this paper describes the research component of a recent project undertaken by the Queensland Board of Teacher Registration’s Professional Education Committee (PEC). The project findings are then compared with those of three other studies into Indigenous education. In the final section, implications of the comparison are discussed and suggestions made for future action.
The Board of Teacher Registration's project
The Queensland Board of Teacher Registration (BTR) has an interest in the area of Indigenous education from two key perspectives: the preparation of teachers to teach Indigenous students, and the preparation of teachers to teach all students about Indigenous cultural and historical matters. The BTR's Professional Standards for Graduates and Guidelines for Preservice Teacher Education Programs are published to assist teacher education institutions to develop programs acceptable for teacher registration purposes in Queensland. These standards and guidelines are supplemented by a range of reports in key areas, including Indigenous education.

It was decided in 2003 to update the area of Indigenous studies in teacher education. The Board's previous focus on Indigenous education had involved coordinating the 1993 'Yatha' Conference and publishing a report of the conference proceedings (Board of Teacher Registration, 1993). 'Yatha'—an Aboriginal word meaning 'coming together to discuss'—had provided opportunities to share understandings about Aboriginal and Torres Strait Islander cultures and to talk about their place in teacher education.

The Board's 2003–04 project, overseen by the Professional Education Committee (PEC), drew on the understandings gained through the 'Yatha' process and re-examined Indigenous education and its implications for teacher education in the light of movements in research, policy and practice.

The parameters of the project were:
• to develop a position paper;
• to undertake a scan of teacher education institutions and their offerings on Indigenous education; and
• to survey teachers of Indigenous students about what they thought should be included in preservice teacher education and induction programs to prepare for teaching Indigenous students.

The project was expanded from these initial terms of reference to include a literature review and to involve a broader consultation process capturing the views of teachers, school principals, Indigenous parents and community members, teacher aides and district-level administrators.

Recent research on the effective teaching of Indigenous students
The recent literature conveys consistent messages about the personal and professional attributes, knowledge and skills which teachers need to work effectively with Indigenous students. Harslett et al. (2000) outline a set of teacher-identified characteristics of effective teachers of Indigenous students. These are grouped into four areas: understanding; relationships; pedagogy; and managing student behaviour. Identified characteristics include inter alia: understanding students' culture, history and home backgrounds; the ability to develop good relationships with Indigenous students and their families; having a sense of humour; and preparedness to invest time in interacting with Indigenous students outside the classroom.

Along similar lines, Osborne (2001) suggests four 'frames' as a means of addressing the question of how well preservice teacher education can prepare teachers' hearts, minds and actions to deliver quality teaching to Indigenous students in remote communities. The frames are: productive pedagogy; equitable multiculturalism; school reform via school-wide pedagogy; and culturally relevant pedagogy which builds from students' daily lives and cultures. Osborne focuses his discussion on culturally relevant pedagogy, identifying nine 'signposts'.

Partington (2003) argues the case for all graduating teachers having an understanding of the reality of classroom life for Indigenous students. Six major areas are identified: awareness of the existence of racism; involving parents in the education of the child; an understanding of the potentially different values of Indigenous students; understanding of what constitutes threats to the teachers' classroom management and how Indigenous students respond to threats against them; understanding and acceptance of Aboriginal English or other Aboriginal languages in the classroom; and an understanding of the diverse environmental influences on Indigenous students and the strategies that may be helpful in overcoming their negative aspects. According to Partington, government efforts to effect change in Indigenous education will not succeed by focusing on the students; teachers must change first.

Methodology used in the consultation process for the Board's project
As part of the Board's project, a Working Party of the PEC sought to confirm the relevance within the Queensland context of the literature findings by consulting with local educators and community members. It was felt that the consultation could be small-scale because it was seeking to gauge the local applicability of findings from previous research rather than break new ground.
During September and early October 2004 Working Party members conducted 21 interviews involving teachers (7), school principals (8), para-professionals (2), and district-level administrators (4). Consultations were also held with 30 Indigenous parents and four Elders.

Interviewees were selected to ensure a fair distribution across state and non-state schooling sectors (early childhood, primary, and secondary) and metropolitan and regional Queensland.

Consultations with Indigenous parents and community members were conducted by telephone and personally, some individually and some in groups. A summary was prepared of the comments and opinions expressed. The interviews with school-based personnel and district-level administrators took place mostly by telephone, with a small number occurring face-to-face. The interviews were all recorded and later transcribed. The data from all interviews and consultations were analysed to compare responses and extract key themes and issues.

The same base question was used in all the interviews and consultations with slight modifications made according to the category of interviewee. All groups were asked to describe the knowledge, skills, experiences and understandings about Indigenous education needed by teachers. School Principals and District Officers were asked what they wanted teachers to bring with them from their preservice preparation and what areas would be developed at the school. Teachers were asked about the knowledge, skills and understandings they had when they commenced teaching, what skills they would have liked to have had, and what knowledge and skills they gained ‘on the job’. Teacher aids, community education counsellors and parents were asked to comment on the knowledge and skills needed by teachers in order to work successfully with Indigenous children.

Data analysis
It had been anticipated that interviewees would identify teacher knowledge, skills and understandings in four key areas: Indigenous history and culture; partnerships with the community; protocols; and language/literacy. To commence the analysis of interview and consultation data, the frequency of reference by respondents to these four dimensions was recorded on two collection sheets – one for responses about a preservice teacher education focus, the other for responses with an in-service focus. A matrix was also constructed to capture quotes from individuals within the various respondent categories, under each of the four areas.

From this initial stage, it became clear to the Working Party that two of the areas – partnerships with the community, and protocols – were being viewed by respondents as being two components of a single area, that of working with the community. In addition, respondents were alluding frequently to an area not originally anticipated by the Working Party – the importance of teachers being able to apply pedagogical knowledge to Indigenous learners.

Consequently, adjustments were made and the areas finally selected for further analysis of the data were:
• teachers’ knowledge and understanding of Indigenous history and culture;
• partnerships and protocols for working with the community;
• applying pedagogical knowledge to the teaching of Indigenous students;
• language and literacy issues.

Findings

Consistency of responses
For the four areas listed above, there was noticeable consistency in the comments made across the different categories of people consulted. The consultations confirmed the importance of issues such as: teachers’ personal and professional attitudes to Indigenous learners; the links between knowledge of Indigenous history and cross-cultural awareness; teachers’ ability to establish and maintain positive relationships with school communities; the need for teachers to understand local contexts when creating learning environments for Indigenous students; and the need for every teacher to be able to teach literacy, understand the role of Aboriginal English as a language in its own right, and engage appropriate ESL pedagogy where required. The challenges, then, are how best to achieve this aim and how to set the priorities for all ‘phases’ of teacher education.
A different mindset

One of the school principals interviewed put the case clearly by saying, 'We've got to start to generate a different mindset about the job of teaching and it's not just what happens inside the classroom or inside the school gate ... it's got to be seen as relationships ...'. The theme of relationship-building was the one that most consistently permeated the transcripts of consultations and interviews in the BTR project. Parents spoke of the importance of being included in school planning processes and of the need for teachers to be aware of how best to communicate with Indigenous parents. Teachers themselves acknowledged the difference it made to student learning outcomes to have teachers immersed in the local Indigenous culture and history. Teacher aides identified successful teachers of Indigenous students as those who were able to genuinely listen to the students, to involve themselves in out-of-school activities with students, to treat students in culturally-sensitive ways, to remain calm in challenging situations and to display a sense of humour. District Officers and school principals stressed the key role played by teachers having high academic expectations of the students.

A learning continuum

A clear and consistent message from all categories of people consulted in the BTR project was the need for foundational work at pre-service level in all the areas listed above, with ongoing development to take place, in context, through processes of induction and continuing professional learning.

Table 1 below provides a sample of the kind of knowledge and skill development from preservice teacher education into induction and ongoing professional learning, as suggested by interviewees' comments.

Table 1

<table>
<thead>
<tr>
<th>Knowledge, skills and understandings teachers need to work effectively with Indigenous students – What Should be Covered at Preservice Level?</th>
<th>Knowledge, skills and understandings teachers need to work effectively with Indigenous students – What Should be Addressed Through an Inservice Focus?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous history and culture</td>
<td>Indigenous history and culture</td>
</tr>
<tr>
<td>Having some generic cross-cultural awareness along with knowledge of the history of Indigenous people in Australia, and access to Indigenous people as part of preservice preparation. Having some knowledge of Indigenous family values.</td>
<td>Gaining essential local, context-specific knowledge and understandings by working in schools and living in communities. Deepening knowledge and understandings of these values, and applying such in interactions with students and their families.</td>
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<tr>
<td>Community partnerships and protocols</td>
<td>Community partnerships and protocols</td>
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<tr>
<td>Understanding the importance of having high expectations of student success. Having some cross-cultural awareness regarding Indigenous students and their families/communities. Having effective interpersonal skills, with particular sensitivity to establishing relationships with Indigenous people.</td>
<td>Having high expectations of student success and being accountable for student learning outcomes. Deepening understandings and capacities to interact in culturally-sensitive ways with Indigenous students and their families. Deepening understandings of community dynamics and the various roles within communities, through professional and personal involvement in school and community life.</td>
</tr>
<tr>
<td>Applying pedagogical knowledge</td>
<td>Applying pedagogical knowledge</td>
</tr>
<tr>
<td>Understanding principles of successful learning, eg: knowledge of different learning styles knowledge of strategies/programs/frameworks such as FELIKS, Productive Pedagogies, New Basics ability to develop/adapt curriculum in culturally-sensitive ways catering for individual difference using technology as a learning tool understanding learning in context. Having knowledge of different approaches to behaviour management, including non-confrontational ones.</td>
<td>Increasing skills in applying principles of effective learning, as appropriate within the specific context. Deepening understandings of applying non-confrontational approaches to behaviour management.</td>
</tr>
<tr>
<td>Language and literacy issues</td>
<td>Language and literacy issues</td>
</tr>
<tr>
<td>Having foundation knowledge of explicit literacy teaching and ESL pedagogy. Understanding that Aboriginal English is a language in its own right.</td>
<td>Further developing skills in explicit literacy teaching and ESL pedagogy. Increasing knowledge and use of specific resources and strategies for improving literacy outcomes. Understanding, valuing and making use of Aboriginal English as a language in its own right.</td>
</tr>
</tbody>
</table>
Drawing conclusions
The key conclusions drawn from the BTR project included the following:

- All graduate teachers need to have some generic cross-cultural awareness and knowledge of the history of Indigenous people in Australia. This should be supplemented and contextualised as part of teachers' induction in schools and through their ongoing professional learning. It is essential that the Indigenous community is included in the development and implementation of these aspects of teacher education.

- It is also necessary for teachers to know about and be able to apply principles of effective learning and teaching to Indigenous students.

- Foundation work in the area of literacy teaching should take place at the preservice level with further development occurring through inservice opportunities.

- It is essential that teachers have high expectations of academic success for Indigenous students. This is closely linked to teachers' understandings of literacy learning, and culturally-relevant curriculum and pedagogy.

- In addition to a requirement for highly-effective interpersonal skills, teachers of Indigenous students need to continue developing skills in relationship-building and working in partnership with Indigenous parents and communities.

- Due attention needs to be given to the means by which teachers are inducted into communities and schools where there are Indigenous learners. Distinctions need to be made between induction to Indigenous communities in regional and remote Queensland and induction to schools in urban settings where there are Indigenous students.

Comparing the BTR project findings to other research
The issues raised by respondents in the Board's project, and the nature of the comments they made, confirm findings from recent literature in relation to teacher skills and attributes for working effectively with Indigenous learners. Table 2 is an attempt to show key links between the findings of the BTR research and those of the three other studies in Indigenous education mentioned earlier in this paper – Partington's (2003) six areas central to teachers' understandings of the reality of classroom life for Indigenous students, Osborne's (2001) nine 'signposts' of culturally-relevant pedagogy; and the characteristics of effective teachers of Indigenous students described by Harslett et al. (2000).

It can be seen from Table 2 that there is a good deal of consensus regarding teacher qualities and competencies for working successfully with Indigenous students. The common threads linking the four studies seem to fit quite comfortably within the headings used to categorise data from the BTR project. Knowledge of Indigenous history, cultures and languages; appreciation of Indigenous values, family structures and lifestyles; application of relevant pedagogies and non-confrontational approaches to classroom management; and cross-cultural understandings and interpersonal skills that foster positive relationship-building are clearly identified as being necessary for successful learning and teaching in Indigenous contexts.

Implications and some possible ways forward
Two points seem clear from the findings of all four studies examined here. The first point is that there is agreement about specific content which can and should be addressed in the area of Indigenous education in preservice teacher education programs. The second is that greater attention needs to be given to the processes for effectively inducting teachers into classrooms and school communities.

There are clear issues here for higher education providers, for teacher employers, for teachers themselves and for school and local communities about ways of integrating efforts to promote successful learning outcomes for Indigenous students. Some useful ways forward might include:

- Exploring ways of strengthening partnerships involving universities, teacher employers and school communities:
  - to provide preservice teachers with access to Indigenous people as part of their teacher preparation;
  - to address content areas related to Indigenous culture, history and language;
  - to increase the number of preservice teachers who undertake professional experiences in Indigenous contexts;
− to build on the foundation studies of preservice programs, through continuous professional learning, in areas pertinent to teachers of Indigenous students; and
− to encourage greater numbers of Indigenous people into the teaching profession.

- Ensuring that both the teaching of literacy and the application of ESL pedagogies are explicitly addressed in all preservice teacher education programs.
- Basing teacher selection to work with Indigenous students on demonstration of the desirable attributes identified in recent studies, including this one.
- Acknowledging that teacher induction is not just school-based—it needs to involve Indigenous community members and parents.
- Increasing the number of trained mentors in school communities as part of induction programs for teachers.
- Assisting schools in their efforts to build positive relationships with parents and the broader community.

The final stage of the Board’s project has involved the targeting of specific groups as part of the report’s distribution. Letters were sent with the reports to employers, teacher professional associations, school communities, teacher unions and universities seeking their response to the report and suggesting actions they might specifically take to address key issues. The suggested actions were expressed in similar terms to those in the list above. It is anticipated that the letters will be followed-up within a six- to twelve-month period to gauge the effects of the project and the report on teacher education in Queensland.
Table 2
Links between BTR research project findings and findings from other studies

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<tr>
<td>Knowledge, skills and understandings teachers need to work effectively with Indigenous students</td>
<td>What should be taught to student teachers about the reality of classroom life for Indigenous students</td>
<td>Nine signposts of culturally relevant pedagogy</td>
<td>Characteristics of effective teachers of Indigenous students (as identified by teachers)</td>
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<tr>
<td>Indigenous history and culture</td>
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<tr>
<td></td>
<td>Understanding the potentially different values of Indigenous students.</td>
<td>No 2: Socio-historico-political realities beyond the school impact on the classroom and teachers need to be aware of them.</td>
<td>No 3: Teach content that is culturally-relevant to students’ prior experiences, that fosters their cultural identity and empowers them with knowledge and practices that enable them to operate successfully in mainstream society.</td>
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<tr>
<td></td>
<td>Understanding of the diverse environmental influences on Indigenous students, and identification of strategies useful in overcoming their negative aspects.</td>
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<td></td>
<td>Awareness of the existence of racism.</td>
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<td>No 9: Name and tackle racism.</td>
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<td>Community partnerships and protocols</td>
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<td></td>
<td>Involving parents in the education of their children.</td>
<td>No 4: Culturally relevant pedagogy involves personal warmth towards, respect for, and demandingness of students.</td>
<td>No 7: Involve parents and families from ethnic groups we have marginalised.</td>
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<td></td>
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<td>No 5: Having high expectations of student success.</td>
<td>Relationships</td>
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<td></td>
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<td>Ability to develop good relationships with Indigenous students and their families.</td>
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<td>Consistency and fairness with all students while appreciating student differences.</td>
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<td>Having a sense of humour.</td>
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<td>Having patience and persistence.</td>
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<td>Being a good listener.</td>
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<td></td>
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<td></td>
<td>Investing time in interacting with Indigenous students outside the classroom.</td>
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</tbody>
</table>

- Some generic cross-cultural awareness along with knowledge of the history of Indigenous people in Australia.
- Access to Indigenous people as part of teacher preparation.
- Understanding of Indigenous family values.
- Local, context-specific knowledge and understandings are essential and can only be gained by working in schools and living in communities.
- Preservice teachers should critique policy documents relevant to Indigenous education.
- There is a need to address issues of tolerance and to assist preservice teachers in understanding their own values and dispositions in this area.

- Understanding Indigenous history and culture.
- Understanding student family and home backgrounds.
- Appreciating differences in child-rearing backgrounds and family responsibilities.
- Having high expectations of student success.
- Ability to interact in culturally-sensitive ways to Indigenous students and their families.
- Highly-effective interpersonal skills are essential, with particular sensitivity to establishing relationships with Indigenous people.
- Knowledge needed of role of Elders within communities.
- Having a sense of humour.
- Having patience and persistence.
- Being a good listener.
- Investing time in interacting with Indigenous students outside the classroom.
Knowledge, skills and understandings teachers need to work effectively with Indigenous students (cont)

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<tr>
<td>Applying pedagogical knowledge</td>
<td>What should be taught to student teachers about the reality of classroom life for Indigenous students (cont)</td>
<td>Nine signposts of culturally relevant pedagogy (cont)</td>
<td>Characteristics of effective teachers of Indigenous students (as identified by teachers) (cont)</td>
</tr>
<tr>
<td>• Understanding principles of effective learning, eg:</td>
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<tr>
<td>- knowledge of different learning styles;</td>
<td></td>
<td>No 3: Teach content that is culturally-relevant to students’ prior experiences, that fosters their cultural identity and empowers them with knowledge and practices that enable them to operate successfully in mainstream society.</td>
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<tr>
<td>- knowledge of strategies/programs/frameworks such as FELIKS, Productive Pedagogies, New Basics;</td>
<td></td>
<td>No 5: Culturally relevant teaching involves spelling out the cultural assumptions upon which the classroom operates. Culturally relevant approaches to curriculum involve analysing and critiquing the status quo as a collective enterprise to construct equitable and just social relations. This means accepting knowledge as socially constructed and open to challenge.</td>
<td></td>
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<td>- ability to develop/adapt curriculum in culturally-sensitive ways;</td>
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<td>No 6: There are five components of culturally relevant classroom management. These are:</td>
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<td>- catering for individual difference;</td>
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<td>- use group work;</td>
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<td>- using technology as a learning tool;</td>
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<td>- avoid direct, overt management strategies and using indirect strategies;</td>
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<tr>
<td>- understanding learning in context.</td>
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<td>- avoid excessive ‘spotlighting’, behavioural or academic;</td>
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<tr>
<td>• Understanding of non-confrontational approaches to behaviour management.</td>
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<td>- use an unhurried pace;</td>
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<td></td>
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<td>- match school/home communication structures, particularly in early grades.</td>
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<tr>
<td>Language and literacy issues</td>
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<tr>
<td>• Understand, value and make use of Aboriginal English as a language in its own right.</td>
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<td>No 8: Include students’ first languages in school program and classroom.</td>
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<tr>
<td>• Explicit literacy teaching and ESL pedagogy.</td>
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<td></td>
<td></td>
<td>No 1: Some ‘mainstream’ teachers can teach students from ethnically marginalised groups well.</td>
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</table>
References
Board of Teacher Registration. (1993). Yatha: Aboriginal and Torres Strait Islander studies in teacher education. Brisbane: Board of Teacher Registration.
The Everyday Practices Of Partnership: The Interactional Work Of Participants In A School And University Collaboration

Graeme Hall
Board of Teacher Registration, Queensland

This paper examines one school/university partnership that was modelled on the principles of a Professional Development School. The study investigated the audio-recorded interactions that occurred during meetings between groups of teachers and academics as they planned and reported on a collaborative project aimed at improving Mathematics teaching practices in the school. Whereas most research investigating school/university partnerships addresses the outcomes of such partnerships, or attempts to describe and advocate for ideal partnerships, this paper considers the actual interactional work of the participants as they engage in the everyday and ongoing activities of partnership. It shows how partnerships are constructed through talk and activity. Instead of considering the partnership as a predetermined and pre-existing phenomenon, this paper adopts the view that the work of partnership is an ongoing accomplishment through the activity of the participants. In this way, this paper shows the local social order of a partnership as it was built, maintained and transformed through the interactional work of the participants. Both the institutional setting and the participants' enactment of partnership work contributed to the establishment of the social and moral order of the partnership.

The notion of "partnership" dominates contemporary school improvement and educational reform agendas. Recent reports highlight the importance of quality teaching for ongoing improvement in student outcomes, and the need to develop new kinds of relationships between schools and school systems, on one hand, and universities, on the other, in order to achieve high standards of performance and professionalism in teaching (Commonwealth of Australia, 2003). Designing strategies for re-visioning the historical divide within the education community, between teachers and academics (Gore & Gitlin, 2004), continues to engage the profession at all levels. The traditional and conventional approach has been that teachers continue to be cast as users of knowledge developed by academics designed to improve their practice (Lingard & Blackmore, 1998). Addressing this divide requires teachers and academics, when they do come together for the purpose of collaborative work of any kind, to remain open to new understandings of each other's work" (Gore & Gitlin, 2004, p. 56). A point of departure from the traditional perspective is to move beyond this divide between teachers and academics. Instead of re-visioning this divide, we can envision a professional place where the divide does not exist. Such a place provides for the establishment of a hybrid teacher/researcher (Brennan, 1998), and invites new ways of working collaboratively, building and doing partnerships.

The study reported here acts as a point of departure from previous studies of school and university partnerships in that the focus is not on how institutions value such partnerships, but on how the school and university members engage in the social interactional work of partnership building. That is, how the partnership members in face-to-face meeting talk enact and "talk into being" the partnership activity. The study explores talk as work (Gronn, 1983), and shows how people use talk as the resource for doing their work in this context. It constructs the partnership as a social activity rather than as a systemic phenomenon. It departs from other ways of studying how organisations and institutions go about their business by "proposing that the very constitution of organisations depends on the production of local knowledge through local language practices" (Boden, 1994, p. 75). In other words, the school and university partnership is examined as an organisational activity undertaken primarily through talk and, in this way, shows how partnerships work on a day-to-day basis as well as over the course of the partnership.

Previous studies have tended to concentrate on the political aspects of the relationships and on concepts of power at the organisational level within the relationships. Examples occur where researchers have endeavoured to establish collaborative arrangements involving "relationships in which questions of mutuality, equality, and voice were important" (Connelly & Clandinin, 1994, p.86). These aspects of
relationships among co-participants are essential components of my research. However my study is not constrained by these considerations, but rather provoked by them to attend to the detail of how a school and university partnership operates. The institutional setting provides the context for the partnership work oriented to by the participants. Instead of treating the partnership as pre-existing and ideal, this study takes a fine-grained analysis of how the school and university partnership operates and is accomplished.

The school and university partnership under investigation here focussed on the development of an improved curriculum delivery in a school. This included curriculum development, pedagogy and assessment. As a whole, the school and university partnership project embodied a number of different activities, involving a range of personnel. These partnership activities included:

- intensive coaching in mentoring for teachers and other school staff;
- school and university staff co-operating in presenting programs to help parents understand the philosophy and practices of multi-age classes;
- pre-service practicum and internship programs;
- live video micro-teaching links between school and university campuses;
- collaborative work between school and university personnel to improve pedagogy, especially in mathematics.

This research examined one feature of the partnership. It investigated the planning meetings conducted as part of this activity, to understand how the participants together did the partnership work in this particular context. Meetings are where institutions establish social and moral order, and where they do the work of "locating and legitimating both individual and institutional roles" (Boden, 1994, p. 81). Boden shows how meeting talk is specific in form, in that it is both "occasioned by and constitutive of" the institutional setting in which it occurs (p. 82).

There is a traditional view in the education profession of a divide between practice and theory, a divide that is reflected in a practitioner/academic divide. This divide is described as a geographic feature that it is variously proposed might be "bridged" (Down & Hogan, 1999), "prevented" (Dickinson, Eade, Binns, Craig, & Wilson, 2004), "crossed" (Sherman & Torbet, 2000), or otherwise "attended to" (Darling-Hammond, 1997). This study is premised on a reluctance to engage with this metaphor of "the divide", preferring to understand a space beyond the divide where teachers and academics become different kinds of practitioners, sharing common goals and activities in their search for knowledge about teaching and learning. The basis for shared understandings and successful collaborative work between schools and universities lies in the acknowledgement of a shared interest. In proposing that partnerships between schools and universities provide a means of reifying assumptions such as these, Goodlad argues in favour of these partnerships thus:

For schools to get better, they must have better teachers, among other things. To prepare better teachers ... universities must have access to schools using the best practices. To have the best practices, schools need access to new ideas and knowledge. This means that universities have a stake in school improvement just as schools have a stake in the education of teachers. (Goodlad, 1985, p. 6)

The major type of school and university partnership is that between a university and an individual school or a small group of otherwise informally connected schools. Such partnerships are widely reported as individual cases. Within this type of partnership, there is an identifiable range of purposes for partnership which can be distilled into three major areas: the provision and support of pre-service teacher learning; the provision and support of in-service teacher learning (and the development of continuity between these two); and the development of the knowledge base about teaching and learning and about good practice (Darling-Hammond, 1994). The primary motive for all three purposes is the unifying theme - improving the learning of students in schools is the reason for doing it all.

Darling-Hammond (1994) summarises the work of these partnerships (professional development schools) by contending that professional development schools are central to the project of re-forming schools and schooling. She proposes that much more is expected and required of teachers than has ever been in the past, especially in terms of understanding children and their learning styles, their intelligences, their diverse backgrounds and life experiences. These understandings, she states, "can only be developed if teacher preparation enables entering teachers to put theory into practice in settings that model and encourage both state-of-the-art practice and an enquiry ethic that sustains continued professional growth" (Darling-Hammond, 1994, p. 9).
The research questions
The research questions were initiated early in the study, along with some development and refinement throughout the various stages of the project's progress. The first (central) question interrogates the relationships among participants:

How do the school and university partners in a Professional Development School Project accomplish the work of partnership through their interactions with one another?

Three related questions call for more detailed consideration of the interactions among participants to understand how the partnership was accomplished.

- What interactional resources do the partners (teachers, interns and academics) use to construct their talk and interactions with one another in the project?
- How do the partners (teachers, interns and academics) construct themselves and the other members as members of the partnership?
- as academics / researchers?
- as teachers?
- What knowledge is produced from this type of accounting for school and university partnerships?

These questions guided the study, providing a focus for the selection and treatment of data samples, and subsequent analysis.

Methodology

Ordinariness: The ethnomethodological opportunity
This research derives its data from the unmediated discussions, conversations and interactions among the co-participants. It seeks to consider these interactions as courses of action, and consequently to analyse them to identify how the participants achieved meaning and social order. These elements of the data are characteristic of ethnomethodology. "Rather than assuming a priori that members share meanings and definitions of situations, ethnomethodologists consider how members achieve them by applying a native capacity to account 'artfully' for their actions, rendering them orderly" (Gubrium & Holstein, 2000, p. 491). In other words, co-participants work together to construct the social order of the interactional event, including meeting talk, conversation and interviews. The term "ethnomethodology" was coined by Harold Garfinkel (1967), and was designed originally as a general label for a range of phenomena associated with the use of mundane, everyday knowledge and reasoning by ordinary people (Heritage, 1984). As Hester & Francis (2000) point out, "social life is produced 'from within' by members of society and it is the task of ethnomethodology to identify the methods of such production" (p. 1). The researcher temporarily suspends belief in social realities to focus on the data (audio taped and transcribed social interactions between participants) about the world as it exists in the specific context and about the social orderness within it.

The approach to accounting for the everyday activities of participants taken in this study is an example of applied ethnomethodology (Heap, 1990). This is ethnomethodological work that can hope to have consequences for decision making, and that can make a difference to members (p. 47). Here, ethnomethodological resources are used to analyse closely the activities of the participants in meetings, to show how they do the work of partnership and therefore to clarify the questions that can be asked about the doing of this partnership work. These techniques have been used by other researchers to show how participants in other institutional settings undertake their activities (e.g., Heritage & Sefi, 1992; Silverman & Peräkylä, 1990; Boden, 1994; Gronn, 1983; Danby & Baker, 2000). However, the use of applied ethnomethodology in this study to investigate how partnership work is done through the social activities of participants is a point of departure from previous studies of school and university partnerships.

Given the mundane, everyday nature of the unmediated data available in this study, and given the nature of that data as naturally occurring, uncontrived talk, an ethnomethodologically based strategy for analysing talk-in-interaction offers an approach to consider the structure of the talk itself, identifying the socially structuring features of talk-in-interaction. This approach is a hallmark of talk-in-interaction, which relies in the meaning-making construction of social orderness and action within the structures of the talk itself.

Talk-in-interaction
In the 1960s, Harvey Sacks sought to identify, within the ethnomethodological frame, data resources that would provide access to analysis of real, everyday social interaction. He selected talk as the most readily
available, universal interactional resource used in the accomplishment of the daily activity of ordinary people as they go about the business of their lives. His choice of talk as a resource was not the result of a linguistic interest, but because of a pragmatic interest. It was readily available, and tape recordings made it infinitely available not only to himself but also to others (Sacks, 1984). The legacy of Sacks' extensive corpus of analysis of talk-in-interaction, as well as his descriptive and instructive lectures and writings about his methods (Sacks, 1995), have led to the development of conversation analysis as a distinct methodological discipline within the ethnomethodological tradition. A number of his colleagues and contemporaries, including Emanuel Schegloff and Gail Jefferson, confirmed and developed Sacks' pioneering work, and many continue to develop and refine it.

Conversation analysis (CA)
Conversation analysis (CA) is characterised by three main features or assumptions: first, interaction is structurally organised; second, contributions to interaction are contextually oriented; and third, as a result of these two characteristics, no order of detail in interactions can be dismissed as disorderly, accidental or irrelevant (Heritage, 1984, p. 241). These features are the basic foundations on which conversation analysis is built. They are discussed briefly here, and their explication and consequences are made explicit in the analyses in the following chapters.

Conversation analysts assume that talk-in-interaction, like other activities in everyday life, has an inherent structure. That is, it is not random or unorganised. If this were not so, it would be impossible for us to interact in the routinely coordinated ways we do with people whom we do not know and with whom we have not rehearsed our interactional activities (Pomerantz & Fehr, 1997, p. 69). Ordinary people, in their everyday interactions, are able to use the resources of language and of talk to make sense of situations and accomplish the realities of daily life. Conversation analysis sets out to make explicit the shared methods individuals use in this shared everyday sense-making.

Membership category analysis (MCA)
Like conversation analysis, membership category analysis (MCA) emerged from the work of Harvey Sacks, and the two disciplines share the ethnomethodological agenda of analysing and explaining ordinary, everyday activity through the resources of its ordinary, everyday interactions – particularly its talk. While there can be a reflexive relationship between the two, where the types of sequential features of talk are both informed by and can contribute to the speakers' orientation to their respective membership categories, these features coexist as a result of their emphasis on the ordinariness of everyday situations and the work participants do in accomplishing their interactions (Hester & Eglin, 1997, p. 2).

Data analysis through transcription
At every stage of data collection and analysis, the researcher makes judgements that become part of the values context of the study. Even the recordings of the actual talk are not able to be described as value-free or neutral, since there have already been decisions made regarding, for example, the placement of microphones and the timing of the commencement of recording. The data were analysed through transcription processes relying on the conventions described by Psathas (1995). After careful listening to the tape recordings, passages were selected for transcription on the basis of their contribution to understanding aspects of the partnership work of the participants in the meetings. An important feature of this treatment of the data is that the act of transcribing talk in this manner is itself analytical. The talk itself is data. The recording of the talk constitutes a representation of the data, and the transcription is the analyst's interpretation – the researcher's account of the features of the talk.

Steps to analysis
Analysts of talk-in-interaction utilize a number of resources and strategies to explore and explain the work accomplished in a particular situation. However there are a number of commonalities among the techniques used by different analysts. While there are several suggestions for how to begin conversation analysis (ten Have, 1999), I have drawn on Pomerantz and Fehr's (1997, pp. 71–74) set of "tools" to describe how analysis generally proceeds and to assist in approaching the analysis of talk. Pomerantz and Fehr point out that analysts draw on their own language and knowledge resources in analysing talk, and that these tools are simply one of a number of approaches. Nevertheless, this approach proved useful in this study as a means of providing structure and purpose to the analysis task. The tools consist of a set of five steps the analyst can take. Although presented in a chronological order, this order sometimes moves about among the steps. The steps suggested by Pomerantz and Fehr (1997) are set out here in summary:
1. Select a sequence.
2. Characterise the actions in the sequence.
3. Consider the language and other resources participants use to package their actions.
4. Consider the effect of the timing and taking of turns on understanding actions and topics.
5. Consider how the ways the actions were accomplished implicate certain identities, roles and relationships.

These examples of the strategies used by conversation analysts to make accessible the data they collect through processes of transcription reinforce the notion that transcription is "a selective process reflecting theoretical goals and definitions" (Ochs, 1979, p. 44). The transparency and accessibility of the data and its representation are keys to the claims of conversation analysis to be a rigorous empirical discipline, closely connecting data, transcription and analysis (Hutchby & Wooffitt, 1998, p. 92).

Outcomes of the research

Consideration of the research questions, and the detailed analysis of the data transcripts as previously described, revealed four major themes emerging from the work:

1. Displays and denials of expertise: the construction of expertise as an accomplished and demonstrated feature of the talk-in-interaction of partnerships;
2. Interactional management of partnership: the partnership itself as a social activity accomplished through the interactional activities of the participants, rather than an existing entity or condition;
3. The ongoing activity of leadership: the management of leadership through the interactional activity of the participants in the partnership, rather than as a pre-existing condition or attribute.
4. Talk does the business: the activity of talk-in-interaction, accomplished through the social and moral work of the participants as they assemble their activities of partnership through the agency of talk, specifically through the institutional talk of meetings.

A unifying thread through these themes is the recognition of school and university partnership as constructing social interactions rather than only as institutional and systemic structures. This is an important and ever-present way in which this study departs from others that have investigated these kinds of arrangements. The study builds on the open-endedness of social interactions, from which comes much of the creativity and energy of social life as well as the essentially unpredictable outcomes of everyday, lived social relations (Strathern, 2000).

Displays and denials of expertise

Evident across the data chapters was how participants in the school and university partnership oriented to, and engaged in, displays of expertise. These displays occurred despite claims by the participants themselves that they were not actually engaging in this type of activity. The potential for claims to expertise to produce negative sentiments in participants, and the consequent reluctance of participants to claim expertise has been reported before. However this reporting had not before been supported by such evidence of the actual ways in which the claims and denials are accomplished, as is provided in this study.

In addition, analysis of the data revealed a surprising type of disclaimer to expertise. This particular strategy used by participants in their talk in relation to expertise was an unexpected finding of the research. This type of disclaimer was used particularly by the academic partners, and shows one way in which they orient to the context of partnership. Time and again, academic participants in particular are heard stating categorically that they are not experts, or are not participating as experts, in some particular field.

This appears to be a strategy that participants and, in particular, the academic participants, employ when they are sensitive to the possibility that being understood to be experts may summon a sense of elitism and a degree of defensiveness on the part of other participants (Silverman & Peräkylä, 1990). This activity of claiming expertise by denying it is an interesting paradox, and one area that invites further investigation in future research.

Interactional management of partnership

This study departs from earlier understandings by showing how partnership is social interaction, enacted through the collaborative and co-operative activities of the participants. Through these activities by which the participants construct and demonstrate their various kinds of expertise, they are heard and seen to be
accomplishing together their expertise in doing partnership. This illustrates partnership as something that participants do, rather than as a condition that pre-exists.

One such category-bound activity (relating to the activity category of partnership) is the sharing of knowledge and opportunities, using various kinds of knowledge to illustrate points, to achieve one another's goals, and to move towards establishing and achieving shared goals. We see this happening very clearly in the talk of a large meeting involving the dean, library manager and mathematics education professor from the university, along with the other, regular participants. In this meeting, the library manager constructs with the other participants a set of activities through which the teachers can support the library in its work, the library can provide assistance to the teachers, and all contribute to the establishment of some new purposes for the partnership.

The ongoing activity of leadership
Leadership, like partnership, can be described as an activity rather than as a commodity or pre-existing attribute. It is something that participants do (Gronn, 2003; Lingard et al., 2003).

There are participants in leadership positions within the study. In particular, the activity of the principal throughout the meetings is evident. Two academics in leadership positions are also participants, the dean and the mathematics education professor. These three 'designated' leaders undertake a number of activities that show that they have certain expectations about how they will be regarded by others, and that others participate in this construction of designated leadership by responding to them in particular ways. The designated leaders are often the ones to decide the topic of the meeting talk. They offer turns at talk to particular participants and frequently invite certain participants to respond. They are usually the ones to determine and bring about a finish to a sequence or to the whole meeting, and are heard to play a major role in such decisions as when the next meeting will be, who might be invited, and what activities the participants might undertake between meetings. The other participants co-construct the enactment of this leadership activity by responding, acquiescing, and generally behaving in ways that not only permit but endorse the activities of the designated leaders.

However leadership, as I have claimed, is not confined to designated leaders. Leadership is an activity, and in this study its enactment is seen and heard to be distributed among the various groups of participants. Some activities that help to accomplish leadership among these participants are taking up invitations to talk without hesitation, offering support and mentorship to peers, taking the initiative when opportunities to contribute to the group's learning occur, and even proposing and effecting topic changes.

This study has provided an opportunity to see how teachers, pre-service interns and academics can participate in leadership activity as part of the activity of accomplishing partnership. It has also shown how designated leaders can sometimes be seen to manage the partnership activities, though this level of management may not always be conducive to optimal participation by all.

The business of talk
This study shows how members use the resources of their ordinary everyday talk to do the business of meetings and partnerships. In this instance, I have observed closely and analysed how these participants have used meeting talk to enact the business of partnership and, in so doing, to accomplish their categorical work as teachers, as researchers and as learners about teaching and learning. The learnings about talk in this context are two-fold. First, the work of partnership is seen to be accomplished by the participants through their everyday talk, and through the various resources relating to institutional talk that they bring to and use during the activity. Second, we can use the resource of recordings of the talk to study and learn in great detail about how the participants actually co-construct the partnership.

This study has introduced fresh insights into how the everyday transactions occur when teachers and academics, or indeed any other kinds of partners, collaborate in partnership activity. Drawing on the resources of ethnomethodology and, in particular, the use of conversation analytic and membership category analytic methods, the work of the accomplishment of partnerships has been examined in ways that have not been addressed in previous studies. These analytic methods have made possible a close and detailed account of the socially interactive activity among the participants in the partnership and an accounting for that activity in terms of documented precedents, conventions and 'rules'.

Implications
This study focuses on the emerging, key role of school and university partnerships; it departs from the more traditionally institutional studies to bring an emphasis on the social interaction of the participants. It departs from the idealisation of partnership to show how partnership actually happens; it shows how
partnership can be accomplished, rather than how it should be; it shows how talk-in-interaction is used to study in close detail partnership-in-action; and it takes us beyond the traditional divides set up between school teachers and university academics.

This research provides a close encounter with daily practice, with all its strengths and limitations. The knowledge about professional learning and development of teachers, particular in relation to the improvement of teaching practice and school reform, directly relates to the professional lives of teachers.

References


'I Learned Grammar Through Copying Off The Board':
A Study Into Pre-Service Teachers' Knowledge About Language

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Nationally, inquiries into teacher education and literacy have highlighted concerns about the preparedness of teachers to teach literacy effectively. In the international literature, 'knowledge about language' has been identified as an important factor in successful literacy teaching. This paper reports on a qualitative study which investigated pre-service teachers 'knowledge about language'. In general participants in this study found it difficult to analyse language because they were only able to articulate their understandings about language at a semantic level. Participants' responses were characterised by a decontextualised approach to and prescriptive beliefs about grammar. The study supports a need for further research in this area focusing on a better understanding of the relationship between approaches used to teach 'knowledge about language' and students' ability to apply, use and analyse this knowledge in meaningful ways.

Literacy teaching and learning and teacher educator training remain high on Australia's political agenda with the recent announcements of national inquiries into the teaching of literacy and teacher training (Nelson, 2004, 2005). Amongst other matters, these inquiries will investigate the preparedness of pre-service teachers to teach literacy effectively.

This investigation can be seen as the continuation of sustained curriculum review and reform throughout Australia. For example, in the Northern Territory, two major education reviews (Collins, 1999; Ramsey, 2004) have raised questions concerning language and literacy teaching. First they highlighted concerns about the performance of Northern Territory children as measured by literacy and numeracy benchmarks. Second, both indicated a need to increase teachers' knowledge about language and literacy. Third, they identified a need to engage with students who speak traditional languages and non-standard varieties of English. Fourth, they suggested a need to develop specific linguistic and intercultural understandings of the difficulties faced by young people in learning Standard Australian English. Finally, they recommended that schools adopt a whole school policy approach to the development of language acquisition programs in school (Nelson, 2004, 2005).

All of these recommendations point to a need to examine in depth understandings about language and language use in teacher training programmes throughout Australia.

A review of literature on the relationship between teacher training and the study of language suggests that this is more than a local issue. Globally, other education systems have also been facing similar concerns for some time.

In the USA, for example, Fillmore and Snow (2000) claim that the substance of debates about teaching reading 'gives striking testimony to the historical absence of relevant expertise on language among educational practitioners' (p. 34) They propose that this expertise be established in teacher training programs through a range of courses in language and linguistics, including courses on language structure, language and cultural diversity, sociolinguistics, the role of literacy in the development of language skills and language development.

In the UK, the past decade been a time of debate about why grammar should be taught in schools and a time of renewed emphasis on grammar in the curriculum (Barton, 1998; Cameron, 1995). However, as Myhill (2000) observes, this has not yet translated into a coherent, focussed approach to the teaching of grammar, which currently ranges from a mechanistic, correction-driven model of grammar learning to approaches that more explicitly promote understandings of the relationships between language structure and meaning. While Myhill argues for a view of grammar that explores the structure-meaning relationship, she also calls for the debate to shift from the polemic about whether grammar should be taught to a more
pedagogically driven engagement with the learning implications of studying grammar, noting that it is ‘not necessarily the conceptual abstraction of grammar which causes difficulty [for students] but the mapping of that abstraction onto ‘live’ text’ (Myhill, 2000, p. 162).

In Australia, the link between language knowledge and education has largely been made from within the systemic functional grammar school. For example Quinn (2005) explores the historical context in Australia of teachers and students who have had limited instruction in grammar and advocates the use of systemic functional grammar as ‘a shared language of language’ in language teaching (p. 35). Christie (2005) reports on using functional grammar to analyse levels of abstraction and/or lexical density in students’ writing. Christie highlights the need for teachers to have a good knowledge of language and comments that this type of research in the analysis of students’ writing can form the basis for pedagogies of effective intervention.

**Pre-service teachers and ‘knowledge about language’**

In the current study, our understanding of ‘knowledge about language’ is consistent with the views of Myhill and Christie above. That is, we consider that an ability to teach language and literacy effectively involves more than the traditional approach of being able to correct ‘bad’ grammar. In our view, an effective ‘knowledge of language’ needs to focus on the relationship between the forms of language (the grammatical rules, or how language is structured) and how people use language to make meanings. This is consistent with Halliday’s (1973) functional approach to grammar and with the approach of others working within the functional grammar framework. For the purposes of this study, we adopt Derewianka’s definition of grammar as ‘a way of describing how a language works to make meaning within a particular culture’ (1998, p. 1).

If teachers are explicitly to use knowledge of language to help them teach language and literacy, however, they first need to be confident of this knowledge themselves and to have some understandings about how and why it may be useful in teaching. At the same time, it is our hypothesis that many, if not most, of the students entering our pre-service education courses have had little exposure to any learning about language in their prior schooling.

This paper reports on findings from a qualitative study of pre-service teachers’ ‘knowledge about language’. The starting point for this study is our perception that the pre-service teachers in our teacher education courses have very few analytical tools, first for analysing the forms of language and secondly, for relating linguistic forms to the ways that we create meanings through language.

In this study we did three things. First we determined whether participants could ‘objectify’ language. This entailed participants demonstrating that they could look beyond the meaning of language to consider how language is structured. Second we gauged the extent to which participants were able to do this. Finally we gathered data about participants’ own school experiences of learning about language and the importance they placed on teaching ‘knowledge about language’ in primary and secondary classrooms.

**Study design**

The general aim of the study was to assess the level to which first year pre-service teachers could demonstrate the conceptual tools that they will need in order to teach grammatical concepts to primary school children.

In doing so, we operated firstly on the principle that the grammar questions we asked should be contextualised. To this end, all of the grammar questions in the questionnaire related to language drawn from written texts, which the participants were asked to read before completing the questionnaire.

Secondly, we aimed to ascertain levels of knowledge about language. By referring to the Northern Territory Curriculum Framework, we determined target levels of knowledge about language at the end of primary school, the end of compulsory secondary school, and at tertiary entry level.

The study used questionnaires and follow-up focus group sessions in the data collection phase. The discussion in this paper relates specifically to the questionnaire data. The questionnaire divided into two main sections. The first section was designed to determine whether participants could ‘objectify’ language and the extent to which they were able to do this. This section comprised five separate sections and contained a total of fifteen questions relating to participants’ knowledge about parts of speech, letters, syllables and sounds, sentences, genre and language variation. Each section addressed one of these areas and had three questions of differing degrees of difficulty. The English Learning Area document from the Northern Territory Curriculum Framework was used to assist in writing the questions (DEET, 2002). According to the English outcomes, the first question in each section was one that could be answered by a
student in Year 7. The second question in each section was one that a Year 10 student should be able to answer and the third, a question that a Year 12 student should know. Participants were informed about how the questionnaire was structured and they were given instructions to go to the next section if they had difficulty with an item. The second part of the questionnaire contained four open-ended questions that asked participants to provide information about their own experiences of learning about language in school and about their views on teaching ‘knowledge about language’ in schools.

The original questionnaire was piloted with a small group of academics teaching in our course, allowing us to check for reliability and validity of the various questions, to check the overall design and to reduce the incidence of non-response (Bulmer, 2004; Gray, 2004). The pilot and follow-up interviews relating to the questionnaire resulted in a number of questions being changed and deleted.

Sample
Thirty-nine participants completed the questionnaire. Convenience sampling was used to form the participant group. This is considered a legitimate sampling method where the population is considered relatively heterogeneous (Siraj-Blatchford & Siraj-Blatchford, 2001). The participants were voluntary and came from the first year pre-service teacher cohort in the Bachelor of Education course. The students were sourced from one of the researcher’s literacy classes. The participant group divided into two main cohorts, those who attended primary school pre-1980 and those who attended primary school post-1980. We divided the group in this way, as post-1980 was a period in education when the whole language and genre movements strongly influenced the teaching of literacy. Questionnaires were administered by the researchers outside of normal tutorial classes.

Data analysis
There were two distinct phases to the data analysis. In the first phase of the analysis, data collected from the questionnaires and focus groups were analysed separately. This stage of the analysis reflected assumptions from interpretive qualitative research (Guba & Lincoln, 1981). Identification of themes and key issues occurred by constant and comparative analysis of the data (Cairney et al, 1995; Cairney & Ruge, 1997). Tables and graphs were used to represent most of the questionnaire data. Extended responses from the questionnaires and the transcripts from the focus group interviews were analysed at the text level and a qualitative research tool ‘Nvivo’ facilitated this process.

The second phase of the analysis involved bringing the questionnaire and focus group data together. The focus group data helped to clarify the key findings in the questionnaire and allowed us to create a richer picture of participants’ experiences of learning about ‘language’ in school and about their views on teaching ‘knowledge about language’ in schools.

In the following section the findings from the study are discussed. It divides into two main parts. The first reports on the participants’ knowledge about language and the second discusses participants’ recollections and views on teaching and learning about language in schools.

What participants knew
As stated previously, participants were asked a range of questions relating to knowledge about sounds, parts of speech, sentence structure, genre and language variation. As discussed earlier, each section comprised three questions at increasing levels of complexity. A detailed discussion of each follows.

Phonological awareness
Most participants were able to identify the number of letters and syllables in a word, with little difference between the older and younger participants. However, only 12 out of the 39 participants could identify the discrete sounds that make up a word, suggesting that a majority of the participants lacked the phonological awareness required for teaching children about the relationship between letters and sounds.

Parts of speech
Participants were asked to identify the parts of speech of various words in the context of several written texts. Participants could identify nouns, verbs and adjectives when the words occurred in the word class in which one would most commonly find them, such as ‘milk’ (noun) and ‘egg’ (noun). However, only about a third of participants were able to identify a word’s part of speech where that word did not occur in its most ‘typical’ class (for example, where the word ‘spoon’, typically a noun, was used as a verb).

Beyond the terms of ‘noun’, ‘verb’ and ‘adjective’, participants showed less understanding of grammatical terminology. For example, although most participants were able to identify a verb in context, only half were able to identify a verb in the ‘simple past’. Only a third of participants were able to identify
a pronoun, four participants could identify modal verbs, two participants (both in the older pre-1980 cohort) correctly identified a prepositional phrase and one respondent (also in the older cohort) was able to identify an article.

Responses suggested that many participants drew predominantly on semantic understandings of grammatical concepts and that these understandings limited their ability to engage with the grammatical concepts in greater depth. For example, most participants were able to identify verbs in context that were clearly ‘doing’ words (‘add’, ‘recommend’, ‘develop’), but only five participants identified ‘is’ as a verb and two participants (again, both in the older cohort) identified a passive construction as a verb.

**Sentence structure**
Generally participants showed an implicit understanding of sentence structure by punctuating a short simple text. The majority of the participants also showed limited understanding of the concepts of 'subject' and 'object', although they tended to identify only the content words of the phrases and not the entire constituent structure. (For example in 'Some parents might storm the schools', most participants identified 'parents' as the subject of the sentence, rather than the entire phrase 'Some parents'.) Only two students (both in pre-1980 cohort) successfully identified the clauses in a complex sentence consisting of five clauses.

**Genres**
The majority of participants successfully identified simple examples of some common genres. Again, participants were mostly able to match generic features of texts with examples when the features were largely semantic in nature, such as ‘the sentence introduces the topic of the paragraph’. However, participants were more likely to show confusion in matching more abstract features with examples. For example, less than half of the participants were able to identify sentences that performed the functions in a paragraph of ‘exemplification’ and ‘classification’.

**Language variation**
In this section of the questionnaire, participants characterised speakers based on three utterances that would typically be associated with (respectively) a child, an Aboriginal speaker/rural Australian and a person from Scotland. Most participants identified the first utterance as typical of a child. However, participants mostly associated the non-standard forms of the typically Aboriginal speech more with adolescence. Many participants also characterised the Scottish speaker as 'old' or 'an older person'. In other words, it appeared that participants tended to associate non-standard forms of speech with peer/age groups rather than with regional, ethnic or class group.

When asked to give reasons for their choice of speaker identity, most participants included value judgements which would not be considered linguistically sound, such as 'laziness', 'being slack' or 'lack of education'.

In conclusion, some generalisations about students' level of language knowledge can be made from the responses to the questionnaire. Firstly, participants' knowledge of metalinguistic terms did not consistently seem to extend past the basic parts of speech of 'noun', 'verb' and 'adjective'.

Secondly, responses to the questionnaire showed a hierarchy of knowledge about traditional grammatical concepts. In demonstrating understanding of these concepts, participants operated reasonably well at the semantic level, for example, where they could easily identify a verb as a 'doing word', or a noun as a 'person, place or thing'. However, they showed less understanding where the grammatical concepts in question were less semantically predictable.

**Memories**
In the final section of the questionnaire participants reported on their experiences of learning grammar in primary and high school. They also gave their views on the importance of teaching grammar in schools.

Information provided by participants concerning their memories of learning grammar in primary and high school was limited although analysis of the data did reveal a number of similar and consistent themes throughout relating to context, content and pedagogy.

Participants’ memories of learning grammar in primary school were limited, although most recalled learning parts of speech such as nouns, verbs and adjectives. This appears to be consistent with data collected in the first part of the questionnaire where participants’ knowledge and understanding was limited to a narrow range of parts of speech. No reference was made to learning about different genres, although all participants had some knowledge in this area. According to the data these aspects of grammar
were taught largely through board work and work sheet activities. Rote teaching methods were frequently used and this usually occurred in a context separate from where the grammar might be used as the following data illustrate:

Rote learning. Learning spelling, grammar etc in the same way I learned times tables.
Doing worksheets on verbs, nouns. Like connect the work to what it is etc. Lots of repetition.
I learned about grammar through copying off the board, reading, comprehension activities.

Many of the participants suggested there was an expectation they 'knew' grammar when they entered high school. They referred to experiences of learning grammar in high school within the contexts of academic 'essay' writing and to a lesser extent 'creative' writing. The data suggest that correct grammar, punctuation and sentence structure was considered important when teachers marked their writing, as illustrated by the following comments:

There was an expectation that you had an understanding of the construction of sentences.
I remember getting taught through writing essays, comprehension and novel studies. This was putting together sentences, phrases and paragraphs. I think we had spelling tests at high-school.

Unlike the primary school data there were a number of references to learning connected with different genres. There was also an assumption that the learning in high school was of a higher order than that in the primary school. In the following example the data suggest that the teaching of parts of speech was confined to primary school learning and that learning in high school was confined to other more 'useful' aspects of language:

Paragraphs and sentence structure was always important and emphasised upon because of essay writing etc. However verbs, nouns etc were out of the picture as comprehension faded out and analysing text came in.
Then things like metaphors, similes, onomatopoeia became more so useful and taught.

A strong common theme occurring throughout responses related to the teaching of grammar in the primary and high school was that grammar tended to be taught in isolation and at a semantic level. Participants' recollections of learning about parts of speech, for example, were phrased in 'definitional' terms (what the grammatical concepts are) rather than in 'functional' terms (how the language works). This is exemplified in the following comment, where a participant describes activities aimed at helping them to learn what nouns, verbs and adjectives were.

Group oriented activities such as having to act out a verb or produce a noun or describe something to the class using adjectives.

This supports findings from the data relating to participants' knowledge and level of understanding about grammar investigated in the first part of the questionnaire, where participants could identify parts of speech when they appeared in a typical context but could not identify parts of speech when they served a different, less obvious function. Participants appeared to lack a metalanguage that enabled them to discuss or analyse how language works.

All of the participants felt it was important to teach grammar in both the primary and high school. Amongst other things they suggested that teachers needed to be equipped to teach grammar so they could effectively teach their students. They reported that knowledge of grammar was important for students to be able to communicate effectively, to learn and be successful at school. The data suggest that some participants believe that the teaching of grammar only relates to the learning of English. Further they spoke about the need for grammar to be 'correct' and for 'proper' English to be spoken. Some also suggested that the teaching of grammar was 'specialised' and that it was not the role of all teachers. Overwhelmingly participants' responses were characterised by a decontextualised approach to and prescriptive beliefs about teaching grammar.

Where to from here?
This study has highlighted a lack of knowledge about language in first year pre-service teachers. Many participants in this study could not answer any questions targeted at high-school level and above, which suggests they do not have the knowledge, skills and understandings to teach children effectively in schools.

Participants in this study found it difficult to analyse language because they were only able to articulate their understandings about language at a semantic level. They did not have a metalanguage that enabled them to discuss grammatical relationships or the relationship between form and meaning. Further, when
participants recalled their own experiences of learning about language they described very prescriptive and decontextualised experiences. Generally these experiences were described as occurring in a random and unstructured fashion throughout their schooling, although the accounts of participants from the pre-1980 cohort suggested that teaching was more explicit and systematic in this era. This suggests a relationship between the strategies used to teach knowledge about language and students' understandings.

The study also suggests that most of participants who undertook this questionnaire will benefit if their teacher education course includes some explicit teaching of a range of metalinguistic understandings. For example, many of the participants will need explicit teaching of the metalinguistic knowledge which underpins approaches to early literacy teaching, such as knowledge of the relationship between letters and the sounds of English.

Moreover, it appears from this study that many participants have highly prescriptive views about language forms, as evidenced by their tendency to label non-standard forms using terms such as 'lazy' or 'slack'. In their education studies, participants may therefore benefit from an explicit focus on a descriptive approach to talking about language, incorporating the active teaching of understandings about the role of different language varieties in the community.

Finally, as noted above, this study suggests that teaching about language through participants' schooling was fragmented and that concepts were not carried through from the primary into the secondary sectors. This in turn points to a need to work with the participants to develop a sense of scope and sequence in metalinguistic learning. Participants may benefit from a focus on ways in which metalinguistic skills and knowledge can be built up, consolidated and developed into an indispensable adult 'tool' in literacy practice – in both composition and comprehension of texts.

All of this highlights a need for further study in this area. In particular we need a better understanding of the relationship between approaches used to teach 'knowledge about language' and students' ability to apply, use and analyse this knowledge in meaningful ways.

This small study has identified a problem in one area of Australia. If the problem is more widespread throughout the country, then there is clearly a need to redress this nationally, both within schools and within teacher education courses, by examining practices for teaching language and literacy.

References

Born Or made?
Developing Personal Attributes Of Teachers

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Re-service teachers have expectations of the capacity of universities to prepare them for the task of teaching. Education authorities, schools and communities also have expectations and requirements of graduating teachers. While the modes of presentation and course content in relation to knowledge and skills are readily identifiable, the extended role of the teacher is more difficult to quantify and transmit. This paper investigates the roles that teachers fulfil and the way in which they are equipped for those roles through pre-service education, in-service activity and lifelong-learning experiences. Using existing literature, the experiences of practitioners, expectations of community and education authorities along with reflections of pre-service teachers, an attempt is made to focus on the acquisition of attributes considered appropriate for teachers in order to function effectively and develop roles in the classroom and the community. As such, the paper is concerned with personal qualities, personality attributes and interpersonal skills and the transmission of such attributes to pre-service teachers through courses, the interface of university with school and mentoring initiatives.

Introduction

Contrary to popular mythology, professional artists are made, not born. Though artistic techniques, especially in music, are often learned early, indoctrination into the culture of artists may come quite late (Kadushin, 1969).

This paper focuses on music teacher education. It appears that music teachers have to fulfil a number of complementary roles, with the central conflict being that many music education majors struggle with the nexus between their identity as musicians or performance teachers in training. Woodford (2002, p. 690) says researchers and writers describe music teachers as having multiple roles and responsibilities, including but not limited to performer, composer, conductor, critic, musicologist, mentor, facilitator, social activist, politician, music listener, music theorist, public intellectual, diplomat, travel agent, administrator, confidante, instructor, public speaker, moral agent, visionary and democratic leader.

In order to unpack these roles and endeavour to discover which of them are born attributes and which can be taught, the research reports on three main areas:

1. The expectation of pre-service teachers
2. The transition from university to school
3. The expectation of employing authorities

The final section of the paper addresses teacher education models and asks the question - who is responsible?

Pre-service teachers expectations

There is a considerable body of existing literature in that examines pre-service teacher attributes and expectations. Pajares (1992) contends that pre-service teachers will adhere to their existing, established beliefs unless they respect their teacher educators and are strongly challenged by new ideas that better explain their experiences. The values pre-service teachers bring to university (whether they are innate or shaped by school, home or community experiences) are problematic for teacher educators to change. If, as Madsen (2003) suggests, students are most influenced by the teacher's delivery, standing and approach, this represents a considerable challenge for the university context. Courses should therefore encompass the teaching of delivery skills as well as skills that deal subject-specific content. In the field of music education, Strouse (2003) further contends that the essential areas for music educators include rapport building, curriculum planning, recruitment, administration, and public relations.

In the Australian context, Harrison (2004, p. 204) suggests that there are a number of areas that pre-service and experienced teachers expected to be included in pre-service courses. In summary, these could
be categorised as content, pedagogical, practical, management and reflective skills, along motivational and communicative attributes.

**Transition from university to school**

The reflections of early-career teacher are relevant in this discussion, as they have immediate past knowledge of university training, juxtaposed with the reality of the classroom. Much of the recent research in this field has been undertaken by Conway (2002, 2004) who contends that loneliness, exhaustion, classroom management, administration, planning and curriculum, working with parents and communities, working with colleagues, and expectations of the field are areas of concern for beginning teachers. In looking at the roles outlined by Woodford (2002) above, there is little doubt of the authenticity of these remarks. Furthermore, Conway (2004) suggests that all teachers, beginning or experienced, are learning as much as they are teaching. This notion of lifelong learning in music education finds support in Harrison (2004). The role of mentoring and induction through the early-career phase teacher is significant particularly in classroom management, assessment, repertoire and planning.

Conway (2004) also found that many of the issues that she observed beginning teachers to be struggling with may have been worked out before the first year if they had been in a field placement for a longer period of time. In an extensive study into teacher reflection of practicum experiences conducted by Brophy (2002), two areas of teacher weakness and strength were identified: musicianship and pedagogy. Musicianship was defined to include all personal musical skills (in particular, voice and piano skills) and the student's ability to connect these skills to their teaching of music to children. Harrison (2003) reported similar findings in relation to singing teachers' practical and pedagogical skills. Pedagogy, in this instance, included matters relating to teaching skills: lesson planning, delivery and management. Practicum is aligned with microteaching in the sense that it is a university-based application of practical skills. Butler (2001) found that microteachings had a direct impact on students' thinking and skill development. Certainly, these students perceived the microteachings as a highly valuable experience, connecting them to the "real world" of teaching.

Recent Australian research contends that the knowledge and skills that related specifically to learning how to teach music and how to cope with the professional aspects of a music teacher's job was of most importance to early-career teachers (Ballantyne and Packer, 2004). Furthermore, pedagogical content knowledge and skills and professional knowledge and skills are seen as important to early-career music teachers and teachers in this phase would like to see them integrated through preparation courses (Ballantyne, 2004).

**The perspective of education authorities**

The role of professional learning and accreditation across all curriculum areas is becoming increasing apparent. In the United States, according to Bidner (2001), licensure of teachers is performance-based and measures the ability to deal with diversity in the classroom, develop students' creative and critical thinking skills, and infuse technology into the curriculum. The disposition (or attitude and ability to work with others) is also a considered a very important characteristic of a good teacher. The extent to which this can be taught poses an interesting conundrum for the teacher educator. Teachers are certainly shaped by their formal and informal interactions, but whether those without the disposition to teach can have this attribute developed is problematic and central to this research.

NASM (National Association of Schools of Music) says that the prospective music teacher in schools should have an ability and desire to remain current with developments in the art of music and in teaching, to make independent, in-depth evaluation of their relevance, and to use the results to improve musicianship and teaching skills.

Perhaps of greatest interest here is the desire to teach - can this be taught? In addition, among teaching competencies, NASM claims, prospective teachers should have knowledge of current methods resources and repertoire. Recent research in Australia by Temmermann (1997, 2004) and Ballantyne (2004) supports this approach. Australian music teachers are also fortunate to have recently developed ASME National Framework for Music Teaching standards (http://www.asme.edu.au/). In general terms, these standards are based on existing models in other disciplines and include references to the need for teachers who:

- know their students, their subject and how students learn
• plan for effective and creative learning, including a challenging and enjoyable learning environment
• assess and review student learning
• continue to learn and engage in reflective practice
• work collegially to improve the quality and effectiveness of music education
• recognize and respond to a range of different learning contexts
• demonstrate cultural respect
• adhere to a code of conduct
• embrace technology.

For teachers in Queensland, the recent review of the Board of Teacher Registration in which McMeniman (2004) recommends, in part, a mandatory commitment for teacher to be accountable for professional learning through formal processes. The Board of Teacher Registration (http://education.qld.gov.au) already provides a framework that assists teachers, schools and teacher educators in the formation of teachers. Central to the Board’s schema is the capacity to “structure flexible and innovative learning experiences for individuals and groups.”

How is the music teacher constructed and who takes responsibility?

It would therefore appear that these broad areas worthy of consideration in teacher education and professional learning about music:
• the acquisition of musical knowledge and skills
• the acquisition of pedagogical knowledge and skills
• the acquisition or development of personal attributes
• application of the above through professional practice.

The expectations of pre-service teachers, early career teacher, schools and education authorities as outlined above are gargantuan. The linking of professional training with ongoing professional learning is perhaps the most significant aspect of this, along with the enhancement of existing skills and attributes. The responsibility for the initial and ongoing training of teachers cannot and does not fall solely to the university sector but they can play a greater role. One way universities can help is to communicate regularly with high school teachers about students, student teachers and early-career teachers. We must also, according to Bergee and Domerest (2003, p. 20), begin to talk to our state (and federal) organizations about better scholarship support for music education. There are existent models to support the notion that a collaborative approach is required. As Mark (1998) puts it, the role of music teacher training is not to satisfy the expectations of highly specialised experts, but rather those of the pupils, students, teachers and the school and education authorities as representatives of a society which wants to see music as part of the school curriculum.

The most significant stakeholder in this process is the pupil. It is crucial, as Taebel (1994) contends, that teachers do not lose sight of what the ultimate questions should be: “what is good for our students, and are we giving them the best?” The cope of this research has not canvassed the reflections of students in schools and this is vital need in future research. What the students want and what they need could be two very different things and therefore the current research can form an important foundation for this proposed future direction to inform teacher education processes.

In referring to administrative challenges faced by teachers, Conway, et al. (2004) remarked that

I do not believe that an undergraduate course that is “out of a context” can address what teachers need to know. We cannot depend on school district, county, or state policies to provide music teachers with what they need to be successful.

One model, provided by The College Music Society in the United States, is an institute on “Music Teacher Education for This Century: A Working Institute for Change and Innovation in Our Profession” in which all participants will collaborate in examining issues facing music education.

Strategies could (and already do) include workshops presented by professional organisations, university short courses as well as degree programs. Many of these can focus on skill development. Furthermore programs focussing on such areas as classroom management, planning and curriculum, working with parents and communities, working with colleagues, and expectations of the field should be addressed in both teacher education and professional learning. What is now required is a concerted approach that
ensures all those involved in teacher education take responsibility for various aspects of teacher education. This does not have to mean complete separation of roles of universities, schools, authorities and others. On the contrary, it means that clear delineations and more adequate communications are required to guarantee that we are covering the essential needs of all the stakeholders, with consistency and lack of redundancy.

Furthermore, as Conway (2004) suggests, teachers are learning as much as they are teaching. Teachers should be encouraged to acknowledge this as a way of enhancing collaborative and innovative learning practices. The notion of lifelong learning in music education finds support in Harrison (2004) who traces the process from pre-womb to tomb:

Our lifelong music education journey begins in womb. The music choices and tastes of our parents are thrust upon us soon after conception and then, from our first utterance, playtime cries and banging of toys, we are engaged in making music. Through lullabies, through the mobiles hanging over our cots, through toys given by well-meaning relatives, our process of music education in the pre-compulsory years begin.

Harrison (2004) also looks at issues of disengagement from learning. This is as much an issue for teachers as for students. The notion of "playing for the pension" is a common one in musical circles and has some resonance when one visits staffrooms. An examination of course content, transmission, attributes, and training will not only assist in pre-service processes but in engaging the disengaged and ambivalent practicing teachers.

The role of mentoring and induction through the early-career phase teacher is surely the shared responsibility of the school and the university. Bell and Robinson (2004, p. 42) offer these suggestions to beginning teachers, mentors, cooperating teachers, college supervisors, and others:

There is a great resource at hand to help you negotiate obstacles: the university supervisor. As experienced teachers who have previously travelled this path, they can pave the way for a smoother experience. Most college music education professor's view working with student teachers as the most important part of the job.

The links that are made through professional practice and internships need to continue through the first few years in order to avoid disengagement and attrition. The role of the secondary music teacher is enormously significant, according to Bergee and Domerest (2003, p. 17)

High school music teachers were highly influential in students' decisions to become music teachers, with 41% of respondents citing them as the most influential and another 29% as the second most influential in their decision to pursue music teaching. According to one respondent, "the music educator at my former high school was a remarkable person and helped me and many others to develop a true love and appreciation of music."

Conclusion

A possible model for "making" the teacher needs to continually involve the various stakeholders to ensure lifelong learning practices are enacted in teacher education. A working model could be represented as a jigsaw puzzle in which teachers, communities, professional development, universities, school and others all play a part.

Are teachers born or made? Bergee and Domerest (2003, p. 18) found that 98% of respondents of teachers chose "love of music" as the main reason for choosing their career while Butler (2001) reflected that

Descriptions of effective teaching focused primarily on ideal traits or qualities that they believed an effective teacher would possess, as well as the kinds of activities in which teachers engage. The emphasis on teacher traits and actions suggests that participants viewed good teaching through the construct of a teacher persona.

As teacher educators, we would like to hope that we take the raw materials we have and, through some of the processes above shape them into teachers who continue the vocation to which we have been called.

References

Effective Teacher Attributes: Perceptions Of Early-Career And Pre-Service Music Teachers

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In the current climate of Australian teacher education, reviews of both music education and teacher education training are high on the political agenda. In addition there is a well-documented need to research the best ways to prepare music teachers (Asmus, 2000), particularly reflecting the needs of pre-service and early-career teachers (Yourn, 2000). No studies to date have been conducted comparing pre-service and early-career teachers’ perceptions of their needs in relation to knowledge and skills (teacher attributes). This paper examines the desirable attributes of effective teachers from the perspectives of pre-service and early-career music teachers and draws conclusions for the reconceptualisation of pre-service teacher education courses.

Introduction
Teacher education has been under significant review in Australia in recent years (Australian Council of Deans of Education, 2001; Grieshaber et al., 2000; Ramsey, 2000). In announcing the Inquiry into Teacher Training, the Federal education minister set an agenda that will:

- examine very carefully the philosophical underpinnings of teacher training in Australia, the extent to which our teachers are being supported in their training when they attend schools for practicum, the way in which schools are actually delivering mentoring and support to teachers that are in training. Overall the committee will be inquiring directly into the way in which teachers are being prepared in terms of not just specific skills but the philosophies and scientific rigour of teacher training in Australia (Nelson, 2005).

In addition, as a result of the McMeniman (2004) report, universities in Queensland are being asked to restructure graduate programs in education to fit a one-year model. Furthermore, there will be implications from the National Review of School Music (2004) that asked for extensive responses regarding the adequacy of teacher preparation. These three recent initiatives, combined with the processes of re-conceptualisation and reformation of teacher education brought about by research at the turn of the century, increase the significance of an inquiry into the attributes of effective music teachers. For the purposes of this study, teacher attributes are defined as the knowledge and skills necessary to be effective teachers.

Research by Hargreaves, Welch, Purves, and Marshall (2003b) indicates that the professional identities of music teachers are consolidated within the pre-service music course (changing very little once they reach their first teaching post). Specifically in music, Hargreaves and Marshall (2003a) found that as pre-service teachers become early-career teachers, perceptions of the required skills for successful music teaching changed with teachers increasingly emphasising communication and interpersonal rather than musical performance skills. Other researchers have also confirmed the desire for teachers to possess teaching and personal skills (Hamann, Baker, McAllister, & Bauer, 2000; Teachout, 1997; Harrison, 2003, 2004).

Previous research has shown that pre-service and early-career music teachers feel that their preparation was lacking in several areas (Ballantyne & Packer, 2004; Marks, 1998; Brophy, 2002; Russell-Bowie, 2004). An examination of course content undertaken by Temmerman (1997) argues that there are disparities and inconsistencies in pre-service teacher education courses. Such disparities and inconsistencies have the capacity to adversely affect early-career teachers’ perception of their role, resulting in early departure from the profession (Ballantyne, 2004) and pre-service teachers’ preparedness for the workforce. Through examining pre-service and early-career music teachers’ perceptions on their professional identity through...
research of this nature, it is possible to redesign teacher education programs so that early-career teachers continue to develop as successful teachers.

Other studies (Ballantyne & Packer, 2004) have explored the effectiveness of four aspects of pre-service courses – the pedagogical content knowledge and skills (knowledge and skills pertaining specifically to the teaching of music in the classroom), non-pedagogical professional knowledge and skills (non-pedagogical or musical knowledge and skills required of music teachers), music knowledge and skills, and general pedagogical knowledge and skills (non-discipline specific pedagogical knowledge and skills). The perceived effectiveness of these four areas varied. In terms of improving teacher education courses, it was found that the knowledge and skills that related specifically to learning how to teach music and how to cope with the professional aspects of a music teacher's job was of most importance to early-career teachers.

In a similar vein, Harrison's (2004) research indicates that there were a number of areas of skills, knowledge and attributes that pre-service and experienced teachers described as being important. These included:

- Knowledge of content, pedagogy, repertoire and curriculum documents
- Management skills incorporating organisation, behaviour management, time management and human resource management
- Skills in managing technology
- Possession of a range of teaching styles
- Reflective skills for self evaluation and improvement
- Practical music skills in a variety of genres and including sight-reading, singing, conducting, composition and arrangement.
- Capacity to motivate, inspire and encourage
- Connection with students as people (p. 204).

This paper builds on the knowledge and skills deemed important by early-career teachers (Ballantyne, 2004) and the development of attributes as identified by Harrison (2004) within the context of teacher education courses.

**Context for the research**

This research was undertaken in Queensland, Australia. Teachers in Queensland attend university for a minimum of four years. Most students training to become music teachers complete undergraduate qualifications in music, and combine this with degrees in Education. The three universities that train most secondary music teachers in Queensland are the Queensland University of Technology (QUT), the University of Queensland (UQ) and Griffith University (GU). Accreditation of teacher education programs is regulated by the Board of Teacher Registration, which results in significant similarities in the content and design of the pre-service programs at the universities in this study.

**Method**

This paper reports on pre-service and early-career music teachers' experiences of their courses. Data was gathered through interviews (Stage 1) and questionnaires (Stage 2). These methods were similar in that they both focused on eliciting perceptions regarding important categories of knowledge skills required for effective teaching. The methodology for each stage is described below.

**Stage 1: Interviews**

This stage of the research involved interviews with 14 pre-service teachers at Griffith University (GU). Interview respondents were selected for their willingness to participate in interviews and to represent varied learning experiences. Approximately 50% of the group were undergraduates with at least 2 years of music-specific training. The remaining participants were graduate-entry education students with at least three years of undergraduate qualifications in music. No participant had taken practicum experience at the time the interviews were undertaken but small proportion had limited experience of studio teaching of music.

The interviews were designed to explore the perceptions of pre-service secondary music teachers regarding the knowledge and skills they require to function effectively in the classroom and their expectations of their pre-service teacher education program in delivering and developing these. It was also anticipated that discussion of these issues prior to a practicum experience would enhance the professional experience component of the course.
The interview questions utilized semi-structured questioning, based on Patton's (2002) interview guide approach. In practice, this meant that all interviewees were asked identical questions, but additional questions were also used to elaborate, probe and expand on particular topics where necessary. This flexibility ensured that important and salient topics were not excluded and also provided structure to ensure comparability of responses. The stimulus questions relevant to this paper were:

1. What do you hope to gain out of your pre-service teacher education course?
2. What skills and attributes do you believe it is important for music teachers to possess?

Stage 2: Questionnaires

As part of a larger study, a questionnaire was designed to explore the perceptions of early-career secondary music teachers regarding the knowledge and skills they require to function effectively in the classroom and the effectiveness of their pre-service teacher education program in developing these.

This paper reports findings from a subset of four questions within this instrument, focusing specifically on participants' qualitative ratings of:

(a) the most useful aspects of their pre-service preparation;
(b) the ways that these aspects had been useful;
(c) the least useful aspects of their pre-service course; and
(d) the ways that these aspects had not been useful.

The questionnaire was distributed to 136 early-career secondary classroom music teachers who undertook their pre-service education in Queensland and had graduated in the years 1998 to mid 2002 from Queensland University of Technology (QUT), the University of Queensland (UQ) and Griffith University (GU). It is estimated that this list includes more than 90% of the early-career music teachers currently teaching in Queensland (17% from GU, 44% from QUT, 39% from UQ, 75% female). Completed responses were returned by 76 people (response rate of 56%).

Respondents to the questionnaire had similar demographics to those expected from early-career music teachers teaching in Queensland, viz., approximately 17% from GU, 40% from QUT, 40% from UQ and 78% female. In addition, the spread of experience of respondents was fairly even with 22.4% having taught for one year, 34.2% having taught for two years, 21.1% having taught for three years, and 22.4% having taught for four years.

Data analysis

The data from both studies was subjected to content analysis (Cavana, Delahaye, & Sekaran, 2001) to identify themes, concepts and meanings (Burns, 2000). It was the purpose of this study to find similarities and differences between the themes emerging of pre-service and early-career music teachers' perceptions of the desirable attributes of effective music teachers.

Results and discussion

Stage 1

This stage of the research focussed on what students in 2005 expected to gain from their course and what they perceived to be the important knowledge, skills and attributes of effective music teachers. In response to the questions "What do you hope to gain out of your pre-service teacher education course?" and "What skills and attributes do you believe it is important for music teachers to possess?" included:

- teaching strategies – how to teach knowledge and skills
- knowledge of preparation and planning techniques
- practical knowledge of which techniques will work in the classroom and the opportunity to practice these techniques
- organisation skills
- assessment strategies
- capacity to develop appropriate resources.

Analysis and further discussion revealed that pedagogical knowledge and skills (i.e. the knowledge and skills required to teach concepts) were considered by most participants to be the most important in the pre-service program. The understanding of which knowledge and skills to choose was also considered
useful. To a lesser extent, participants reflected on the need to develop resources, organisation skills and assessment strategies. These were considered important aspects of the pre-service teacher education program, but with the exception of assessment strategies, these elements were identified as not necessarily being provided as part of the formal university program.

A smaller but still significant number of students suggested that the course should focus on the area of musical knowledge and skills such as:

- the need to develop aural skills
- the capacity to understand and represent the cultural and social location of music in Australian society
- the opportunity to broaden musical skills and knowledge
- the ability to apply musical knowledge to the practical environment.

Of these, the most significant response was in relation to broadening musical skills and knowledge, followed by the understanding and transmission of cultural and social aspects of music. Bearing in mind that all these participants had undertaken at least 2 years of training in aural musicianship, practical musicianship and music history, this is a relevant finding and raises questions as to the location of music education training within universities. The extent to which music education programs are housed within music faculties or education faculties is the subject of continuing investigation by the researchers. Furthermore, the placement of music knowledge and skills within pre-service teacher education needs further investigation, as it is currently located primarily at the beginning of the education degree or purely within the undergraduate music program. Given the need for the application of pedagogical and musical knowledge and skills as clearly being of importance in the perceptions of pre-service teachers, approaching practicum as an opportunity to “practice” knowledge micro-teaching and practicum experiences is considered highly relevant.

In order to begin to provide some longitudinal data for future reflection and analysis, a comparison of the results from the Harrison (2004) with the responses from 2005 was undertaken. It possible to draw the following conclusions in relation to skills, knowledge and attributes perceived to be significant by pre-service teachers in the 2004 and 2005 cohorts.

- knowledge of content, pedagogy, repertoire and curriculum documents
- possession of a range of teaching styles to cope with diversity
- practical music skills in a broad range of genres and including strong musicianship skills
- organisational skills
- capacity to develop confidence, motivational skills and attributes
- connection with students as people
- capacity to develop appropriate physical, content-specific and human resources.

Further research is required in this aspect of the study to ascertain the extent to which the findings of this research can be supported longitudinally in the development of teacher education programs. It is anticipated that the 2004 and 2005 cohorts of pre-service teachers (all of whom are yet to commence full-time employment) will be tracked into their first few years of teaching to provide further data as to whether their perceptions change as they enter the profession. In the interim, the results from stage 2 (below) provide an insight into the perceptions of early-career teachers.

**Stage 2**

The first question reported on in this stage of the research was an open-ended short response item that asked early-career respondents to identify three aspects of their pre-service course that had been the most useful to them since they had started teaching.

Analysis revealed that the practicum was by far the most useful aspect of the pre-service program. This is the area of the pre-service program where students are able to apply the knowledge and skills learnt in university directly to the music classroom. There is also a strong emphasis on the usefulness of knowledge and skills associated with teaching music, with repertoire and resource development, planning lessons and work plans, music teaching techniques and aural perception skills being rated as very important. It is interesting that all except two categories of the top seven mentioned are explicitly covered in music curriculum units. These two categories are behaviour management techniques and knowledge of learners...
and their characteristics. As such, from the analysis of this question it seems that the areas mentioned reflect a desire for an applied course that is grounded within the context of the secondary music classroom.

**Table 1**

Frequencies of areas mentioned as being the most useful to early-career teachers

<table>
<thead>
<tr>
<th>CATEGORY DESCRIPTOR</th>
<th>% OF RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practicum</td>
<td>43.4%</td>
</tr>
<tr>
<td>Behaviour management</td>
<td>23.7%</td>
</tr>
<tr>
<td>Repertoire and resource development</td>
<td>22.4%</td>
</tr>
<tr>
<td>Planning lessons and work plans</td>
<td>21.1%</td>
</tr>
<tr>
<td>Knowledge of learners and their characteristics</td>
<td>13.2%</td>
</tr>
<tr>
<td>Music teaching techniques</td>
<td>11.8%</td>
</tr>
<tr>
<td>Networking</td>
<td>11.8%</td>
</tr>
<tr>
<td>Aural perceptions skills</td>
<td>10.5%</td>
</tr>
<tr>
<td>Skills on classroom instruments</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

Early-career music teachers’ answers to the question – "In what ways have [the things you found to be useful] been useful to you?" - reveal that developing new and varied strategies, resources and repertoire for teaching are viewed as important (see Table 2). Respondents felt that this should be combined with ‘hands-on’ experience (in the classroom).

**Table 2**

Frequencies of responses to the question "In what ways have [the things you found to be useful] been useful to you?"

<table>
<thead>
<tr>
<th>CATEGORY DESCRIPTOR</th>
<th>% OF RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing new and varied strategies, resources and repertoire for teaching</td>
<td>38.2%</td>
</tr>
<tr>
<td>‘Hands-on’ experience</td>
<td>28.9%</td>
</tr>
<tr>
<td>Help with classroom and behaviour management</td>
<td>13.2%</td>
</tr>
<tr>
<td>Confidence in content knowledge/skills</td>
<td>13.2%</td>
</tr>
<tr>
<td>Knowing how to teach</td>
<td>11.8%</td>
</tr>
<tr>
<td>Ability to adapt to the teaching environment</td>
<td>11.8%</td>
</tr>
<tr>
<td>ability to plan/organise performance and extra-curricular events</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

As well as being ‘hands-on’, early-career music teachers mentioned the need for the pre-service course to help them develop new and varied teaching strategies, resources and repertoire for teaching, enabling them to know how to teach. Teachers also feel the need to develop the skills and knowledge to be able to adapt to the teaching environment as well as the skills to plan and organise performance and extra-curricular events. The practicum is identified as being of particular importance in terms of developing ‘hands-on’ knowledge and skills, as it enables pre-service music teachers to develop ‘relevant’ skills and knowledge pertaining to classroom and behaviour management and the music knowledge and skills so essential to successful classroom practice.

The areas of the pre-service course that were viewed as least useful to early-career music teachers were those that dealt with generic teaching skills and knowledge. Interestingly, a large percentage of respondents cited knowledge of learners and their characteristics to be an area that was least useful to them, although it was also viewed as being the most useful area (by other respondents). In this context, however, it was commonly referred to in the context of specific subjects that dealt with this, indicating that although respondents can see the purpose of this aspect of the course, it is not being dealt with as they would like (see Table 3).
Table 3
Frequencies of categories mentioned as being not useful to early-career teachers

<table>
<thead>
<tr>
<th>CATEGORY DESCRIPTOR</th>
<th>% OF RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic teaching skills/knowledge</td>
<td>32.9%</td>
</tr>
<tr>
<td>Knowledge of learners and their characteristics</td>
<td>20.5%</td>
</tr>
<tr>
<td>Ability to plan for effective learning</td>
<td>11.0%</td>
</tr>
<tr>
<td>Knowledge of educational purposes and values, and their philosophical and historical grounds</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

Responses to the question in what ways have [the things you raised] been not useful to you since you started teaching? - did not raise any new issues and served to confirm that early-career teachers view subjects where theory is not linked to real life and teaching practice as least useful to their needs.

The consistencies of responses to questions (which were all qualitative, and placed at the beginning of the questionnaire) suggest that early-career teachers have a clear idea about what is important to them in an effective music teacher education course. It is important to these teachers that they have a course which prepares them for the realities of their future career by:

- providing opportunities to develop the applied skills and knowledge to teach in the secondary music classroom; and
- cope with the extra responsibilities such as extra-curricular commitments expected in their career.

The perceptions of both pre-service and early-career teachers are represented in Table 4. The purpose of presenting results in this fashion is to clearly extrapolate similarities and differences between the two groups of participants for the purposes of further analysis and discussion below.

Table 4
Comparison and combination of pre-service and early-career teachers' perceptions

<table>
<thead>
<tr>
<th>EARLY-CAREER TEACHERS' CATEGORIES</th>
<th>PRE-SERVICE TEACHERS' CATEGORIES</th>
<th>COMBINED CATEGORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing how to teach</td>
<td>How to teach knowledge and skills; The ability to apply musical knowledge to practice</td>
<td>Pedagogical content skills and knowledge</td>
</tr>
<tr>
<td>Music teaching techniques</td>
<td>Knowledge of preparation and planning techniques</td>
<td>Planning skills and knowledge</td>
</tr>
<tr>
<td>Planning lessons and work plans</td>
<td>Practical knowledge of which techniques will; the opportunity to practice these techniques</td>
<td>Contextual knowledge and skills</td>
</tr>
<tr>
<td>Practicum</td>
<td>Organisation skills</td>
<td>Management knowledge and skills</td>
</tr>
<tr>
<td>'hands-on' experience</td>
<td>Capacity to develop appropriate resources</td>
<td>Repertoire and resource development</td>
</tr>
<tr>
<td>Classroom and behaviour management; Ability to plan/organise performance and extra-curricular events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repertoire and resource development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing new and varied strategies, resources and repertoire for teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aural perceptions skills; confidence in content knowledge/skills</td>
<td>Develop aural skills; broaden musical skills and knowledge</td>
<td>Musical skills and knowledge</td>
</tr>
<tr>
<td>Capacity to adapt to the teaching environment</td>
<td>Understanding and representing the cultural and social location of music in Australian society</td>
<td></td>
</tr>
<tr>
<td>Networking</td>
<td>Assessment strategies</td>
<td></td>
</tr>
<tr>
<td>Knowledge of learners and their characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills on classroom instruments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion
The results indicate that pre-service and early-career teachers share similar beliefs about the important aspects of pre-service teacher education courses. The similarities in responses indicate a consistent perception of the work of music teachers and reveals that discipline specialisation is a significant aspect of effective music teacher attributes. In particular the categories of pedagogical content knowledge and skills, contextual knowledge and skills, repertoire and resource development, musical knowledge and skills reflect the importance of specialisation.

The remaining categories (planning knowledge and skills and management knowledge and skills) imply some reference to the specific context of music teachers. Within the category of management knowledge and skills, early-career teachers point to the importance of planning and organising performance and extra-curricular events. This consistent with the findings of Ballantyne (2001) and Wheeley (2004) who argue that music teachers in Queensland secondary schools experience difficulties associated with the expectations of extra-curricular programs.

Within the category of planning knowledge and skills, early-career teachers list planning lessons and work plans as useful - again indicating a subject specific focus to their perceptions of important skills and knowledge for music teachers. This same emphasis on discipline specialisation was not evident in the responses from pre-service teachers, which was surprising, given that early-career music teachers frequently teach in areas other than music and that many pre-service teachers were fresh from undergraduate music degrees.

Categories mentioned by only pre-service or early-career teachers (not both) include assessment strategies, the capacity to understand and represent the cultural and social location of music in Australian society, the ability to adapt to the teaching environment, networking, knowledge of learners and their characteristics, and skills on classroom instruments. Pre-service teachers focussed on assessment strategies and the capacity to understand and represent the cultural and social location of music in Australian society. This could be related to the content covered in curriculum subjects immediately prior to the interviews or that the senior music syllabus is very assessment oriented, and may cause consternation among 1st year tertiary students. More research into these categories is necessary to substantiate these hypotheses.

Early-career teachers focussed on the ability to adapt to the teaching environment, networking, knowledge of learners and their characteristics, and skills on classroom instruments. The categories dealing with the ability to adapt to the teaching environment and networking may reflect early-career teachers’ socialisation experiences. Their emphasis of developing skills on classroom instruments suggests that early-career music teachers view useful skills to be related to their teaching specialisation. The category knowledge of learners and their characteristics, may suggest that their perception of useful knowledge and skills is not entirely discipline specific, and that early-career music teachers see the value in the psychology of learning, whereas this category did not emerge from the interviews with pre-service teachers.

Conclusion
There appears to be a high degree of similarity between the responses of the pre-service teachers and the early career teachers. While not necessarily articulated in the same terms, both groups considered providing opportunities to develop the applied skills and knowledge to teach in the secondary music classroom to be significant in teacher preparation courses.

The early-career music teachers (perhaps due to their experience in the classroom) felt that teacher education courses should enable music teachers to cope with the extra responsibilities such as extra-curricular commitments expected in their workplace. This was evidenced through the mention of the need to develop the ability to plan/ organise performance and extra-curricular events. The extent to which pre-service teachers embrace this need after their practicum and beginning experiences as teachers will be worthy of observation and documentation.

Given that the research design was slightly different for stage 1 and stage 2, it is difficult to draw extensive conclusions for application across a range of contexts. This research has however, begun the template for pre-service teacher education based on the perspectives of two significant stakeholder groups. Further research with pre-service teachers, early-career teachers and experienced teachers is required to further validate the outcomes of this project. In addition, the role of community, home, schools and universities needs to be taken into account in enhancing these qualities and attributes.

For the purpose of this study, early-career teachers are those teachers in their first four years of teaching.
References


Assessing Final-Year Preservice Teachers' Preparedness For Teaching Art Education In NSW Primary Schools

Sue Hudson & Peter Hudson
Queensland University of Technology

The teaching of art education in primary schools occurs in less than ideal conditions and may be avoided by generalist primary teachers. Eighty-seven final-year preservice teachers were surveyed on their preparedness for teaching primary art education at the conclusion of their Bachelor of Education program. The 39 survey items were derived from the New South Wales' Creative Arts K-6 Syllabus across four stage levels (i.e., early stage 1, stage 1, stage 2, and stage 3), and data were subjected to exploratory factory analysis, which indicated acceptable Cronbach alpha scores (i.e., .90, .89, .89, .90, respectively). Percentages and mean scale scores suggested that these final-year preservice teachers believed they were generally prepared to teach art education in primary schools as a result of a preservice teacher education visual arts unit. Nevertheless, more than 10% of preservice teachers indicated they could not agree or strongly agree that they could provide 20 of the 39 teaching practices advocated by the syllabus and 20% indicated this for 7 of the 39 teaching practices. Posttest surveys linked to a state syllabus may assist in assessing preservice teachers' preparedness for teaching art education and may provide valuable information for further development of tertiary education coursework.

Teaching art education is part of an education system's requirements (e.g., Board of Studies, 2000), yet competing curriculum demands and the quality of teacher preparation may affect the implementation of art education in the primary school. "Many elementary generalists feel that if they can't draw, they can't teach art. Instead, they explore numerous materials, or one material in numerous ways" (Duncum, 1999, p. 33). Duncum reports that there are few long-term gains regardless of the quality of teacher education and argues that art educators need to work with the conditions in which general primary teachers operate. He further claims that primary teachers and preservice teachers need to learn effective teaching strategies to cope with general primary teaching conditions.

Teaching strategies will vary according to the classroom context and the particular content to be taught. More importantly, art educators (e.g., Duncum, 1999; Eisner, 2001) agree that teachers need to select teaching strategies that target students' needs. In addition, one art teaching strategy may be used in combination with other strategies. For example, the inductive strategy, which involves "a predetermined sequence that shifts from a basic description to sophisticated evaluation" (Duncum, 1999, p. 20) may evolve from or be used in coordination with a verbal reflective strategy. Undoubtedly, primary teachers need to develop teaching strategies that suit specific circumstances within a quality art education program, and a teacher facilitating an art education program will need to employ a combination of teaching strategies.

Preservice teachers need to experience a broad range of art education practices that "will help preservice teachers to examine their decisions about art education in conjunction with the values about subject matter knowledge and practical applications expressed in the field" (Grauer, 1999, p. 22). They need a wide view of culture, as "teachers experienced in only one culture are ill-prepared for teaching in multicultural classrooms" (McFee, 1995, p. 190). However, it is the practical application of art teaching where preservice teachers' values and beliefs on effective practices can be formed. It is in the classroom that teachers and students become co-participants in the formation of art knowledge and skills with effective teaching as the key to successful learning. Yet preservice teachers need to have the content knowledge and pedagogical knowledge before entering the classroom.

Obviously, the art teacher is the most important figure for the delivery of art instruction in the school. Although Kowalchuk (2000, p. 18) states, "the student teaching experience is often considered to be the final phase of art teachers' preservice preparation," professional experiences are generally an integration of all subjects at the primary school level. Art educators who guide preservice teachers' practices can aid in developing concepts about effective art education in the primary school. Most importantly, the role of the art educator is to inspire preservice teachers to teach art, to consider at as a rewarding, life-long process,
and to formulate concepts on effective art teaching (Kowalchuk, 2000). Tertiary education programs need to provide preservice teachers with art education units that focus on “instructional strategies that connect to students’ interests and lives outside of the art classroom” (Kowalchuk, 2000, p. 23).

Even though the teaching of art occurs in less than ideal conditions there is a trend towards linking the arts to other key learning areas, particularly as art education is considered a frill subject and, consequently, can be given little consideration. Leshnoff (1999, pp. 11–12) reports that,

Analysis of the data reveals that a significant number of teachers have 20 minutes or less of daily scheduled preparation time (13.396), do not have an art room (8%), teach more than 6 classes each day (18.50), teach 30 or more students at a time (7%), have a yearly budget of $500 or less (21.1%) work with classroom teachers who are not involved in the art lesson at (37%), and work with administrators who are classified as totally non-supportive (8%).

Probably one of the strongest platforms for art education is the integration of art into other subject areas, which can be noted in teachers and preservice teachers' practices (e.g., Hudson & Hudson, 2001; Richards & Gipe, 2000). Even though arts appears undervalued, art education is not only supportive of other curriculum areas but can provide intuitive, creative, descriptive, and purposeful insights for communicating concepts (Armstine, 1995; Collins, 1995; Efland, 1995; Eisner, 1991; Harste, 1994; Welch & Greene, 1995).

What preservice teachers believe about art and its value may affect whether it is taught or not (e.g., see Efland, 1995). Just as positive experiences may instil self-confidence (Bandura, 1997), negative experiences may have individuals believe they are incapable or unconfident in specific tasks (e.g., Cameron, Mills, & Heinzen, 1995), and this includes art education (Luehrman, 2002). Hence, this study aims to determine preservice teachers' preparedness for teaching art education in primary schools at the conclusion of their four-year Bachelor of Education degree. In particular, the Creative Arts K-6 Syllabus (Board of Studies, 2000) was used to guide the construction of a survey instrument to assess preservice teachers' preparedness for teaching art education in schools associated with this syllabus.

Data collection and analysis
A posttest only survey was administered to 87 final-year preservice teachers (representing 84% of the total cohort at one university) at the conclusion of their Bachelor of Education program to determine their preparedness for teaching art education in primary schools. The art education component of the Creative Arts K-6 Syllabus (Board of Studies, 2000) provided the basis for constructing the survey, which was organised across four stages of development for primary students (i.e., early stage 1 [ES1], stage 1 [S1], stage 2 [S2], and stage 3[S3]). Data from this survey were subjected to an Exploratory Factor Analysis (EFA; Hair, Anderson, Tatham, & Black, 1995; Kline, 1998) to assess the unidimensionality of these stages, which underlie the responses to the survey. Cronbach alpha scale greater than .70 was considered acceptable for the internal reliability associated with each factor (Hair et al., 1995).

The 39 survey items had a five-part Likert scale, namely, "strongly disagree", "disagree", "uncertain", "agree", and "strongly agree". Scoring was accomplished by assigning a score of one to items receiving a "strongly disagree" response, a score of two for "disagree" and so on through the five response categories. Multiple indicators from the syllabus were used to reflect the stages of development. These indicators formed items on the survey instrument (Appendix 1), which were used to assess the preservice teachers' preparedness for teaching art education in primary schools. To further substantiate the instrument's validity, two primary art teacher educators examined the items on the proposed survey.

Descriptive statistics were derived using SPSS12. Survey responses with missing or improbable values were deleted (Hittleman & Simon, 2002). Data analysis included: frequencies of each survey item linked to associated factors (stages), mean scores (M), and standard deviations (SD, see Hittleman & Simon, 2002). Analysing individual items (i.e., with percentages, M, SD, and t-tests) aimed to provide further insight into preservice teachers' preparedness to teach art within each of these stage levels (i.e., ES1, S1, S2, and S3).

Results and discussion
The survey was distributed to 96 final-year preservice teachers at one Australian university. The 87 completed responses (68 female; 19 male) represented an 84% response rate for the total cohort of final-year preservice teachers at this university. The demographics for this study were provided from the preservice teachers' responses on the first section of this survey (Appendix 1). The following are key descriptors of the sample (n=87). Although 46% of these preservice teachers were less than 22 years of age and 32% were between 22 and 29 years of age, there were 22% who were older than 30 years of age.
Seventeen percent of the preservice teachers completed art education units in years 11 and 12 at high school. Other than 6% who had only completed one teaching methodology unit in art education, 94% had completed two or more units. In addition, 98% indicated that their three or more practicum experiences influenced their learning to teach art education and 82% indicated that other tertiary units influenced their learning to teach art education.

Mean scale scores on each of the four stages indicated general agreement that these 87 final-year preservice teachers were prepared for teaching primary art education (i.e., ES1=4.22, S1=4.16, S2=4.09, S3=4.15; Table 1). The low standard deviation for each of the four stages indicated little variation in the responses assigned to the mean scale scores. Hence, most of the 87 preservice teachers believed they were adequately prepared to teach art education in primary schools. Cronbach alpha scales of internal consistency were considered acceptable (i.e., ES1=.90, S1=.89, S2=.89, S3=.90; Table 1). Analysis of individual items associated with the respective stages provided further insight into these final-year preservice teachers’ preparedness for teaching art education.

### Table 1
Mean scale scores and Cronbach alphas for each of the four stages (n=87)

<table>
<thead>
<tr>
<th>STAGE LEVEL</th>
<th>MEAN SCALE SCORE</th>
<th>SD</th>
<th>CRONBACH ALPHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early stage 1 (ES1)</td>
<td>4.22</td>
<td>0.47</td>
<td>.90</td>
</tr>
<tr>
<td>Stage 1 (S1)</td>
<td>4.16</td>
<td>0.50</td>
<td>.89</td>
</tr>
<tr>
<td>Stage 2 (S2)</td>
<td>4.09</td>
<td>0.50</td>
<td>.89</td>
</tr>
<tr>
<td>Stage 3 (S3)</td>
<td>4.15</td>
<td>0.44</td>
<td>.90</td>
</tr>
</tbody>
</table>

Most of the preservice teachers indicated preparedness to teach art education at the early stage 1 level (Table 2).

### Table 2
Statistics on preservice teachers’ confidence to teach early stage one (n=87)

<table>
<thead>
<tr>
<th>TEACHING PRACTICE</th>
<th>%*</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss art and artists</td>
<td>85</td>
<td>4.14</td>
<td>0.77</td>
</tr>
<tr>
<td>2. Provide opportunities to meet and talk with artists</td>
<td>56</td>
<td>3.59</td>
<td>0.77</td>
</tr>
<tr>
<td>3. Discuss artworks and their properties</td>
<td>94</td>
<td>4.29</td>
<td>0.61</td>
</tr>
<tr>
<td>4. Discuss the ways in which the world is represented in artworks</td>
<td>90</td>
<td>4.16</td>
<td>0.70</td>
</tr>
<tr>
<td>5. Provide opportunities for making artworks</td>
<td>100</td>
<td>4.56</td>
<td>0.50</td>
</tr>
<tr>
<td>6. Provide opportunities to explore different media, tools and techniques</td>
<td>98</td>
<td>4.49</td>
<td>0.59</td>
</tr>
<tr>
<td>7. Demonstrate various visual effects</td>
<td>90</td>
<td>4.19</td>
<td>0.64</td>
</tr>
<tr>
<td>8. Assist students to experiment with different effects and techniques</td>
<td>92</td>
<td>4.18</td>
<td>0.56</td>
</tr>
<tr>
<td>9. Discuss who an audience may be and consider where audiences view art</td>
<td>89</td>
<td>4.17</td>
<td>0.65</td>
</tr>
<tr>
<td>10. Provide opportunities for students to talk about different artworks</td>
<td>98</td>
<td>4.42</td>
<td>0.58</td>
</tr>
</tbody>
</table>

* %=Percentage of final-year preservice teachers who either "agreed" or "strongly agreed" they were confident in facilitating that specific teaching practice.

Surprisingly, 100% of these final-year preservice teachers indicated a preparedness to provide opportunities for students to make artworks. Ninety percent or more agreed or strongly agreed that they could discuss artworks and their properties, discuss the ways in which the world is represented in artworks, provide opportunities to explore different media, tools and techniques, demonstrate various visual effects, assist students to experiment with different effects and techniques, and provide opportunities for students to talk about different artworks (Table 2). Eighty-nine percent claimed they could discuss who an audience may be and where audiences view art, and 85% could discuss art and artists with their students. Of concern were the 56% who indicated they could provide opportunities to meet and talk with artists. However, if these preservice teachers considered possible employment locations, such as remote country areas, then opportunities to meet and talk with artists may prove to be difficult to organise.

Nearly all these preservice teachers (n=87) believed that they could provide opportunities for students to talk and write about their artworks (99%) and most believed they could question students about what the students do in their artmaking (93%). Mean scores indicated agreement with the teaching practices
associated with a stage one level, 24% could not agree or strongly agree that they could extend the students' understanding of the concept of the artist (Table 3). In addition, more than 10% of these preservice teachers believed that they were uncertain, disagreed or strongly disagreed they could provide six of the eight practices listed in Table 3 (items 11, 12, 14–17). Hence, even though percentages are high, there will be a significant number of preservice teachers who are not prepared for teaching these aspects of arts education in the primary school at the S1 level.

Table 3
Statistics on preservice teachers' confidence to teach stage one (n=87)

<table>
<thead>
<tr>
<th>TEACHING PRACTICE</th>
<th>%*</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Extend the students' understanding of the concept of the artist</td>
<td>76</td>
<td>4.00</td>
<td>0.70</td>
</tr>
<tr>
<td>12. Discuss how artists make artworks for different reasons</td>
<td>85</td>
<td>4.09</td>
<td>0.66</td>
</tr>
<tr>
<td>13. Question students about what they do in their artmaking</td>
<td>93</td>
<td>4.23</td>
<td>0.56</td>
</tr>
<tr>
<td>14. Extend students' opportunities with different media, tools and techniques</td>
<td>89</td>
<td>4.14</td>
<td>0.67</td>
</tr>
<tr>
<td>15. Use examples of artworks and discuss abstract representations</td>
<td>87</td>
<td>4.17</td>
<td>0.75</td>
</tr>
<tr>
<td>16. Provide opportunities to observe characteristics through art</td>
<td>89</td>
<td>4.18</td>
<td>0.66</td>
</tr>
<tr>
<td>17. Demonstrate different viewpoints in artworks</td>
<td>86</td>
<td>4.05</td>
<td>0.73</td>
</tr>
<tr>
<td>18. Provide opportunities for students to talk and write about their artworks</td>
<td>99</td>
<td>4.44</td>
<td>0.52</td>
</tr>
</tbody>
</table>

* %=Percentage of final-year preservice teachers who either “agreed” or “strongly agreed” they were confident in facilitating that specific teaching practice.

At the S2 level, over 90% of these preservice teachers agreed that they could provide opportunities for students to: view different kinds of artworks, make artworks about real experiences, explore different traditions and techniques in artmaking, and compare their interpretations of artworks with those of others (see Table 4). However, only 64% indicated that they could discuss how artistic intentions affect the choices artists make and 62% indicated they could provide opportunities for students to meet and talk with artists about their art interests. Five of the nine items associated with S2 had 13% or more preservice teachers indicating they were unprepared for teaching art (items 19–22, 24, Table 4). Of interest was the 6% increase from ES1 to S2 for these preservice teachers to provide opportunities to meet and talk with artists.

Table 4
Statistics on preservice teachers' confidence to teach stage two (n=87)

<table>
<thead>
<tr>
<th>TEACHING PRACTICE</th>
<th>%*</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Discuss how artistic intentions affect the choices artists make</td>
<td>64</td>
<td>3.74</td>
<td>0.80</td>
</tr>
<tr>
<td>20. Assist students to reflect on their own representational activity through questioning</td>
<td>82</td>
<td>4.08</td>
<td>0.77</td>
</tr>
<tr>
<td>21. Facilitate discussion about reasons for making art</td>
<td>87</td>
<td>4.14</td>
<td>0.66</td>
</tr>
<tr>
<td>22. Provide opportunities for students to meet and talk with artists about their art interests</td>
<td>62</td>
<td>3.70</td>
<td>0.72</td>
</tr>
<tr>
<td>23. Provide opportunities for students to view different kinds of artworks</td>
<td>92</td>
<td>4.26</td>
<td>0.64</td>
</tr>
<tr>
<td>24. Discuss ways in which subject matter and concepts are emphasised in artworks</td>
<td>87</td>
<td>4.01</td>
<td>0.66</td>
</tr>
<tr>
<td>25. Provide opportunities to explore different traditions and techniques in artmaking</td>
<td>92</td>
<td>4.22</td>
<td>0.62</td>
</tr>
<tr>
<td>26. Provide opportunities for students to make artworks about real experiences</td>
<td>98</td>
<td>4.39</td>
<td>0.64</td>
</tr>
<tr>
<td>27. Compare their interpretations of artworks with those of others</td>
<td>93</td>
<td>4.30</td>
<td>0.59</td>
</tr>
</tbody>
</table>

* %=Percentage of final-year preservice teachers who either “agreed” or “strongly agreed” they were confident in facilitating that specific teaching practice.

Finally, most preservice teachers indicated a preparedness for teaching art education at the S3 level (Table 5). Standard deviations continued to be relatively low (SD range: 0.54 to 0.78) with mean scores that may be considered in the upper ranges (M range: 3.87 to 4.41). Furthermore, 94% or more of these preservice teachers agreed or strongly agreed with half of the items in Table 5 (items 30, 32-34, 38, 39). However, more than 20% of these preservice teachers were uncertain, disagreed or strongly disagreed with items 29, 31, and 35 (Table 5).

Although Cronbach alphas were acceptable for the four factors (Table 1), exploratory factor analysis will need to be conducted to determine communalities for each item associated with particular levels. The overall statistics show a considerable majority of preservice teachers' preparedness for teaching art in the
primary school, however, item analysis presented an indication of preservice teachers who may not be prepared for their future roles in primary schools. For example, more than 10% of preservice teachers indicated they could not agree or strongly agree that they could provide 20 of the 39 teaching practices advocated by the NSW Creative Arts K-6 syllabus (Board of Studies, 2000). In addition, 7 items (i.e., 2, 11, 19, 22, 29, 31, 35) had more than 20% of preservice teachers indicating they may not be able to facilitate these teaching practices. As a result, as many as 20% of final-year preservice teachers may not be comprehensively educated on teaching art in the primary school even though specific tertiary education programs aim at developing these teaching strategies in these preservice teachers. Undoubtedly, further research is needed to determine how to educate preservice teachers who believe they are not prepared for teaching art in primary schools.

Table 5
Statistics on preservice teachers' confidence to teach stage three (n=87)

<table>
<thead>
<tr>
<th>TEACHING PRACTICE</th>
<th>%*</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Provide opportunities to analyse and interpret subject matter</td>
<td>81</td>
<td>3.87</td>
<td>0.59</td>
</tr>
<tr>
<td>29. Extend opportunities to investigate and use various media, techniques and tools</td>
<td>78</td>
<td>3.90</td>
<td>0.67</td>
</tr>
<tr>
<td>30. Extend opportunities to explore and discuss concepts and subject matter</td>
<td>94</td>
<td>4.21</td>
<td>0.57</td>
</tr>
<tr>
<td>31. Use a range of construction techniques using clay and other three dimensional materials</td>
<td>77</td>
<td>3.94</td>
<td>0.78</td>
</tr>
<tr>
<td>32. Provide opportunities for students to critically reflect on their artmaking</td>
<td>97</td>
<td>4.31</td>
<td>0.58</td>
</tr>
<tr>
<td>33. Provide opportunities to make artworks that involve working in groups</td>
<td>98</td>
<td>4.41</td>
<td>0.54</td>
</tr>
<tr>
<td>34. Discuss different ways of valuing students' artworks and other artworks</td>
<td>94</td>
<td>4.26</td>
<td>0.60</td>
</tr>
<tr>
<td>35. Discuss how artworks may be ambiguous in their form, content and meaning</td>
<td>77</td>
<td>3.95</td>
<td>0.75</td>
</tr>
<tr>
<td>36. Discuss the contribution of artists, designers, craftspeople, architects in different times and places</td>
<td>87</td>
<td>4.08</td>
<td>0.61</td>
</tr>
<tr>
<td>37. Present ways to undertake research about particular artists, their work, and artistic styles</td>
<td>89</td>
<td>4.13</td>
<td>0.63</td>
</tr>
<tr>
<td>38. Arrange excursions for students, as audience members</td>
<td>97</td>
<td>4.36</td>
<td>0.59</td>
</tr>
<tr>
<td>39. Ensure students visit internet sites to investigate relationships between artists, the world, artworks and audiences</td>
<td>95</td>
<td>4.34</td>
<td>0.61</td>
</tr>
</tbody>
</table>

* %=Percentage of final-year preservice teachers who either "agreed" or "strongly agreed" they were confident in facilitating that specific teaching practice.

Conclusion
Practicum experiences and tertiary art education curriculum studies appear to influence a preservice teachers' preparedness for teaching art education. Even though tertiary art education may focus on syllabus requirements for teaching art, there will be some preservice teachers unprepared for art teaching. Indeed, reaching the ultimate goal of 100% for each of the items associated with each stage level for every preservice teacher may prove to be an impossible task. Other factors that may contribute to lowering this percentage may include the preservice teachers' propensity for either becoming teachers or becoming art teachers. That is, consideration of intellectual and creative capabilities, demonstration of the affective domains, organisational abilities, and the preservice teachers' confidence for teaching art may influence the preservice teachers' perceptions of their preparedness for teaching art.

Nevertheless, a posttest only survey may aid in identifying issues for the development of future tertiary art education coursework. In addition, some of the art teaching expectations advocated by a syllabus will require continuous revision. Advocating involvement with artists as a requirement may be impracticable as this will depend on the location of schools and the availability of artists. Indeed, even within well-located areas artists' availability and costs may limit or eliminate this opportunity for students to meet and talk with artists. It is also possible these preservice teachers may not know who artists are; indeed how do we determine who are the artists?

In general, preservice teachers are prepared for teaching art in the primary school. However, the link between tertiary education and the commencement of new teachers into the profession requires further support to ensure current art education is implemented. Schools can support this preparedness for art teaching by encouraging beginning teachers to implement art education as soon as they arrive in schools. This will involve principals and executives in their leadership roles to facilitate the teaching process by reviewing art education programs, promoting effective and supporting mentoring programs, presenting opportunities for beginning teachers to display their students' artworks, and engage beginning teachers in
purposeful art education discourse. In this way, new teachers can be assured continuity from their tertiary art education experiences to their beginning teaching practices in order to bring effective art teaching as indicated by system requirements to fruition.

References


Appendix 1

**Preparedness for Teaching Art Education**

**SECTION 1:** This section aims to find out some information about you. To preserve your anonymity, write your mother's maiden name on this survey. Thank you for your participation in this important study on your mentoring. Please *circle* the answers that apply to you.

**Mother's maiden name:** __________________________________________

a) What is your sex?    Male    Female

b) What is your age?  <22 yrs    22 - 29 yrs    30 - 39 yrs    >40 yrs

c) Did you complete any arts units in Years 11 and 12 at high school?

d) How many primary visual art curriculum/teaching methodology units did you complete at university?  0  1  2  3  4 or more

e) How many block practicums have you now completed during your tertiary teacher education?    1  2  3  4  5 or more

f) Have practicums had an influence on your learning to teach visual arts?

Strongly disagree    Disagree    Unsure    Agree    Strongly agree

g) Has tertiary teacher education had an influence on your learning to teach visual arts?

Strongly disagree    Disagree    Unsure    Agree    Strongly agree

h) Would primary visual arts be one of your strongest subjects?

Strongly disagree    Disagree    Unsure    Agree    Strongly agree
SECTION 2: The following statements are concerned with your preparedness for teaching art education. Please indicate the degree to which you agree or disagree with each statement below by circling the appropriate response linked to each statement.

SD = Strongly Disagree
D = Disagree
U = Uncertain
A = Agree
SA = Strongly Agree

For teaching art education, I believe that I am able to:

Part A
1) discuss art with students (e.g., Who are artists? What do they do? What do they make?)
   SD  D  U  A  SA
2) provide opportunities for students to meet and talk with artists
   SD  D  U  A  SA
3) provide opportunities for students to look at and discuss artworks and their properties (e.g., paintings, drawings, sculptures, digital artworks, photographs)
   SD  D  U  A  SA
4) discuss the ways in which the world is represented in artworks and the features of things depicted in artworks
   SD  D  U  A  SA
5) provide opportunities for students to make artworks about things of interest to them
   SD  D  U  A  SA
6) provide opportunities for students to explore the qualities of different media, tools and techniques (e.g., in drawing: pencils, paints, crayons, fibre tip pens, computer applications)
   SD  D  U  A  SA
7) demonstrate various visual effects with different techniques, media and tools
   SD  D  U  A  SA
8) assist students to experiment with different effects and techniques
   SD  D  U  A  SA
9) discuss who an audience may be and consider where audiences view art
   SD  D  U  A  SA
10) provide opportunities for students to talk about what is of interest to them in different artworks
    SD  D  U  A  SA

Part B
11) extend the students' understanding of the concept of the artist to include different types of artists (e.g., painter, sculptor, architect, graphic designer, printmaker, digital artist, video artist, weaver, ceramic artist)
    SD  D  U  A  SA
12) consider how artists make artworks for different reasons
    SD  D  U  A  SA
13) question students about what they do in their artmaking
    SD  D  U  A  SA
14) extend students' opportunities with different media, tools and techniques and assist them
    SD  D  U  A  SA
15) use examples of artworks, and discuss abstract representations
    SD  D  U  A  SA
16) provide opportunities for students to observe the characteristics of interesting things through art
    SD  D  U  A  SA
17) demonstrate different viewpoints in artworks
    SD  D  U  A  SA
18) provide opportunities for students to talk and write about their artworks
    SD  D  U  A  SA

Part C
19) discuss how artistic intentions affect the choices that artists make
    SD  D  U  A  SA
20) assist students to reflect on their own representational activity through questioning
    SD  D  U  A  SA
21) have students talk about their own reasons and others' reasons for making art
    SD  D  U  A  SA
22) provide opportunities for students to meet and talk with artists about their art interests
23) provide opportunities for students to view different kinds of artworks

24) discuss the ways in which subject matter and concepts are given a particular emphasis in artworks

25) provide opportunities for students to explore different traditions and techniques in artmaking

26) provide opportunities for students to make artworks about real experiences

27) compare their interpretations of artworks with those of others

28) Part D

provide opportunities for students to analyse and interpret the qualities and details of selected subject matter

29) extend the range of opportunities that students have to investigate and use various media, techniques and tools in relation to the investigation of subject matter

30) extend the range of opportunities that students have to explore and discuss concepts and subject matter that is of interest to them in visual arts

31) use a range of construction techniques when using clay and other three dimensional materials

32) provide opportunities for students to critically reflect on their artmaking

33) provide opportunities for students to make artworks that involve working in groups

34) discuss different ways of valuing students' artworks and other artworks

35) discuss how artworks may be ambiguous in their form, content and meaning, and subject to different interpretations

36) discuss with students the contribution of artists, designers, craftspeople, architects in different times and places

37) present ways for students to undertake research about particular artists, their work, artistic styles and exhibitions they have visited

38) arrange excursions for students, as audience members, to exhibitions in galleries, museums and urban precincts

39) ensure that students are able to visit relevant internet sites to investigate relationships between artists, the world, artworks and audiences

Overall, I am confident I will be an effective art teacher

SD  D  U  A  SA
Local Responses To The Needs Of Samoan Students: Implications For Pre-Service Education Programs

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With the spread of globalisation, many Pacific Islanders have realised that opportunities for economic gain and social mobility can be found outside their island countries, and have been eager to access these opportunities. This has resulted in substantial migration to Australia, either directly or via New Zealand. Here in Australia, a large Samoan migrant community has formed in Logan City where more than 160 different cultural backgrounds are currently represented. Logan City has a high level of unemployment and about one-third of those who are employed earn less than $200 a week (Queensland Government, 2003). Thus, for teachers in some schools in Logan City, global changes have resulted in a local community where cultural and linguistic diversity is often interfaced with poverty. In this paper we report on data obtained from a sample of more than 300 teachers working in primary and secondary schools in Logan City. We determine their levels of concern regarding the educational achievement of Samoan students, and identify the issues that teachers associate with student underachievement. Implications of these data for pre-service education programs are then considered.

Globalisation involves the flow of technology, finances, information, and ideology. It also involves the movement of people (King, 1997). Since the 1960s there has been substantial migration from Samoa to New Zealand for a combination of reasons (Connell, 2003). Primarily, migration has been prompted by economic circumstances. Samoan migrants recognise significant income differentials between Samoa and countries such as New Zealand, Australia and the United States; and are attracted by the prospect of social and economic mobility in the destination country. In addition, they identify opportunities to improve the living standards of family remaining in Samoa by providing remittance transfers to relatives. With a decline in the prestige of agricultural work in Samoa there has also been a pattern of movement away from remote islands and isolated rural areas to urban centres. Thus, the increased pressure on domestic resources in urban centres encourages migration which, in turn, alleviates levels of unemployment. Finally, the opportunity to migrate has been enabled by improved air transport at reduced costs.

Migration to New Zealand was particularly attractive as the country's industry and service sectors developed during the 60s and 70s. However, when New Zealand's economy saw a decline in the early 80s there were high levels of unemployment among unskilled, Pacific Islander migrants. This made Australia a destination target for many Samoan migrants, and those who had migrated at an earlier stage to New Zealand (Hughes, 2003). As the majority of Samoan migrants have low levels of English proficiency and limited capital resources, they have tended to locate as diasporic communities in areas such as Western Sydney and Logan City where public housing and cheaper accommodation is available.

Logan City is the third largest city in Queensland, with a population of 170,000 people. It is a multicultural city comprised of 161 different cultural backgrounds (Australian Bureau of Statistics, 2003). According to 2001 census data, Logan City has a high level of unemployment and about one-third of those who are employed earn less than $200 a week. In the central district of Logan, unemployment ranges between 14% and 17%. Retention rates for senior level schooling are generally low and the percentage of people attending university is about 2%. Approximately 30% of the population in the central district of Logan was born overseas with 22% speaking a language other than English. Almost 16% of those with a non-English-speaking background are Samoan. More recently, there has been a significant increase in the number of migrants with refugee status (House of Representatives, Commonwealth of Australia, 2004).

For teachers in Logan City, global population shifts have resulted in local school communities where a rich mix of cultural and linguistic diversity may be interfaced with poverty. One of the major cultural groups represented in local schools is Samoan. Typically, Samoan children come from homes where traditions of family networking are strong and where parents have adopted an authoritarian role.
Communal, cultural and religious activities have been highly valued with resources often pooled to cater for family needs, and to assist relatives who have remained in Samoa (Queensland Government, 2004). The fa'aSamoa (the Samoan way) is a set of cultural understandings that has underpinned these practices.

As an ideology, it promotes values of respect, obedience and reciprocity, where the needs of the individual are subordinate to those of the group (Hutakau, 2002). While the church, in particular, has played an important role in sustaining the fa'aSamoa for Samoan migrants in areas such as Logan City (Tiata, 1998, cited by Singh & Dooley, 2001), it is likely that the integrity of this phenomenon has been challenged by competing ideologies that accompany experiences in 'new times in new places'.

Traditional notions of learning in the Samoan culture have supported a formal system of education that has favoured teacher-centred, talk-and-chalk instruction with students situated as passive recipients of knowledge. This system has been complemented in the home and in the community by an informal system of learning where children learn by observing and imitating (Yorston, 1999). Both formal and informal systems of learning have reinforced a similar set of cultural values and attitudes. While the role of the classroom teacher in Samoan culture was highly respected, formal classroom learning was separate from informal learning outside the classroom. Thus, family participation in children's formal education was not encouraged, nor expected (Onikana, Hammond, & Koki, 1998). Notions of childhood, in the Samoan culture, did not depict the child as "a recipient of care but as a contributor" (Yorston, p.3). Children prepared food and cared for younger siblings, activities that would have been prioritised over homework. These cultural practices would have encouraged a set of learning styles and attitudes that conflict with those in westernised classrooms where co-operative learning, student inquiry, critical thinking, and family involvement have been promoted. This is not to suggest that these cultural practices should be interpreted as a set of general traits to describe an individual. As Gutierrez and Rogoff (2003) noted, overgeneralizations such as this can hinder understanding of effective ways to support individuals, and deny variation and change that occurs for individuals.

Barnard (2003) advised that difficulties will occur when values and beliefs underpinning practice in a school community are not shared and understood by children and their families, and compounded when teachers are not aware of the possible disparity between their own values and those held by families whose cultural and linguistic background may differ. McNaughton (2002) has suggested that effective literacy instruction for children with diverse cultural and linguistic backgrounds demands a meeting of minds between learners and teachers in classrooms, where the meeting allows continuity between "how things are done at school and how things are done in the child's family and social setting" (p. 20).

This research looks at how teachers believe things 'should be done' at school. It achieves this by:

- determining teacher perceptions of the academic achievement of Samoan students;
- identifying issues that teachers perceive as influencing student underachievement; and,
- investigating the stability of teacher perceptions across primary and secondary years of schooling.

Data collection
Survey data were obtained from 306 teachers working in eleven schools located in the central and southwest districts of Logan City. The schools were comprised of six government primary schools, four government secondary schools, and one Catholic P-12 school. All schools had significant populations of Samoan students. In some, Samoan students comprised 60% of the school population. In total, 32% of the respondents were primary teachers with the balance teaching in secondary schools. Teachers who completed the surveys represented a range of teaching experience. The majority of teachers were monolingual with 16% of respondents describing themselves as bilingual or multilingual.

The survey was comprised of three parts. In the first part, teachers provided demographic particulars. In the second, they responded to a set of seven items using a five-point Likert scale. These items determined teacher levels of cultural awareness and confidence when working with Samoan students. The third part required teachers to provide responses to open questions. The data reported in this paper involve responses to one item from the second part of the survey, "I am happy with the academic achievement of my Samoan students"; and one question from the third part, "What issues are of concern to you regarding the educational achievement of Samoan students?".

Data analysis
SPSS Version 12 software was used to analyse responses to Likert-scale items. The percentage frequency of response categories was determined for all teachers. Responses by primary teachers and secondary
teachers were then compared. QSR NUD*IST Ver 4 software was used to analyse responses to open-ended questions. This allowed an exploration of text to build and refine a series of categories and subcategories. Frequencies for items within categories were determined and reported as a percentage of all items comprising the dataset.

**Findings**

Figure 1 indicates that fewer than 25% of teachers agreed with the statement that they were happy with the academic achievement of their Samoan students while more than 50% disagreed. About 20% remained undecided.

![Figure 1](image1)

Teachers' response to the question, "I am happy with the academic achievement of my Samoan students".

Issues of concern evolved as five categories: (1) students' beliefs and values, their attitudes and levels of motivation; (2) students' behaviours, especially in relation to classroom participation; (3) literacy performance; (4) cultural differences; and (5) lack of human and material resources. Figure 2 provides percentage frequencies for categories.

![Figure 2](image2)

Teachers' response to the question, "What issues are of concern to you regarding the educational achievement of Samoan students?".

Comments regarding student affect and student behaviour comprised about half of all responses. About one third of the comments relating to student affect focussed on beliefs and values held by students (see Figure 3). There was consistent comment that Samoan students did not value educational achievement. More than half of the comments related to attitudes. The comment, "Lack of commitment and willingness to work hard - if it's too hard it's not worth the effort" (Teacher 20, School 3), was typical. Teachers made consistent comments about students' lack of motivation in class. In terms of behaviour, there were four subcategories (see Figure 4). Teachers listed concerns about absenteeism, time management difficulties in relation to the submission of work, and inappropriate wearing of uniform. At least 40% of comments related to participation in class. Patterns of disruptive behaviour or passive withdrawal were both commonly reported.
Fewer than 20% of all responses related to literacy performance. Over half of the comments described students' difficulties when reading and writing print texts (see Figure 5). While fewer than 10% of all responses related to cultural differences, the majority of comments suggested disjunction between the ways of school and those of homes (see Figure 6). The following was typical, "Cultural mismatch between traditional anglo-saxon culture and island life" (Teacher 7, School 2). A smaller subcategory of comments suggested that Samoan students self-segregated and needed to integrate with other cultural groups.

Almost 24% of all responses related to lack of resources. Most comments described the absence of parental support as an explanation of students' educational underachievement (See Figure 7). Lack of teacher understanding and preparedness for meeting the needs of students with cultural and linguistic backgrounds different from their own were noted. Other concerns were the lack of culturally relevant materials to use in classrooms, and the lack of teaching support.
As Figure 8 indicates, except for a shared concern about cultural difference, primary teachers and secondary teachers emphasised different concerns. Categories of student affect and student behaviour were prominent in the responses of secondary teachers whereas students' literacy and resource needs were prioritised by primary teachers.

**Figure 8**
Comparison of primary teachers and secondary teachers' responses to the question, "What issues are of concern to you regarding the educational achievement of Samoan students?".

**Discussion**

**Teacher perceptions of the academic achievement of Samoan students**
Reports of Samoan students' educational underachievement by Logan teachers are consistent with trends in other diasporic Samoan communities in the United States (Janes, 2002) and in New Zealand (McCaffery & Tuafuti, 2003). For example, Samoan children in low-decile schools have been found to make significantly lower than expected progress in the development of word recognition, writing vocabulary and reading comprehension (McNaughton, Phillips, & MacDonald, 2003). Underachievement was also noted by Singh (2001) who reported that data provided by the Queensland School Curriculum Council showed that the literacy and numeracy performance of Samoan students during state-wide testing in 1997 was "extremely below the performance of the whole cohort of students" (p. 322). The problem, however, was that the performance of Samoan students was masked by the performance of other students who spoke a language other than English but who had high levels of English literacy. In fact, data for NESB students indicated results above the performance of the whole student cohort and were used to legitimise reduced funding to English as a Second Language (ESL) programs, a decision that would further disadvantage the Samoan students who were underachieving.

**Perceptions of issues influencing student achievement**
Comber (1999) has warned that in areas where there is high poverty and low employment, teachers must guard against deficit discourses that "construct poor children as lacking, effectively blaming their parents not only for their poverty but also for their poor behaviour, language and literacy" (p. 23). 'Deficit' explanations in relation to the Samoan students' underachievement were common, with most teachers explaining underachievement in terms of behaviour problems, negative attitudes, lack of parent support, poor literacy skills, and socio-economic disadvantage. Explanations of 'cultural discontinuity' (Erickson, 1993) were less common with fewer than 10% of teachers noting cultural mismatches between practices at home and those at school. Explanations of 'structural inequality' (Au, 1993) were uncommon. Such explanations focus on issues of social- and economic-power differentials that allow inequalities among groups to persist. Singh's (2001) example of government funding cuts to ESL programs for all groups in Queensland schools when some groups underachieve demonstrates how systems allow underachieving groups to stay that way. The status quo is maintained; the inequalities are conserved.

It is important to compare the explanations provided by primary teachers and secondary teachers. Primary teachers emphasised concerns about the literacy achievement of students, and the lack of human and material resources to meet students' learning needs. In contrast, the secondary teachers emphasised problematic behaviours and attitudes. Their emphasis could be interpreted in two ways: (1) that problematic behaviours and attitudes are the cause of underachievement, or (2) that they are the result,
suggesting student resistance to schooling. The first reading is of interest as values of respect and
obedience have been central to the fa'aSamoa. The second reading is credible if concerns voiced by
primary teachers about the need for resources and the need to develop students' literacy skills are unheard.
The second reading provides a warning of unwanted outcomes. It directs our focus to the inadequacy of
systemic resources, and to the role of teacher education institutions in equipping pre-service teachers to
respond effectively to students' literacy needs.

Implications for pre-service education
Many classroom teachers lack professional knowledge about “teaching, assessing, and organising programs
for students with a non-English-speaking background” and “learn how to cope with NESB students
through trial and error” (Haworth, 2003, p. 138). This does not provided an efficient response to students' needs especially when global migrations continue to result in classroom populations with a diverse range of
cultural and linguistic backgrounds. It is important that universities review current programs for pre-
service teachers to see that there are opportunities to develop initiatives that encourage intercultural
sensitivity, cultural awareness, linguistic awareness, and responsive pedagogies. The solution does not lie
with one course but a series of courses throughout the pre-service program where participants are
provided with opportunities to reflect on their own cultural beliefs and practices. Superficial, static and
classroom teachers will become more homogenous while student populations in schools will continue to diversify.
Similar trends are evident locally. For example, student populations in Logan classrooms have diversified
in terms of student cultural and linguistic backgrounds, whereas student populations in pre-service teacher
programs at Logan Campus do not show similar diversity. For example, at Griffith University's Logan
Campus there is significant under-representation of Samoan students in Education programs when the
population of Samoan students in primary and secondary schools is considered. Investigation of this
situation is needed as this trend has implications for students in Logan schools. There will continue to be
a lack of role models and advocates for Samoan school students in schools, and so Samoan students will
continue to construct teachers as outsiders to their own cultural identity and will exclude a career in
Teaching. This will perpetuate the under-representation of all Pacific Islander groups in Education
programs at Griffith University.

Conclusion
Historically, explanations for the underachievement of language-minority groups have involved students
and their families, their languages and cultures (McCaffery et al., 2003). Thus, it is easy, but not useful to
frame explanations using deficit explanations. While they encourage blame, they do not readily suggest an
effective response. We have suggested additional explanations and recommend that all be interrogated
carefully to determine a course of action that includes a role for: teachers and administrators in schools;
students and their families; executives in state and federal education systems who decide on policy and
resource allocation; and university personnel who shape the knowledge and practices of the teaching
workforce.

References


Classroom Simulation: Enhancing The Learning Experience For Pre-service Teachers

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Reviews of teacher education in Australian and international contexts consistently report that traditional teacher preparation programs are not adequately preparing pre-service teachers for entry into the profession. Students, university lecturers and employing schools acknowledge this and admit that a significant number of pre-service teachers leave university feeling under-prepared for classroom life. The ability of students to transfer what they’ve studied at university into effective classroom practice is an area that has been identified as needing further investigation by all stakeholders. It is timely to look at ways to enhance pre-service teacher education; one way that we have been exploring is the use of an online classroom simulation. This paper describes the development and use of an on-line simulation to support the teacher education program in one Australian university. The simulation allows users to take on the role of the teacher of a simulated Kindergarten classroom, organising classroom literacy experiences for students aged 5 to 6 years of age. During the simulation the user is required to make decisions about organising and structuring literacy teaching and learning experiences, classroom organisation and classroom management (including responses to individual students). The paper reports on the trials of this software prototype with two cohorts of teacher education students (first year students in 2004 and first year students in 2005) and subsequent findings.

Introduction

In the current climate of professional milestones, national benchmarks and teaching standards for early career teachers, it is crucial that pre-service teacher training programs adequately prepare teachers for a challenging professional role. Teacher education programs alert pre-service teachers to important pedagogical knowledge and skills, however the transfer of this to actual classrooms appears to be not happening.

Reviews of pre-service teacher education (D.EST, 2002; Ramsey, 2000; Vinson, 2001) have reported that pre-service teachers often feel under prepared to enter full-time teaching at the end of their university studies. Cole and Knowles (2000) claimed that there is a gap between what teachers are taught in the theory of their pre-service teacher training and what they are expected to do at the ‘chalk-face’ in their professional experiences (p. 9).

Just what constitutes quality pre-service training of teachers is in itself an issue that is at the centre of much educational debate (Stronge, 2002). There seems to be an expectation from employers, schools and early career teachers themselves, that pre-service primary teacher training will prepare teachers pedagogically; ensure they have adequate content knowledge across the curriculum areas; and have a repertoire of teaching strategies that will assist students with the aim of increasing student achievement. More than ever it seems pre-service teachers need to be able to ‘hit the ground running’ when they enter a classroom situation. They need to have a sound pedagogical knowledge that goes beyond merely ‘surviving’ the demands of the classroom.

Even if teachers are adequately prepared during teacher training, there is a great deal of research to show that pre-service pedagogical beliefs are not always translated to beginning classroom practice (e.g., Lokan, Ford & Greenwood, 1996; Borko, Eisenhart, Brown, Underhill, Jones, & Agard, 1992). A complex mix of influences and environmental factors impact upon the teachers’ use of pedagogical approaches in their beginning years of teaching, with many drawing more on the traditional approaches that are already ingrained from their own schooling rather than the pedagogically sound methods they learned at university (Herrington, Herrington, & Glazer, in press). One reason for the long-term ineffective practical outcomes of such university courses, is according to Resnick (1987), a result of too little engagement with genuine situations, and too much emphasis on theoretical perspectives.
Barth (1990) acknowledged the benefits to the teaching profession when pre-service training is linked with actual classroom experience. However, he claimed that, 'seldom do these two worlds converge' (p. 118). In agreement, Darling-Hammond (1997) argued that theory and its application cannot be separated for effective teacher development:

Teachers learn just as their students do: by studying, doing, and reflecting; by collaborating with other teachers; by looking closely at students and their work; and by sharing what they see. This kind of learning cannot occur solely in college classrooms divorced from engagement in practice or solely in school classrooms divorced from knowledge about how to interpret practice (p. 319).

The Ramsey (2000) review of teacher education in NSW strongly recommended that pre-service teachers receive quality classroom-based experience supervised by an accredited teacher mentor. However, simply providing more classroom-based experience does not guarantee quality experience. Klein and Hoffman (1993) have argued that experience per se does not equal expertise. They cited their own research on firefighters where rural volunteer firefighters with 10 years experience were not as expert as those who had spent one year in a 'decaying inner city' (p. 205). Simple accumulation of practice from a single perspective is not sufficient to ensure expertise. Both Darling-Hammond (2000) and Ramsey (2000) have conceded that school-based practical experience often consists of a series of isolated, decontextualised lessons, prepared and implemented according to the requirements of the supervising teacher; or at worst it can be an unsupported and disillusioning experience. It has become necessary to rethink school-based practice teaching programs, and to plan specifically for the acquisition of perceptual and cognitive aspects of expertise. Many would argue that simulations are one way to provide access to opportunities to think 'like an expert'.

Simulation as a way to support teacher education

As with all learning environments, simulations vary in quality. Some are presented as simple linear programs with little choice, or limited pre-determined choices. Others are high-end, elaborate environments with realistic graphics and multi-dimensional landscapes. In the current context of preparing teachers for a professional role, it is critical to base any simulation on a theoretically sound foundation that goes beyond the appearance and navigational aspects of a simulated world to focus on the cognitive aspects of expertise (Herrington, Oliver, & Reeves, 2003). Situated learning theory (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; McLellan, 1996) is acknowledged within the literature as a powerful model capable of providing a sound theoretical basis for technology-based learning environments. Based on 'cognitive apprenticeships', situated learning environments allow students to learn how to apply knowledge within the context of an authentic situation.

The development of a classroom-based simulation as a situated learning environment is one way to provide pre-service teachers with access to additional classroom experience. Simulations as learning environments have a long history of use in education and training (Grabinger, 1996). Simulations have become increasingly popular for creating virtual environments that closely replicate a specific social situation. Advances in gaming software, particularly those that involve players creating worlds (e.g., The Sims), have demonstrated that it is feasible to create engaging, realistic and motivational simulations. Jonassen (2000) argued that computer-based simulations can be powerful vehicles for learning by applying the critical characteristics of the traditional apprenticeship, and his extensive research with business simulations supports his assertion. To date, limited research has been conducted on simulations in teacher development and how knowledge transfers to teaching practice.

The design of the developed simulation prototype

The purpose of the developed simulation software was to allow users to take on the role of the teacher of a virtual Kindergarten classroom. During the running time of the simulation users are required to make decisions about organising the lesson, classroom organisation and classroom management (including responses to individual students). Users are able to monitor and track the progress of three targeted students throughout the course of the simulation. An embedded tool, referred to as the ‘thinking space’, is available throughout the running time of the simulation to encourage users to plan and justify new decisions, reflect upon the consequences of previous decisions and above all, have the opportunity to ‘think like a teacher’.

There are a number of key features we incorporated within the design of a simulation to support pre-service teachers in this on-line learning environment. Figure 1 presents the introductory page of this on-line simulation prototype.
The purpose of the software is clearly indicated on this page. The design of the pages within the simulation allows the user access to the embedded ‘thinking space’, information about the students and the teacher along with support material (the class goals on this page) throughout the running time. The inclusion of decision points, targeted students, opportunities for reflection and the inclusion of support material and their role within the on-line simulation will be further discussed.

**Decision points**
The simulation is designed into cycles that reflect the problem-solving nature of classroom life. At nominated points the user is required to make a series of decisions about the management of the classroom, of students and of random events that typically occur during a Kindergarten classroom experience. At other times they will be required to make decisions about the sequence of teaching, for example: do they begin a lesson with a reading experience, or a writing experience, or a language activity? Each of these decisions has the potential to impact on subsequent decisions in each of these described areas.

As the user makes decisions about the management of the classroom and how they will organise their teaching and learning experiences, the simulation allows access to a branching cycle, representative of a slice of time within the whole teaching period. Each cycle that the users engage with, presents them with decisions related to that specific cycle. Care has been taken to ensure that a number of alternate cycles can lead to similar student outcomes. This reinforces the notion that there can be several suitable approaches to specific student learning needs.

The cycles within the simulation represent management decisions and teaching and learning decisions typical to a Kindergarten classroom. Table 1 presents an overview of the management decisions within this prototype version of the simulation.

**Table 1**

<table>
<thead>
<tr>
<th>Management decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Organisation of the classroom</td>
</tr>
<tr>
<td>2. The Start of the day</td>
</tr>
<tr>
<td>3. The late arrival of a student</td>
</tr>
<tr>
<td>4. Random decisions</td>
</tr>
</tbody>
</table>
The teaching and learning decisions incorporated within the simulation continue the focus on the concept of the days of the week within the literacy-based experiences in a Kindergarten classroom — we believe this is a typical learning experience in a kindergarten classroom. Table 2 presents an overview of the literacy focused teaching and learning experiences available to the user as they organise their literacy time within this virtual Kindergarten classroom.

### Table 2

<table>
<thead>
<tr>
<th>Teaching and learning experiences</th>
<th>RETELL OF A FAMILIAR STORY</th>
<th>CONSTRUCTING A TEXT AROUND THAT DAY’S NAME AND WEATHER</th>
<th>SEQUENCING ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>READING EXPERIENCES</strong></td>
<td><strong>WRITING EXPERIENCES</strong></td>
<td><strong>LANGUAGE ACTIVITIES</strong></td>
<td></td>
</tr>
<tr>
<td>Retell of a familiar story</td>
<td>Constructing a text around that day’s name and weather</td>
<td>Sequencing activity</td>
<td></td>
</tr>
<tr>
<td>Modelled reading using the names of the days of the week on individual cards</td>
<td>Innovation on a poem</td>
<td>Handwriting task</td>
<td></td>
</tr>
<tr>
<td>Modelled reading using a calendar</td>
<td>Recount of previous week</td>
<td>Poetry activity</td>
<td></td>
</tr>
<tr>
<td>Modelled reading using a poem</td>
<td>Creation of a daily schedule</td>
<td>Search for the days of the week in community texts</td>
<td></td>
</tr>
</tbody>
</table>

**Targeted students**

Three targeted students have been incorporated in the simulation, based on our own classroom teaching experiences and classroom-based research. These targeted students are representative of the diversity of students in a typical classroom. Each student poses different scenarios for the user, requiring them to respond to bullying, language barriers, discipline issues and behavioural problems.

Information about each of the targeted students is available to the user throughout the running time of the simulation. Figure 2 shows how the information about Gavin is presented in the form of teacher notes to the user. The notes are based on the type of notes that teachers typically keep. It is designed to add depth and authenticity to the simulation.

![Figure 2. Teacher notes.](Classroom.png)
Opportunities for reflection
An embedded tool, which we refer to as the 'thinking space', is available to the user throughout the simulation. This has been developed with the aim of encouraging the user to articulate and justify the decisions they have made. This tool provides opportunities for the user to reflect upon the impact of previous decisions on the targeted students. It is our intended aim in these spaces to engage the user in Jonassen’s understanding of critical thinking, that is, ‘generalizable, higher-order thinking, such as logic, analyzing, planning, and inferring’ (Jonassen, 1996, p. 24).

The thinking space presents three key questions to prompt thoughtful decision making.
1. Why is this important for these students?
2. How will I know this is an effective decision?
3. What do I want to do?

A help screen that offers additional ideas for the user to consider supports these key questions. The user types their reflections and thoughts into the embedded tool which saves their notes. The user is able to retrieve and review their previous decisions and thoughts throughout the running time of the simulation.

Support materials
Support materials were integrated into the simulation prototype to support and inform pre-service teacher learning and decision making. These include links to websites, textbook references and information summary sheets compiled and annotated by the research team. Textbook links are related to first year core textbooks in the primary teacher education program in the Faculty of Education, University of Wollongong. Hoffmann and Ritchie (1997) identify the importance of enabling students to interact with sources at the time that they need them.

The research approach
Three trials have been conducted with this software with first year primary education students from the University of Wollongong. The first trial was conducted in 2004 with a cohort of twenty-four pre-service teachers working within the alternative Knowledge Building Community (KBC) teacher education program at the University. This trial identified a number of refinements that could be made to the software along with some indication of how these users interacted with the software (for further information see Ferry, Kervin, Turbhill, Cambourne, Jonassen and Hedberg, 2004). The second trial was conducted in 2005 with another cohort of 24 first-year students enrolled in the KBC program. The focus during this time was on the users’ use of new design features (such as navigation, time taken by the users, analysis of history trail left by the users and analysis of thinking space entries). After this, 185 pre-service teachers enrolled in a core first year subject entitled "Curriculum and Pedagogy 1" engaged with the software. Each trial drew upon a case study design with data collected through researcher observations, semi-structured interviews and analysis of user entries in the embedded tool, the ‘thinking space’. Potential case study participants volunteered to be involved in the research with a purposive sample selected from these volunteers by the researchers. Data were analysed by coding into categories based on the emerging themes. Conclusions were checked and discussed amongst the project members and key stakeholders within the University.

Research findings
Our first experience with the 2004 cohort showed that the simulation design has the potential to engage pre-service teachers in deep thinking about the virtual classroom environment. These students, as part of the KBC program, had been involved in weekly classroom-based experiences prior to their use of the simulation software. Analysis of collected data showed that many of these users were able to link these school-based experiences to those presented within the simulation. In addition, some were able to link the theory they had been exposed to in their pre-service teacher education training to classroom practice (Ferry et al., 2004).

In our 2005 trials, we interviewed the participants before using the simulation and again after they had engaged with the software for two separate sixty-minute sessions over a two week period. These participants had had minimal access to classroom experiences prior to this trial. When asked if the simulation was a useful and worthwhile experience, on participant stated:
"I think it was the closest thing to actually being in a classroom that I have experienced at university. It gave me something that was really tangible".

Our analysis of all the collected data has suggested that the pre-service teachers often have pre-conceived ideas about how classrooms, and language experiences, are organised and operate before the practicum experience. Our participants have demonstrated that often their own personal experiences at school contribute to their initial expectations of classrooms and how they operate. For example, one participant commented that "... in Kindergarten I spent my time completely upset cause I missed my mum ... my teacher would distract me and help me and get me working with other kids that were ok". These experiences were evident in the decisions this participant made when dealing with the individual needs of the targeted students within the software. Another user, when asked about a decision they had made, replied, "I think that's a good idea because I have seen that done at schools". For these students, engagement with the simulation software provided opportunity for these ideals to be exposed and discussed prior to the experience.

Our data suggests that interaction with a classroom-based simulation is a feasible way to support and extend upon existing classroom-based experience. Analysis of user interaction with the simulation highlights three key implications for the use of simulations in pre-service teacher education.

1. Identifying potential classroom issues
Many of the users appeared to gain insight and awareness of the different problems that typically face classroom teachers. The simulation provided opportunity for the users to immerse themselves within the virtual classroom environment while assuming the role of the teacher.

Use of the simulation software appeared to assist users to develop an awareness of the many challenges they face as beginning classroom teachers. In particular, decisions around classroom management within the virtual classroom engaged many of these users in dialogue with each other and compose written reflection in their thinking space entries. The following excerpt from audio-recordings made while the participants were using the software, captures some discussion focused on the reaction of a targeted student to a decision made by the user.

Hayley: Oh my god, Bibi is crying. What did I do?
Bree: Don't worry she cries all the time. She has cried for me a few times now. Just ignore her and she will stop.
Hayley: Ignore her?
Bree: Yeah, she hates attention. Read her profile and her updates.

This excerpt also identifies the use of the support materials when encountering such issues within the software.

When responding to another classroom management issue within the simulation, another participant made the following entry in her ‘thinking space’ before deciding upon her course of action.

Ignore: I don’t think children should ever really be ignored in the classroom, or as little as possible. Most of the time it’s because they crave attention and then the more they don’t get it the more they’ll act up. However, constant reprimanding is also not good.
Reprimand: In this case I’d probably say yes, because he disrupted the classroom, and if he is just ignored it might set a bad example for the other students. On the other hand I don’t want to set him off and make him worse.
Final decision: Reprimand.

2. New perspectives and reflecting on preconceived ideas
One participant claimed that her use of the simulation assisted her to "put things into perspective". This was a theme that consistently emerged throughout the analysis of the data. The users of the simulation software identified the enormous scope of the role of the teacher and associated demands with key stakeholders. The remark made by one participant - "Is a teacher's job ever done??" - identifies an awareness of the complex role of a classroom teacher. A number of the participants were able to identify areas for further study that emerged from their use of the simulation. For example, one participant expressed motivation to investigate the areas of ESL teaching and bullying. This participant stated:
"With the Simulation it's kind of made me think that I am going to be faced with these things, these challenges and I think the Simulation prepared me more because now before I go on my prac I'm actually going to read ... documents and I'm also going to refer back to the website that's available in the Sim about bullying".

The 'thinking space' encouraged many of the users to think more deeply about the decisions that are made on a daily basis as a teacher. In addition, the 'thinking space' provided opportunity for the users to acknowledge and reflect upon their preconceived ideas about teaching.

3. Development of opinions and new ways of thinking

The simulation appeared to encourage the users to form opinions related to different facets of teaching, and to reflect on those beliefs. One participant said that in real life situations she can dismiss the decision making process and does not "even bother thinking about it", however, the simulation is continually asking, "What do I [the user] think?" The thinking spaces encouraged the users to justify, reflect on and evaluate their decisions, and this participant seems to believe that they achieve this aim in her case. She said that "seeing the thinking space there and thinking, ok I have to have an opinion on this" encouraged her to form and justify her beliefs.

Many of the participants identified that the virtual environment within the simulation provided space for the users to make decisions and take risks without affecting real children. One participant commented that she "... liked how you can go through and check your answers. You can go through and if you don't like the consequences of your decisions you can go back and change it".

Concluding comments

Each trial of the software has revealed aspects within the design of the simulation that support the users and those that require further refinement. As such, the software has undergone significant revisions at the conclusion of each trial, before the next. Our data showed that the simulation has the potential to develop pre-service teacher understanding of complex classroom situations associated with the teaching of literacy by giving them the opportunity to slow down or accelerate classroom events, revisit and reflect on critical decision points and replay events in the light of new understandings. Working in this environment appears to have given pre-service teachers both time and opportunity to think critically about complex teaching situations which relied on the teacher's ability to tune into children's experiences, engage with them in dialogue and negotiation as well as utilise a range of indirect instructions such as questioning, modelling and prompting. Users have reported that their experience with the simulation helped them to make their practicum experience more focused by giving them the knowledge and experience to more fully appreciate the impact of subtle changes that experienced teachers made during lessons.

References


Transversing The Digital Divide
Using Interactive Whiteboards

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Technological advance and globalisation have made their presence felt in everyday life, resulting in changing economies, networked societies, digital technologies, and diverse new community and regional cultures. These changes have called for the need to broaden the definition of literacy to one that includes the notion of literacies, or “multi-literacies,” which is inclusive of communication and information technologies, as opposed to earlier singular print-based definitions. This re-conceptualisation of literacy has been reflected in policy documents on a local and national level. In some classrooms this move to embrace the new technologies has led to the adoption of new tools such as interactive whiteboards. These interactive whiteboards allow for interaction with electronic content and multimedia resources in a ‘multi-person learning environment’. Kent (2003) has expressed the view that the adoption of the interactive whiteboard has led to the revised role of the teacher, referring to this pedagogical practice as “e-teaching.” In this paper we report on data collected from interviews and video segments of teachers in one local school who integrate the interactive whiteboard into their daily curriculums. We will explore the diverse ways in which these teachers currently use interactive whiteboards and identify how they adapt their pedagogy. The implications of these data for teacher education are then considered.

Introduction
Reform in the Australian education sector has been driven by policy at the state and federal level designed to address needs created by “globalised economies, networked societies, digital technologies, and new community and regional cultures” (Education Queensland, 2000a p. 7). These changes have shaped educational policy, as well as curriculum, pedagogical practices and teacher education. Reform initiated by the federal (National Literacy Goal MCEETYA, 1997) and at the state level (see Queensland State Education – 2010, 1999) have translated into initiatives designed to embrace new technologies and to construct learning environments that promote a broadened range of literacy practices. In most schools this has led to the integration of desk-top computers based on a belief that technology will improve learning. Yet, limitations of computers in schools has been well documented (Hill & Fletcher, 2002; Lewin, 2000) with, accessibility, reliability and teacher control identified as issues to be addressed in the classroom. However, a recent technological innovation in the form of interactive whiteboards appears to offer a way forward in accommodating the new ways of incorporating a range of information communication technologies (ICTs) in schools.

An interactive whiteboard (IWB) is a touch-sensitive whiteboard screen that is designed to work in conjunction with desktop and networked computers and a projector (Smart Technologies, 2004). An image is generated by the computer and projected onto a large whiteboard, where a touch is equivalent to a mouse-click. It provides both audio-visual presentation and computer-based interactivity and allows for interaction with electronic content and multimedia resources, such as VCR, the internet, intranet, CD Roms, CD’s, DVD’s, a range of computer software, scanners and digital cameras.

Impact of IWBs in schools
Interactive whiteboards have been a recent phenomenon in educational settings, introduced in the 1990's, primarily in England, Canada and America. More recently, IWBs have been introduced in Australian schools and there is a need to carefully document their impact on teacher practice and student learning. Research reported in the United States, the United Kingdom and Australia have found that IWBs affect learning in several ways. There is evidence that the use of IWB’s and other ICT’s increase the level of student engagement in the classroom through increased motivation and improved enthusiasm for learning. Furthermore, they have been employed successfully to cater to the diverse learning needs of students with hearing and vision impairments. Also indicated are higher levels of retention of information
by students through the use of the note taking facilities of these IWBs. Lee (2003, p. 1) has proposed that
IWBs have the potential to "fundamentally change and enhance the nature and quality of schooling." He
further states that this change can only be achieved by highly skilled and effective teachers. Kent (2003)
has expressed the view that the adoption of the IWB has led to the revised role of the teacher, referring to
this pedagogical practice as "e-teaching." Essentially, 'e-teaching' involves using technology to enhance
the art of teaching in a whole class or small group situation. This is in contrast, to how desktop computers
have been conventionally used in classroom, usually on an individual basis or small group.

**Impact of ICTs on teachers**

The integration of any technology into the classroom cannot be achieved instantaneously and as such is a
period of growth and transformation for teachers. Transformational learning theories for adults suggest
that this process of growth involves changes in assumptions, perspective, behaviour and self. One such
theorist on transformational learning, Merzow (1981) states that adults may experience ten phases of
transformation, but that these stages or steps may not be clearly defined, nor followed by each adult
learner. The phases that may occur as adults revise their meaning are: "disorienting dilemma, self-
examination, assessment of assumptions, recognition that others share similar transformations,
exploration of options for new roles, developing a course action plan, acquiring knowledge and skills to
implement the action plan, trying out new roles, building of competence and self-confidence, and a re-
integration into life based on new perspectives" (Dias & Atkinson, 2001, p. 3). Dias and Atkinson (2001)
suggest that the process of transformational learning is evident in teacher beliefs, feelings and actions as
they adapt new technology to existing teaching frameworks.

One way of describing technology integration by teachers has been suggested by Sandholtz, Ringstaff
and Dwyer (1997). In their view the technology integration of teachers falls into five different evolutionary
stages which each have their own patterns of change and support requirements to progress to the next
level. These five stages are entry, adoption, adaptation, appropriation and invention. During the entry phase,
teachers are reluctant to try new things, reverting to traditional teaching methods. Whilst integrating
computer technology into the traditional classroom, they may encounter problems with the resources and
technical issues. Once they have progressed to the adoption phase, teachers are making a more conscious
effort to integrate technology into daily lessons, but with limited activities such as keyboarding, word-
processing or drill and practice activities. Whilst they may still have concerns about technical issues,
teachers begin to display some trouble-shooting capabilities at a basic level. In these two earlier phases the
support needed for educators is the collaboration with peers with respect to planning and teaching
experiences. Also of paramount importance is training in computer-assisted instructional methods and
word-processing software. As teachers progress to the adaptation to and integration of new technologies,
students use a greater variety of programs, producing work at a faster rate. During this phase teachers
have learned to use computers as time-saving tools rather than creating additional demands. With this
focus on greater productivity Dwyer, Ringstaff and Sandholtz (1990) suggest there are four important
support issues that need to be addressed. Firstly, peer observation and team teaching should be
encouraged with a flexible schedule developed that allows for this to occur. Secondly, alternative
pedagogies should be introduced and discussed. Thirdly, staff should be trained in a greater variety of
software packages to foster greater productivity, such as spreadsheets, e-mail, databases and Hyperstudio.
Sandholtz, Ringstaff and Dwyer (1997) describe the appropriation stage as a milestone, rather than a
phase, with teachers and students displaying an understanding of the technology's usefulness and are able
to apply it effortlessly as a tool to accomplish tasks. This stage is marked by more student interaction, and
students are working more frequently with computers for curriculum related projects.

The ultimate goal is to reach a stage where there is greater invention. In this stage, teachers experiment
with their new pedagogical styles and how they relate to students. This means being more reflective of
their teaching and old teaching patterns. This stage supports the notion that students actively construct
knowledge, with student experts coming to the fore to assist their peers and teachers with technological
problems. In order for teachers to progress in their learning, Sandholtz, Ringstaff and Dwyer (1997)
suggest the need for professional development through conferences and presentation and to reflect upon
their technology integration goals when planning. Additionally, some other ways to support teachers at
this stage is to enable collaboration between teachers, support teachers in writing and publish their
findings, and create support systems outside the school network through the email and internet. Finally,
these teachers should share their knowledge by mentoring other colleagues (Sandholtz, Ringstaff, &
Dwyer, 1997).
Impact of ICTs on student learning

Benefits for the improvement of student learning outcomes through ICTs adoption has not been proven indisputably in research findings. Some findings have, however, indicated that it is possible to use them in ways that may lead to student improvement (Hativa & Becker, 1994 as cited inDEST, 2001). Educational technology has been reported as having a significant impact on learning in most subject areas and with students who have special educational needs (Sivin-Kachala & Bialo, 1994). Furthermore, it impacts on other facets of student learning, beyond planned educational outcomes, with the use of computers attributed to student motivation, improved student attitude and self-esteem and increased self-regulated learning and access to information (Rowe, 1993; Joiner, 1996; Wellburn, 1996; Tierney, 1996 as cited inDEST, 2001). As discussed earlier, research on the impact of the IWB has had similar effects on student learning. But clearly, as Sivin-Kachala & Bialo (1994) have highlighted the impact of ICT is related to the specific student population in which it is used, the pedagogical design of the learning environment, the role of the teacher, grouping strategies, and student access to ICT. Selinger (2002) also suggests that when planning teachers should consider the level of student competence and comfort with ICT. If there is a mismatch between what the learner is attending to and the learning itself, this can result in misconception and frustration.

Description of the study

The purpose of the study reported in this paper was to explore the diverse ways teachers currently are using the IWB and to the impact of this technology on their teaching practices. The site of this study was in a large primary school in Logan City with a lower-socio economic profile. There is a range of economic and social issues that challenge and impact upon families, students and teachers of this school. Approximately 25% of the total student population requires additional support, with 8.6% of student enrolments being ascertained with levels of Special Need.

In 2002/3 an IWB was purchased by the school and used for school curriculum planning purposes. However, in 2004, at the request of a Year 1 teacher, the IWB was installed in her classroom as she wanted to integrate technology into her classroom practice. Her initiative resulted in expansion of internet cabling at the beginning of 2004 in the Year one block and the purchase of another IWB in June 2004, resulted in the trialing of the IWB across two Year one double teaching spaces. After recognizing the potential of the IWB to create enhanced digital learning environments, additional IWBs were installed in a Year 4 and Year 7 double teaching space, as well as the school’s Special Education Unit. This school is now in the process of a school wide implementation. For the purposes of this study, teachers in the first stages in Years 1, 4 and 7 were selected to enable a comparison across the year levels.

Research design

A comparative case method (Stake, 1995; Yin, 2003) underpinned the study exploring the implementation of IWBs in classrooms and their effect on teacher practice.

Two guiding questions focused the data collection and analysis:

4. In what ways are classroom teachers using interactive whiteboards to support learning?

5. What personal, cultural or social factors hinder or support the use of interactive whiteboards in the classroom?

Sample

Teachers were invited to participate in the study and one teacher from each double teaching space in Year 1, 4 and 7 contributed to the data. Multiple sources of data were collected using semi structured interviews which were triangulated with observations of classroom practice and document data in the form of work samples to give credibility to the study (Lincoln & Guba, 1985). Observations of each teacher were undertaken over a period of 5 weeks where samples of work were collected. Follow-up interviews were conducted with each teacher at the end of the observation period.

Analysis

Observation notes informed the interview questions and data were analyzed using qualitative techniques to identify repeated themes and patterns emerging in the data (Miles & Huberman, 1994). This was an iterative process where constructions of beliefs and practices in the teacher’s talk offered insights into understanding ways teachers engaged with IWBs to create knowledge and adopt new practices. They also
illuminated ways that they transformed this knowledge into practice. Thus, it was possible to compare the construction of knowledge across units applying the inductive analytic process described by Yin (1993) as "pattern-matching". Data were compared systematically to establish converging or diverging evidence from the various sources. Pattern-matching identified chains of evidence in the data that revealed consistent and repeated themes (Miles & Huberman, 1994). Transformational learning theories for adults (Sandholtz, Ringstaff, & Dwyer, 1997) provided the theoretical framework for interpreting data and informing the two guiding questions of this study.

Results

Impact on teacher attitudes, beliefs and role
All teachers interviewed indicated their level of comfort and confidence in using ICT’s and the IWB was relatively high. In two cases teachers are recent graduates and were exposed to information technologies in their teacher education program or through exposure to ICT’s in the workforce. This relatively high level of comfort and confidence was displayed during all observations of the classrooms. The teacher who had only used the Microsoft suite in her workplace experience felt the software with the IWB was not as easy to use. The other teachers, however through their training had been exposed to other software packages other than Microsoft and did not find this an issue. One teacher whilst feeling confident, described her confidence level as having increased through the use of the IWB and expressed the view that "I need to be confident for the kids to be confident." She also expressed the view that "I have learnt through them, more than anything." In spite of little or no training, with IWBs all teachers have highlighted the importance of transferring skills developed in other software programs. They also displayed high levels of self-efficacy, with their predisposition to experimentation or risk-taking and collaboration with peers when dealing with software programs they had little or no knowledge of. Whilst the data of only one teacher per double teaching space was collected, it was interesting to note that they were the only teachers to use the IWB during the observation period. Clearly, teacher predisposition and perception with respect to the place of ICT in teaching and learning is important. All teachers had in varying degrees implemented technology in the classroom prior to interactive whiteboards but described it as a difficult process, due to computer problems or lack of computers.

The established teaching style of all three teachers, who followed the Whole-Part-Whole approach, was not fundamentally changed through the introduction of the IWB, but rather the IWB was merged into their existing pedagogical patterns. All the teachers tended to adapt the same lesson content, and saw the place of the IWB as "an extra resource you take on." The creative potential of using the IWB is expressed in one teacher’s comment “you can do a lot more with it once it’s (the lesson content) up there." This notion of seeking to improve both practice and creativity and an evolution in their practice is evident in "we are still teaching the same things but you are trying to find new ways to do it. We are starting to extend our ideas about how we can use it." What has changed greatly is the way in which the IWB allows student interactivity with the lesson content within a social and technological context. The IWB has clearly revitalized the process of teaching for all teachers who were enthusiastic in their use, with one teacher commenting that she wouldn’t want to teach without one and that it is "more interesting for the kids and us."

Perceived benefits for students
One of the key benefits expressed by all the teachers was that “students seem to respond better to visual learning,” with the size of the display “which really captures their imagination.” All teachers commented that students were engaged and motivated when using the IWB. Secondly, the interactivity of the IWB, which allows students to manipulate content on the whiteboard was important, with one teacher expressing the view that it allowed students to be greater risk-takers. "Its not on paper, where it feels like it is stuck." As to the knowledge, skills or processes that students were learning, one teacher expressed the benefit that all students were able to see the same picture that the teacher was talking about, with less chance of misconception. Furthermore content and topics that traditionally weren’t so interesting, can be made more interesting by the IWB.

Impact on teacher practice
Teachers were purposeful with the way they integrated the IWB into classroom activities, dependant upon the curriculum objectives and lesson structure. From the initial observation, it has been noted that teachers are using the IWBs in different ways, for different purposes and different lengths of time across
the different year levels. The design of the lesson impacted on the role of the teacher, with both direct instruction and teacher as facilitator being used when integrating the IWB. In most instances the IWB was used to introduce material, to extend learning, provide additional practice or extension activities, to provide reflection and closure, to review prior lessons or concepts. In some lessons graphic organizers or written directions for computer-related tasks were used to scaffold student learning and to develop higher order thinking. This was also the case when lessons were used for revision or for absent students.

Whilst teachers could generally see the possible integration across all Key Learning areas, only one year level was using it for all aspects. The IWB is mainly at this stage being used for Maths and English, some SOSE, and some science. One teacher found that developing an interactive way for developing mental strategies for problem solving in maths a challenge, but the school was at the time adopting a new Maths program. Teachers are gradually extending their practices by the addition of accessories such as microphones, to add sound, and scanners to enable display of student work. Whilst technology skills were only modeled in the context of learning areas or tasks to be completed, all teachers expressed that their retention of technology skills was high. Whilst they felt most students were able to remember, any who didn’t could be prompted through visual reference to a previous whole class activity.

Factors affecting teacher implementation
Generally, all teachers expressed little or no problem in technical, software or networking problems when using IWBs. Issues such as storage of files for the software were addressed in the early stages of implementation, with a system for storage on the servers and the use of memory sticks to enable easier transferal of resources created at home. One teacher did admit to having a software clash, because of a slightly older version of the whiteboard program she had at home, whilst the school had a newer version.

There are still some limitations that these teachers are dealing with and evident in both the observations and the teacher interview. This focused around class management in relation to class size and behavioural aspects. These issues presented themselves in different ways in each year level, due to the individual needs of some students. All teachers expressed a concern about class size as the IWB is shared within a double teaching space and they felt it was difficult to use the IWB with anywhere from 45 students in the lower grade, up to 60 students in the middle and upper grades. Teachers found that if each class used the IWB separately, students in the other class were often distracted by this and it was hard to remain on task. In relation to students with special needs, it was often difficult to ensure students treated the IWB carefully. Furthermore the Year 7 teacher commented as to the difficulty in ensuring these students have access to the IWB in whole class time, yet still trying to maintain the focus of the rest of the class who may be more academically advanced. One teacher felt that her students weren’t able to work independently and this hampered her use of the IWB.

Whilst the two recent teacher graduates felt that whilst the level of training in ICT’s they received was sufficient and that they were probably better prepared than some other teachers, it was not as good as it could have been to prepare them for using technology in the classroom. Whilst they both were exposed to using a computer to complete university related tasks, one teacher felt specific ICT courses only scratched the surface on how to use software for teaching purposes. As the IWB is a new educational resource in Australia and only used in other innovative schools, professional development is through school based meetings and collaborative sharing. Teachers are not currently participating in local, national or international forums, but express the view that in order to move forward they need access to international schools who have been trialling the IWB for a longer period of time. In seeking to creatively enhance learning and apply it across more Key Learning areas, teachers have identified the need for different lesson plans, examples and resources from some of these international schools as it is time consuming locating or creating their own. One teacher also expressed the concern of renewing the curriculum, so that students aren’t completing the same types of activities at each year level. The software for the IWB has also been developed internationally and teachers at this school have been proactive in identifying areas for the programmers to develop for both more efficient ease of use and for content more specific to an Australian context.

Discussion
This report described how three teachers in three different year levels integrated the IWB into their pedagogical practices. Data collected indicate that teachers in this study were at the appropriation stage of the process of integrating new technologies into their practice. They have certainly progressed at a fast rate in spite of a relatively short period teaching with the IWB. This may be related to the teachers’ claims
that they had a relatively high level of confidence and comfort with technology prior to the IWB's implementation. In order for them to progress further, however, Sandholtz, Ringstaff and Dwyer (1997), suggest the need for professional development through conferences and presentation and to reflect upon their technology integration goals when planning. Additionally, some other ways to support teachers at this stage is to enable collaboration between teachers, support teachers in writing and publish their findings, and create support systems outside the school network through the use of email and internet. Finally, these teachers could share their knowledge by mentoring other colleagues (Sandholtz, Ringstaff, & Dwyer, 1997). The teachers in this study as we have highlighted have reflected on their own practice and identified some of these as a key priority in their own professional development.

**Implications**

As Durrant and Green (2000) highlighted “it is teachers educational expertise that needs to be foregrounded and strengthened, along with their professional knowledge, skills and dispositions, which they then bring to the challenge of the new technologies for schooling and for education generally” (p104). This still certainly needs to be the case for teacher education programs, with a strong emphasis on building specific subject-area knowledge, as well as the skills and knowledge of a variety of educational software, as well as the development of skills to cope with new software packages that are to be created in the future. Finally, as Fitzallen (2004) discovered in her case study research, the acquisition of ICT skills does not necessary lead to enhanced and transformative teaching practices. Also, it may not influence the teacher attitudes and the perceptions of student use of ICT.

In order to help our teachers move from the appropriation stage to a more inventive stage of technology integration, or to progress through the stages of integration generally, there is the clear need for professional development for teachers, with a focus on gaining access to more experienced technology users outside their own school and even outside their own country. Technologies such as the internet and email make it possible to provide a window to the world, where both teachers and students have the opportunity to participate in virtual knowledge networking where members share, create and master knowledge (Dede, 2000). Secondly, as there is no real training for teachers at this time with IWBs, so there is a need for professional development for teachers and staff, which is suited to their levels of integration. Thirdly, teachers need to re-examine and challenge their own pedagogical beliefs about what constitutes effective teaching and learning, with the willingness to experiment with their teaching practice. During this aspect of change, teachers need to be provided with the necessary support.

**Conclusion**

Technology itself, even one as promising as the interactive whiteboard is not sufficient to create a successful learning community (Woodrow, Mayer-Smith & Pedretti, 2000). There is currently no Australian longitudinal research to indicate if students are achieving learning outcomes. As Winn (2002) suggests the study of learning in complete, complex and interactive environments is one requiring careful research methods. Learning environments such as IWBs are environments in which learning takes place in part through social interaction (Winn, 2002). This social nature of learning within this environment needs to be acknowledged, with a study of the systems of variables, both in the student and environment level needing investigation (Salomon, 1991). With this in mind, Winn (2002) has suggested the need to look at the use of technology to distribute cognition over the entire community or school linked by the technology. So, in order to study the distributed learning, three areas need to be studied. Firstly, the actual learning community itself, which consists of different teachers with varying backgrounds and different levels of expertise with the IWB and how they engage the IWBs in their curriculum needs to be researched. Secondly, the potential of the IWB itself needs to be evaluated. Environments such as the IWB present information in a variety of ways from the ability to use the WWW, multimedia products, learning objects, Smartboard and Microsoft software that allows students to add their own inscriptions to their work and to teacher designed learning objects. Hence, those aspects or resources accessed by the IWB which foster or hinder student learning, clearly needs to be investigated. Finally, the use of the IWB by the teacher in providing authentic and productive tasks for students needs to be explored.
References


As we move into the new millennium, debates intensify as to what novice teachers need to know, who could and should provide this knowledge and how teacher learning might be linked to educational and social change. Arguably, in new and uncertain times responsible teaching professionalism is as much about building collaborative learning cultures and critical inquiry in school and community contexts, as the accumulation and dissemination of knowledge and skills. While teacher education is well placed to produce generative teaching professionals able to fashion these learning cultures, it may be that teacher educators will first need to embrace uncertainty, questioning and interrupting taken-for-granted assumptions that currently frame practice and potentially inhibit change.

Currently in Australia doubts are being expressed at a national level about the roles, responsibilities and ability of teacher education to produce competent and able teachers. The concern seems to be that teacher education has not moved with the times; that the disciplinary knowledge of prospective teachers is low, and that teacher education is not doing enough to redress extant problems (Department of Education, Science & Training (DEST), 2003). While what preservice teachers do and do not know are perennial problems in teacher education, the issue should be examined in light of other important questions framing the production of generative and competent teachers in and for the future. Three questions demand considered and urgent attention: which outcomes, broadly conceived, are critical for these new teachers entering a professional field that calls out for change yet lumbers on under balkanized structures and traditional pedagogical relationships; what knowledge is vital, and how might preservice teachers best learn it? While members of various political, educational, civic and professional communities bring a variety of perspectives to bear upon these questions, I contemplate them from a poststructuralist standpoint.

A common thread running through statements at a political and policy level is that novice teachers be able to interact in new ways with learners in classrooms and beyond. In policy documents such as Austraila's Teachers: Austraila's Future (2003, p. 61) inquiry-based, investigative learning is put forward as a means of providing 'more motivating, more engaging and more relevant study experiences' for students of mathematics, science and technology. The hope is, of course, to redress the problem of attrition – especially in mathematics and science where students are turning away from subjects which 'resist mass appeal and do not grip the imagination of students' (DEST, 2003, p. 61). As well, due to the proliferation globally of inequalities and social differences (UNESCO, 1996, in Day, 2004, p. 148), there is to be an emphasis on collaboration and community building, to provide for all students a schooling context wherein they can feel safe and valued. Children in school need teachers 'who understand them, who are able to provide a secure environment, and provide critical access to knowledge' (Day, 2000, p. 103). However, many feel that the teaching professional of the twenty-first century must also be a leader, an activist, an agent of change, a 'post' professional (Hargreaves, 2000) working for enhanced learning opportunities for all, within and around 'the narrow instrumentalism of current reform agendas' (Sachs, 2003, cited in Day, 2004, p. 147). In summary, then, this new professionalism is learner and learning centred, focusing on the ability to work positively with difference and continual change.

From a poststructuralist perspective, this new professionalism can be seen to be premised on an epistemological and ontological position that de-centres positivist knowledge and the rational, and autonomous individual. This professionalism can not be only about the application of constructed knowledge and skills, nor about trained professionals marching robot like into the community for social change. It is about the other half of education—the culture, and community building and the ways in

259
which teachers interact with their students, colleagues and the wider community to create and intensify learning. It is about recognising and working in positive ways with difference and uncertainty. It is about having agency, a form of critical energy to speak up for students and their learning, often in the face of persuasive political and policy discourses. It is not about negating any discourse, but rather about working with and around all discourses in the interests of sustained learning. This new professionalism is not a cognitive state, the result of knowledge accumulation as has often been assumed (Australia’s Teachers: Australia’s Future, DEST, 2003), but is a new way of being an educator that may be, to some extent at least, constituted in preservice teacher education. In the following sections of the paper I contemplate how the critical reflective practices of teacher education, while useful at one level, may operate in ways that detract from novice teachers recognition of themselves as generative and authoritative professionals.

Socialisation

Much of contemporary and traditional practice in teacher education is based on notions of socialisation, framed by quite different understandings of the human subject from those proposed in poststructuralist thought. The notion of socialisation accepts a mind/body (knowledge/social world) dualism, where what is outside somehow gets inside the individual to influence action. It is assumed that preservice teachers simply need exposure to, socialisation into, new ‘truths’ in a discourse to be able to enact them. For example, in teacher education there is an attempt to socialise preservice teachers, in the mathematics and science education areas, for example, into inquiry-based or investigative ways of interacting for the construction of more robust intellectual knowledge (DEST, 2003). What is not often recognised, though, is that the inquiry based practices of teacher education cannot control the power relations between learners and lecturer (or school based teacher educator) that always exist. As the preservice teachers engage in these activity based, investigative practices, many of them are constituted (or positioned, in power relations) to know themselves as unlikely and/or unable to teach in these ways (Klein, 2001). This is because traditional authority relations prevail, and the preservice teachers do not develop a sense of themselves as initiators of sense-making processes, nor authoritative and powerful in the knowledge production interactions.

Similarly, reflective practice and journal writing in teacher education can cement or confirm particular historical models of the ‘good teacher’, as if this notion is somehow generalisable and universally practicable (Luke, Luke, & Mayer, 2000). Where this is the case, it leads to the maintenance of the status quo, and ‘authenticates some particular ways of being a teacher while it oblitrates others and confounds the possibilities of thinking outside existing categories of thought (Fendler, 2003, p. 23). Critical social analysis is also important in teacher education, though because of the inherent relations of power it often encourages students to come up with the answers the lecturer wants. Groundwater-Smith (1988, cited in Harrison, 2004, p. 381) suggests that students ‘can be more interested in receiving a qualification than they are in becoming critical’. Critical thinking and inquiry based processes as they are currently operate in teacher education can often mean the learning of a ‘cognitive structure that permits students to critique [and inquire into] knowledge only from the position of the teacher’ (Harrison, 2004, p. 381).

So many of these discursive practices operate in ways that are regulatory and normative, in that students are guided, and propel themselves towards essentialised ‘truths’ about teaching and teachers that are upheld by lecturers, school-based teacher educators, booklets of readings, texts and examination. Unseen and unbalanced power relations subjugate autonomy (Younghblood Jackson, 2001) making critique and inquiry little more than pretence (Harrison, 2004). In taking for granted the rational and autonomous student of humanist thought, individualistic thinking and notions of individual deficit are reinforced in teacher education. Venn (1984, p. 148) says: ‘the mind - social dichotomy... presents a problem in terms of a socialisation process, reinforcing the individualism of the unitary rational subject. Thus differences in behaviour are reduced to individual differences, measured as deviations from norms; that is to say they are seen as the result or the index of personality differences, of variations in cognitive abilities, rates of development or, in gross cases, of pathologies’. This rational, individualistic notion of persons has serious educational consequences. On the one hand, it puts undue pressure on novice teachers to achieve themselves as some idealised notion of what a ‘good, agetic’ teacher must be (Sumsion, 2003), and on the other it allows them to classify their students, colleagues and themselves as those with, or without ability and/or motivation. In the end, blame or deficit is placed on the individual who can/does not demonstrate the proper rationality and attendant practice. This then leaves the power/knowledge/identity relationships of pedagogic practice to continue unfettered and unquestioned. Perhaps in teacher education, as McLaren (2003) stipulates, it is time to ‘become warriors against certainty... to intensify the obvious until it becomes strange’ (p. 296)?
Recognising power at play

A poststructuralist perspective recognises that all knowledge (including knowledge of self, identity) is discursively produced. It does not accept the essential identity nor the dualisms (good/bad students; effective/ineffective pedagogies) of humanist thought. Rather, in the intersecting discourses (as a noun) of teacher education (psychology, sociology, behaviour management, leadership) notions of 'best practice', 'constructivism', 'accountability' and 'inquiry based practice' are seen to be produced. There is nothing absolute about any of these concepts; they vary across contexts and change as participants struggle locally to establish themselves as authoritative within discursive boundaries. As well, the discursive practices (a verb) of teacher education simultaneously produce preservice teachers as certain sorts of teachers, sometimes supporting a strong recognition of themselves as competent and generative 'teachers in process', and at others, suppressing this recognition. Pedagogic work in teacher education is identity work, and arguably at the moment relies far too heavily on normative and regulatory discursive practices that suppress, rather than support, the constitution of a new teaching professionalism for new times.

The poststructuralist concept of the constitution of knowledge and identity embraces uncertainty and problematises commonsense notions of learning; students are always learning, and all teaching has power relationships and learning implications. As students engage in teaching-learning relationships of power/knowledge/identity they are forming a constituted knowing (Lather, 1991) about how teaching and learning are done. A key issue for this paper is that the concept of knowledge constituted (as well as constructed) in the discursive practices of teacher education foregrounds interaction and intersection of power/knowledge/identity and the productivity of these relations, rendering all parties active, changing and changeable agencies (Lusted, 1986). Teaching, then, becomes not the instrumental conveyance of knowledge, but a productive series of interactions where power/knowledge/identity interact and influence each other; a new teaching professionalism relies on this productive interactivity to focus on quality in learning experiences, as novice teachers ‘inquire systematically about how teaching practice constructs learning opportunities for students’ (Cochran-Smith, 2000, p. 17). Critical inquiry, and agency, are not cognitive attributes but a constituted state; a way-of-being in education that may be influenced by the quality of their engagement in preservice teacher education.

A new teaching professionalism

From a poststructuralist perspective the quality of the pedagogic process or learning journey is enormously important. Traditionally it has been important primarily because of the pedagogic and intellectual knowledge and skills constructed, but more recently also because of its ontological dimension, and how it influences ways of being a teacher and learner in New Times. Currently, when preservice teachers enter teacher education programs their learning journey is already fairly carefully scripted; there are subjects to ‘cover’, disciplinary and pedagogical knowledge to construct, a set amount of time to be spent in schools and exams to pass. However, as Phelan (2001, p. 593) cautions: When an instrumental view of teaching is sanctioned by institutions, then teacher education becomes a question of maintenance of and accommodation to the status quo. It simply reinforces the type of knowing (epistemology) and being (ontology) already in place. Butler (1995, p. 135, in St Pierre, 2000, p. 502), though, suggests that things could be different: To be constituted by language is to be produced within a given network of power/discourse which is open to resignification, redeployment, subversive citation from within, and interruption and inadvertent convergences with other such networks. ‘Agency’ is to be found precisely at such junctures where discourse is renewed.

Perhaps a renewed ‘border pedagogy’ (Davies, 2000) in teacher education, unfettered by absolute and unchanging knowledge and identities ‘set in stone’, operating at the ‘borders’ of current humanist discourses, might energise debate and dialogue, encouraging novice teachers to seek and find alternative discursive spaces in which to enact a revised teaching professionalism. This pedagogy would be a pedagogy not of transfer, but of sustained equitable dialogue and unremitting transformation of thought and action. Such a pedagogy would operate on two interdependent fronts; it would position the preservice teachers in such a way that they may come to recognise themselves as legitimate, agentic professionals in process, and it would help them sense the constitutive, or productive, effects of all pedagogical intervention.

Learning to teach is about establishing oneself as generative professional

The preservice teachers are learning to be teaching professionals, and if it is considered important for them to be able to act in agentic and generative ways, then something needs to be done about this in teacher education programs. It is not enough, though necessary, to teach the pedagogical and disciplinary
knowledge as traditionally conceived. If it is considered important that preservice teachers establish themselves as persons who engage in systematic inquiry and knowledge production, the collective discursive practices of teacher education must foster it. Being generative, in a poststructuralist sense, is about coming to recognise oneself as an author of action; it is important that preservice teacher have ample opportunity to choose and carry through a line of action, even, perhaps, for assessment purposes. Spaces (social, physical, discursive) should be made for them to ask questions that are not meant to be asked. They should have access to colleagues and teachers in schools who position them as agentive, gradually developing a sense of themselves as ones who can and should go beyond what is taken-for-granted to forge something new (Davies, 1991).

Within poststructuralist thought, the possibility for personal sense making within the discourses of teacher education is not only a cognitive issue; here it is more importantly an issue of power, positioning, because it is important that the preservice teachers be able to recognise themselves as having something useful to say, and a right to say it. The discursive practices of teacher education could be renewed to situate the teacher in process in learning situations where s/he is able to achieve authorship or authority in knowledge (and self) construction. Often competent in digital literacies and multiliteracies, preservice teachers will flourish in discursive contexts that encourage them to learn from every person they meet, to endlessly ask questions and carefully listen to the answers, as they chart their learning-to-teach journey in novel ways, for example, in e-portfolios constructed throughout their program of study. The compilation of the portfolio puts the preservice teacher in the driver’s seat, enabling her/him to better understand self and profession, to become a proactive architect of professional development and to obtain fair and comprehensive assessment (Campbell, Cignetti, Melenyzer, Nettles, & Wyman, 2004).

The notion of preservice teachers constituted in discourse does not allow a mind/body separation. It makes relevant the how of pedagogic interaction over the what; it makes visible the power relations and recognises that the ability to inquire, engage and enervate learning is a way of being a teaching professional that has to be constituted in the collective discursive practices of teacher education. However, as Foucault (1982) said ‘My point is not that everything is bad, but that everything is dangerous, which is not exactly the same as bad. If everything is dangerous, then we always have something to do. So my position leads not to apathy but to a hyper- and pessimistic activism’ (pp. 231, 2). In teacher education, every interaction with students comprises power/knowledge/identity components, and is constitutive of the teaching professionals of the future, though in exactly which ways is always uncertain. Regardless of the uncertainty, and valuing it as opportunity, there is much to be done to work differently towards forming teachers who do know learners and learning differently, who can ‘see’ beyond the taken-for-granted and who can and will enact a teaching professionalism appropriate to/for the twenty-first century. A second step in teacher education is to have the preservice teachers sense the productive, or constitutive force of pedagogical interaction.

Social change is about recognising the productive force of pedagogy

A further step taken by poststructuralist theorising is to decentralise the absolute and positivist nature of knowledge. Knowledge about teaching, learning and learners is always in process, tentative, constituted in discourse. As Cochran-Smith (2000, p. 16) puts it, knowledge produced is always ‘generative material for interrogation and analysis’. The preservice teachers have some pedagogical and disciplinary knowledge and skills in the traditional sense (though not enough of them, as is commonly remarked [DEST, 2003]) and a knowledge constituted unconsciously and invisibly, a knowing (Lather, 1991) about how teaching and learning are done. This knowledge is grist for the pedagogical mill in teacher education and, as students’ knowledge, should be given the esteem of that in course readings and textbooks. However, it is not about accepting this knowledge as factual or correct, but about thinking about and sharing the effects on learners if teaching is done in the ways that are to the preservice teachers so comfortable and convincing. While there are no absolute answers to what should be done pedagogically, the preservice teachers begin to sense that how they interact with children matters; and, as Lather (1991) says, in their actions in the classroom is this (re)constituted knowing.

A second topic for consideration and contemplation is to have preservice teachers recognise the working of power in pedagogic relationships; they could note how they are positioned as ‘novice’ in the novice/expert binary in teacher education, schools and the wider community. The preservice teachers could be encouraged to write stories, autobiographies, similar to that produced by Young-blood Jackson, (2001) about Annie, a preservice teacher struggling to achieve herself as a legitimate professional in contradictory power/knowledge/identity relationships with two different teachers in different classrooms.
Youngblood-Jackson (2001) shows how the learning to teach process is not the linear and unproblematic experience it is commonly constructed to be; the preservice teacher is always in process, constituted in relations of power/ knowledge/ identity. Youngblood-Jackson (2001, p. 387) says of Annie, the preservice teacher in her research: 'In Candace's classroom, she was vibrant - moving about the room, engaging students in animated discussion, smiling, and taking risks in her pedagogical choices. In Sheila's classroom, however, Annie stood immobile, behind a podium, recited notes from an overhead projector, passed out worksheets, and seemed detached from the students' (Youngblood-Jackson, 2001, p. 387).

Where novice teachers are able to sense their identity as teaching professionals as always in process, rather than a product, all manner of possibilities present themselves. First, they may be able to concentrate on the quality of the journey, a journey of 'always becoming' rather than in the indulged self-satisfaction of a journey complete. Second, they may come to celebrate difference, seeing it as a site of potential and possibility, rather than deficit which has too often been the norm. Agency, and generative potential for novice teachers depends on their being able to recognise the constitutive power of the collective discourses of education, and being able to interrupt and change those discursive positionings they do not want.

Conclusion
It has been my experience that preservice teachers sometimes remark that they have to know much more before they will be able to teach; it is as if they need a full knowledge bank before they will be able to venture confidently into the classroom. Although knowledge is important, and some (DEST, 2003) would venture that the more of it the better, it does not necessarily translate into new, innovative and generative ways of interacting with/ in learning schools and communities. Such agency can not be taken for granted, yet may be fostered in teacher education where novice teachers come to know that every bit of knowledge spoken about learners and learning could be spoken differently, and that how they interact in learning and teaching has a lineage, is productive, and could be enacted otherwise. Clearly these cautious also apply to me and my writing, teaching and research where, reeking poststructuralist proclivities I embrace uncertainty and the freedom it brings. However, I am well aware as Foucault (1982) advises, there is much more to be done, and 'everything is dangerous' (p. 231).

References


Making A Difference In Child Protection: Towards An Effective Education For Teachers

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The purpose of this paper is to examine recent research about teachers' participation in the child protection system with a view to developing guidelines for effective child protection training. In relation to the conference themes, this paper offers multiple intersections, whether as an example of policy development impacting on the education of teachers, as one of professional practice which has implications for the ongoing education of the teaching workforce, or as a teacher education initiative, per se.

Introduction

In five states of Australia, some form of mandatory reporting of suspected child abuse is required of teachers, or other school staff (the exception being Western Australia). The number of reports continues to increase, with around 219,384 notifications in 2003-4 and 40,416 substantiated (proven) cases of harm to children in 2003 (The Age, 11.4.05, p. 6). With one child reported as abused or neglected every two minutes—and one proven to have been harmed every 13 minutes—child maltreatment is a serious community concern (Nicholson, 2005).

Schools have a significant role in supporting children and families and in connecting them with community services when needed. As Briggs and Hawkins (1997) point out, teachers' close daily contact with students ensures that they are well placed to observe when a child or young person is at risk of harm. Moreover, a teacher may well be the only trusted adult to whom a child can turn for assistance (Watts, 1997). However, despite the pivotal importance of their role, teachers' experience of statutory notification continues to be problematic. Bluett (in Davies, 2002) observes that "Teachers are extremely worried about this issue. They feel unconfident about identifying or reporting anything but the most obvious physical abuse. The stress of making a report is huge." Bradley (2002), also sheds light on the challenges: "forced to report abuse, but getting little training or feedback, teachers fear child protection is failing." Hence, Blaske tt and Taylor's (2003) grim assertion that "many professionals dread making a notification" appears justified. In the face of such comments, the issue of professional preparation is worthy of further exploration.

United States research: Teachers reporting child abuse

Research about teachers as notifiers of child maltreatment has, for the most part, been carried out in the U.S.A where statutory obligations have been in force in all states since the 1970s (Crenshaw, Crenshaw, & Lichtenberg, 1995). Early research tended to focus on teachers' non-compliance, despite their acknowledgement of professional and ethical commitment to reporting (for example, Levine, 1983; McIntyre, 1987; Abrahams, Casey, & Daro, 1992; Reiniger, Robison, & McHugh, 1994). Later studies (see for example, Crenshaw, et al., 1995; Kenny, 2001) also confirmed the robustness of this finding. The reasons advanced for teachers' under reporting of suspected child abuse include lack of knowledge about reporting procedures (Reiniger et al) as well as lack of confidence in their ability to identify indicators (Levine, 1983; Abrahams, Casey and Daro, 1992). In addition, fear of the consequences to the child or themselves as notifiers, was cited (Abrahams et al 1992; O'Toole, Webster, O'Toole, & Lucal, 1999). Of Kenny's respondents who admitted to recognising but resisting the obligation to notify suspected abuse, the following justifications were proffered (2001, p. 90):

- fear of making an inaccurate report
- lack of faith in child protection services
- lack of visible evidence accompanying disclosure of physical injury
• not wanting to appear foolish
• belief that reporting brings negative consequences to the child
• feeling as though it is not my job
• fear of misinterpreting cultural discipline styles
• wanting to avoid being involved in legal proceedings

Fears such as these appear to be widespread as bases for non-compliance, with many teachers having had prior negative experiences of notification. This is also the case in the Australian context.

A trend which emerged in a number of studies was the tendency for notifications to reflect a hierarchy with physical abuse more likely to be reported than sexual or emotional abuse (Levine, 1983; Crenshaw et al., 1995). Crenshaw et al argue that this is related to teachers' difficulty in recognising the less visible manifestations of other forms of maltreatment.

In response to the complexities evident in these observations, it is hardly surprising to find researchers questioning the nature of training offered. Trudell and Whatley (1988), for example, pointed to the inadequacy of preparation, cautioning against "training teachers as though a brief intervention, usually of a few hours (i.e., limited duration) will suffice, when in fact, complex concepts are involved." Providing teachers with information alone in a rational, objective fashion (most commonly on legal obligations, procedures and indicators of abuse), as though this were sufficient to alleviate their concerns about mandatory reporting, was unlikely to succeed. Furthermore, it is argued, such approaches are doomed, given the tendency to obscure crucial issues for teachers such as: the ongoing controversy about mandatory reporting, ethical decisions, the assumption of consistently positive outcomes, the truncated view of the process offered, neglect of individual school context and the minimisation of the emotional impact on the notifier (Trudell & Whatley, 1988). On this view, appropriate training would need to embrace the requirements of increased time allocation, content which is accurate in representing the complexities involved, and pedagogy which is experientially based. Kenny's (2001) findings affirmed this direction for thorough training utilising case-studies and hypothetical situations, amid calls to administrators and school leaders to provide support and encouragement to notifiers to allow them to overcome their fears about the reporting process.

In an important study, Crenshaw et al. (1995) examined the decision to notify in finer detail to discover that knowledge alone (of procedures, indicators and reporting laws) did not differentiate between teachers who proceeded with notifications and those who failed to do so. Fewer than 10% of their sample of 664 teachers and support staff rated themselves as sufficiently prepared to recognise and report child abuse. Teachers who did not proceed with reports rated their inability to define indicators of emotional or sexual abuse and neglect, when ambiguity was present, as more significant in their decision than did those who notified: these teachers were more willing to base their decision on suspicion. Non-reporters also seemed to be influenced by parental characteristics. In addition, the two groups were distinguishable by the belief that schools should be a first line of defence against child abuse and neglect. Hence, effective training would need to extend beyond dealing with policy and procedures and merely handing out lists of indicators, toward a strengthening of teachers' ability to identify possible maltreatment, objective data gathering, and to developing a strong conviction about teachers' contributions as front line workers in the effort to combat child abuse.

O'Toole et al. (1999) explored the decision-making process further by investigating the influence of case characteristics, those of the teacher and organisational setting on recognition and reporting of suspected abuse. It was found that over half the variance in both recognition and reporting in response to vignettes in which specific characteristics were systematically manipulated, could be explained by case characteristics, predominantly, type and seriousness of the act and, to a lesser extent, the psychology of the perpetrator and behaviour of the victim. The under reporting of physical and emotional abuse was confirmed as well as highlighting the masking of possible abuse through positive evaluations of either perpetrator psychology or victim behaviour. Amongst other findings regarding teachers, parental status adversely affects the tendency to report, as does years of experience for recognition (but not for reporting) prompting the authors to speculate that a lack of preservice training may have contributed. Teachers involved with large numbers of students tended to report less, despite having skills in recognition. At the school level, administrators were viewed as conservative in their propensity to report. O'Toole et al. concluded that indications of discretionary reporting were most likely to be attributable to teachers' experience of inadequate response by child protection services. They recommended greater feedback to
notifiers, training in specific definitions of maltreatment and collaborative inter-agency work.

**United Kingdom research: Teachers' experience of child protection participation**

Unlike the U.S experience, research in the U.K. has not been focused on mandatory reporting as voluntary systems of notification have been available to schools until relatively recently. Legislation was amended in 2002 to require schools and local education authorities to make arrangements to safeguard and protect children (Gilligan, 2002). The model currently in force is that of child protection co-ordinator, with a ‘designated teacher’ (usually the head teacher in primary schools) assuming responsibility for notifications to the local department of social services and ensuring that all employees are aware of the maltreatment indicators and notification procedures. The impact of teachers reporting sexual abuse was the subject of a study by Skinner, (1999). Concentrating on the aftermath of notification, she found that there were marked discrepancies between the preparation received by teachers and the reality of their experience. As with the U.S. studies, there was an emphasis on the ‘procedural rather than the personal’. Indeed Skinner’s respondents reported the need to continue to process the experience, given their experience of emotional disturbance including nightmares and post traumatic stress disorder, even after several years had passed. They categorised the levels of training and organisational support as largely ‘non-existent’, a single participant ranking this as ‘adequate’. The timing of training was an issue; some participants gained access only post-notification and some had participated more than 10 years previously. Skinner reiterated the need for ongoing training and organisational support for notifiers. Greater commitment by all teachers was also signalled, given respondents’ reports on the culture of schools, many senior colleagues and subject specialists having rejected (sometimes vehemently) their concerns for students.

Webb and Vulliamy (2001) investigated the experience of child protection co-ordinators who received either a half day or a full day session of training— the foundation upon which their responsibilities in relating to child protection services, home-school relationships and training of colleagues was to be based. The content of the program included information about referrals (notifications), case conferences, the child protection register (statutory case list), record keeping and identification. In response to this, 40% of surveyed teachers recommended more training on recognition of signs and symptoms of the various types of abuse, appropriate responses to disclosures of abuse, the role of child protection staff and personal safety programs. Moreover, when information of this nature was disseminated in end of the day staff meetings dealing with LEA child protection requirements and local school policy, it came under pressure. As Blyth and Cooper (1999, p. 117,) point out, “a one hour slot at the end of a school day can do no more than start to raise awareness and give some basic information. Webb and Vulliamy emphasise the need for training of sufficient depth to provide staff the opportunity to explore their own feelings, attitudes and values about abuse, thus enabling them to recognise how these might inhibit them from taking action. They also pointed to the need to develop skills in how to respond to a child attempting to disclose abuse, how to relate to parents post referral, and for knowledge of community agencies and resources. The problematic nature of inter-agency collaboration fuelled by a lack of feedback and response to teacher concerns by child protection staff was again highlighted.

Baginsky (2003) also focussed upon interagency relationships as an outcome of her study in preservice child protection training. Although an accreditation standard in child protection competence had been imposed, Baginsky found that “a few courses offered a maximum of three hours but sometimes it was as little as one hour”. Although initially confident, students returned from school experience placements in a state of confusion, having been cautioned by supervising teachers that “making referrals was pointless … as often they were not aware that anything was then done” (2003, p. 120). Consequently, Baginsky concluded that materials should be rewritten to focus on multiagency child protection work. Further, she argued, the lack of timetable space at preservice level should preclude reliance on input at this level. However, her subsequent follow-up study with new graduates demonstrated that reliance on service level training to fill the gap was also unwise, with only 17% of newly qualified teachers attending LEA courses, and only 20% able to access training in schools, presumably due to the difficulty and costs of covering absences (Baginsky, 2003, p. 127). In the light of this Baginsky argues that training should be provided on a continuum from pre-service to inservice levels with regular opportunities for updating. Moreover, participation would need to be guaranteed by requiring teachers to have undertaken child protection training as a condition for their continuing in employment (Baginsky, 2003).

Hence, while teachers in the U.K. are subject to different legal requirements, their needs for professional preparation do not differ markedly from those of their U.S. counterparts. Training in child protection requires adequate time, and complexity of content and processes to allow for the exploration of
values, beliefs and emotions which are involved in detecting and notifying child abuse. Working with child protection agencies in a collaborative manner also requires serious attention.

**Australian research: Preparation and notification**

Australian research on these issues has been conducted relatively recently. A number of studies have explored the situation in South Australia where teachers are required to have completed a one-day workshop in child protection as a condition of employment. McCallum (2001a) surveyed all schools to establish views about mandatory notification and school reporting practices. Factors inhibiting notification were identified as: lack of supportive school structures, lack of experience in teaching, personal issues, for example, fear of retaliation from parents and increased workload.

Consistent with studies reviewed previously (for example, O'Toole et al., 1999), McCallum found that personal isolation within schools posed difficulties for notifiers. Hence, the need for effective policy, procedures, and sources of collegial and personal support are required at the school level. McCallum also pointed to feelings of doubt and negative self-efficacy accompanying the process. (2001a, p. 4).

Under such conditions, McCallum concludes, ‘current models of training are ineffective in preparing educators to report suspicions of child abuse and neglect’. Overcoming the inhibiting factors in notification thus requires a preparation which takes into account the local contexts of schools, teacher needs and concerns, including post-notification consequences for the victim and family, and conditions of educator learning.

An empirical assessment of the success of the current Mandated Notification Training Program, available since 1989 in South Australia, was undertaken in two studies by Hawkins and McCallum (2001a & 2001b). In the first investigation of the one day program, training was found to increase participants' confidence in their ability to recognize the indicators of abuse, their awareness of reporting responsibilities, their knowledge of what constitutes reasonable grounds for reporting and how to respond appropriately to a child's disclosure of abuse. However, in spite of these quantitative gains in knowledge and skill, it is interesting to examine those areas where teacher attitudes proved to be resistant to change.

For example, although participants are advised that they are not required by law to investigate or prove that abuse has occurred, 20% of recently trained teachers believed they should investigate further if unsure of their suspicion. Similarly, despite being instructed to respond to a child's disclosure by listening supportively, allowing the child to talk without pushing for investigative details, 20% of the recently trained teachers indicated they would persuade the child to give more details. In the words of one respondent, "I believe it is sometimes better to do some investigation first or checking up before notifying the authorities" (Hawkins and McCallum, 2001a, p. 1618). Hawkins and McCallum observe that for some teachers, "there is clearly a mismatch between the level of evidence required by law for reporting to occur and the level teachers expect to satisfy their own personal need for confidence in initiating the serious step of a child abuse report" (2001, p. 1618).

Furthermore, this mismatch continues even after training has been undertaken and may contribute to the significant occurrence of non-reporters or discretionary reporters evident in the literature (Hawkins & McCallum, 2001, p. 1619). Similarly, disquiet about Child Protection Services’ (CPS), procedures may have contributed to discretionary reporting by 15% of recently trained teachers, whose justifications included: "the child was happier within the situation than she would have been away from it—contact with her siblings was very important to her and the neglect was not severe enough to put her at serious risk". Another stated, "I didn't think anything would be done". In the same vein, although teachers are instructed to report suspicions directly to CPS, more than half of the recently trained group indicated they would consult other colleagues presumably to decrease their feelings of uncertainty about the event and to engender emotional support for their decision. One teacher explained: "I feel that I would discuss the situation briefly with a trusted colleague even though this is not recommended" because, "I don't know if I trust wholly my own intuition" (Hawkins and McCallum, 2001, p. 1619). These reservations notwithstanding, the training program was shown to have brought about greater acceptance of the incidence and seriousness of child abuse, together with an enhanced commitment to children's rights and of their own personal responsibility in child abuse prevention Hawkins and McCallum, (2001, p. 1620).

In a second study, Hawkins and McCallum examined the impact of Mandated Notification training (as above), on the tendency of individuals to report hypothetical cases of abuse and neglect, using the Crenshaw et al methodology involving response to maltreatment vignettes. Consistent with those of Crenshaw et al., they found that abuse was unambiguously present: respondents were willing to proceed with notification. Training in this context, had no impact on willingness to report. However, where the
evidence of abuse was more ambiguous, willingness to notify was reduced. In these circumstances, training increased the likelihood of reporting.

A less formal evaluation of the Mandatory Notification Training program, with fourth year pre-service teachers, (two years after having undertaken the training in their second year) was also conducted by McCallum (2001b). An examination of their knowledge of the policies and procedures, abuse indicators and potential collaboration with CPS revealed confusion and low confidence levels. McCallum concluded that, despite pre-service teachers’ high level of commitment to child protection issues, the nature, scope and scheduling of such programs ought to be reassessed. McCallum asserts that these findings constitute “clear evidence that pre-service teachers require additional training” (that is, more than one day’s duration) “and that ‘one-off’ programs are not sufficient to skill beginning teachers to fulfill the legal mandate” (2001b, p. 17).

Watts (1998) investigated factors affecting Queensland pre-service teachers’ decision-making about child abuse. Their participation in training courses notwithstanding, participants’ decisions were found to be consistent with O’Toole et al’s findings. Preservice teachers were thus “more likely to be influenced by some personal experience—such as previous relationship with a person in a similar position, a child of a similar age, or identifying with one of the people involved in a case, such as the mother, child or father—than by the definitions, evidence and procedures they are aware of... beliefs [such as] ‘a mother wouldn’t do that,’ despite the fact that abuse is also perpetrated by women.”

Similarly, programs which focus on attitudes and belief systems are recommended by Taylor and Lloyd (2001), in the wake of a report concerning the reluctance of adolescents and children in a Victorian rural area to disclose sexual abuse for fear of being disbelieved or attracting stigma. The non-offending parents were also fearful of being disbelieved by professionals and of being retaliated against by the offending parent’s supporters. This prevented them from accessing needed community services (p. 3). Traditional notions of ‘family’ hold it to be a private entity, thereby allowing it to evade scrutiny and intervention. Hence, staff in professional, government and legal organizations may be hesitant about becoming involved in cases of domestic violence and child abuse: a contention validated in the O’Toole et al finding that rural schools had the lowest reporting rates. Consequently, Taylor and Lloyd argue, “teacher training programs need to develop greater understanding of abuse within the family unit, especially as the majority of sexual and physical violence against children and adolescents occurs within the family” (2001, p. 3). Addressing attitudes and beliefs about child abuse, as we have seen, might well hold the key to overcoming barriers to reporting. However, as previously argued, the kind of values clarification and experiential work required cannot be accommodated in the few hours allotted in the majority of programs discussed. Citing Baginsky and Hodgkinson, (1999), Taylor and Lloyd argue that a more comprehensive and substantial course in child protection is warranted in the interests of allowing students to develop a more integrated knowledge of child protection issues. There is evidence (McIntyre & Carr, 2000) that longer programs are more effective in changing teachers’ behaviour. And as Baginsky, (2003) contends, such a course should be seen as a starting point to be followed by opportunities for regular updating during the in-service phase. Based on the preceding analyses, it is clear that it is the attitudes and values of teachers (rather than the child protection knowledge they hold) which determine their response to suspected child maltreatment. For Taylor and Lloyd, “training programs also need to take account of community attitudes and values, and the extent to which these impact on school environments and local agencies involved in protecting children from abuse” (2001, p. 4). Furthermore, training programs will have greater effectiveness if the pre-training knowledge, attitudes and beliefs are understood. Taylor and Lloyd (2001) conclude that there is a need for teachers and academic teacher educators to consider the value of developing a core child protection course that could be conducted, either as a single unit, or as a course that is interwoven across the span of the course curriculum. Moreover, they argue, such a unit should be compulsory for all teaching degrees. (Taylor & Lloyd, 2001, p. 4).

Turning now to studies concerning notifier behaviour, Goddard, Saunders, Stanley and Tucci investigated the implementation of mandatory reporting legislation in Victoria in 2001. Goddard et al sought to shed light on factors influencing community professionals’ decisions about whether or not to report suspected child abuse or neglect to statutory child protection services. Professions represented in the sample included those in direct contact with children and families such as psychologists; social workers; medical practitioners; nurses and child care workers, the majority being teachers. The majority of respondents, (75%) found it complex or difficult to determine whether child abuse had occurred and when they should notify the Department of Human Services (DHS). Most respondents (88%) based their decision to proceed on their view of the anticipated outcomes for the child. More than half of the
respondents (56%) believed the outcome would not be positive for the child or for the child's family (63%). Notification behaviour was influenced by the source of information about the abusive event, some informants being viewed as less credible. However, the most important influences on the decision to report “were the perpetrator’s access to the child, the functioning of the primary caregiver, the nature of parent/child interaction and the type and severity of abuse and neglect” (Goddard et al., 2001, p. 89). The authors note that while community professionals view their responsibility to protect children from maltreatment seriously, they require support in their decision-making about suspected abuse. Goddard et al assert that “information about what they should consider to be abuse is imperative” and they suggest, “knowledge about the way the child protection system works will also assist in raising their confidence about identifying and reporting cases of child abuse” (2001, p. 89).

The results of this study indicate that considerable confusion exists amongst professionals as to whether or not they are mandated to report child abuse, 29% of those surveyed being either inaccurate or uncertain about their obligations under Victorian law. According to Goddard et al, “this represents a major impediment to the effective protection of children from abuse and neglect” (2001, p. 3). These authors also call for a major education campaign ensuring that all community professionals understand what constitutes child abuse, are aware of their notification obligations and fully understand the procedures to follow in making a report to DHS (2001, p. 4). Once again, these findings confirm the challenges posed by mandatory reporting, given that many professionals regard notification as discretionary in the face of lack of skills, professional support and feedback.

In a recent investigation, Blaskett and Taylor (2003) conducted a survey and interview based study with health and welfare professionals from various occupational groupings including general practitioners, nurses, teachers, psychiatrists and psychologists, childcare workers and social workers. Their aim was to ascertain the extent to which professionals comply with legislative requirements and the manner in which they influence one another in their notification behaviours. Resonating with a number of those reported above, the study’s conclusions indicate that professionals often influence one another when forming a belief or reporting that a child is subject to abuse. There are variations in reporting behaviours across the professional groups, with 10% of the sample admitting to non-reporting. Surprisingly, there were generally positive attitudes towards mandatory reporting per se. However, most harboured some fear of recriminations resulting from notifications. Generally low levels of confidence were expressed in the child protection system as a whole. An insufficiency of training and lack of awareness of reporting responsibilities was common to the group, although teachers had one of the highest rates of training in the sample. (On the other hand, teacher interviewees reflected an alarming trend to discretionary reporting: the greater the frequency of their contact with CPS, the less inclined were they to utilise this avenue in future.) However, the access to, nature and quality of such training appears problematic, with the nature and quality of such training appears problematic, with more than 40% of survey respondents requesting further opportunities. One teacher commented:

I’m a little sorry for those people who have been teaching in the short time since the first lot of training came out to the second—there is a big gap of people that really didn’t know the legislation applied to them other than what their principal might have told them and that would have been the principal’s interpretation of it anyway, so I think the training should be offered much more regularly than every nine years (Blaskett & Taylor, 2003, p. 155).

Blaskett and Taylor (2003) provide a detailed analysis of these findings with comments specific to occupational groups. Their observations of the implications of the common data, however provide little cause for optimism. They note, for example, that

Despite a high level of concern to protect children from abuse, for a variety of reasons including lack of confidence in the child protection system, concern to protect confidentiality, fear of reprisal and concern at loss of trusted clients, professionals with the care of children express reservations about reporting abuse. Several of those who are most experienced in dealing with cases of child abuse and with Child Protection Services are those who are most reluctant to invoke assistance from child protection authorities (p. 9).

A contemporary Queensland study, (Walsh, Farrel, Schweitzer, & Bridgstock, 2005) sought to explore factors critical to teachers detecting and reporting maltreatment. Teachers were found to be committed to reporting, but unsure of their abilities to recognise abuse. Where the culture of the school encouraged discussion of these matters, teachers were more confident about identifying physical abuse and neglect. Sexual abuse however, was the most difficult to identify in any circumstance. Teachers invoked discretion in their decision making where they judged that notification would not serve the child’s best interest. There was often a lack of feedback on the outcomes of notifications, even when reports had been made via their own principal. Walsh et al. note that situations such as this lead to low confidence in the
reporting system further discouraging participation. Informal discussions with colleagues and personal factors (parental status, for example) appeared to be more influential than the impact of training in child protection. However, given that half the number of teachers involved had fewer than five hours of child protection training, (the average being 2.8 hours), this is hardly surprising. Walsh et al recommend enhanced training, with compulsory study in initial teacher training. This would consist of both embedded content across units combined with focussed study in dedicated units. At the inservice level, continuous training is suggested. In accord with South Australian practice, these authors recommend compulsory child protection training as a prerequisite to employment. A broadening of the teacher's role to include proactive measures such as personal safety teaching is also warranted according to these authors (Walsh et al., 2005).

Thus, Australian research on notifier behaviour has produced results typical of those conducted in the U.S.A and the U.K. A pattern of discretionary reporting is evident, often with subjective impressions influencing whether notifications are made. While training, usually of short duration, has occasionally been found to be effective, some attitudes are extremely resistant to change. Teachers still lack confidence in their decision-making and seek reassurance from colleagues, in spite of admonitions to report directly to CPS. Similarly, they seem unable to be dissuaded from collecting 'evidence' from children. Concern about family disruption and/or retaliation by parents weighs heavily upon them in deciding whether to proceed with notifications, especially in rural communities. Overall, there are clear implications for training. 'One-off' sessions of limited duration are ineffective, as are programs, which focus on procedural aspects rather than personal perspectives on child maltreatment. An extended time frame is preferable; one which allows for revisiting of difficult topics and time to reflect on personal values, attitudes and beliefs. A multi-agency approach needs to be taken, given the realities of present circumstances and the desire of some teachers to find community based solutions. At the systems level, consistency of response, (including feedback) from CPS is needed to restore confidence in the notification process as well as strengthening the interagency collaboration essential to securing children's safety.

Conclusion
Research studies from three countries, (U.S.A, U.K., and Australia) on teachers' participation in child protection responsibilities have been reviewed. A number of commonalities in teachers' responses to statutory notification have been identified. In particular, there was evidence of discretion or 'underreporting' of child maltreatment (Abrahams, Casey, & Daro, 1992; Crenshaw, Crenshaw and Lichtenberg, 1995; Kenny, 2001; Webb & Vulliamy, 2001; Goddard, Saunders, Stanley, & Tucci, 2001; Blaskett & Taylor, 2003; Walsh et al., 2005). An exploration of the factors involved in decision-making about suspected child abuse reveals the process to be heavily influenced by subjective appraisals about the situation or people involved (Crenshaw et al., 1995; Kenny, 2001; Watts, 1998; Walsh et al., 2005). There is concern for the teacher's own safety, with fear of parental retaliation, an oft stated rationale for failing to report (O'Toole et al., 1999; Kenny, 2001). In addition, many teachers have developed a distrust of the child protection system's capacity to secure an improved situation for child victims (Goddard et al., 2001, Hawkins & McCallum, 2001). This is not ameliorated by a failure by CPS to liaise with notifiers in the post notification phase (Goddard et al., 2001; Webb & Vulliamy, 2001; Blaskett & Taylor, 2003).

Guidelines for teacher preparation
The program implications for training teachers to respond constructively to mandatory reporting legislation in particular, which have emerged from this overview encompass elements such as timing, duration, pedagogy and content. An opportunity for increasing the breadth of child protection roles is evident as teachers move from the narrowly reactive positions (that is, as notifiers) to proactive opportunities such as teaching personal safety, organizing parenting programs on the school site or interacting with community agencies to broker family support services. They are as follows:

Timing: Teachers require a comprehensive program of education about child maltreatment. Such a program needs to be commenced during their pre-service training and continue throughout their career.

Duration: Since 'one-off' programs and those consisting of a few hours, or even one full day, have been shown to be ineffective, a program extending over one semester in pre-service teacher education, with an equivalent number of hours at in-service level— in cases where the pre-service component has not been undertaken— is recommended. This needs to be supplemented by opportunities for updating periodically (for example, annually) during employment.

Pedagogy: Programs need to be experiential in nature, focussing on existing attitudes and beliefs with a view to guiding participants to a child centred approach, such that subjective judgements are eventually
replaced by objective appraisals and action to safeguard the child. Case studies and role-plays of appropriate responses to disclosure and notification should be core components.

Content: The school, as the first line of defence in child abuse prevention and response, needs to be emphasised. The dynamics of various forms child abuse including institutional abuse should be highlighted, as well as the customary areas of child maltreatment identification, appropriate response and notification. The effects on children of victimisation, including altered academic performance, and short and long-term disturbances to social/emotional adjustment should be highlighted and support strategies included. Parental responses to allegations and strategies for handling them should be examined. An overview of the child protection system should be provided. Representatives of CPS should be invited to discuss local procedures and to provide possible models for interagency collaboration, including monitoring, case conference participation and liaison. Local community agencies and resources should be identified and relationships fostered toward cooperative efforts, whether in child protection or other areas of school community partnership. Child abuse prevention programs, for example, personal safety (including on-line safety), should be introduced and teachers invited to consider their roles in a proactive approach. School policy on child safety needs to be examined and developed further. The benefits of providing resources to parents, for example via parenting programs and linkages to community agencies will be emphasised.

School structures: In addition to providing opportunities for collaboration on policy/procedures development, structures for providing support to those directly involved in notification need to be developed. School leaders, especially principals should be closely involved. An awareness of legislative requirements needs to be fostered at the same time as recognising that if an alternative course of action is preferred and a discretionary response (that is, non-notification) is made, the child's welfare must be preserved and local options for safety and access to services must be provided.

Finally, it needs to be acknowledged that effective training for child protection duties is also contingent upon teachers' capacity to have confidence in the functioning of the child protection system. The difficulties noted by Goddard et al. (2001), Blaskett and Taylor (2003) and Walsh et al., (2005) should not be underestimated. It is hoped that a research informed program of child protection education for teachers will contribute to enhancing our capacity to safeguard children.

References


Positioning The Practicum Through Research And Scholarship

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The practicum or professional experience can be positioned within a number of discourses. It is my contention that for many teacher educators, teachers and student teachers, the dominant discourse is still one of practice, despite the 90s seeing a rapid rate of practicum innovation and scholarship (e.g., Groundwater-Smith, 1993; Martinez, 1998; Zeichner, 1990). This paper reports on an initiative in the School of Education at the University of South Australia which is attempting to position the practicum within a discourse of research and scholarship. It will be argued that positioning practicum within such a discourse opens up spaces for different ways of thinking and engaging with the practicum. This is significant because there is a current call for a rethinking of our teaching and learning approaches, a preparedness to deconstruct taken for granted assumptions and an expansion of our knowledge bases in relation to the practicum (Haigh & Ward, 2004; Le Cornu, 2004; Martinez, 2004).

Introduction

In the 90s in Australia we saw many changes being made to teacher education practicum programs based on a call to reconceptualise and restructure based primarily on the concepts of reflection, partnerships and collaboration (Dobbins, 1993; 1996). We have also seen scholarship in the practicum expand as an increasing number of teacher educators have written about their experiences, both in terms of changes they have made to their professional experience programs or conducted research in the area (Campbell-Evans & Maloney, 1997; Groundwater-Smith, 1997; Hastings & Squires, 2002; Martinez, 1998; White, 2004).

However, it is my contention that despite this, in many teacher education institutions, the dominant practicum discourse is still one of practice. Practical and pragmatic concerns tend to dominate the daily lives of university teachers educators whose teaching and learning responsibilities involve the practicum. For anyone involved in professional experience this will not seem surprising given the complexities of practicum and the current climate of tight budgetary constraints. The practical everyday concerns of getting enough placements, matching students' personal circumstances (e.g., financial, transport and family commitments) to appropriate placements, the myriad of associated administrative tasks and the need to attend to the multiplicity of political, professional and economic issues surrounding professional placements, can consume both one's time and energy. Moreover, there are increasing challenges facing the practicum including the internationalisation of professional experience, expanding use of ICT, the press for flexibility, accountability and standards and the move towards strategic and educational alliances across professions with professional experience (Martinez, 2004).

Another significant contextual issue is that teacher education in general is still seen as a low-status field of study in many research universities (Zeichner, 2005). This is reflected, Zeichner argues, in heavy teaching loads, meagre travel budgets for attending conferences, little or no professional development being provided for faculty to help them learn how to continually improve their work and the fact that frequently the work of supervising students in their field placements is "farmed out" to adjunct staff who often have very little connection to the rest of the teacher education program.

This paper describes an initiative of the School of Education at the University of South Australia which was established to try to build scholarship in the area of practicum or professional experience. It starts with some background information and then provides a description of the initiative, followed by a discussion of some of the challenges and dilemmas associated with its implementation. The paper draws on a number of data sources including questionnaires, evaluations, meeting notes and a personal journal.
Background
The School of Education at the University of South Australia is a large school, having recently amalgamated three Schools of Education. It is spread across two campuses - Magill (eastern suburbs) and Mawson Lakes (northern suburbs), with the closure of Underdale (western suburbs) campus at the end of 2004. As well as having a new campus, new programs in Early Childhood Education, Junior Primary/Primary, Middle School, Secondary and Adult Education are being implemented in 2005. Professional placements are central to all of the School's programs and there are large numbers of students enrolled in the core practicum courses in each program with approximately 2500-3000 placements being needed each year. The profile of the School of Education continues to change and provide particular challenges, with staff reductions (as people retire and are not replaced) and very large numbers of casual staffing (particularly in the practicum area).

In 2004 the practicum staff in the School of Education were faced with even more challenges, given cuts to the practicum budget at the same time as the need to develop new courses. It was considered timely by the Head of School to review our practices in the practicum, examine the assumptions and principles upon which they are based and consider the implications for our new programs and for our scholarship in the field of teacher education. Two initiatives were established to facilitate this process: the introduction of a role of a Director for Practicum Scholarship, Development and Research and the formalisation of the School of Education Practicum Management Committee. This paper focuses on the former.

The role of Director for Practicum Scholarship, Development and Research was a challenging role indeed to begin in 2004 given that practicum staff were involved in moving campuses, teaching out old programs, writing new courses and coping with the reality of budget cuts. There was also a tradition of people in the School of Education not engaging in much scholarly work around the practicum which was evidenced by the lack of conference presentations or publications in relation to professional experience.

One helpful contextual event that happened in 2004 (to take effect in 2005) was a new Enterprise Bargaining agreement which stated explicitly that there be time for academic staff to engage in scholarship. The School of Education then developed its own workload agreement for 2005 taking that into account so in effect providing time and space for teacher educators to engage in scholarly activity. It should be noted that the EB agreement however defines scholarship as "keeping up with the field" with an emphasis on professional reading. This is a different view to that often espoused by the wider university community which sees scholarship as "advancing the field". The University of South Australia has adopted the Boyer model of scholarship which invites scholars to see their work as "having four separate, yet overlapping, functions. ... the scholarship of discovery, the scholarship of integration; the scholarship of application; and the scholarship of teaching." (1990, p. 16). Such a model involves more than just good teaching or even reflective practice. It also includes a more public dimension, opening practices to critique and evaluation as well as making the insights gained available to others through scholarly activities such as conferences, seminars or by contributing to the literature. Hence staff in the School of Education, like many around the country, are encouraged to not only do scholarly work by critiquing their practices or engaging with the literature but they are also strongly encouraged to produce scholarly work.

The initiative – and what has happened so far
The brief of the role of Director for Practicum Scholarship, Development and Research was to work with relevant practicum colleagues in 2004 and 2005 to consider the following questions:

- How do we create a culture which acknowledges and affirms scholarship in the practicum?
- How do we find the scholarship in our work?
- How do we deepen the scholarship in our work?
- How do we build capacity in the School to do some innovative things in the practicum in the new programs?

Prior to an exploration of these questions however, the Practicum Management committee needed to be formalised and this was seen as a responsibility of the Director for Practicum Scholarship, Development and Research. This process took much of the first six months as it required clarification of all roles including placement officers, course co-ordinators and program practicum co-ordinators. Prior to 2004 the School of Education, like many teacher education programs, had positions of Program Practicum Directors, whose role it was to oversee the practicum for large numbers across a number of programs.
However, with changes to staffing, more and more of the responsibility for practicum matters was being devolved to course co-ordinators and to individual program levels. Hence much clarification of roles was needed. The committee consists of all of the program practicum co-ordinators, the placement officers and the Director for Practicum Scholarship, Development and Research. The role of the committee is to oversee consistent management practices across the School and to provide leadership in the development of innovative practices.

The process resulted in a document entitled *Practicum Management and Development in the School of Education 2004/2005* which included the following explicit commitment to the practicum in the School of Education:

> It is essential that the practicum maintains the highest status in terms of value and quality for all participants... It must be perceived as an asset and investment in the profession, not a cost, to all who are involved. For this to occur and for the practicum to progress and thrive, there must be a platform of productive and efficient management systems that facilitate the implementation of innovative initiatives which promote practicum scholarship and development. (p. 2)

In mid 2004, an invitation was extended by the Director for Practicum Scholarship, Development and Research to interested staff in the School to attend a meeting which was designed to explore the above mentioned questions. Twenty staff attended and a wide range of views on practicum, scholarship and culture were revealed in the discussion and follow up questionnaire. For example, when asked what they meant by scholarship, responses included the following: “Keeping up to date which means professional reading and talking” and “Publishing”. In answer to the question about finding and deepening scholarship, the two key themes of time and collaboration emerged. There was general agreement that more time was needed to share and explore people’s ideas in more depth. A number of staff expressed frustration and a degree of cynicism both during the meeting and in their responses to the questionnaire, when asked about building capacity in the School, as can be seen in the following:

> How do we ensure all university personnel value practicum – it’s often seen as the work of Level A/B’s and sessional staff? It’s not valued as real work;

> By rhetoric being supported by the pragmatics so that ideas can be followed through. We need recognition and valuing of the practicum.

In response to the expressed need for more time, it was decided by the Practicum Committee to hold a one day retreat. This was seen as a catalyst day so that people felt better prepared to engage in planning for the new programs and more informed to teach and research in the practicum. Invitations were issued and the result was that 41 participants attended the day in August. This number included many sessional staff as funding had been secured for the event to enable them to attend. The funding also enabled the hiring of a very nice seaside venue with excellent catering, both considered essential by the working party, to give a strong message to staff that they - and the practicum, were valued. The day was planned deliberately to give people time out to talk with each other, hear about current thinking in regard to the practicum, share current practices, explore assumptions and engage with the issues around practicum which are becoming more problematic. The key input on the day was entitled Problematising a Practicum Curriculum and staff were challenged with the idea of needing to rethink/reprioritise practicum practices. It was stressed that it is a time for questioning the ‘taken for granted’. Participants were also introduced to the notion of ‘pedagogies for the practicum’ which challenged established notions of place, space and role in learning to teach in the practicum (Le Cornu, Mayer, & White, 2001).

During the day, participants were asked to critique their current practices using the following questions:

- Why do you do that?
- Whose interests are served?
- Who is advantaged/disadvantaged?
- What are the underlying assumptions?

Time was provided for staff to work in program teams in the afternoon to think about the implications for the new programs. The feedback from the day was extremely positive, with the recurring theme being that all participants valued the time and space to talk about professional experience.

Following the retreat, staff were heavily involved in planning new courses and, faced with budgetary
cuts, many meetings were held to determine some parameters in developing the new programs. Thus the last four months of 2004 were consumed with practicum development rather than scholarship per se. However, during the many discussions that were held, particularly amongst members of the Management committee, it became apparent that some of the discourse was changing. Rather than focusing only on ‘the what’, more and more people were critically reflecting on many taken for granted practices and asking ‘why’. For example questions such as “Why do we make visits to sites?”, “Why do we have weekly on-campus workshops?” and “Why does practicum have to be full-time?” were asked. There was some evidence of people trying to unpack the underlying assumptions around traditional practices and asking hard questions of planned new practices such that they would make explicit the rationale behind the changes.

In other smaller discussions outside of the committee a number of people referred to questions that were raised at the retreat and used some of the language that was introduced on the day. For example, asking: What assumptions are we making in the ways we work and in what we ask of students and mentors? and ‘How do we support students to work in, through and around the contradictions of teaching prac?” People also asked for specific literature which prompted a practicum literature review being conducted and disseminated amongst staff. However anecdotal evidence suggested that most staff were too busy to read or even access it. This observation supported what people said that they wanted (from an earlier questionnaire), namely: “Regular opportunities to be involved in serious ongoing conversations” and “Time to share/read/listen/talk – sharing around key issues/literature/professional discussions”. Hence it was decided that structured opportunities needed to be provided to enable staff to engage with the practicum literature. So towards the end of 2005 a Teaching and Learning Grant was written to provide opportunities for a Practicum Scholarship group to be established in 2005.

In February 2005 a ‘practicum professional development and scholarship’ day was held at the new Mawson Lakes campus. Again, this was planned by a small working party of the Management committee. The morning focused on new supervisory approaches being adopted by the School of Education and the afternoon focused on scholarship. It was pleasing to note that nearly all staff who attended in the morning, stayed on for the afternoon and indeed, the written evaluations of the day confirm the level of enthusiasm around practicum scholarship. In written evaluations when asked what they were most excited/inspired by, the following comments were made: “the idea of practicum scholarship meetings” and “the focus on scholarship of prac. was a bonus given that my head is filled with administration”. When asked what their biggest challenge would be, the following are insightful: “Remembering to unlearn as well as learn” (referring to a quote by Cochran-Smith, 2003, presented at both the retreat and P.D. and scholarship day) and “creating space for building scholarship time”. It remains to be seen as to what level of commitment there is to the scholarship group being established. At the time of writing of this paper a working group has met to finalise the schedule of meetings for the year and to plan the first meeting to be held in May.

The initiative of designating a specific role of a Director for Practicum Scholarship, Development and Research has resulted in many conversations occurring at various levels including the Practicum Management Committee, working parties for the retreat, the Professional Development/Scholarship day and the Scholarship group and discussions across programs, at course development level and many individual ones.

Discussion

Thus far, it is apparent that positioning the practicum within a scholarship and research discourse is opening up spaces for different ways of thinking and engaging with the practicum. These spaces are represented in the array of learning conversations being held between staff.

A learning conversations is a conversation that “looks into things”, with the idea of making meaning and/or coming to a deeper understanding. It could also be called an inquiry conversation or a reflective conversation in that it goes well beyond describing as it involves analysing and problematising. Haigh and Ward (2004) have stressed the importance of ‘questioning the taken for granted’ and that is indeed, one of the characteristics of learning conversations. They enable this questioning to take place. I have argued elsewhere about the power of learning conversations for teacher educators’ renewal. They provide ‘time out’ from other university work for us to reflect, make sense of things and be challenged to think about things differently (author, 2004). My experiences in the Practicum Scholarship role thus far confirm this view. Martinez (2004), in identifying problems with traditional supervisory practices, stated that frequently “snatched conversations” were the order of the day. I would argue that this is also the case between teacher educators at university and indeed school-based teacher educators in schools. One cannot have a learning conversation when one is busily rushing from one thing to another. There needs to be time for
people to "work through the dilemmas, quandaries and dissonances that relate to their living and being in the world" (Feldman, 1999, p. 137). This of course is in direct contrast to the situation described by Zeichner (2005) where teacher education is often treated as something that "can be quickly mastered in a 45 min. conversation" (p. 120).

During 2004 the learning conversations were deliberately aimed at reviewing our practices in the practicum, examining the assumptions and principles upon which they were based and considering the implications for our new programs and for our scholarship in the field of teacher education. This certainly occurred. In the process of redesigning practicum courses and unpacking various terms like practicum and scholarship, investigating the purpose of professional experience and beginning to engage with the literature, different questions were asked and a different discourse ensued. Too often, the situation has been similar to that described by Zeichner (2005) where he says:

It is very common for faculty and staff to sit around and generate ideas about particular aspects of their programs (eg admission requirements, course sequence and organization, etc) with little or no attempt to learn what the literature has to say about an issue. (p. 123)

This he argues, is very poor scholarly behaviour. There is little doubt that the imperative to redesign practicum courses for the new programs supported the move towards a more scholarly approach to the practicum but it is my contention that it was only by framing the redesign process within a scholarship paradigm that the nature of the conversations changed. It was only by structuring times such as the retreat and professional development and scholarship days for all practicum staff and building scholarship conversations into the Management committee that people engaged in a deeper focus than what has been described by some practicum managers as the 'nuts and bolts of prac'. There needed to be opportunities for staff to hear about the trends in the literature and to know that in changing times, teacher educators need to be able to "both unlearn long-held ideas, beliefs and practices and learn new ways of working" (Cochran-Smith, 2003).

As a result of the conversations in 2004 the School of Education is now moving towards the development of a Practicum Partnership Pedagogical framework, which has the following two premises:

• Intimate linking of on-campus, on-line and in-school/site learning in practicum courses and
• Explicit commitment to strengthening partnerships with our site base colleagues.

Such a framework challenges practicum staff to develop new practices and also new discourse to describe these practices. For example, based on the work of Le Cornu, Mayer and White (2001) we are moving to reject the term supervision in relation to the role of the university teacher educator. Le Cornu et al. (2001) maintained that continued use of the language of supervision had been a barrier to the successful implementation of successive reconceptualisations of the practicum suggested throughout the last decade. They argued for the adoption of the language of pedagogy rather than that of supervision and we are trying to embrace this in the implementation of the Practicum Partnership Pedagogical framework.

Similarly, the work of Awaya, McEwan, Heyler, Linsky, Lum and Wakukawa (2003) was introduced to challenge some views on mentoring. Their argument is that mentoring is a relationship rather than a role with a set of preconceived duties. Loughran's (2004) view of 'student teacher as researcher' was also presented as he makes the case for teacher educators needing to trust that student teachers can (and should) accept more responsibility for their own learning about teaching.

Engaging with different ideas and becoming familiar with other educators' practices enabled staff to interrogate their own practices and make changes to their practices as a result.

In 2005 the focus of the learning conversations will change. Whilst in 2004 the emphasis was on course development, (albeit in a scholarly way), the emphasis in 2005 will be on scholarship per se, with staff being encouraged to read, write and research their practices. As was seen in the preceding section, a scholarship group has been established. The planning group has met and initially we are framing it a bit like a 'reading group'. This is because we recognise, like Zeichner (2005), that teacher educators need to be familiar with the literature in teacher education in order to see "one's practice as a teacher educator in new ways that challenge one's existing frameworks" (p. 122). The challenge now will be to build a culture around researching the practicum. We want to implement Cochran-Smith & Lytle's (2004) idea of 'working the dialectic' (cited in Cochran-Smith, 2005) which sees a blurring of theorising and doing in teacher education. They state explicitly that "part of the task of the teacher educator is functioning simultaneously as both researcher and practitioner" (p. 219).

Whilst it is beyond the scope of this paper to discuss the numerous challenges that exist when attempting to reposition the practicum within a discourse of research and scholarship, not the least one
being the question of how we involve our school/site based partners in learning conversations, I would like to conclude this paper on a personal note. One of the biggest challenges for me in 2004 was the sheer number of conversations in which I was involved and the time needed for these. This theme is a recurring one in my personal journal last year as the following extracts exemplify:

I need to capture the frustration I feel however at what seems like endless conversations!!! I had forgotten the time that is needed to engage people in talking about their views and assumptions, let alone looking at changing these!!! (24/9/04)

and:

It has been very hard to focus on 'scholarship' as the 'development' part of the role has been all time-consuming. This has been in relation to the new programs and needing to have R-7 pract strand meetings' to look at our prac and then also be involved in talking with ECE, 3-9 and 6-12 people about their programs. At the same time there has been a push for 'cost cutting' and so more meetings have had to be convened by the prac. management committee and 'special meetings' with program directors and prac. course co-ordinators to ensure that their voice is heard. (21/10/04)

It is clear to me that a multi-levelled approach is necessary in building a culture of scholarship. By this I mean that no one person can come in and declare an agenda of scholarship. Reculturing needs to involve many learning conversations with many people. I have argued elsewhere that any practicum reform needs to involve a reciprocal relationship between restructuring and reculturing (author, 1999). That is, restructuring which involves redefining rules, roles, responsibilities and relationships for all participants and reculturing which involves changing the shared beliefs, customs, attitudes and expectations of the practicum, need to occur simultaneously. This point has been reaffirmed in my current role. At times the processes can be very frustrating as indicated in the following extract from my journal;

As I said to ... today, I don't want to be putting this much time in to what is essentially 'non scholarship' stuff to do with prac. BUT I know that this restructuring is crucial for reculturing. We can't move to a pedagogical model, if all of the details aren't thought through. (28/10/04)

We know that the 'nuts and bolts of prac' demand our time and attention. We know too that any changes to roles and responsibilities of the various participants involved in practicum require time and energy to be involved in professional dialogue. However we also know that if the changes to the way the practicum is structured are to result in 'deep change' rather than superficial change they must be accompanied by cultural change in schools' and universities' values, beliefs, habits, assumptions and ways of doing things. For, as Gore (1995) noted in relation to practicum reform, "while some schemes may appear innovative, in reality deep change does not occur" (p. 16). Thus, if any attempt to reposition practicum within a scholarship and research discourse is to be sustained there needs to be time and opportunities provided by and for staff to work together - and I include our school/site based partners in this - to "learn and unlearn" through learning conversations and indeed, other inquiry endeavours. The practicum presents an ideal opportunity for scholarly work as Martinez (1998) pointed out, when she wrote "... practicum presents a rich site for investigation of the lived out impact of our work as teacher educators" (p. 104).

Conclusion

It has been argued in this paper that university teacher educators, like teachers and student teachers, need time and space to be involved in "intellectual work" (Cochran-Smith, 1991) to think deeply about themselves and their work. Such work opens up spaces for different ways of thinking and positioning in relation to the practicum. Such work includes deconstructing taken for granted assumptions around practicum and uncovering the multiplicity of ways various stakeholders (ie student teachers, teachers, university teacher educators) are positioned in different discourses. It also includes making time to engage in scholarly work in the practicum. The ultimate commitment is to engage in scholarship which involves disseminating the findings of this work throughout the wider educational community so that not only our knowledge base in the practicum is enhanced but so too is the status of teacher education.
References


Situated Teacher Learning
In The Danwei Community Of Practice: An Ethnography

Yongcan Liu
Cambridge University

This paper is a preliminary report of the theoretical framework and research design of an on-going project which explores how College English teachers learn in a Danwei community of practice at a university in the context of China's English Language Teaching reform in higher education. In particular, the research explores the learning capacities of the Danwei community of practice under investigation at three levels: personal (how teachers' pedagogical knowledge and classroom practice develop), interpersonal (how teachers interact and communicate with their colleagues) and organizational (how the Danwei community of practice provides structural and organizational support for teachers to learn). Through a detailed analysis at the three levels, this research intends to find out in what way teachers are supported in their learning process in the Danwei community of practice. Ethnography is used as the major research strategy to capture teachers' daily lives and routine teaching practice. Observations, interviews and accounts (documents and audio-video records of naturally occurring interaction) are used to collect empirical data for the purpose of convergence of evidence and a holistic portrayal of the process of teacher learning in professional development.

Research rationale and research background

Setting the scene for the research
ELT reform in China has been taking place for more than 25 years. Unfortunately, however, the intentions and aims are not necessarily met. The problem of 'Deaf and Dumb English', which was condemned 20 years ago for instance, still remains prominent today. In such a circumstance, a new well-planned ELT reform facing the 21st century is needed.

The ELT reforms in primary and secondary education started in the early 1990s, which implies that the current college English teaching system can no longer meet the needs of high school leavers going to college. Realizing the pressing need to construct a complete streamlined ELT system from primary level to tertiary level, the Ministry of Education selected eight universities (another university took part in the pilot scheme one year later) as the pilot institutions in 1996 to explore the theoretical models and practical experiences of reforming college English language teaching.

In 2001, the Ministry of Education organized a curriculum revision team responsible for summarizing the past experience of reforming college ELT and formulating the College English Curriculum Requirements (Requirements hereafter). The Requirements (for Trial Implementation) was published in 2004 and the scheme is being piloted in 180 higher institutions across the country. It is not just a revised version of the old College English Teaching Guidelines (Guidelines hereafter), rather it reflects a fundamental shift in ideology of teaching and learning in line with the social change - 'Whole-Person Education'. Important changes have been made in curriculum aims and objectives, teaching content and instruction, evaluation and assessment as well as teacher training and support (see China's Ministry of Education, 2004). The present study, along with many others, is intended to make a modest contribution to the implementation of the new ELT reform by providing in-depth and informed empirical evidence for the stakeholders in this reform.

Literature review

Community of practice
Bellah, et al. (1985, p. 333) noted that a community is 'a group of people who are socially interdependent, who participate together in discussion and decision-making, and who share certain practices that both define the community and are nurtured by it'. Since the 1990s, there has been a drive in education to develop communities. This action comes at a time when many show concern over the accelerating loss of the sense of 'togetherness' as we are experiencing less mutual engagement and recognition and more
fragmentedness and alienation than any other time in history. We are also warned that the historical notions of 'social responsibility and commitment [are] crumbling in a culture of unrestrained individualism. What we risk losing, many agree, are those communal spaces where meaningful social interaction broadens people's sense of self beyond the "me" and "I" into the "we" and "us" (Grossman et al., 2001, p. 945). The ideology of 'social interconnectedness' can be seen in people's deliberate efforts in creating opportunities to cherish 'the symbolic behaviour in the forms of beliefs, values, and activities that reflect the social relations we call community' (Calderwood, 2000, p. 6). People believe in community not only because of the ideal images associated with the term such as sharing, caring, security, rituals and celebrations, but more importantly because many 'undoable' things have been achieved best in the presence of a community. Therefore, a social movement that aims to enhance humanity and revitalize the sense of 'belonging' has emerged in response to the crisis of 'individualism'.

Geographic proximity, economic interdependence or shared beliefs and values could serve as the cohering factors of a community, but the existence of communities is effected through social practices. Being alive as human beings, we are all engaged in various social practices, and during the process, we learn to adapt to the social relations locally specific to communities. Practice in this sense is not an antonym of theory we usually talk about, but a series of social interactions in adapting to the norms of the community and accommodating the need for affiliation. Calderwood (2000, p. 18) defined a community of practice as 'one within which there are unequal levels of power and knowledge, sustained by a system of learning that ensures, over time, the continuation of the existence of the community'. From a novice to a competent member in a community, the learning process of being included involves the social interactions of becoming, experiencing, doing and belonging mediated through a series of social practices such as negotiation of meaning, mutual engagement, participation and sense of being a member (Wenger, 1998). To put it differently, 'the movement from apprentice to master within the community of practice is reflected in the novice's increasing self-identification of herself as a fully participating member of the community, as an expert practitioner' (Calderwood, 2000, p. 18).

Danwei as a community of practice
Danwei, which literally means 'work unit' in English, is a term used during Mao's era to refer to all forms of social groupings in China. Although use of the term becomes more flexible in the post-Mao era, people still commonly use it to refer to people's workplaces, particularly those in academic institutions, governmental and civil service sectors and state-owned enterprises, be it an office, a department, a school, an institution or an organization. Danwei, in this sense, is a microcosm of society, composed of various social relationships and practices, and as a whole, it is a community of practice penetrating the five common themes in theories of community: interdependence, interaction/participation, shared interests, concern for individual and minority views, and meaningful relationships (Westheimer, 1998). These themes also correspond to the defining features of a community of practice proposed by Wenger (1998): mutual engagement, a joint enterprise and a shared repertoire.

In the case of a university department, the value of teachers working together for the common good of students is upheld, which makes their practice meaningful in the sense of sharing goals and values. As there are different levels of knowledge and power in the community, however, the process of learning to teach for less competent teachers also entails a movement towards shared competency and self-identification in the department through participation, mutual engagement and negotiation of meaning in both academic and non-academic affairs in the community. The department has its own social structure, history and values, bureaucracy and routines, system of evaluation, control, and reward, methods of information circulation, rules for interpersonal interaction, membership, learning processes, and so forth (Lave & Wenger, 1991), which all reflect the legacy of interaction and negotiation of meaning through social practices.

Learning community: An application of sociocultural learning theory
To understand the mechanism and operation of a learning community, it is also necessary to explore its origin which is labeled 'learning organization' in business and management. After Peter Senge's (1992) ground-breaking book The fifth discipline: the art and practice of the learning organization, researchers in the business sector (Block & MacMillan, 1993; Galagan, 1994; Whyte, 1994) began to devote considerable attention to the effect of workplace factors on staff of the company. Their research findings indicated great influence of work settings on workers, and therefore it is considered as a high order to nurture the corporate climate of collaboration and to celebrate the work of each individual member of staff through shared vision, leadership and decision-making.
It was not long before the idea of collaboration was applied in education, but with a new label ‘learning community’. Nevertheless, it is not fair to say that ‘learning community’ is merely an educational replication of ‘learning organization’ without its own trajectory of development. As Darling-Hammond (1996) noted, ‘schools are now expected not only to offer education, but to ensure learning’. With a much higher demand raised by ‘educational consumers’, education practitioners, like their counterparts in business, also need to work smarter by sharing what Wenger (1998) called ‘tacit knowledge’. Practitioner knowledge is not something that can be made by following a recipe. It is fluid and on-going, which consequently requires teachers to help each other by affirming actions, sharing information, negotiating meanings and shaping ideas. Only through these collegiate and collaborative actions, many believe (McLaughlin & Talbert, 1993; Darling-Hammond, 1996; Hord, 1997; Grossman et al, 2001; Gallucci, 2003), can the two goals of education, i.e. student learning and teacher learning, be best achieved.

The learning capacities of the Danwei community of practice: A conceptual framework

Not every community of practice is necessarily a learning community. A vibrant learning community needs building up capacities to engage its members to learn. Hord (1997), based on empirical evidence, found five defining features of a successful learning community: supportive and shared leadership, collective creativity, shared values and vision, supportive conditions and shared personal practice. The underlying assumption is that teachers should be supported in terms of physical conditions and human capacities to work together in planning, learning and solving problems and this operation should be facilitated by teachers voluntary participation mediated through sharing power, leadership and decision-making. In the corporate culture of collaboration and empowerment, all members of the community are engaged in developing new ways and understandings towards the common enterprise of the community – the well-being of students. Mitchell and Sackney (2000) also presented a delicate conceptual framework of the capacities of a learning community at three levels: personal, interpersonal and organizational (see Figure 1).

Based on this conceptual framework above, the present study intends to answer the following overarching question: how do college EFL teachers learn professionally in the Danwei community of practice in the context of China’s ELT reform in higher education?

And more specifically, the overarching question is segmented into the following subquestions corresponding to each level of the conceptual framework:
1. How do the teachers' pedagogical knowledge and classroom practice develop in the Danwei community of practice? How do the teachers perceive their pedagogical knowledge construction process?

2. How do the teachers in the teaching team interact and communicate with each other? How do the teachers perceive their relationship with colleagues in the team?

3. How does the Danwei community of practice provide structural and organizational support for teachers to learn? How do the teachers perceive the support for learning provided by the Danwei community of practice?

Research paradigm and research strategy

Borko and Putnam (1996, p. 674) in their review of learning noted that ‘the learning of individuals, including teachers, is a constructive and iterative process in which the person interprets events on the basis of existing knowledge, beliefs, and dispositions’. This conceptualization of the generic nature of learning orients our epistemological understanding of teacher professional development as a dynamic and transactional process. As a consequence, it is more appropriate to understand the learning process in its natural setting, i.e. the Danwei community of practice in the case of the present study. Among the research strategies within the interpretivist paradigm, ‘ethnography has become the most popular approach to inquiry’ (Francis & Hester, 2004, p. 22), and is widely and increasingly used in fields such as sociology, management studies, education studies, social psychology due to its strengths in understanding ‘a group or culture’ and its focus on ‘the routine, daily lives of people’ (Fetterman, 1998, p. 1). The strongest argument for using ethnography is that it provides a ‘thick description’ (Geertz, 1973) of ‘people in naturally occurring settings or “fields” by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally’ (Brewer, 2000, p. 10). A brief recapitulation of the present research indicates that ethnography is a suitable candidate as this study intends to scrutinize teachers’ learning experience so as to understand the learning capacities of the Danwei community of practice at personal level (knowledge construction), interpersonal level (collaborative culture) and organizational level (structural support). Put simply, the characteristics of ethnography fit well the current research (see Table 1 below). Although ethnography is sometimes used interchangeably with participant observation and case study, we consider participant observation as a kind of data collection technique with the researcher herself/himself as the tool while case study parallels ethnography as a kind of research strategy. Merriam and associates (2002) noted that unit of analysis determines whether a study is a case study, but case study is often combined with other research strategies, producing ethnographic case study, autographic case study or critical case study, etc. As Brewer (2000, p. 77) pointed out that ‘... all ethnographic research involves case study’, we consider the present research on the teachers in situated context an ethnographic case study with the Danwei community of practice as the case, the selected teachers as the participants of the ethnographic case study and the learning capacities at the three levels as the embedded units of analysis within the case (see Yin, 2003)

Table 1

<table>
<thead>
<tr>
<th>CHARACTERISTICS OF ETHNOGRAPHY</th>
<th>CHARACTERISTICS OF THE PRESENT STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>About a group of people</td>
<td>About a group of teachers</td>
</tr>
<tr>
<td>About culture</td>
<td>About the culture of the Danwei community of practice</td>
</tr>
<tr>
<td>About routine lives of people</td>
<td>About teachers’ daily lives and routine teaching practice</td>
</tr>
<tr>
<td>In natural setting</td>
<td>In teachers’ workplace: the Danwei community of practice</td>
</tr>
<tr>
<td>About social meanings</td>
<td>About teachers’ individual experience of learning and construction of social meanings</td>
</tr>
</tbody>
</table>

In addition, this ethnographic study also draws on some critical and postmodern elements. As Mitchell and Sackney (2000, p. 130) indicates, ‘the metaphor of the learning community is based on a social constructivist view of human development that is rooted in postmodern and critical theory ideologies’. An interpretation of the sentence is that teachers’ learning process is an individual social construction process, but their practices and knowledge are also constrained and reproduced by the local discourse of
community of practice. People may argue that this study should be labeled critical theory in terms of paradigmatic stance. Nevertheless, economic struggles and political dislocations are not the lens through which we look at the process of teacher learning. Therefore, it is more appropriate to say that epistemologically the present research is based on social constructivism, but methodologically, the local discourse of sharing and collaboration should also be subjected to critical analysis (see Alvesson, 1996; Alvesson & Willmott, 2003). Appendix 1 briefly outlines the data collection methods (observation, interview and account) and the techniques for data analysis (hermeneutic thematization and critical discourse analysis) for each research question.

Michael Fullan (2001) indicates that students may not learn well unless teachers themselves learn well. In the context of China's ELT reform, teacher learning is essential in the process of change in teachers as well as in institutions. In the case of a university, this process is mediated through Danwei communities of practice. Therefore, the present study is intended to explore the process of teachers' professional learning in situated context, and to provide in-depth empirical evidence for the stakeholders in this reform.

References
### Appendix 1

Research questions, methods for data collection and analysis

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data Collection Methods</th>
<th>Data Analysis</th>
</tr>
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<tr>
<td>(1a) How do the teachers’ pedagogical knowledge and classroom practice develop in the evolving Danwei learning community?</td>
<td>Pre-class interview (with teachers) Observation (formal classroom observation) Post-class interview (with teachers) Audio diary and informal class visit Field note and research diary</td>
<td>Qualitative content analysis (thematization)</td>
</tr>
<tr>
<td>(1b) How do the teachers perceive the change process of their knowledge and pedagogy?</td>
<td>In-depth interview (with teachers)</td>
<td>Qualitative content analysis (thematization)</td>
</tr>
<tr>
<td>(2a) How do the teachers in the teaching team to which they belong interact and communicate with each other?</td>
<td>Participant observation (collective lesson planning meetings, research workshop, staff room) Audio and video taped collective lesson planning meetings Collaborative works Field note and research diary</td>
<td>Qualitative content analysis (thematization) Discourse analysis (conversation analysis, artifact analysis)</td>
</tr>
<tr>
<td>(2b) How do the teachers perceive their relationship with colleagues in the team?</td>
<td>In-depth interview (with teachers)</td>
<td>Qualitative content analysis (thematization)</td>
</tr>
<tr>
<td>(3a) How does the Danwei community of practice provide structural and organizational support for teachers to learn?</td>
<td>In-depth interview (with department leaders and team leaders) Participant observation (staff representative meetings, individual counseling meetings) Audio-taped counseling meetings Departmental documents Field note and research diary</td>
<td>Qualitative content analysis (thematization) Discourse analysis (conversation analysis and social analysis)</td>
</tr>
<tr>
<td>(3b) How do the teachers perceive the support for learning provided by the Danwei Community of practice?</td>
<td>In-depth interview (with teachers)</td>
<td>Qualitative content analysis (thematization)</td>
</tr>
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The Development Of Modern Foreign Language Student Teachers' Conceptions About Self During A One-Year PGCE Programme

Yongcan Liu & Linda Fisher
University of Cambridge

The present study explores four aspects of student teachers' conceptions about self: conceptions about their classroom performance, conceptions about their relationship with pupils, conceptions about their self-image in pupils' eyes and conceptions about teacher identity during a nine-month secondary PGCE (Postgraduate Certificate in Education) programme. Case study research strategy within the constructivist framework is used to understand the complexities of the process of change, with four methods (semi-structured interview, log, open-ended questionnaire and end-of-course self-reflection report) collecting various empirical data to achieve a convergence of evidence. In general, all three participants of the case study are more confident about themselves on conclusion of the course than at the beginning of the course. Constant linear development is observed in the student teachers' conceptions about their classroom performance and teacher identity, while their conceptions about their relationship with the pupils and their self-image in pupils' eyes show some discrete, temporary or even reversal change.

Introduction

The literature on studying the change of teachers' behaviours in teaching had been well established in the 1960s and 1970s (see Brophy & Good, 1986, p. 181) while teacher cognition is a relatively new and broad term referring to different thought processes of a teacher. It was not until the late 1970s and early 1980s due to the advances of cognitive psychology and ethnographic techniques that the research focus of teaching began to turn to a perspective on things that teachers thought about. This corresponded to a general change of research focus from product (behaviour) to process (thinking) in many disciplines at that time. A lot of empirical studies began to concentrate on how teachers planned the lesson, evaluated student understanding, allocated time and turn, etc. Their emphasis was on investigating two domains of teacher cognition: teachers' planning and decision-making processes (see also Clark & Peterson, 1986; Fang, 1996; Richardson, 1996; Borg, 2003). The study on a third domain - teachers' beliefs and knowledge, however, was a missing paradigm and has attracted more and more attention since the mid 1980s. With reference to foreign language teachers' beliefs and knowledge, the research has just 'picked up a momentum in the second half of the decade which continues to gather pace today' (Borg, 2003, p. 83), (see also Almarza, 1996; Richards et al., 1996; Brown & McGannon, 1998; Sendan & Roberts, 1998; Cabaroglu & Roberts, 2000; MacDonald et al., 2001; Peacock, 2001). The present study, which looks at the development of student teachers' conceptions about self during a one-year PGCE course, is expected to enrich the findings in this area.

Theoretical background

Belief, knowledge or conception?

'Belief' is a commonly seen concept in various research literatures from sociology, anthropology, psychology, philosophy and many other disciplines. The diversity of using the same term in different fields has resulted in confusion and inconsistency (e.g., Clark and Peterson's 'preconceptions and implicit theories', 1986; Calderhead's 'propositions', 1996; Sendan & Roberts's 'personal theories', 1998, to mention just a few). Pajaras (1992) even presented a dauntingly long list of synonyms. Very few people, however, would disagree that the greatest confusion about belief comes from its relationship to knowledge. In various literatures, knowledge is either taken as different from beliefs by nature (e.g., Shulman, 1986; Richardson, 1996), or as a fuzzy grouping term, used without distinguishing between what we know and what we believe (Grossman, 1989; Woods, 1996; Verloop et al., 2001). As the focus of the paper is not...
intended to explore the nature of belief and knowledge, 'conception' is used as an umbrella term, which refers to teachers' psychologically held thinking and understandings about learners and learning, teaching, subject matter, professional development, and self (based on Calderhead, 1996).

**Sociocultural learning theory and support for teacher learning**

In the past two decades, one of the most important features of development in teacher education is the rapidity of adopting what Elliot (1993, p. 17) has termed as 'the hermeneutic view of teacher education'. The most essential manifestation that characterizes the trend is reflective learning. Terms such as 'teacher as researcher', 'reflective practice', 'action research' have become prolific all over the world. Reflection is considered as an important link between the postactive phase of an old teaching cycle and the proactive phase of a new one. This is because teachers usually try out their conceptions in new practice that are drawn from their previous experience through reflective activities such as keeping logs and thinking critically (Schon, 1983; Calderhead & Gates, 1993; Loughran, 1996; Pollard, 2002).

Besides reflection, another big advancement in teacher education is the practice of the school-based model in initial teacher education. In this model, mentoring in school plays a very important role in supporting student teachers in terms of general help, practical advice, discipline help and counseling (Carre, 1993, p. 206). Thus a mentor's role is perceived as ranging from 'model' and 'coach' at earlier stages to 'critical friend' and 'co-enquirer' at later stages (see Furlong & Maynard, 1995, p. 181). When we inject Vygotsky's approach into our conceptualization, a mentor's roles at the earlier stages imply a more one-way process of scaffolding learning. In contrast, a more two-way 'transactional' mentoring model is advocated at later stages, which reflects the idea of Zone of Proximal Development (ZPD) noted for its mutual shaping mechanism.

As the bulk of research on language teacher cognition started to appear in 1990 (Borg, 2003, p. 82), the empirical studies on the three domains of language teachers' cognition: planning, decision-making and conceptions are still not many. In particular, there are still fewer published empirical studies with reference to the change of foreign language teachers' conceptions in teacher education programmes (see table 1). In view of this, the present study concentrates on one dimension of teacher cognition, namely, conception (the other two dimensions being planning and decision-making) and one aspect of teacher conception, namely conception about self (the other four aspects being learning and teaching, subject matter, professional development). The research is expected to answer the following questions:

1. What are modern foreign language student teachers' conceptions about self like at the beginning of the one-year PGCE programme?
2. How do these conceptions change and develop during the course?
3. How do the student teachers explain the changes or the resistance to change?
Table 1
A summary of 8 studies on the change of foreign language teachers' conceptions in teacher education programme

<table>
<thead>
<tr>
<th>RESEARCHER(S)</th>
<th>YEAR</th>
<th>PARTICIPANT(S)</th>
<th>RESEARCH FOCUS</th>
<th>RESEARCH METHODS</th>
<th>NATURE</th>
</tr>
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<tbody>
<tr>
<td>Freeman</td>
<td>1993</td>
<td>4 in-service high school French and Spanish teachers in an in-service MA programme</td>
<td>teaching</td>
<td>Interviews, observations, document analyses</td>
<td>qualitative</td>
</tr>
<tr>
<td>Almarza</td>
<td>1996</td>
<td>4 foreign language teachers on a PGCE course</td>
<td>Teaching</td>
<td>Interviews, journals, observation, recall</td>
<td>qualitative</td>
</tr>
<tr>
<td>Richards, Ho &amp; Giblin</td>
<td>1996</td>
<td>5 trainee teachers on a TEFL training course</td>
<td>teaching</td>
<td>Audio-taped discussion, written self-report</td>
<td>qualitative</td>
</tr>
<tr>
<td>Brown &amp; McGannon</td>
<td>1998</td>
<td>35 trainee teachers of LOTE and TESL</td>
<td>learning</td>
<td>Survey, open-ended questionnaire</td>
<td>quantitative</td>
</tr>
<tr>
<td>Sendan &amp; Roberts</td>
<td>1998</td>
<td>1 ESL student teacher on a 4-year training programme</td>
<td>teaching</td>
<td>Repertory grid</td>
<td>qualitative</td>
</tr>
<tr>
<td>Cabaroglu &amp; Roberts</td>
<td>2000</td>
<td>20 students on a PGCE course (Modern Languages)</td>
<td>teaching, learning subject (curriculum)</td>
<td>Interviews</td>
<td>qualitative</td>
</tr>
<tr>
<td>MacDonald</td>
<td>2001</td>
<td>55 undergraduate and postgraduate students on TESOL programmes</td>
<td>learner &amp; learning</td>
<td>Survey</td>
<td>quantitative</td>
</tr>
<tr>
<td>Peacock</td>
<td>2001</td>
<td>146 trainee ESL teachers on a three-year BA programme</td>
<td>learner &amp; learning</td>
<td>Survey, observation</td>
<td>qualitative</td>
</tr>
</tbody>
</table>
Methodology

Case study design

Borko and Putnam (1996, p. 674) in their review of learning to teach noted that ‘the learning of individuals, including teachers, is a constructive and iterative process in which the person interprets events on the basis of existing knowledge, beliefs, and dispositions’. This conceptualization of the generic nature of learning to teach orients our understanding towards hermeneutic interpretation and reconstruction of meanings. Case study is used here, as it is considered as an effective constructivist research strategy in understanding the subtle social phenomena in complex social contexts (Yin, 2003). The participating cases are all from a nine-month secondary PGCE course in the UK, preparing modern foreign language teachers in French, German, Spanish, Russian and Italian for 11-18 age range. The course model of learning to teach is explicitly reflective and experiential (see Cambridge, 2003, p. 3). At first, 8 trainee teachers volunteered to take part in the study (6 female, 2 male). Of these three were selected purposively on the basis of the demographical information of each candidate (see Table 2 below for informants’ characteristics). For the sake of ethics and confidentiality, a pseudonym for each informant is used in the following discussion.

Table 2
Informants’ characteristics

<table>
<thead>
<tr>
<th>NAME</th>
<th>GENDER</th>
<th>NATIVE LANGUAGE(S)</th>
<th>TARGET LANGUAGE(S)</th>
<th>EDUCATION</th>
<th>PRIOR INFORMAL TEACHING EXPERIENCE</th>
<th>AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah</td>
<td>F</td>
<td>English/French</td>
<td>French/German</td>
<td>PhD</td>
<td>3.5 years</td>
<td>29</td>
</tr>
<tr>
<td>Paula</td>
<td>F</td>
<td>English</td>
<td>French/German</td>
<td>BA</td>
<td>2 months</td>
<td>26.5</td>
</tr>
<tr>
<td>Luc</td>
<td>M</td>
<td>French</td>
<td>French/German</td>
<td>BA</td>
<td>2 years</td>
<td>25</td>
</tr>
</tbody>
</table>

Data collection in the present study covers a nine-month, three-term period with each term as a unit. The major means of data collection are audio-taped semi-structured interviews conducted three times throughout the year. Each session lasts 40 minutes or so and takes place either in a quiet classroom of the university where the PGCE course is based, or in the informant’s home. The recordings are transcribed and coded in the first place, then the analysis is triangulated via an open-ended questionnaire completed by the trainee teachers at the beginning of the course, a written end-of-course self-reflection report and the weekly evaluation logs kept by the student teachers. The use of a variety of methods is considered essential in capturing the change from different perspectives and at different times.

Findings and discussion

In this section, we tentatively discuss the development patterns of teachers’ conceptions about self, drawing on empirical evidence from various data collected. The conceptual theoretical framework and the orienting analytical framework act as the basis of analysis and interpretation of the findings.

Conceptions about self (classroom performance)

From Table 3, it can be seen that constant linear change in teachers’ conceptions about their own classroom performance in all three cases is observed. The linear change indicates that the trainee teachers perceived that they made constant improvement in their own teaching practice throughout the year, and this change according to them could be ascribed to the increased time in school and the accumulation of teaching experience. In particular, Luc and Paula share more similarities in their conceptions about classroom management and confidence level, which is contrasted with Sarah’s moderate report of change. This might be due to the different starting points in terms of teaching experience. Sarah, who had taught in summer school and language school, was far more experienced than Luc and Paula from the very start. Standing in front of the classroom was not strange to her whereas Luc and Sarah still felt very excited at the beginning, which in a sense indicates that Sarah had a higher starting point. They might reach a similar level of performance in the end, but her conceptions about her performance seemed to show less change.
### Table 3

Case-ordered matrix of conceptions about classroom performance

<table>
<thead>
<tr>
<th></th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luc</td>
<td>'reached the first threshold', 'needed more confidence'</td>
<td>more familiar with the teaching procedures; more confident</td>
<td>'automatic', very confident</td>
</tr>
<tr>
<td>Paula</td>
<td>'felt more to improve', not confident enough</td>
<td>more 'adaptive', still felt more to improve, more confident in classroom</td>
<td>more 'flexible', 'independent', a lot more confident</td>
</tr>
<tr>
<td>Sarah</td>
<td>felt 'supportive', 'quite confident with teachers at the back'</td>
<td>more freedom to work on different elements, 'more natural'</td>
<td>'adapted a bit more to classes', 'not nervous, more efficient'</td>
</tr>
</tbody>
</table>

### Conceptions about self (relationship with pupils)

The table below (Table 4) shows somewhat different development patterns in the three student teachers' conceptions about their relationship with the pupils, but all three cases thought they got on better with the students in the last term than at the beginning. In their own final self-reflection report, they also described their relationship with pupils as 'much much better', 'definitely better' and 'easier' respectively. Luc's development pattern is typical among student teachers, showing a constant linear tendency of getting better while the other two cases are unique to some extent. Paula's conceptions about her relationship with the pupils seemed to stay quite stable and at a low level in the first two terms, then there was significant breakthrough in the third term. This seems to be because she was intimidated by some classes with negative attitudes towards her lessons in the first two terms and was reluctant to close the gap as can be seen from her quotation:

> If you get that sort of situation where there is a bit hostility coming from the group, then it is more difficult to approach them. I still find it very difficult and don't want to make friends with them. (Paula: Interview 2, 30-March 2004)

### Table 4

Case-ordered matrix of conceptions about their relationship with pupils

<table>
<thead>
<tr>
<th></th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luc</td>
<td>'easily cheered up', 'eager to establish good relationship', students strange to him</td>
<td>Relationship getting much better, more contact in tutor group and sports club, students started approaching him</td>
<td>students more friendly, felt better himself, 'more intimate relationship', 'more open to students'</td>
</tr>
<tr>
<td>Paula</td>
<td>'reluctant to talk to them', difficult to establish relationship</td>
<td>more contact, students 'more welcoming', more chat with students, 'but still very difficult'</td>
<td>'approachable', more students asking for help, good relationship</td>
</tr>
<tr>
<td>Sarah</td>
<td>'good contact with children', 'not many major problems with pupils, but kept a distance'</td>
<td>relationship became more difficult at the beginning, then established good relationship even with the most difficult classes</td>
<td>more contact, 'relationship remained more or less the same, still kept a distance from students'</td>
</tr>
</tbody>
</table>

The ascending trend in the last term seems to imply that Paula went through what she called 'the psychological barrier' eventually and she commented, 'You cannot have that (good relationship) if there is a constant battle'. Sarah's case also shows a different pattern – the relationship between Sarah and her students deteriorated at the beginning of the second term, and she attributes this to the school environment.

### Conceptions about self (image in pupils' eyes)

As for the conceptions about self-image in pupils' eyes, the patterns of development for the three cases seem different (see Table 5 below). In the early stages, Luc believed himself to be a humorous teacher, but commented that the heavy workload prevented him from being funny in the second term. When everything became automatic and natural in Term 3, he reverted to a more relaxed and light-hearted teaching style. It seems that the reason 'you have no time to be funny' results in the sort of 'V-shaped' development pattern. The change pattern for Paula, however, shows some linear progression. The development from being 'unsure', to being more 'authoritative' and further to being 'strict' indicates the maturation in terms of teaching and management skills. Another aspect of this linear change is concerned
with the distance between Paula and the students. Along with the progression of time, Paula was more willing to approach students and be approached by them. In contrast, Sarah's case does not show much change. She 'did things my [her] own way' throughout the time and felt she largely remained consistent in pupils' eyes.

Table 5
Case-ordered matrix of conceptions about self-image in pupils' eyes

<table>
<thead>
<tr>
<th></th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luc</td>
<td>light-hearted, 'relaxed'</td>
<td>more stern, serious, 'more stressed'</td>
<td>light-hearted, 'relaxed'</td>
</tr>
<tr>
<td>Paula</td>
<td>'unsure', 'apprehensive', 'unapproachable'</td>
<td>'creative', 'interesting', 'more authoritative', 'more approachable'</td>
<td>'strict', 'professional', 'approachable'</td>
</tr>
<tr>
<td>Sarah</td>
<td>'not aggressive', 'calm'</td>
<td>'not aggressive', 'soft', 'quiet'</td>
<td>'not aggressive', 'unconfrontational', 'quiet'</td>
</tr>
</tbody>
</table>

Conceptions about self (teacher identity)
Luc, Paula and Sarah share a similar development pattern on teacher identity (see Table 6 below). All of them felt less like a 'real' teacher at the beginning, but gradually, with more like a teacher with more support from the school and more contact with the students, finally they felt like a real teacher having independent responsibility. Having had more experience in dealing with school issues in Term 2, all three cases identified themselves well as a regular teacher in the last term. Sarah talked in her last interview about how her teacher identity became clearer to herself as well as to the students gradually.

I think they saw me as a student teacher very much at the beginning. At least in the younger girls' eyes, I am now just the teacher like any other teachers. They have forgotten basically that I arrived in January and that I wasn't their teacher at the beginning... (Sarah: Interview 3, 24 June 2004)

Table 6
Case-ordered matrix of conceptions about teacher identity

<table>
<thead>
<tr>
<th></th>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luc</td>
<td>'felt like a student', 'outsider'</td>
<td>'felt part of the team and part of the school'</td>
<td>'felt like a real teacher'</td>
</tr>
<tr>
<td>Paula</td>
<td>'felt not yet a teacher', confused about her identity</td>
<td>felt like a teacher in the classroom, not confident about her identity outside the department</td>
<td>'felt part of the department', 'felt part of a wider staff body', 'real sense of being a teacher and having responsibility'</td>
</tr>
<tr>
<td>Sarah</td>
<td>'felt like a student teacher', 'not a regular teacher'</td>
<td>felt like a normal teacher', got respect from students</td>
<td>'felt like a genuine teacher'</td>
</tr>
</tbody>
</table>

Conclusion
In general, all three participants of the case study are more confident about themselves on conclusion of the course than at the beginning of the course. Constant linear development is observed in the student teachers' conceptions about their classroom performance and personal teacher identity, while their conceptions about their relationship with the pupils and their self-image in pupils' eyes show some discrete, temporary or even reversal change. Foreign language teachers' conceptions deserve more research not only because it was a 'missing paradigm' of teacher cognition, but also because it has great implications on foreign language pedagogy and teacher education. The findings of the present case study, due to its small scale, might not be able to be generalized immediately, but they are expected to be transferred to similar cases and contribute to building theories. It is also expected that the present research will arouse the interest of researchers to conduct studies exploring the issues uncovered in this study such as more detailed analysis of the development of conceptions at different stages and the interaction effect of the influences.
References
An Apple For The Teacher?

Noella Mackenzie
Charles Sturt University, Albury

In this paper the current status of teaching as a profession and the morale of teachers in Australian schools in the current era provide a framework for the examination of the intent and outcomes of teaching excellence awards. The introduction of teaching excellence awards into the school education sector is found to be a reflection of the economic era in which the current education system is situated with the awards process viewed as potentially politically manipulative. A research study carried out in NSW public schools between 2000 and 2002 suggests teachers' experiences and attitudes range from optimism to negativism, exhilaration to cynicism, and empowerment to constraint. Teachers report concerns over the status of teaching in the community with many also identifying a slump in teacher morale over recent times. This paper provides an opportunity to reflect upon the issues of teacher morale and the status of the teaching profession in the current era in Australian schools while reviewing the teaching excellence awards process.

Introduction

Dinham and Scott (2003) concluded in a recent study that teaching excellence awards 'can result in a range of outcomes both intended and unintended and both positive and negative' (p. 17) although they maintained that the benefits demonstrate a powerful argument in favour of awards. Teaching excellence awards were not part of the teaching culture when I joined the teaching profession in 1977. Given that the majority of Australia's teachers are now aged between 40–50 this would be the same for most teachers within the NSW Department of Education and Training (DET). My own experience as an award recipient in 2001 suggests that awards can have a positive impact on recipients. However, following a study conducted between 2001 and 2003 I now question the impact of awards presented to so few from such a large profession and suggest that the outcomes of awards are not always positive.

Background and context

There have been many major 'social, economic and political' changes in Australia over the last century, impacting upon Australians in different ways. Many of Australia's current demographic statistics 'point to radical change', with a small number of Australians 'experiencing record levels of personal wealth' (Mackay, 2003, p. 2) while at the same time there is an increase in poverty and homelessness. Mackay (2003) claims that the insecurity and confusion many Australians are experiencing are the result of four simultaneous revolutions: technology (predominantly information technology), gender, cultural and economic (in particular the rise of economic rationalism). These revolutions, have led to an Australia, which is 'characterised by a renewed sense of caution, uncertainty and above all, a sense of disengagement from the national agenda' (Mackay, 2003, p. 22). According to the Organisation for Economic Cooperation and Development (OECD, 2000), this situation is not unique to Australia, with education systems globally being pressured by a need to adapt to changes and rising expectations as society 'becomes a learning society' (OECD, 2000, p. 11). Despite this, education in Australia is no longer a 'fashionable value' (Kelly, 2000, p. 9) with 'growing evidence that our education system is sliding down the international comparison ladder' (p. 9). While it may appear that Australia is moving towards a knowledge economy with increased numbers of students in higher education, government spending on education 'shrank from 4.9 percent of gross domestic product to 4.4 percent in the five years to 1998' (Colebatch, 2000, cited in Smyth, 2001, p. 20). As the world enters a 'phase in history in which education is the central figure', Australian politicians appear to view education as a low priority: a 'cost rather than an investment' (Australian Council of Deans of Education (ACDE), 2004, p. 1).

During the 1990s the education landscape was 'irreversibly re-contoured to conform with the new orthodoxies of economically dominated public policy, rather than with the best collective wisdom of educators' (Beare, 2003, p. 15). With a shift in focus to economic policy, the work of teachers is,
increasingly determined by forces outside schools with an emphasis on achieving ‘acceptable end products’ (Smyth, 2001, p. 6) resulting in state-wide testing and performance appraisal techniques aimed at ‘value for money’ (p.6). The OEC (2000) reports a 'strong political drive towards "school improvement", based on the assumption that education is not fulfilling its potential' (p. 1).

**Australian teachers in the early 21st century – a profile**

Although there is some variation across the states and territories, Australia's teachers are older than at any time in the past 40 years. The median age of teachers in Australia increased from 34 to 43 years over the 15 years to 2001, during which time the proportion of teachers older than 45 years rose from 17 percent to 43 percent. The proportion of Australian teachers under the age of 34 years is currently less than 29 percent. Sixty per cent of Australian male teachers and 50 percent of Australian female teachers are older than 45 years (Department of Education, Science & Training (DEST) 2003, p. 70). Australia's teachers are highly qualified' with an expectation of teaching as an 'all-graduate profession' in the near future (DEST, 2003, p. 75). In 1963, 48 percent of Australia's teachers were men and 52 percent were women (DEST, 2003, p. 72). Data from the 1999 National Survey: Teachers in Australian Schools (Australian College of Education (ACE), 2001a) indicates that while female teachers outnumber male teachers by 2:1 overall, of the teachers in the 21 to 30 years age bracket women outnumber men by 3:1. Female teachers are still most highly concentrated at the early childhood and lower primary years, while most male teachers are working within secondary schools (DEST, 2003, p. 72). Few teachers are from non-English speaking backgrounds. This is despite the fact that Australia is one of the most ethnically and culturally diverse countries in the world (DEST, 2003, p. 15). There are few Aboriginal and Torres Strait Islander teachers despite initiatives designed to recruit and train more teachers from this group.

**Employment and career prospects**

The majority of Australian teachers (88.2 percent) are permanently employed on a full-time or part-time basis by education authorities, either State/Territory government authorities or Catholic diocesan authorities (DEST, 2003, p. 75). In independent and Order-owned Catholic schools, teachers are usually employed directly by the schools at which they teach. Victoria is the only State where individual government schools may make offers of employment to individuals (DEST, 2003, p. 75). Younger teachers are more likely to be employed on a contract basis (ACE, 2001). Beginning teacher salaries in Australia compare favourably with most other professions, however, teaching is less financially attractive the longer a teacher remains in the profession (DEST, 2003, p. 176). The majority of teachers reach the top of their salary scale within ten years. Promotion opportunities are limited, in most cases lead out of the classroom and continue to favour males (Senate Employment, Education and Training References Committee, (A class act), 1998, p.iii). Despite the predominance of female teachers, 45.9 percent of male teachers are in executive or managerial positions, while only 24.3 percent of female teachers hold executive or managerial positions (DEST, 2003, p. 73).

**The status of the teaching profession**

Hoyle (2001) claims that the formal occupational status of teaching in official statistics is that of a profession (p. 144), but warns that the recognition of teaching as a profession by political and related reference groups continues to remain ambiguous despite meeting many of the alleged criteria of a profession: practitioner autonomy; higher education; knowledge-based practice; a self-governing body; and a code of ethics (p. 145). Ventimiglia and Reed (2004) assert that educators ‘who are trained and certified view themselves as professionals, yet they are seldom accorded the respect commonly given to those in other professions’ (p. 228).

The lowering of the status of teaching and other 'people work' is, according to Scott (2001a) and White (2001), the result of the values associated with ‘economic rationalism’, that is, of ‘individualism, materialism and the search for personal security and well-being over more social aims' (Scott, 2001a, p. 2). The report, A Class A d (1998) made the claim that status and power were 'usually economic' and that the status and power of teachers was reduced because teachers work with children and 'children have no economic or political power' (p. 3). This view is supported by Hoyle (2001) who adds that the large percentage of female teachers, the lack of professional mystique (most members of the population have had lengthy, required exposure to teachers) and the fact that a teacher's clients are children who they face on a daily basis in large groups as a matter of routine, all count against teaching in terms of status (p. 141). This is maintained by Johnson (2000) who argues that the public persists in believing that anyone can teach, with teaching regarded in the community as 'women's work - a half-step above child care' (p. 21).
Crowther (2001) introduces another perspective, when he asserts that by the early 1990s ‘curricula, administration and policy processes’ had become more important than teaching, thereby affecting the political influence, public image and ascribed status of teaching (p. 5). Crowther (2003), however, suggests that after two generations of being ‘under a cloud’ teaching ‘is a profession whose time has come’ (p. 2). Lovat (2003) supports this arguing that teaching is ready to move into a new era of professionalism.

**Teacher morale**

Positive teacher morale is identified as a useful indicator of healthy effective schools (OECD, 2000). Alternatively, low morale for teachers can lead to decreased productivity and a detachment from the teacher role, colleagues and students. Smyth (2001) describes teacher morale as currently very low, with teachers feeling ‘frustrated and prevailed upon’ (p. 11). Hicks (2003) claims that there is evidence to suggest that too many young teachers who initially begin their career with enthusiasm and positive expectations are looking for a change in direction after only 3–5 years despite having studied for 4–5 years to become teachers while O’Donnell (2001) suggests that teachers ‘suffering from low morale are retiring early or leaving the profession to seek other employment’ (p. 1). Contributing factors include a perceived lack of support from parents and departmental authorities, ‘internal politics’, new initiatives which increase teacher workload and principals taking advantage of the goodwill of teachers by asking them to take subjects for which they have no training (Hicks, 2003, p. 1). Eltis (1997) suggests that ‘no other group in our society faces such challenges with so little extrinsic reward’ (p. 3) as teachers. One way of lifting morale may be the recognition of individual teachers, schools or programs, through extrinsic awards. Scott (2001b) suggests however, that while teachers justifiably complain that ‘authentic recognition is rare for members of their profession’ (p. 1), not all teachers ‘enthusiastically endorse awards schemes’ (p. 1).

**Extrinsic teaching excellence awards**

Although there is little research into the impact of teaching excellence awards on teachers in schools, the need to recognise the accomplishments of teachers has been discussed in the literature for almost two decades and more particularly in the last three or four years (Cummings, 2003; Dinham & Scott, 2003; Fitzgerald, 2002; Boston, 2002; Beare, 2002; Dinham, 2002; Galbally, 2002; McCulla, Hayne, & Stone, 2002; O’Connell, 2002; Scott, 2001b). Cummings (2003) describes ‘a rapid expansion in the growth of award schemes and other forms of professional recognition’ as a result of a ‘seismic shift in attitude’ with regard to ‘acknowledging and rewarding teachers’ work’ (p. 7) with 650 teachers across Australia receiving awards of some kind in the twelve months leading up to World Teachers’ Day on October 2003 (p. 7).

Kemp (Australian Federal Minister for Education, 1996–2001), suggested in a speech at the presentation of the Australian Excellence in Education Awards in 1996, that it was ‘important to honour outstanding achievement’, arguing that ‘recognition lifts the sights of everyone and provides the positive models we all need’ (1996, p. 2). Boston (2002) also supports the use of awards, claiming that ‘professions such as law, medicine and architecture have tangible and widely understood types of accomplishment: cases won, cures effected, buildings well-designed’ whereas ‘the accomplishments of teachers are, both historically and currently, less tangible and less well understood’ (p. 2). Boston (2002) advises the need to ‘uncover and perceive qualities which already exist, but which have previously gone unnoticed’ (p. 2) with individual teaching excellence awards being a possible way to do this. Beare (2002) takes this a step further and identifies a strong link between public prestige and the awards process suggesting that if the teaching profession, ‘wants to command public prestige’, it must ‘draw attention to its most able and respected members and to its major achievements’ (p. 27). According to Beare (2002) the profession needs the awardees as much as the awardees need the honour of receiving an award with awards allowing the profession to announce ‘publicly and collectively that it owns such eminent people’ (Beare, 2002, p. 27). Galbally (2002) comments ‘that a professional organisation’s awards system has the opportunity to promote excellence across the profession and if done properly to promote a positive image of the profession to the wider community’ (p. 47). In contrast, Fitzgerald (2002) questions whether the awards that are currently being presented are ‘likely to encourage an enhanced sense of confidence in education or are observers likely to be persuaded to the view that there are winners and losers in education?’ (p. 33).

It is the desire to recognise, applaud and reward teachers who are making a difference to the future of young Australians that appears to be the major motivation for a number of extrinsic teaching excellence awards currently being conferred on teachers in Australia including: The National Excellence in Teaching Awards (NeTA, 2003), and The Quality Teaching Awards (ACE, 2001b). However, in 1975, Lortie, identified three types of possible teacher rewards, ‘extrinsic, ancillary and intrinsic’ but was strong in his
recommendation that 'intrinsic rewards' were more 'important for teachers than extrinsic rewards' (cited in Schmoker, 1996, p.106) arguing that the 'traditions of teaching make people who seek money, prestige or power somewhat suspect' (p. 101). Scott (2001b) advises that not all in the teaching profession in the current era are supportive of the use of extrinsic teaching excellence awards and suggests that some teachers may be suspicious about their use. Another perspective on awards may be gleaned from a recent article by the head of communications for the Catholic Education Office, Sydney, Ted Myers, who suggests a link between a school's marketing orientation and student outcomes (Myers, 2003). In this light teachers receiving awards may be seen as another way of marketing a school or system, which reflects an economic rationalist approach to education.

The study

The study reported in this paper involved an examination of the intent of extrinsic teaching excellence awards, the awards process and the impact of these award as viewed through the eyes of award recipients and their non-recipient colleagues. Data were gathered between 2001 and 2002 from 101 volunteer teachers working in NSW DET schools. The NSW DET is one of the largest centralized systems in the world, in numbers of students and teachers, and in geographical dimensions. In 2002, the NSW DET reported a staff made up of 51,160 fulltime teaching positions and 14,812 fulltime non-teaching positions (NSW DET, 2003, p. 152). The number of teachers employed by the NSW DET has been fairly consistent over the past ten years.

Data were gathered using questionnaires and interviews. Schools were identified as those schools with at least one staff member who had received a significant extrinsic teaching award between 2000 and 2002. Both award recipients (44% of sample) and non-recipients (56% of sample) contributed to the data. Participant profiles may be reviewed in table 1 (below). Data were gathered in two stages, 12 months apart. Document analysis, using public documentation regarding extrinsic awards added to the data.

Table 1
Participant profiles and participation details

<table>
<thead>
<tr>
<th>SEX</th>
<th>POSITION</th>
<th>AGE</th>
<th>EXPERIENCE (YEARS)</th>
<th>TYPES OF AWARDS RECEIVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42%</td>
<td>Teacher</td>
<td>37%</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>Female</td>
<td>58%</td>
<td>Principal</td>
<td>1%</td>
<td>30-40</td>
</tr>
<tr>
<td></td>
<td>Executive</td>
<td>40%</td>
<td>40-50</td>
<td>42%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>1%</td>
<td>&gt; 51</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Not given</td>
<td>1%</td>
<td>Not given</td>
<td>5%</td>
</tr>
</tbody>
</table>

Study findings

Documentation analysed in this study indicated that teaching awards generally aim to recognise and applaud excellent teachers and promote the teaching profession in the community. Both the literature and the study participants acknowledged that the conferring of awards is a relatively new phenomenon. The pattern of response emerging from the data in regard to awards was disparate, with experiences and attitudes ranging from optimism to negativism, exhilaration to cynicism, and empowerment to constraint. Although no respondent suggested that having a teacher receive an award could be negative for a school there was evidence to indicate that in many instances awards added to the complexity of the micro-politics (Hoyle, 1988) within schools.

Positives

In some instances awards had a very positive effect on recipients, providing them with access to resources previously unavailable, and enabling them to take on new opportunities, as can be seen in the following statements made by recipients of state awards.

[The impact has been] significant . . . I have been involved in meetings re: quality standards at both national and state level, included in National Council representation for a well-respected professional organization. Spoken to Uni [sic] students and colleagues . . . for the first time I have been asked my opinion.

[Receiving the award] . . . opened doors like you wouldn't believe. I've been offered all sorts of lecturing opportunities . . .
Political points?
While some recipients suggested that receiving an award had vindicated their role with their family others questioned the motives behind the awards suggesting they were a 'cheap' way of scoring political points during a time when public education is experiencing problems.

I was honoured to receive the award but remain cynical about the circumstances surrounding the creation of the awards and the criteria for their distribution. I was not previously aware of the existence of these awards and could only speculate, certainly with a degree of job-induced cynicism, that they were established at a time when there began a great wave of concern over the depression in public education. I could imagine a bureaucrat envisaging an award to celebrate the vast numbers of highly skilled but unrecognised teachers in the system and to publicise the process of recognition as widely as possible (recipient of a state award).

What about me?
If we accept the positive impact of awards on those recipients who were empowered by receiving an award, we are required to also consider the impact upon those who are not offered access to these same rules and resources (Giddens, 1984) who may in fact be disempowered by not receiving an award. One principal described how she was blamed for not nominating two staff members with one of these teachers asking for a transfer because 'she no longer felt respected'. Another participant believed that his status in the school had been diminished because he had not received an award nomination.

Pressure to perform
A number of recipients of state awards described feelings of increased pressure to perform as a result of receiving an award while still others claimed no change in situation.

I have found since the award, more is expected of me . . . more work – no extra pay
Other’s expectations are now always high and I feel a level of pressure not there before . . .

Mixed responses
While the majority of award recipients felt that the impact of their award had been positive for the most part, mixed reactions from colleagues were common.

[I received a ] mixed reaction - one colleague said it was 'bullshit' . . .there was a degree of negativity from some teachers (recipient of a state award).
Most were positive about it - a couple that were rather jealous . . .a little bit of professional jealousy if you like (comments from a non-recipient when asked to describe staff reactions to a colleague's award)

Negatives
Some award recipients, as illustrated by the following comments, experienced quite negative responses, including jealousy and resentment.

An air of apathy and even resentment. No one really wanted to know.
There were two executive members who decided to make life difficult.

Local awards
Despite the growth of awards, it is likely that by the end of 2003, less than 0.5 % of the teachers employed by the NSW DET to fill the more than 50 000 'full time equivalent' teaching positions (NSW DET Annual Report, 2003, p. 26) had received a national or state teaching excellence award, demonstrating the 'newness' and 'exclusiveness' of this phenomenon to date. While 'Local awards' may be accessible to more teachers, these did not appear to have been as positive in their impact on recipients as state and national awards with embarrassment cited as an unintended outcome by a number of recipients of local awards.

It was an embarrassment to tell people what the award entailed. Eventually it became a joke. Students from other primary schools received the same award as me for being good at athletics. I felt like my efforts were not meaningfully acknowledged at all.
The rewards are juvenile— like getting a merit certificate in year 2. It is not an appropriate acknowledgement. Surely the department [sic] can do better.

Conclusions: Is the apple ripe and juicy or does it hide a worm?
Documents analysed which relate to specific teacher excellence awards suggest that awards are largely designed to ‘encourage, recognise, honour and reward the work of excellent, dedicated, talented,
innovative and inspiring teachers', 'strengthen public recognition of teaching excellence', encourage 'good students' to become teachers and 'improve the experience of schooling for children and parents' (NeiTA, 2003, p. 1). Research into the impact and outcomes of teaching excellence awards is limited, however, with no theoretical or research based rationale for the teaching excellence awards currently offered. Although 'tall poppies' may draw attention to the whole field of poppies (O'Connor, 2004), too few of the quarter of a million educators, will ever be publicly honoured by state or national awards to see awards as having a significant impact upon the status of the profession. Although local awards have been accessible to more teachers the evidence gathered in this study suggests that at best these awards have little effect and at worst are considered by teachers as embarrassing.

While some award recipients reported positive outcomes including empowerment and increased opportunities, others described increased pressure, discomfort, jealousy and resentment. If we accept that the culture of an organization 'controls the patterns of organizational behaviour by shaping members' cognitions and perceptions of meanings and realities' (Ott, 1988, p. 69), that the culture of teaching is complex (Smyth, 2001) and that the culture of each school is unique, awards may be accepted in some schools, while in others they may upset the existing staff dynamics. This may explain why some award recipients experienced positive reactions from colleagues, others quite negative and the many participants in the study who described 'mixed responses' from colleagues. Awards may in fact work against a culture of collaboration by identifying and promoting teachers who act in 'self-sufficient and individualistic ways' (Grimmett & Crehan, 1992) and encouraging competition despite the research which supports the need for schools to develop a positive climate and culture which permits all teachers to perform effectively during times of change and increased workload (ACDE, 2004). Awards have failed to take into account the impact that identifying individuals for awards has on school culture and staff dynamics.

If, however, we accept the positive impact of awards on those recipients who are empowered by receiving an award, we are required to also consider the impact upon those who are not offered access to these same rules and resources (Giddens, 1984) and may in fact be disempowered by not receiving an award. More research is needed to gauge the impact on individuals of not ever being nominated for a teaching award.

As there is no evidence to indicate that either teachers nor parents initiated the introduction of teaching excellence awards, awards may be seen by some teachers as a politically motivated 'neo-liberal', 'economic rationalist' (Apple, 2000, cited in Smyth et al., 2000, p. xi) response to a crisis in community confidence in education along with a perceived need to raise educational standards, improve international competitiveness and avoid an impending teacher shortage. While it has been suggested that education professionals are increasingly prepared to nominate their outstanding colleagues for awards, (O'Connor, 2004) in this study the educational professionals initiating award nominations were almost always administrators, with teachers rarely nominating other teachers for awards.

While publicity may allow awards to achieve more of their stated goals, the data analysed in this study suggest that this has not been the case thus far in the short history of teaching excellence awards. While in some cases this may be due to a lack of planning or interest on the part of the media, in other instances the lack of publicity is quite deliberate. One award recipient participating in this study accepted nomination for an award only after receiving assurance from his principal that there would be no publicity and the new school he was moving to would not be informed. A reluctance on behalf of some teachers to be seen as 'tall poppies' may be linked to individual differences, the culture of particular schools or the culture of the profession, which may still see awards as something teachers use to motivate students in classrooms (Scott, 2001b). There is no evidence to indicate that the publicity surrounding teaching awards has improved the status of the profession or encouraged 'good students' to become teachers.

Research evidence produced in this study does not show that overall in anything but a limited and idiosyncratic way teaching awards have substantially improved morale or raised the status of the profession, during the decade they have been conferred. Given the absence of sufficient research to indicate whether the aims of teaching excellence awards are being met, it may be that the awards process is either implicitly or explicitly serving significantly different ends. In this case the awards process may be seen as reflecting an economic rationalist approach to education leading to schools and teachers competing with one another.
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Developing An Inclusive Model For 'Teacher' Professional Development

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This paper reports on the findings of a recent teaching grant awarded in 2004, from the Australian Teacher Educator's Association (ATEA). The grant enabled a professional development teaching (PDT) team to be established at Norlane West primary School, Geelong. The team comprised of twelve 'teachers' who included two teacher educators, six Year 5 and 6 teachers and four student teachers. The aim of the project was to examine how a team of new and experienced teachers developed and changed their teaching repertoire and their professional identity through a process of teaching, learning and reflection. What made this particular project unique was the inclusion of student teachers in the PDT team and the action reflection cycle adopted by all members of the team. The reflective cycle consisted of a teacher educator, teacher and the team of student teachers all participating in a filmed teaching experience, editing and reflecting on their own teaching and then sharing the video with the other members of the PDT team. This individual and team reflection process proved to be very successful and an effective model for influencing 'teacher' professional development.

A 'new' model for teacher professional development

Teacher educators are often frustrated by tensions between the campus-based and school-based learning of their students. There is little communication between school and campus, and often student experiences in one setting do not connect with the other (Putnam & Borko, 1997). Placement as an apprentice to a single classroom teacher limits student awareness of options and does not encourage reflection and critique. Teacher educators have little educational input and their role is limited to assessment and troubleshooting. Teachers are left to remedy the inadequacies in students' practical preparation brought about by campus-based teacher educator's disjunction from practice.

There is an urgent need for a better way of using school placements to prepare student teachers to enter the profession. A more adequate preparation of teachers would help overcome entrenched beliefs about education that students bring from their own history of schooling and which are hard to change through campus-based experiences (Day, 1999; Richardson, 1996). It should prevent current problems of early career teacher drop out caused by a mismatch between student preparation and employer expectation (Feiman-Nemser, 2001).

This paper reports on the early stages of development of a model for the placement of students in schools. The paper also aims to document how the model contributes to the development of a teacher repertoire and teacher identity to serve as the basis for future professional growth (Feiman-Nemser, 2001). The paper focuses particularly on teachers' use of video to reflect on their teaching. While the literature makes claims for the value of reflection, it is hard to find a detailed account of what it means to reflect on teaching and how this reflection in fact contributes to teacher development.

The model described here developed out of a field-based approach we, the two authors, had previously implemented. Students were placed in groups of three in classrooms to observe and teach within the two-hour literacy blocks. Although this approach improved the connection between students' campus and school-based experiences, it failed in most cases to produce quality reflection and critique. It was also limited by the fact that it produced little evidence of benefit for the teachers who were unpaid volunteers.

Informed both by our experiences with the field-based program and by the literature on teacher education we worked to produce a model that would overcome these limitations. The model developed for this pilot was a relatively labour intensive one that designed for a single group of students. We are currently developing an approach for a whole cohort.
Principles that shaped the 'new' model

The design of the model was governed by a set of principles and practices derived from the literature:

- Integration of pre- and in-service teacher education (Fullan, 1995). Both teachers and students synergistically benefit from joint access to professional development activities. Integration makes it more likely that students' learning will transfer to the early career experience. Asking teachers and student teachers to reflect together also benefits teachers because it increases their awareness of their own teaching, gives them access to new theoretical perspectives, and gives teachers a break from routine and a new enthusiasm for teaching (Atay, 2004).

- Use of a team including both teachers and outside members (Day, 1999; Guskey, 1995; Huberman, 1995b; Joyce & Showers, 1980). Teams allow a pooling of expertise and mutual support. They make teachers active in initiating their own professional development and identifying development needs, and provide an environment for improving reflection and problem solving skills.

- Negotiation of a focus for the professional development activity based on student teacher program, teacher needs and teacher educator skills.

- A focus on pedagogy, that is, on principled approaches to good teaching (Gore, 2001). Quality teaching is central to the task of being a teacher, and beginning teachers need a strong vision of what it is to be a good teacher to sustain them through the difficult process of entry to the profession.

- Use of an action reflection cycle. Use of a cycle promotes teacher observation skills, shows teachers how to engage in evidence-based teaching, and promotes teacher agency and control of a professional development agenda (Huberman, 1995a; Wang & Odell, 2003).

- Use of video as a stimulus to reflection (MacKinnon & Grunau, 1991; Richardson, 1990; Saunders, Goldenberg, & Hamann, 1992). Teachers are asked to present videos of their own teaching and to give a rationale for their actions. This is a method that helps teachers to identify points at which they could have acted differently. MacKinnon and Grunau (1991) showed that a great deal of learning occurred in a school-based program when students taught alongside teacher educators and the teaching of both was videoed and compared.

These principles were put into practice in a pilot program conducted in a primary school in a low socio-economic area in a regional city. After negotiating access with and in consultation with the school principal, a team was formed, consisting of two teacher educators (the authors), the five teachers, one male and four female, who taught year five and six in the school, and four student teachers. The student teachers were volunteers enrolled in a Middle Years literacy subject taught by Maclean, and they undertook reflective writing and lesson planning tasks associated with the project for partial credit. The students were all graduates in other disciplines completing the final year of a two-year teacher education course that qualified them both as primary and secondary teachers. A member of the school leadership team participated in the team, and the principal attended the early meetings. With some interruptions for a term break the team met weekly for one hour after school in the time set aside for meetings of the upper primary teaching group. An initial meeting was held to explain the nature of the project and to seek the consent of the teachers.

The action reflection cycle

The first meeting took place in August of 2004 and established an agreed focus on the teaching of expository and argumentative writing. This focus met the needs of the teachers as it was part of the established program and also related to the content of the students' coursework. Once the focus was established a cycle was set in place. This cycle began with a sharing of resources relevant to the teaching focus, then development and planning of teaching activities. Based on this planning, teaching of a session by one member of the group was videoed, and the video was used as a basis for discussion and reflection in the following meeting of the group.

This cycle was followed three times, the first time with a teacher educator (White) teaching a two hour session, the second time with a teacher teaching the session, and the third time with the four students jointly teaching a session that they had collectively prepared.

A final meeting was then held to reflect on lessons learned from the project and to consider how the model might be refined for future use.

The project did not begin smoothly. Funding was awarded in the middle of the year and had to be spent quickly under university rules. There was insufficient time to prepare the teachers for their
participation in the project. Some teachers were concerned that their group time together was being solely used for the project when they had already developed a more extensive agenda.

However after a few sessions attitudes became more positive. Teachers enjoyed the fact that they had something concrete to discuss in the form of the video, and also the involvement that comes from the fact that their own classes and children are being viewed. They very much enjoyed the chance to talk about their own teaching, something which often gets lost in the busy environment of a school. They also enjoyed the chance to think about the way they were teaching and to get out of their routine by considering alternatives.

A key reason for the success was that a teacher educator was prepared to take the risk of teaching a class of children. This immediately gave the project credibility with teachers, and established a model for others to follow.

Teacher: A big sell pitch for me was the fact that you said you teach. I never heard of a lecturer teaching before in primary school. I’ve been around a long time. I’d never seen one come in and take a class. Never ever.

A major development during the project was that we became more sophisticated about the use of the video. After a relatively unsuccessful start in which the video was replayed in an unstructured way, we developed an approach in which the teacher(s) viewed the unedited video of their teaching and nominated sections to be included in an edited version presented to the team. This initial viewing and editing was nominated as an important learning experience by a number of the participants. It was particularly important because it gave teachers agency in controlling the aspects of their teaching to be discussed.

For student use we also developed a structured set of questions focussed on key aspects of good teaching to use when reflecting on the video. These questions required the students to focus on principles of explicit and engaged teaching. For example, students were asked to reflect on their teaching focus, on student engagement and inclusion, and on achievement of planned outcomes. Students were also asked about dimensions of teaching such as student support, modelling and reflection. They were asked to reflect by evaluating their successes and failures, and to discuss what they would do differently if they were to reteach the lesson.

For each of the PLT team meetings, discussions were tape-recorded and later transcribed. These transcriptions were then used to analyse what the various teachers had gained from the action reflection cycle.

Reflection as discursive practice

For the purposes of this paper, we now explore our understanding of reflection as a discursive practice and then specifically look at how the student teachers reflected the video of their teaching. Based on a transcript of the team’s discussion of the video, reflection is analysed as a form of discursive practice.

We ask how processes of identity formation are revealed by analysis of the team’s reflective discussion of the video of student teachers. The analysis reveals how student teachers develop an image of themselves as professionals by watching themselves teaching. Students jointly construct an ‘account’ of their actions in planning and teaching the lesson (Edwards & Potter, 1992). These accounts construct the students as (would be) professional teachers (Archer, 2000). In reflection students are producing a representation of themselves as a member of the category ‘teacher’.

The analysis is influenced by two views about the nature of reflection. First, reflection can be seen as personal theory building as beliefs about teaching and learning are modified in the light of insights from critical events. Accounts of teaching interpret events through the lens beliefs built up in the course of a personal history of teaching and learning experiences, through the perspectives of other teachers and the perspective of students, and through the lens provided by theories of teaching and learning (Brookfield, 1995). Second, reflection can be seen as a social process conducted within a community of practice as the team negotiates shared tasks, shared understandings and a shared repertoire of tools and actions (Wenger, 1998). The group produces products in the form of revised goals for future actions or in the form of revised routines.

Analysis of reflection on the students’ lesson

In the reflective discussion used as a basis for this analysis, four student teachers, four teachers, a teacher educator and the team leader for the upper school discussed an edited 20 minute video of the student teachers taking a two hour lesson on persuasive and argumentative writing. The lesson was jointly planned and taught by the four student teachers. The reflection occurred a week after the taping, after the student teachers had viewed the complete video and edited excerpts for presentation. The student teachers took it
in turns to present the section of the lesson that they had taught. This lesson focussed on two forms of persuasive writing, letters and editorials.

In this section six texts taken from the transcript of the video reflection are analysed to demonstrate features typical of the process of reflection. These texts are consecutive and follow the stages of the lesson as students reflected on the video. Analysis of the six texts demonstrates that reflection on the video is based on a number of key moves:

- the application of categories from professional discourse to teaching actions or events,
- justifications or accounts of events and actions,
- identification of a ‘problem’ in the teaching,
- negotiation of shared evaluations,
- identification of options and choices.

**Modelling**

The lesson begins with a display of the editorial page of the local newspaper in a poster format. A copy of the editorial is also displayed in enlarged format. Students first look in these texts for ‘persuasive words’, then the student teacher, A, models the breaking up of the editorial up into the three stages of persuasive writing students are familiar with from previous lessons: opening statement or issue, arguments, and suggestion.

As Text 1 shows, the enlarged display becomes the initial focus of reflective discussion, as the video makes it quite clear that the print is not visible to the students, and their reluctance to answer is due to the fact that they cannot see the print (T is teacher, ST is student teacher, TE is teacher educator).

**Text 1**

The displays are too small

ST A: All right we started off with modelling basically. Where we talked about editorials in the newspaper and were basically again recapping on persuasive words and point of view and that sort of stuff. And then talked about where they could express that if they wanted to express their opinions and concerns with community. So we went into editorials in the newspaper and that sort of thing.

ST S: So we had a framework for them to follow which made it easier for them to grasp how the editorial was structured which we found quite good for them to use.

ST R: Really good. Yeah. Especially when they went on to write their own editorial at the end. Without having that sort of… there for them to copy. Like they just wrote their own.

ST R: But something we realised from watching the video is that all of these were too small. Way too small for the kids. They couldn’t read them and they couldn’t see them and we were wondering why they probably weren’t answering our questions and it’s because up on the board they couldn’t read the story.

T D: Would have been better to do the next size up and just handwrite it on there.

ST R: Yeah. At first we thought it was maybe just one or two of them was too small but watching the video you can see that even if the kids are sitting right in front of you, that every single one of these was just too small.

ST A: Even having a whole board like that and writing it up and then sort of breaking it down so you have to read it from the back of the pack where they were sitting.

T M: Would you put them in smaller groups and have one per group sitting…

ST R: …yeah that’s probably an idea.

T M: Going to save yourself time and whatever and just run them off. If they sat in a circle and got one in front of half a dozen of them.

Text 1 begins with a recount or retelling of what occurred in the lesson. A’s actions are interpreted in terms of categories labelling teaching moves: modelling, recap. A gives reasons for the students’ decisions, namely that they used newspaper editorials as an example of places where opinion is expressed. The analysis of persuasive texts into four stages is categorised as a framework, and the reason for using the framework is that it makes it easier for them to grasp how the editorial was structured. The final part of Text 1, quite good for them to use, demonstrates the evaluative quality of reflective talk, and that it is about the negotiation of shared evaluation within the group. A reason for this positive evaluation is given in terms of the outcome of increased student independence. Like they just wrote their own.
A further characteristic of reflective talk is finding a problem we were wondering why they probably weren't answering our questions. An explanation is offered that was not obvious at the time of teaching but that becomes obvious in retrospect from the different point of view of the video camera: it's because up on the board they couldn't read the story. The finding of a problem then leads to the final stage of the reflection which is offering of suggestions about how the problem might have been avoided. The teachers offer two different suggestions for action, to handwrite a larger version of the poster and to make copies of the poster to distribute to the small groups. Would have been better to do the next size up and just handwrite it on there. Going to save yourself time and whatever and just run them off. If they sat in a circle and got one in front of half a dozen of them. Notice how the teacher suggestions are couched in a conditional modality to emphasise that student teachers have choice and the suggestion are not directions. These teacher suggestions are then jointly ratified by the student teachers: Yeah Yeah Yeah.

Wait time

After the students complete the account of their actions the reflection the teachers begin to initiate discussion. A good example is Text 2 in which a teacher (not the classroom teacher D) comments on the questioning at the start of the lesson when the children were slow to respond to the student teacher's questions. This delay is reinterpreted in positive terms as 'wait time'.

Text 2 Wait time

TE: I was really impressed how you gave them wait time to think then. When you asked the question early on. About the words and everyone was sitting there like a stunned mullet and you know you're really tempted to jump in and rephrase your question or give them a whole lot of information give them the answer basically. But you just waited and someone came up with the 'should' word or whatever it was. That was good.

Again the use of a technical category wait time is associated with an evaluation supported by evidence or reasoning. You're tempted to jump in … but you waited … that was good. The teaching event is reconstructed as an example of the use of wait time. Again a problem is identified everyone was sitting there like a stunned mullet. Here the reasoning is not given as a justification of the actions of the we who taught the lesson. Rather it is a construction of the teacher as you. The teacher observer, based on her own experience, generalises about how a generic teacher would behave in an equivalent situation where an answer was not forthcoming. This generic form of argument includes A by assimilating her to the category of professional teachers.

Explicit teaching

In the next segment of the lesson students are introduced by the student teacher R to a model persuasive letter relating to a school camp. They jointly deconstruct the letter into the three stages of persuasive writing while R records their analysis on the white board. R then assigns a further task where the students in small groups analyse a second letter using a prepared sheet with the stages of persuasive writing marked out in boxes as a planning frame.

Reflection is not just about constructing an image of the teacher but also about constructing a representation of the relationship between teaching and learning and between the teacher and the students. In Text 3 the student teacher R asks for reassurance about the highly structured and repetitive explicit teaching style that deconstructed and constructed texts using modelling, guided and shared activity, small group activity and procedural facilitation. This explicit teaching style reflects the approach that the class teacher had previously taken.

Text 3 Overdoing it

STR: Because they'd done a fair bit of work. I went through one on the board and then they did their own. I was actually worried that we might have been over doing it. Because A had done a tiny bit and then I did it and then they did... it was kind of the things that were all the same.

TE: But different ways of doing it

TG: For the audience that's probably not bad for our kids.

STA: Sort of repeat in different ways.

TE: They're going to be doing it lots of different ways anyway before they master it better.

A problem is identified in terms of the repetitive nature of the lesson the things that were all the same. However the class teachers reject this concern and reassure R that she has done the right thing by referring to the needs of the students. Note how repetition of the word different is counterpoised to the
same. The teaching style is justified in through implicit reference to the needs of the children in the class who come from a low socio-economic community, and are characterised as a homogenous group as the audience and our kids. These students are characterised as needing repetition and structure in order to learn effectively.

**Engaging activities**

A third student, S, then introduces students to the task of planning their own persuasive letter using the same writing frame as a basis. These letters are based on a choice of one of five preprepared scenarios relating to the local school community, for example, that the skateboard park was closing down, people were concerned about dog droppings on the pavement, neighbours were arguing, and antisocial driving behaviours were occurring in the street. As Text 4 shows, these scenarios engage the students, but they also to some extent stereotype the neighbourhood they live in.

Text 4 Toilet humour

ST S: We tried to select scenarios that could affect them. It did happen and they did respond. They went ooooooh, oh no! you know and especially like the skate park too. I asked them if some people did actually use the skate park...

T D: ... the bowls. The concrete bowls. Up that way

ST And the dog poo they liked that

ST Anything to do with poo kids like

ST Anything gross yeah

ST Toilet humour

In Text 4 the students are also characterised as needing their activities to be engaging and relevant, which justifies the teaching in terms of the kind of learning principles for middle schooling that the student teachers had been exposed to in their coursework. But the construction of what students of this age will find engaging is all their own.

**Ownership**

At this point in the lesson it becomes clear that the students are working faster than expected and than if the lesson proceeds as planned it will finish too soon. While students are writing the plans for their letters the student teachers get together and introduce two new tasks. The students are first to produce a second plan for a letter taking the opposite point of view from their initial plan. They are then asked to write in their workbooks a second letter, based on an issue of their own choice, completed independently without the plan format. This task is introduced by an improvised discussion and modelling jointly led by the students. Text 5 deals with this problem of timing.

Text 5 Too much time

ST A: We could do that. And then we got them to write up an issue that concerned them personally so they did that on their own.

ST S: That was because they grasped it really quickly.

ST A: Yeah.

ST S: And we had too much time we thought oops. What were we going to do? Which worked out quite well cause it gave them a bit more ownership towards their own sorts of things that are going on within their own lives and using examples like around the school too and somebody said they wanted a coach, a football coach.

Text 5 constructs an account of the student teachers' agency in fixing up a problem by referring to their thinking processes. The writing task is retrospectively reinterpreted, favourably, in terms of the theoretical category of 'ownership' reinforced through the language personally, on their own, their own sorts of things.

**Sharing time**

The lesson concludes with the fourth student, K, leading a 'sharing time' in which the students present their letters orally to the rest of the class. Some students just read out the letters, but many choose to dramatise the text in some way to turn it into a performance. Further constructions of the students are evident in Text 6.
Text 6 It’s the stage they’re at

T M: With the guide like that though they’re pretty well... they’ve got that model there in front of them, they can follow it. I mean if you’d done that without those sorts of things you would have had people going off and some not understanding what to do. Some you know repeatedly coming back to you saying oh I’m stuck, I don’t know what I have to do next.

ST R: And this is why their independent editorials at the very end, the last activity, the pay outs are great and we didn’t even give them any... we just said to write your own pretty much. We didn’t say that you had to follow that structure that we’d been using...

T M: and they had something to hang onto.

ST R: Some were even writing where it says like I believe and I strongly recommend or whatever it says in the black paper [one of the worksheets]. They were writing that in say red pen and then writing their own thing and they copied the next bit, the argument, in red.

T M: It’s like giving them a coat hanger and hanging something on when they’re stuck. They can revert back to the model you've given or if they're feeling very independent they can move on to the next step. The struggling student definitely needs that and might need it 10 times before they actually don’t need it anymore.

In Text 6 the students are not constructed as a homogeneous group but differentiated into struggling students and others. The discussion contrasts those who need help and who say I’m stuck and those who can work independently. It portrays teaching as offering support, like a coat hanger, to shift students along a continuum from dependence to independence. The success of the lesson is characterised in terms of the ability of the students to write their final letter without support, and also in terms of the multileveled way the lesson offers students meaningful activity at a range of levels. The use of red pen to include scaffolded language offers a strong image of scaffolding through the incorporation of the teachers’ language into the students’ own writing.

**Contrasting teachers and student teachers**

While this paper mainly concerns the student teachers, it is interesting to contrast their focus on the detail of the lesson with the use the teachers made of the video experience. The teachers used the videoed lessons as a stimulus to crystallise dissatisfaction with the way they were currently organising their teaching. They had got into a rut with a system in which the students rotated between different learning stations. The structured teaching modelled in the video lessons offered a more appropriate approach for primary students needing support to make the transition to secondary school. The teachers also saw the benefits of cooperation in the preparation of units of work, so that the effort and the benefits could be shared within the group.

**Conclusion**

The reflective cycle worked at a number of levels to help the student teachers establish a professional identity and teaching repertoire. Through participation in the teaching team student teachers accelerated their socialisation into the profession. Through interaction with the classroom teachers, students learned how to talk like teachers and to see the classroom events as teachers would. Discussion of the video also helped the students look at themselves and at the children through a number of lenses (Brookfield, 1995): The camera mimicked how they would appear from the children’s point of view, and allowed the students to see themselves through the children’s eyes. Students were also able to see themselves and their teaching through the eyes of the classroom teachers and they began, prompted by the presence of teacher educators, to see the lesson through a theoretical lens in terms of principles of teaching and learning.

However there are clearly a number of shortcomings in the reflective process outlined here that have to be overcome. The spread-out, once a week, nature of the reflective process meant that the students did not get to know the children or the classroom program well enough to teach effectively. The videoed lesson would have been more effective if the students could have taught a unit or a sequence of lessons to simulate more closely the experience of a classroom teacher. Because the students did not know the children well they tended to view them as a homogeneous group rather than as individuals.

There was also a lack of critical reflection. Critical reflection occurs when teachers seek to question the assumptions that are part of the everyday ‘normal’ taken-for-granted world of the teaching profession (Brookfield, 1995). Where there is pressure on student teachers to be socialised into the profession and to be accepted as ‘real’ teachers, and where they are conscious of their lesser status and experience, it is very difficult for them to question the assumptions of experienced teachers about what is normal and natural.
As teacher educators we need to find a way to build on the reflective teacher conversations documented here to allow a more critical edge to appear. In fact as we saw above the experienced teachers were far more critical of their own practice than the students, and used the experience of teaching to make quite radical changes to their practice.

References
Using The Results Of Diagnostic Testing To Promote Mathematical Pedagogical Knowledge

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Deakin University

Teachers require a range of knowledge bases, including both content knowledge and pedagogical knowledge (Shulman, 1986). In recent times there have been calls from a variety of sources for teacher preparation courses to improve the mathematical knowledge of teachers, particularly primary teachers. These calls have been underlined by the recent formation of bodies such as the Institutes of Teachers in Victoria and NSW, as well as the development of teaching standards by professional bodies including the Australian Association of Mathematics Teachers. Rather than simply adopt a “back-to-basics” approach, work is required that uses the results of educational research to design courses that help pre-service students to understand how and why errors are made (by themselves and by children in their own classrooms). Diagnostic testing of pre-service students is the first step in the process. However, it is not enough to simply test students and to remediate their misconceptions. Instead, the aim is to use the results of the testing to improve students’ pedagogical knowledge as well as their subject content knowledge. This paper outlines one approach to the use of diagnostic testing with pre-service students and how the results can be used to assist in the development of pedagogical knowledge.

Background

In recent years, there have been calls from a variety of sources to improve the mathematical knowledge (both subject content knowledge and pedagogical knowledge) of teachers, especially primary school teachers (Thomas, 2000, 2002; Brown, 2002). The debate is not new; Shulman (1986) detailed some of the approaches to teacher education that have been adopted in the US since 1875. He discussed the different emphases that have been placed upon content knowledge and pedagogical knowledge since that time. He noted that originally, teacher education focused on content knowledge at the expense of pedagogical knowledge, whereas today we see the reverse situation where process is emphasized at the expense of content knowledge. Indeed it can be difficult to distinguish between the two because good teaching goes beyond demonstrating one or more solution techniques for a given problem; it should also involve the teacher in being aware of, and being able to diagnose, misconceptions in their students.

In an attempt to evaluate the effectiveness of teacher education courses in Victoria, Ingvarson et al (2004) conducted two surveys: one of 1147 early career teachers (in the first two years of teaching) and one of 749 principals. Both surveys focused on the participants’ perceptions of how well the pre-service courses had prepared the new teachers for the job. It was found that the most effective teacher education programs “strengthen teachers’ knowledge of the content they are expected to teach, how students learn that content, how to help students learn that content and how to diagnose student progress in learning that content. This kind of knowledge has pervasive or generative effects on teachers’ capacity to manage the complex demands that teaching presents. In other words, it is foundational and has flow-on benefits to areas such as pedagogy, classroom management and the capacity to provide a challenging and supportive learning environment.” (Ingvarson et al., 2004, p. 88). Similar work has been conducted in the UK (Morris, 2001; Goulding et al., 2002; Huckstep et al., 2002; Hill et al., 2004), where teacher education providers have been required to audit their students’ mathematical knowledge. In these studies, the researchers investigated how teacher knowledge manifests in the classroom (in terms of the lessons that teachers plan, examples that they use, the questions that they ask and the explanations that they provide) and showed that weaknesses in understanding were linked to insecure subject knowledge and poor planning and teaching.

Recognition of the problems inherent in mathematics teaching by Australian bodies has led to the development of professional teaching standards (for example, see Australian Association of Mathematics Teachers, 2002). This is similar to the approach that has been adopted for many years by a range of other
professional bodies, such as those governing accountancy and engineering, and is to be applauded, because it is only when such standards are introduced that we can expect that teacher knowledge will improve. However at present the standards are somewhat fuzzy – they typically say that “teachers need to have deep subject knowledge and/or pedagogical knowledge” but do not attempt to explain what these look like.

At the University of New England, a three-year longitudinal study into the knowledge of pre-service teachers has commenced. The project aims to investigate the numeracy and literacy standards and problems demonstrated by Bachelor of Education (Primary) students and to monitor changes in student performance over time. The first step in the study has been to use compulsory diagnostic tests to identify the academic literacy and numeracy standards of students in the BEd program. Retesting students throughout their course will help in tracking students' developing competence in the two areas. For students with identified problems in numeracy and literacy, appropriate interventions are being designed and evaluated to determine their effectiveness in achieving sustained improvement in students' numeracy and literacy skills.

In the area of numeracy, an analysis of the hand-written solution protocols was used to identify standards and common misconceptions that were held by the student cohort (Mays, 2005). Early results from the study indicated that it is not the case that the successful completion of one or more units in Year 12 mathematics is sufficient to prepare students for teaching mathematics in primary schools, although this notion can be difficult to dislodge from the students themselves. Rather, it was found that the types of errors that students made were independent of the background mathematics of the students, although the frequencies of particular errors varied for students from different backgrounds (Mays, 2005). Since completing the first diagnostic test, the cohort of students has completed the first of two compulsory curriculum units and a second diagnostic test. This paper reports on the current progress in tracking and improving student mathematical knowledge.

**Diagnostic testing at the University of New England**

If we are to improve pre-service teachers' mathematical content knowledge, we first need to collect some base-line data. In the past, universities required students entering BEd (Primary) courses to have completed a Year 12 mathematics subject, assuming that that would guarantee that students had already acquired sufficient subject content knowledge. However, this is not necessarily the case, as the knowledge required for primary teaching may not have been accessed for years by such students and errors can creep in (Mays, 2005). The approach that has been adopted by the University of New England entails, as one element, testing first-year students to gauge their subject content knowledge (SCK). A test instrument was constructed that comprised five mental computation questions and thirty items taken from the TIMSS set (TIMSS, 2000) to ensure coverage of the five content and one process strand from the NSW primary syllabus documents (Board of Studies, 2002). The test was administered and marked prior to students commencing their first curriculum unit in mathematics. The data were analysed to identify common errors and misconceptions and the areas that required most attention.

The university typically enrols about 160 students in the program each year. There are a number of pathways into the course and, as a result, students have vastly different backgrounds. Approximately two-thirds of the intake is comprised of students who completed Year 12 studies the previous year and have been accepted by virtue of their study score. The remainder of the intake includes students who have recently completed secondary studies and who were recommended by their secondary school principal, some who have transferred from other courses, some who have taken a break from studies for twelve months or more, and others who are seeking a career change. The new BEd course at UNE, which was introduced in 2004, is structured so that students complete four units per semester for the first seven semesters, with the final semester being wholly dedicated to a teaching internship. There are two compulsory mathematics curriculum units in the course; these are taken in semesters two and six. Two units that are dedicated to the development of subject content knowledge, rather than pedagogical knowledge, are available but are not compulsory, and are typically chosen as electives by only ten to fifteen students each year. In future years (2006 onwards), a new mathematics elective that focuses on misconceptions, their causes and possible techniques for remediation will be available. Because the new elective unit will not be available until 2006, the content of the first curriculum unit was structured and delivered in a manner that enabled us to address some of the main areas of concern, whilst focusing on the teaching of mathematics.
Of the cohort who completed the test in 2004, 101 students had studied one or more Year 12 mathematics units within the previous three years. Sixty-seven students had completed general mathematics, twenty-nine had completed 2 Unit and five had completed 3 Unit. In general, the Unit 3 group outperformed the Unit 2 group which, in turn, outperformed the general group (see Table 1 and Figure 1). However, it was also true that successful completion of a Year 12 mathematics subject did not guarantee that students would be free from misconceptions, nor could it predict which misconceptions students would hold. This finding provides support for the notion that the study of secondary mathematics subjects does not guarantee that pre-service primary teachers have sufficient subject content knowledge, and hence preparation courses need to include study of content, not only pedagogy.

### Table 1

<table>
<thead>
<tr>
<th></th>
<th>GENERAL</th>
<th>2 UNIT</th>
<th>3 UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>21.30</td>
<td>25.31</td>
<td>30.00</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.58</td>
<td>0.86</td>
<td>1.61</td>
</tr>
<tr>
<td>Median</td>
<td>20</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>Minimum</td>
<td>8</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>Maximum</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>n</td>
<td>67</td>
<td>29</td>
<td>5</td>
</tr>
</tbody>
</table>

**Scores vs Background**

![Scores vs Background](image)

**Figure 1**

Distribution of scores for students who had completed a Year 12 mathematics subject.

**Teaching subject knowledge via pedagogical studies**

At the time of writing, the first cohort of students has completed the first of the two curriculum studies units, as well as a diagnostic pre- and post-test. The unit comprised a one-hour lecture and a two-hour workshop each week for twelve weeks. The workshops were conducted as activity sessions, where students worked in small groups of between four and six students. The purpose of the group work was two-fold: to model its use in the classroom and to enhance the students’ mathematical content knowledge in a manner similar to the work conducted by Zevenbergen (2004). Each group worked to solve problems and were then required to present their solutions and findings to the larger tutorial group. The content of the curriculum unit was tailored, as much as possible, to include the misconceptions that the BEd students had demonstrated on the pre-test.

On the first test, the types of questions that were well handled by the cohort included reading information from graphs (but not generating their own graphs), basic computation involving whole numbers (except for multi-digit subtraction) and completing numerical patterns (but not using algebraic rules). On the other hand, the question types that were least well handled included conversion between metric units, calculations with fractions, decimals and ratios and the use of algebraic rules to express a pattern or to make predictions (see Mays, 2005, for a fuller discussion). Overall, the cohort appeared to
have good recognition of basic facts but lacked the ability to apply this knowledge to the solution of problems. This situation was compounded by the cohort's poor computational skills. Some of the content is now discussed.

Data and graphing
From the first diagnostic test, it was found that the students were proficient at reading information presented in a graphical format, but did not typically use graphs and diagrams to represent mathematical (other than statistical) knowledge. To address this problem, data and graphing were included as part of three of the lectures and workshops. This work ensured that students were exposed to both statistical and non-statistical applications of graphs, and students were introduced to data types and appropriate graph types. The content of one workshop focused on skills such as interpreting points, interpreting graphs, linking graphs to deduce knowledge that was not directly represented in either, generating graphs from tables of values and from the written word, using graphs to make predictions and telling a story from a graph. Students were also exposed to exercises in probability that focused on the language of chance, the concepts of fairness and independence, and the use of rational numbers to express probability. Although such tasks are listed in the NSW syllabus (Board of Studies NSW, 2002), there is little detail of how to implement them and, as a result, students tend not to use them in their own teaching.

In another workshop, students completed a small exercise in personal data collection, where they were required to measure their hand and foot spans. The data were represented in a variety of ways. Univariate data, such as hand spans, were plotted on back-to-back stem and leaf plots (by gender) as well as in histograms. Students were required to describe and compare the graphs for each gender and to calculate some descriptive statistics including the mean. Because most tutorial groups only contained small numbers of males, students from the entire cohort plotted their positions on a scatterplot of hand span versus foot span. The points were colour-coded by gender and subsequent discussion focused on differences in values for the two genders and the prediction of the value for a foot span from knowledge of an individual's hand span.

Patterns and algebra
In the domain of patterns and algebra, the diagnostic test revealed that typically students were happy to generate new numerical values from a sequence of values by exhaustive listing, and to describe their methods verbally. However, very few used a table of values (unless specifically instructed to do so) and were unaware of the use that could be made of difference data, or how the behaviour of such data was linked to the shape of the associated graph. The test also revealed that none of the students naturally used graphs to represent non-statistical data, nor could many of them express their "rules" in an algebraic manner.

To overcome these difficulties, students were introduced to patterns and algebra in a variety of ways and were encouraged to represent their knowledge in as many ways as possible. Numerical patterns were used to introduce students to methods for generating algebraic rules, although students struggled with non-linear forms. To focus students' attention on the key features of algebraic patterns, examples were made from blocks. For example, one exercise used the patterns shown in Figure 2 and students were required to determine the link between the total number of blocks required to make the shape and the length of the arms in each iteration.

Students began with the L-shape and this was modelled using coloured tiles on an overhead projector. This helped students to realise that the corner tile was not included in the arm length. The discussion then focused on having students identify what was the same about each of the L-shaped patterns and what was different about each one. All answers were included in the discussion and students then had to decide which features were useful (for example, "they all have two arms", "both arms are the same length") and which were not relevant to the problem as stated (for example, "they all have a right angle"). Students were also required to state why they believed a feature was or was not relevant in answering the problem. Collecting such information and gauging its relevance to the particular problem seemed to be foreign to the students, and most were highly engaged in the discussion.

Once the students had distilled all the useful pieces of information, they were introduced to the notion that features that are the same each time can be expressed by numbers (or constants), whereas the features that changed in value each time were variables that they were free to name in any manner that they chose. This helped students to shake the notion that variables must be called x and/or y. When graphing the information, students were required to determine the nature of relevant graphs (depending upon the data type involved) and to decide which variable should be graphed on the horizontal axis and which on the
vertical axis. This helped students to dispel the notion that the horizontal axis is always referred to as the x-axis and the vertical axis as the y-axis, and to realise that not all graphs can be sketched as line graphs. The behaviour of the data in the table of values was also examined to show that the first differences were constant (later examples focused on quadratic and cubic relationships). From this information, students built the expression for the relationship as \( B = 2n + 1 \), and quickly realised that the rule for the X-shape must be \( B = 4n + 1 \), for a "beetle" it would be \( B = 6n + 1 \) and for a "spider" it would be \( B = 8n + 1 \). That is, within a single workshop, students had come to feel comfortable with expressing linear relationships by algebraic rules and could see the pattern of patterns that emerged from the similar types of patterns.

\[
\begin{array}{ccc}
\text{Arm length 1} & \text{Arm length 2} & \text{Arm length 3} \\
\text{L shape} & \text{X shape} & \\
\end{array}
\]

Figure 2.
Block patterns used to introduce algebraic relationships.

An extension exercise required students to find the quadratic rule for the number of bricks required to make a structure that comprised four triangular wings and a single central tower (see Figure 3). Not all students managed to complete the exercise (many were thwarted by trying to find the rule for the triangular numbers), but all could see that the basic structure of the rule could be expressed as "four times the number of blocks in a wing plus the number of blocks in the central tower". Even students who were reasonably proficient at manipulating algebraic symbols reported that they had learnt something about the way in which algebraic expressions are constructed.

\[
\text{Figure 3.} \\
\text{Block pattern that leads to a quadratic rule.}
\]

The next step was to expose the students to the power of algebra in tracing the values generated by a string of actions on an unknown starting value ("Think of a number, double it ... and your answer is ... ").
Students greatly enjoyed this task and developed their own examples that they tested on one another. Not all of their attempts were successful, so some time was spent on identifying errors in their logic, which was a useful exercise in itself.

Students were also required to solve a small problem involving simultaneous equations:

In a particular farmyard, there is a mixture of chooks and dogs. Altogether, there are 72 legs and 30 heads. How many of each type of animal is there?

This problem was typically solved either by modelling with concrete materials or by using a numerical “guess-and-check” technique (some techniques were quite strategic). After completing some of the earlier algebra exercises, students were encouraged to represent the problem algebraically. Those students who had some proficiency with high-school algebra proceeded to solve the simultaneous equations that emerged. However, most students still failed to realise that graphs could be used to solve the problem.

Fractions, decimals and percentages

In the area of fractions, percentages and decimals, students had particular difficulty with operations involving fractions and decimals, ordering fractions and decimals and using such numbers in problem solving. To overcome the problems, in workshops students were exposed to some problems involving mental computation, as well as a range of activities involving paper-folding and sets of counters, and were required to use different representation schemes such as fraction cakes, fraction strips, grids, number lines and the formation of a human number line. Emphasis was placed on the use of benchmark values (such as ½, 0.5 and 50%) so that students learnt how to express rational numbers in a variety of forms.

When working with sets of counters, students were set tasks such as “Collect 20 counters. This is the whole group, now show me four fifths of the set”, as well as the reverse “Collect 20 counters. This is two thirds of the group; now show me the whole group”. The students found the latter task to be much more difficult than the former. Similar examples were used with the paper-folding tasks.

Operations with fractions were introduced using concrete models and were then represented using grids. The first examples used fractions with denominators that did not share a common factor (for example, \(\frac{2}{3} + \frac{3}{4}\)). The focus was on dividing the grid according to the denominators involved and counting cells in the grid to find equivalent fractions. The next step was to use fractions where the denominators shared a common factor (for example, \(\frac{5}{6} + \frac{3}{4}\)). This led to a discussion about the lowest common denominator and methods for calculating it including drawing up lists of multiples of the denominators.

Changes from pre- to post-test

To date, the curriculum unit provided the only means for addressing problems that were identified on the initial diagnostic test. Although the purpose of the unit is to introduce students to the teaching of mathematics, structuring the content provided us with a limited means for addressing student errors and misconceptions. Towards the end of the curriculum unit, students completed a post-test to determine whether there had been any significant changes in their mathematical performance. The instrument used was in a very similar format to the first test, although one new question on ordering four decimal numbers was included. Items from the previous test were either reused in exactly the same format or had some minor changes, such as the values of numbers, changed. Complete data were collected for a total of 134 students. Overall, performance improved both in terms of the mean score and the median score as shown in Table 2. The maximum improvement was 12 points (33%). However, not all students improved—in the worst case one student scored six points lower on the post-test than they had done on the pre-test. Similarly, some areas showed an overall improvement in performance, but in others, student performance actually declined. Some of these findings are now discussed.

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison of results from pre- and post-test</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Median</td>
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<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Count</td>
</tr>
</tbody>
</table>
Areas of improvement

Particular areas where students showed greatest improvement were operations with whole and rational numbers, writing and using algebraic expressions, probability and the solution of problems in geometry (see Table 3). The last result was surprising as geometrical misconceptions had not been specifically addressed during the unit. However, the improvements made in other areas (eg. computational skills) may have had an impact here.

Table 3
Areas showing improvement

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>MDT1 RESULT (%)</th>
<th>MDT RESULT (%)</th>
<th>PERCENTAGE CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-digit subtraction</td>
<td>47</td>
<td>68</td>
<td>21</td>
</tr>
<tr>
<td>Add fractions</td>
<td>31</td>
<td>50</td>
<td>19</td>
</tr>
<tr>
<td>Multiplying decimals</td>
<td>22</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Writing algebraic expressions</td>
<td>78</td>
<td>89</td>
<td>11</td>
</tr>
<tr>
<td>Applied probability (coin toss)</td>
<td>55</td>
<td>85</td>
<td>30</td>
</tr>
<tr>
<td>Calculation of area</td>
<td>53</td>
<td>63</td>
<td>10</td>
</tr>
<tr>
<td>Identification of similar triangles</td>
<td>59</td>
<td>76</td>
<td>17</td>
</tr>
<tr>
<td>Problem solving (bag of marbles)</td>
<td>28</td>
<td>50</td>
<td>22</td>
</tr>
<tr>
<td>Use of algebraic rules (triangular numbers)</td>
<td>74</td>
<td>85</td>
<td>11</td>
</tr>
</tbody>
</table>

Apart from increasing the level of success, it was also true that the incidence of some specific misconceptions was reduced. For example, errors in multi-digit subtraction on the second test appeared to be due to slips in execution rather than a lack of understanding of place value. In the first test, a small number of students treated each “column” of digits as a separate problem and subtracted the smaller digit from the larger digit. This demonstrated a lack of understanding of place value and resulted in the working: 8006
- 2993

Only one student (who did not have regular attendance at class) repeated this error on the second test.

Similarly, on the first test, students were required to compute \( \frac{1}{2} + \frac{1}{3} \). The most common error was for students to add the numerators and the denominators yielding the working:

\[
\frac{1}{2} + \frac{1}{3} = \frac{1+1}{2+3} = \frac{2}{5}
\]

However, on the second test, where students were required to compute \( \frac{1}{2} + \frac{2}{3} \). If students adopted the same technique, they would produce the result \( \frac{1}{3} \) or \( \frac{1}{2} \). The incidence of this error dropped from 30% on test 1 to 17% on test 2.

Areas showing worsened performance

Unfortunately, the changes in performance were not uni-directional. Performance actually declined in some areas, most notably those involving computation. It is possible that all of these instances can be explained in terms of the degree of difficulty of the questions. The four most notable changes are listed in Table 4. Other questions showed declines in performance that were not statistically significant.

Table 4
Questions showing a decline in performance on second test

<table>
<thead>
<tr>
<th>QUESTION FROM MDT1</th>
<th>SUCCESS RATE (%)</th>
<th>QUESTION FROM MDT2</th>
<th>SUCCESS RATE (%)</th>
<th>DECLINE IN PERFORMANCE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% of 80</td>
<td>92</td>
<td>20% of 70</td>
<td>79</td>
<td>13</td>
</tr>
<tr>
<td>( \frac{5}{100} ) = ( \frac{3}{300} )</td>
<td>79</td>
<td>( \frac{12}{200} = \frac{3}{600} )</td>
<td>67</td>
<td>12</td>
</tr>
<tr>
<td>Solve for ( x )</td>
<td>63</td>
<td>Solve for ( x )</td>
<td>34</td>
<td>29</td>
</tr>
<tr>
<td>12x - 10 = 6x + 32</td>
<td>46</td>
<td>11 - 10x = 6x - 52</td>
<td>38</td>
<td>8</td>
</tr>
<tr>
<td>330 m/sec * 4.5 sec</td>
<td></td>
<td>330 m/sec * 5.2 sec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

316
In each of these cases, the question on the second test involved numbers (or order of presentation) that were more difficult than those used on the first test. This demonstrates that the students' number sense is rather fragile and that they need practice in this area. This will be the subject of later testing.

Overall, these results indicate that there is a link between subject content knowledge and pedagogical knowledge. However, we cannot expect to improve students' subject content knowledge simply by involving them in pedagogical units of study. This is an area that must be targeted in a manner that addresses both needs simultaneously.

Conclusion and future directions

The course at the University of New England does not require students to study mathematical content per se, however the curriculum unit provided some limited opportunity to address student misconceptions. However, the main purpose of the unit is to introduce students to the teaching of mathematics. It was shown to have some success in overcoming difficulties identified on the diagnostic test, but it is not sufficient in itself. The next step in the intervention program is the introduction of the unit on mathematical misconceptions, the aim of which is to introduce students to a variety of misconceptions and how these can be used in the classroom to improve teaching. Students have already engaged in some of this type of work during the first curriculum studies unit. When working on whole number operations, students were given work samples produced by students in primary school. The sheets contained some correct, but unusual, solutions and some incorrect ones. The purpose of the work was to have students "correct" the work, i.e., to act as a teacher and to determine whether learners' invented algorithms were correct and, if not, to identify the mistakes made. They were also encouraged to devise a remediation task for each misconception. As the longitudinal study continues, the students' content knowledge will continue to be mapped along with their pedagogical knowledge because the two types of knowledge are fundamental to success in teaching mathematics.

References


Re-Constructing Relations Of Teacher Education And Professional Practice: Boundary Pedagogy And Practitioners At Work

Diane Mulcahy
University of Melbourne

In the context of new times (Hall & Jacques, 1989), one of the most compelling challenges for teacher educators is co-ordinating and negotiating the disparate knowledges now needed by teachers to practise professionally. This paper explores the effects on professional practice of teachers' participation in a program of teacher education where emphasis is placed on making improvements to curriculum, pedagogy and associated fields through addressing problem-situations in schools. Drawing upon empirical data collected in Australian schools, connections among teachers' own learning, their professional practice, and their students' learning opportunities are traced. The paper examines the idea put forward well over two decades ago that schooling 'washes out' the effects of university teacher education programs (Zeichner & Tabachnick, 1981). Informed by poststructuralist concepts and methods, it illustrates the mutually constitutive relationship between the professional knowledge provided in teacher education and the working knowledge of professional practice. It promotes a theoretical and empirical imperative to look to boundary pedagogy (eg. problem-based learning) and boundary practitioners (e.g., beginning teachers) to mobilise these disparate knowledges. Finally, it draws out the implications of this boundary work for re-constructing the relationship between teacher education and professional practice.

Introduction

The notion of new times (Hall & Jacques, 1989) seeks to characterise present tendencies in advanced capitalist societies towards diversity, differentiation and fragmentation. It describes a new social and economic moment, a new political economy, which has variously been called post-industrialism, post-Fordism, fast capitalism, and the knowledge economy, among others. As Hall and Jacques (1989, p. 12) have it, we are witnessing a qualitative change which has shifted the centre of gravity of society and culture markedly and decisively in a new direction. Concomitantly, we are witnessing the expansion of a new form of knowledge which some call 'working knowledge' (Symes & McIntyre, 2000)—knowledge that is generated by and in the work situation (Barnett, 2000, p. 16) or knowledge that is 'ready-to-use'.

Like others engaged in professional preparation, teacher educators are faced with co-ordinating and negotiating connections between professional knowledge and working knowledge as well as between the workforces and workspaces of universities and schools. New times challenge our existing models of professional learning and curriculum and imply the need for new pedagogies in teacher education where the workspace of the school and the concerns and needs of its various stakeholders (e.g., teachers, students, school community, teaching profession) can be taken actively into account. It has long been recognized that tensions exist between the practices privileged in teacher education programs and the practices of beginning teachers in schools. Well over two decades ago, Zeichner and Tabachnick (1981) outlined three different 'scenarios' found in the literature of how schools and universities influence teacher development. They posed the question: 'Are the effects of university teacher education "washed out" by school experience?' and challenged the view that the socializing impact of the university is liberalising and the socialising influence of the workplace is conservative in relation to the university's influence. Arguing against the common assumption that the effects of teacher education would be more apparent but for the conservative nature of schools, they suggested that the view of the school as a conservative force in teacher socialization is somewhat misguided in that it overly emphasizes the homogeneity of teaching perspectives and underemphasizes the diversity of perspectives that exist in fact (p. 11). Contemporary research perspectives on institutional relations present similar challenges. The postmodern¹ research approaches adopted in this paper would suggest that far from being a simple distinction, teacher education and professional practice are intricately inter-related. Neither has a straightforward or unproblematic existence free from our discursively-constituted concepts and practices. Institutions such as universities
and schools cannot be conceived as bounded and self-contained. Adapting Stronach et al. (2002) to my purposes here, 'there is no such thing as 'a school', and the notion of 'the school as a conservative force' is already too much of a generalization. If we want to learn more about the relationship between teacher education and professional practice, and renegotiate connections between the workspaces of teacher education and schools, it may be better to look to the processes that achieve this relationship, rather than to the fundamental nature of either or both.

**Context**

In line with criticism of teachers and of the programs and places where they are educated in a number of countries around the world (Cochran-Smith, 2004), teacher education has come under increasing scrutiny by governments in Australia over the last decade (Committee for the Review of Teaching and Teacher Education, 2003; Guerrera, 2005; Ramsey, 2000; Rood, 2005). A Victorian State Parliament inquiry into teacher training has found recently that new teachers are ill-prepared for the realities of the classroom (Rood, 2005). Faculties of Education are under pressure to improve the quality of teacher graduates and to align the underpinning knowledge and skills produced through teacher education programs to the needs of schools, the profession and the community. Accordingly, in 2001, a small group of teacher educators at the University of Melbourne began to think about a new design for a teacher education program that could integrate the content taught through the campus-based curriculum directly with the experiences that student teachers have in schools (Hildebrand, Mulcahy, & Wilks, 2001). A model of problem-based learning (PBL) was developed where the three overlapping domains of Professional Practice, School Concerns and Professional Knowledge come together through scenarios or problem-situations that student teachers investigate in partnership with their host schools and university facilitators. Drawn from different disciplinary areas, these teachers collectively carry out investigations of direct relevance to their host schools. Engaging in practices of inquiry, they are encouraged to raise substantive questions about curriculum, assessment, pedagogy, policy and the ends, as well as the means, of schools and schooling, and make improvements to aspects of these within their host schools. The PBL program forms part of the Graduate Diploma in Education, a one-year full-time course for graduates that qualifies them for registration and employment as secondary school teachers.

**The new pedagogies research: A relational perspective**

A renewed interest in pedagogy has been taken worldwide over the past decade (Darling-Hammond, 1997; Gore, Griffiths, & Ladwig, 2004; Lingard et al., 2001; Newmann & Associates, 1996). As Lovat (2003) has it, the scope of educational research has broadened to include the very nature of teaching itself: 'This is not just educational research but more properly termed "teaching research", and it is to be found most sharply in what is broadly referred to as the "new pedagogies research"' (p. 12). The demands of a knowledge economy have prompted a renewed focus on learning and teaching, giving rise to significant alternative models of constructing knowledge (Loughran & Doecke, 2004). The paper is set within the new pedagogies research of the past decade or so where the focus has been on the distinctive knowledge base of teaching (Shulman, 1987) and how this might play out in processes of curriculum and pedagogical reform. It is informed by current debates about 'productive pedagogies' (Gore et al., 2004; Lingard, Hayes, & Mills, 2003; McFadden & Munns, 2002)—that is, pedagogies which, in essence, seek to conjoin the strands of effective teaching. As Shulman (1987) has it, these involve mastery of a body of content and mastery of effective pedagogy. He portrays the 'missing paradigm' in education as one that bridges the gap between content knowledge and teaching methods / techniques. The term 'new pedagogies' refers to those curricula and pedagogical innovations that: 'advocate knowledge and conceptual understanding over content and information', are based on 'learning as engaging in the practices of inquiry and ways of thinking of a domain or field of practice', and 'imbue a lifelong learning or futures perspective' (O'Brien, 2002, p. 3). In this definition, knowledge is constituted as a process of dynamic inquiry rather than a product which is static and content-based. Problem-based learning qualifies as 'productive pedagogy'. It demands social inquiry where 'social means that learning is an interpersonal, constructivist process' and 'inquiry connotes active, student-driven learning' (Coombs & Elden, 2004, p. 524, emphasis in original).

The study reported here is grounded in a relational view of pedagogy and institutional relations. The very term 'pedagogy' brings forth the relational quality between teacher and student. Pedagogy is a concept 'used to stress the interrelated aspects of teaching and learning' (Lingard et al., 2003, p. 400). Pedagogy is not given in any educational order of things but rather constructed through a relationship between teacher and taught (McFadden & Munns, 2002). It is performed in acts of articulation where teachers and learners...
are brought into an alignment that enables learning to occur. Modernist epistemologies tend to treat pedagogy as something both independent of, and contained within, singular entities, such as individuals (teacher, instructor) and institutions (schools). Contrary to these assumptions, the broad commitment of this paper is to ‘relational thinking’ (Massey, 1999). As Massey explains: Thinking relationally is, in part, an attempt to reimagine the either / or constructions of binary thinking (where the only relations are negative ones of exclusion) and to recognise the important elements of interconnection which go into the construction of any identity’ (1999, p. 12).

Actor-network theory (ANT) (Latour, 1987; Law, 1992; Law & Hassard, 1999) provides a useful lens for the study of pedagogic practice, particularly when this practice crosses institutional sites. ‘ANT reflexively provides a theory of interconnectedness through which to re-imagine educational practices as spatialised knowledge-building practices’ (Edwards & Clarke, 2002, p. 157). Characterised by the idea that knowledge is produced in heterogeneous networks, ANT is devoted to exploring the middle ground, tracing the ‘mediations’ or ‘translations’ that render entities as for example, technical objects and human subjects. From an ANT perspective, pedagogy becomes an accomplishment of a network rather than an individual teacher. Actor-networks constitute objects through associating social and material entities or elements. As Law (1994) has it, ANT looks at the resources that are mobilised to establish an object of knowledge: people, devices, texts, decisions, organisations, inter-organisational relations. Actor-network theory draws in part on post-structuralism and favours a concept of power as relational. One of its key concerns is to explore and describe processes which generate ordering effects such as the purported domination of knowledge for teaching by university-generated knowledge. Striking a cautionary note, Hetherington and Law (2000) suggest that we need to be careful about the notion of relation itself: ‘We need an understanding of relationality that takes into account the possibility of alterity within the relations that concern us; an alterity, furthermore that should not be reinscribed as yet another form of difference’ (p. 128). Notably, we need to recognize Otherness as ‘inside’ the relations that concern us. The outside of Otherness is always already inside. The analytical strategies of Jacques Derrida take us towards this more radical relational thinking. Derrida's notion of the supplement – that which is made marginal to a controlling centre – takes us into this terrain (see Derrida, 1976, for a discussion of supplementarity). As supplement, the marginal or inessential is actually the necessary and essential.

Data and methods
The principal participants in this study were 20 newly qualified teachers, a subset of the total sample of 133—the full membership of the problem-based learning cohort 2001–2003. Funded through a small Faculty competitive grant, considerations of convenience and cost ultimately determined the study sample. Telephone interviews were conducted with fifteen of these teachers and written records of interview made. Approximately 30 minutes in length, these interview conversations were semi-structured and open-ended in nature. A protocol containing a small number of closed questions and a range of open-ended questions was developed to obtain demographic data and qualitative data. In the spirit of emergent qualitative interviews, conversations did not strictly follow the list of questions. The remaining interviews were conducted face-to-face. Two of these interviews were tape-recorded and fully transcribed. Records and transcripts of interview were analysed using qualitative methods of content analysis. In referring to these data, I am not so much evidencing my argument about the intricacy of the relationship between teacher education and professional practice and the role that problem-based pedagogy and beginning teachers can play in reconstructing this relationship, as telling data stories (Lather, 1991). In so doing, I construct accounts of the pedagogic practices of two newly qualified teachers as case examples. These examples are not taken to be representative of the experiences of other teachers involved in problem-based pedagogy in initial teacher education, nor are they ‘realist’ windows onto the experience of beginning teaching and the pedagogic practices adopted in this teaching. Rather, they are vignettes, selected to show ‘boundary pedagogy’ and ‘boundary practitioners’ at work. The two teachers featured position differently with respect to discourses and practices of problem-based pedagogy. As a more conventional story of research methodology and research methods would have it, their average age is twenty-seven. Both male, each beginning teacher is in his first year of teaching.

Problem-based pedagogy at work: Discourse, practice and networks
Shaun's story: ‘I introduced a games activity that used problem-solving’
Shaun teaches in an inner-city, co-educational government school. A health and physical education (HPE) teacher, he brings ‘a fair bit of youthful enthusiasm’ to teaching and, accordingly, gets on with the students
ninety per cent of the time'. In recounting the qualities that he brings to teaching, Shaun emphasises his prior industry experience and its close link with his subject area, health and physical education:

I've had experience with my KLA (Key Learning Area) as I'd worked as a personal trainer for a few years. ... I'm sporty and active myself – and that's specific to my KLA.

His image of teaching is informed by particular conceptions of physical education and of his personal and pedagogic identity and role:

In PE you can't engage as easily on a one-to-one basis. There are difficulties that some kids have that are there for everyone to see.

I spend a lot of time chatting with the students – spending social time with the students. I say: 'How was your weekend?' I get to know the students' interests and ask them about that. They see that you're a person.

I have a rapport with the kids – having worked in crèches and after school programs.

There's a lot more to a class than what you do in the 45 minutes. There's a lot more interaction, especially at this school.

As a Physical Education teacher, he is engaged everyday in the 'standard motor development activities' which form the foundation of sports and recreation. Making the best or most effective use of pedagogic opportunities involves negotiating possibilities with the students:

With the junior group we go for a lap around the park and two or three of the kids were a bit embarrassed because they were overweight and unfit. So I decided to break the activity up into sections. Every 600 metres they had to do an activity. There were nine activities that the whole group had to do – there were six groups of four kids – and the total was calculated for the whole group. So the kids had to decide what activity they were better at and they could do that three times if they wanted to.

A discourse of problem-solving informs and justifies the pedagogic decisions that Shaun makes:

For a mini assignment with Year 7, they had to create their own game. I'm correcting them all at the moment. And I'm going to choose the 20 best and print them in a booklet for teachers. It will be the games that kids like – games kids prefer. With problem-solving in PE, some kids are less competent, and you, as a teacher, have to figure out how to do it – how to make things more efficient.

Shaun draws upon a particular discursive practice in his efforts to structure learning in PE. The focus is learning through solving problems: 'For a mini assignment with Year 7, they had to create their own game'; 'I set up a mini debate on medicare and the system'. In what might be called a functional perspective, the instrumental use of this pedagogy is brought into focus: 'how to make things more efficient'. In initial teacher education, Shaun sought to spend more time on his 'specific KLA':

A lot of the PBL stuff, or the Dip Ed stuff really, was largely non-specific to my KLA. I spend three-quarters of my time outdoors and only a quarter in the classroom, so it was a lot less specific.

I was definitely not the best PBL student but I saw it as a worthwhile option. Sometimes there's a lot of tail-chasing but I had to do it to get the qualification. At times there's too much theorising – talking about doing something [Dip Ed rather than PBL]. Time could be better spent. It would be better ditching one day a week at uni and spending the time instead at a school. ... With the Dip Ed in general I would have liked to have spent a little more time on my specific KLA. But I enjoy talking about a lot of issues. Overall I enjoyed my time.

The pull of the subject subculture is strong. As a subject, Physical Education is spatially constituted in a specific way: 'I spend three-quarters of my time outdoors and only a quarter in the classroom'. The spaces that Shaun teaches in ('outdoors'), the nature of the subject matter ('standard motor development activities'), the qualities he brings to teaching ('I'm sporty and active myself'), the composition of his classes ('they were overweight and couldn't do physical tasks'), the subject subculture ('in PE you can't engage as easily on a one-to-one basis'), the organization of teachers' work ('there's a lot more to a class than what you do in the 45 minutes') and so on, come together to create a particular discourse and practice of pedagogy. Shaun's pedagogic practices of problem-solving achieve their form as a consequence of the relations in which they are located. In the vocabulary of actor-network theory, they are network effects. The pedagogic network that is in place is a product of the entities – physical activities, games, overweight children, space, time, conceptions of PBL, conceptions of Physical Education, conceptions of curriculum – included in, and excluded from, the network.
Brad's story: 'They came to a point where they ... said: "We need to know Genetics"'

Brad is a Science teacher who has taught in schools in the US and Australia. He speaks to his prior experience of teaching and his emerging interest in problem-based pedagogy in this way:

I think that before I came to Australia – when I was teaching in the US – I was very much teaching content-based material. I did allow for my students to take control of a lot of the curriculum because I did have the freedom, but nonetheless I made sure that that content knowledge was part of my repertoire. I didn't feel free to just let go and let the students take it wherever it goes.

Having things that are context-based has become very relevant to me in that I, myself, have asked the question of why do I have to do something and rarely have I received an answer that was located in the present. It was always something located in the future and I always found that problematic. I think it affected my learning.

A contrast is drawn between 'teaching content-based material' and 'having things that are context-based'. Curriculum and pedagogy are conceived in contrastive ways, or better perhaps, disparate discourses of curriculum and pedagogy circulate in Brad's conceptions and practice of teaching, here, his recollection of student teaching:

When I walked into that classroom – it was a Genetics Year 10 class ... there were a lot of students that were in that classroom that did not want to be (there). ... It was so wonderful to see a 180 degree turn in those students who were resisting and, you know, hearing from the teacher towards the end of that, that some of those students who had never shown an interest in Science, and who had been poor students in the school, ... produced the most wonderful work. They had a massive interest invested in it. To hear some of the students come back and say that they wanted to pursue something along the lines of the content of the PBL unit for the future just because it appeared to be so interesting to them and, you know, of course I could have done it with any topic and it makes me wonder whether if I had picked a different topic if those students would have wanted to go down that track because of the actual model rather than the content.

Brad gives thought to the tension between 'content' and 'process' approaches to curriculum: 'it makes me wonder whether if I had picked a different topic if those students would have wanted to go down that track because of the actual model rather than the content'. He attempts to bring content knowledge and teaching methods together:

When I walked in I gave a very powerful set of stimulus materials and I also incorporated some semi real life environments where a 'lawyer' (a fellow student teacher) came in ... and the students actually thought that it was a lawyer. They were going to form a bioethics committee to present to a legal firm and the legal firm was going to decide whether or not to sue the ... Monash IVF (in vitro fertilization company) based on the feedback from the students. So, they felt they had to do something because these people were going to make a decision about whether or not to sue. And so at some point in the structure I made sure that they themselves would have to say 'I need to know a bit about Genetics if I'm going to explain some of this stuff'. I didn't directly tell them that they needed to know Genetics. They came to a point where they themselves said: 'We need to know Genetics'. They, at times, asked me to give them a lesson. They came, four delegates from different groups came, and said: 'Can you give us a lesson on DNA replication next week?'

Problem-based pedagogy embeds an intricate relationship between teacher and taught:

From the teacher side of it, I can see how incredibly frustrating it would be to do something like this (PBL) for the first time. My biggest problem was making sure that I was very conscious of every question I responded to and I think one of the misconceptions about problem-based learning is that you don't answer questions. A lot of people think that you don't answer questions but I don't believe that. I believe that you answer the questions that the students ask in your head and then you respond with questions that are guiding but not leading. That's how I see it and that's one of the biggest changes I had to make in teaching.

Brad acts deliberatively, anticipatively, answering the questions students ask 'in (his) head' and, in so doing, devises a further question that seeks to stimulate further inquiry. On the one hand, students' questions produce a pedagogic space in which the teacher can problem-solve; on the other, the teacher's questions provide a pedagogic space in which the students can problem-solve. A relational pattern of pedagogic practice plays out in these data. Questioning mediates or translates the efforts of teacher and students. Importantly, this is a two-way translation where each party is both acted upon and active. Problem-based pedagogy achieves its form as a consequence of this two-way translation. Questioning is the key resource that is mobilised to effect this translation. Brad also employs the device of comparison to arrive at a position and practice of problem-based pedagogy:
I can compare the past, and then I can compare the government girls' school that I was in, and the semi-private co-ed school that I was in most recently. ... When I was teaching in the US, I was very much teaching content-based material. ... Now more ideally, at the girls' school (when I was part of the PBL cohort) where there was a lot of freedom, and my supervisor gave me free reign within my teaching to do whatever I wanted pretty much, I had the opportunity to design a problem-based learning unit for Year 10s. And, in that, I think I came closest to my ideal of how I would like a problem-based learning unit to be. ... Now the reason I want to juxtapose that to the more recent experience is because in that school it was very strict and the teachers had very little freedom. The students had very little freedom and I actually saw how the problem-based learning model wouldn't work unless I had certain requirements. I tried to make it softer, I tried not to go all the way, but a lot of the students resisted strongly to the model because they wanted to know content material, because they had been socialized for many years, and all the other teachers in the school that they were with that year were, of course, teaching in a traditional way.

In making mutually informative comparisons among widely separated instances of teaching, he strives to identify the possible forms that 'the problem-based learning model' can (and cannot) take. As noted earlier by way of the example of the Genetics unit, a mutual specification of content and process comes closest to Brad's ideal of 'how I would like a problem-based learning unit to be'.

**Boundary pedagogy and practitioners: Working professional and practice knowledges together**

In the vignettes above, stories of pedagogic practice are not exclusively human (teacher, learner) stories. Pedagogy is an accomplishment of a network rather than an individual teacher. If some networks can be claimed to be more effective than others, then this is an effect of the associations formed among entities and held in place by a particular network of relations. Thus, Brad finds himself: in a school 'where there was a lot of freedom'; with a supervisor who gave him 'free reign'; and with students who were predisposed to a different pedagogic approach:

I think unfortunately the reason why the students connected so strongly with this model (PBL) is because of one of the problems we identified at the school. The students had lack of motivation and they were disconnected from their teachers. So I think being faced with that model, they immediately jumped on top of it and said: 'Yes, this is what we want'.

A network of heterogeneous entities is formed where the strands of effective teaching (that is, mastery of content and mastery of effective pedagogy [Shulman, 1987]), are conjoined. The pedagogy that Brad practises might be thought to be the product of drawing professional and practice knowledges together. Problem-based pedagogy is performed as 'boundary pedagogy' where knowledges 'cross' and form interdependencies: 'Now more ideally, at the girls' school ... I had the opportunity to design a problem-based learning unit for Year 10s. And, in that, I think I came closest to my ideal of how I would like a problem-based learning unit to be'. Contrastively, for Shaun, the connection between the knowledge provided in teacher education and his professional practice in his school is less robust: 'I was definitely not the best PBL student but I saw it as a worthwhile option. Sometimes there's a lot of tail-chasing but I had to do it to get the qualification. At times there's too much theorising'. Accordingly, a different and arguably 'thinner' version of problem-based pedagogy is produced (problem-solving).

While there was plentiful evidence in the data overall to suggest that tensions exist between pedagogies promoted in teacher education and the use that beginning teachers make of these in their classrooms, there was little evidence to suggest that schooling 'washes out' the effects of university teacher education programs. No deep 'disconnect' emerged from the data with respect to institutional relations between universities and schools. Newly qualified teachers piece together their professional and practice knowledges, or, better perhaps, work these disparate knowledges together. They span knowledge boundaries and seek to connect theory with practice, some of these connections taking a more reduced, and some a more enlarged, form. In making both kinds of connections, potential exists for the removal of what some call the 'hegemony of university-generated knowledge for teaching' (Cochran-Smith & Lytle, 1999, p. 289).

For Cooper, 'boundary is an intrinsically ambiguous concept. For the boundary both separates and joins. As such, it represents a dilemma or an irreducible difference that cannot be decisively solved but only deferred' (Chia & Kallinikos, 1998, p. 148, emphasis in original). Boundaries are fault lines that can generate danger and anxiety. Defensive strategies such as status differentials are devised to deal with the anxieties and dangers that accompany the ambivalences and ambiguities that make up the boundary (ibid, p. 149). Writing from within the sociological tradition of symbolic interactionism Star and Griesemer (1989, p. 148) define the concept of boundary object as an object that inhabits several intersecting worlds at
once. Boundary objects are:

objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation (p. 393).

Problem-based pedagogy functions as a boundary object. Its boundary nature is reflected by the fact that it is simultaneously concrete and abstract, specific and general, conventionalized and customized (Star & Griesemer, 1989). It is also simultaneously local and global—a pedagogy that can be used not only in professional preparation but also for student learning in schools and part of a movement worldwide to institutionalize policy principles and practices such as lifelong learning and transdisciplinary learning.

Re-constructing relations of teaching and teacher education

Problem-based pedagogy is internally heterogeneous or 'hybrid'. Linking theoretical knowledge with professional practice, it looks in two directions at once. A picture emerges in which pedagogy is a balance point, liminal between the academy and the school, theory and practice, teachers and learners, and teachers and teachers. The "hegemony of university-generated knowledge for teaching" (Cochran-Smith & Lytle, 1999, p. 289) glosses over the fault lines intrinsic to the boundary between teacher education and professional practice and enables the university to pass itself off as the principal provider of professional knowledge rather than as a partner in the knowledge production process. Lifting the veil on the work that boundary objects and boundary subjects (beginning teachers) engage in can create opportunities for critique of these power relations and status differentials. Projects of 'co-reform' (Allen, Cary, & Delgado, 1995) imply this critique. Giving attention to this work also allows an understanding of knowledge as mobile and connective. A relational view of knowledge (focusing up movement through space and making connections) is very appropriate to educational practice in new times.

Mediating between the worlds of teacher education and professional practice, the beginning teacher as boundary subject inhabits a middle ground. Deleuze's (Deleuze & Parnet, 1987) middle as between is helpful here. As Cooper (1998, p. 118) comments, the concept of middle as between 'requires a new way of seeing, a double vision, where "we must learn to look out of two eyes, not in the same direction but in two different, and indeed divergent, directions at once"' (Weber, 1996, p. 150). Drawing on the work of the critical theorist Samuel Weber, Cooper highlights the importance of looking in two directions at once and at the same time. This double movement is performed in Brad's pedagogic practice of answering 'the questions that the students ask in your head and then ... responding) with questions that are guiding but not leading'. The relationship between teacher education and professional practice can be conceived as a mutually constituting connection in which you can’t have one without the other.

Relations of teacher education and professional practice are created and sustained together; if we want to influence either, then we really have to influence both. Essentialist accounts of pedagogy and institutional relations will not do. Thinking 'betweenness' in education helps us refuse singular models, models which are based on one type of educational practice as the norm by which all others are judged. The interdependency of learning relations and locations, the spatiality of knowledges and the fluidity of institutional relations, has been argued throughout. The regeneration of the relationship between teacher education and professional practice resides in acknowledging this interdependency and fluidity.

Notes

1 Among other things, postmodern research approaches assume that all knowledge in its use exercises power relationships and that meaning is ultimately undecidable. This paper draws most particularly on discourse theory and actor-network theory and related tools of analysis (deconstruction, discourse analysis, network analysis).

2 Transdisciplinary learning involves students in using more than one discipline in solving real world questions or problems. The principle of transdisciplinary learning underpins curriculum frameworks such as the Tasmanian's government's Essential Learnings Framework. See: http://www.lttag.education.tas.gov.au/planning/learnteachassess/transdisc.htm
References


Taking Teacher Education On A Field Trip: An 'Authentic' Task That Provides 'Authentic' Learning

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Peter Botsman (2002), in his address to the CEO Institute, argues that Higher Education churns out graduates who are not fit for the 'real world'. "Will we have to retrain this MBA or PhD before we can use them? Before they can add any value or even make sense? Are the new graduates adaptive? Imaginative? And what do they bring to our tasks other than a standardised series of methods and ideas?".

Students in the Bachelor of Education at Charles Sturt University, Albury-Wodonga campus, are involved in a collaborative project with the Albury Regional Museum and Art Gallery. Using Constructivist theories of learning, and with reflection on Howard Gardner's Theory of Multiple Intelligences, they plan, run and evaluate 'Children's Week', a week of learning experiences for Primary school children. The student teachers become engaged in a number of tacit skills that cannot always be formally taught in the classroom. Some of these are: planning time and energy; carrying through an agreed responsibility; negotiating and communicating with people in power; resolving conflict; coping with stress and tension; assessing strengths and weaknesses; adapting intuitively to situations and needs. Botsman refers to all this as bringing the substance of University learning into the 'play of life'. The paper will describe the project and identify the 'new' learning that results from such a task.

Introduction

As Teacher Educators we are always trying to assign tasks that will be 'useful' for student teachers. We want many things from assessment: we want to 'test' understanding of discipline content; we want students to demonstrate confidence in working with young children; we want students to be able to engage and inspire young children; we want them to show they can adapt to a situation and modify content to suit learner's needs; we want them to demonstrate they understand theories of child development; and about best learning and teaching practice. Writing of essays and other academic assessment practices help us test some of these attributes but not all. Indeed, University learning is often criticised as being divorced from 'real life'. There have been moves to make education more meaningful (Cuttance & Stokes, 2001), hence more 'authentic', with tasks having outcomes associated with higher-order cognitive development, affective development, and the enhancement of social competencies.

In the Bachelor of Education (Early Childhood) offered on the Albury-Wodonga Campus of Charles Sturt University students have been involved in assessment tasks that ask them to draw on academic skills as well as many of those listed above. Linking with local cultural institutions has made it possible for students to demonstrate a whole range of skills and ways of working with young children. This article describes a learning project that benefits all those involved - the student teachers, the education programs at the Albury Regional Museum and Albury Regional Art Gallery, and the school children and teachers who come to participate in the project. The students are placed in a 'real life' situation of planning, delivering and evaluating learning activities for young children, and, through this process learn many skills they will encounter in their future profession as teachers.

The quotations used this article are from the 2004 cohort – 45 students. There are comments extracted from the portfolios the students submitted for assessment, along with responses from the author as Subject Coordinator, as well as supervising teachers and Museum/Art Gallery staff. All groups of students had interviews with the Subject Coordinator prior to 'Children's Week', and observations were conducted during the week of activities.

Background

'Children's Week at the Museum' has been in existence for nearly a decade as a collaborative project between the Albury Regional Museum, Charles Sturt University Bachelor of Education (Early Childhood) students, and local schools in Albury-Wodonga. The idea began on the Wagga campus of CSU where
Primary and Early Childhood Education students would assist in implementing an educational program at the local Art Gallery as part of their learning in Arts-based curriculum subjects.

Howard Gardner’s (1991) discussion regarding museums as fertile learning environments for young children inspired the author to explore a program with the University students on the Albury campus where a week of activities could be planned fostering learning around the current visiting exhibition at the Albury Regional Museum. There would be various types of learning activities available that would explore Gardner’s aspect of ‘other windows’ for learning.

The Museum Project was, therefore, introduced as an assessment task for 3rd year B.Ed(EC) students. At this point in their studies the student teachers have completed three Professional Experience placements and feel confident planning for, and working with, children 0-8. They have a good deal of information about the ways children learn and how to evaluate children’s learning.

The student teachers were asked to plan a specially prepared education program so that children could be involved in various ways of learning. The visiting school children were excited and delighted by what they found at the museum and the student teachers facilitated the children’s discoveries in this learning environment.

The Albury Regional Museum staff members have been very enthusiastic about the program from its inception. The Museum has no funding for Education Programs and no Education staff, so Children’s Week provides a strong focus for their Public Programs. The building itself is a small renovated Inn built in the 1800’s – it is difficult to move numbers of people or children through it without congestion, and the exhibitions are not always ‘child-friendly’ with work hung at a high level and some objects that can’t be touched.

The Museum Project
The structure of the Museum Project has been through a few ‘incarnations’ before reaching its current stage. Each cohort of students reflects on the issues and outcomes of their project, and these reflections result in consequent revisions in the next year planning.

Generally, the main aims of the project are:

- For student teachers to investigate, create, implement and evaluate arts and technology experiences for young children that will supplement a class teacher’s teaching program and augment the learning environment in the museum;
- For students teachers to consider the learning needs of children who will visit the museum, according to current learning theories in arts and technology education;
- To help demonstrate to classroom teachers and museum staff that educationally sound activities can be prepared and implemented using the museum exhibit artefacts and materials.

The project takes place during the University student's mid-session break, and often is the first or second week of the second School term. Local and regional primary schools and pre-schools are informed of the event and book sessions—managerial elements of the project are also undertaken by the student teachers. It is a very public ‘week’ of activities.

The student teachers devise ways to approach the Creative Arts syllabus through topics made evident from the museum’s continuing and touring exhibits. As the project happens midway through the semester, the student teachers need to work quickly and intensely on the topic of the exhibition—these have varied each year. Recent exhibits have been Indigenous culture, Chinese embroideries from Schezuan, and Prisoners of War.

The substance of activities varies – some might use narrative, through storytelling or performance. Some might use drawing sheets, word or picture-provoking activities for those who can read or deciphier codes. To help children understand the experiences of migrants and first settlers there might be drama and story making activities. Visual arts and crafts are also dominant, particularly when pre- and post-visit activities are used. The student teachers need to be able to work with children at different learning and age levels, from Pre-school to Year 6.

The student teachers form groups and choose the area of arts or technology they feel best equipped to work in. They find their own ways to evaluate the children’s learning and reporting methods that suit them best.

The students are assessed by their documentation of the whole experience. They may ask for reflections, reports or surveys from visiting Classroom teachers, the Museum staff, the Subject Coordinator, their peers and the children themselves.
The project is very successful. The school children gain a greater appreciation for Museums, and often return with families to continue exploring. They learn that Museums are interesting and accessible places. Class teachers have been very supportive of the project, many returning on a yearly basis and use the visit as an integral part of their learning programs. The student teachers recognise the ‘real life’ experience they have in working with young children and the value of refining their skills through repeated sessions with different age groups.

**Museum as a ‘life’ situation**

The student teachers are being trained to work with young children in educational settings. They have been exposed to many ideas and theories of learning in their class work at University. During their Undergraduate years they have Professional Experience placements where they can observe and sometimes test these theories. The Museum project gives the students a sustained period of time where they have the opportunities to not only try out their ideas, but also to revise and reform them with each repeated visit from groups of children.

Constructivist theories (Jonassen et al.) and Howard Gardner’s explorations on Multiples Intelligences are the most appropriate to Arts and Technology education. Having knowledge of the different ways we learn helps us consider the varied ways we might involve children in learning activities. Piscatelli, Weier and Everett (2003) emphasise the importance of creating authentic settings for museum learning in order to help children understand the museum and its materials and displays in different ways - not just reading the information panel on the wall!

The Albury Regional Museum is a social-history museum, so the topics cited earlier are connected authentically with our wider communities.

I will consider some of the skills that Botsman (2002) referred to as necessary for the substance of University learning and how they are evident in the Children’s Week project.

**The ‘play of life’ skills**

**Planning time and energy**

Time management is a crucial issue all educators are constantly dealing with. As evidence of this major problem McWhorter and Bullion-Mears (1998) identify ‘time’ as one of the five major factors that affect teacher’s engagement in professional development opportunities. In this project the student teachers had to deal with restrictions of time in their forward planning of the project, as well as finding a way to divide the project week into workable sessions with the children in the museum.

In some years the student teachers have had as little as 5 weeks preparation when their mid-session break coincides only with school teaching weeks in the first school term. Mostly they can count on 6-8 weeks to organise and prepare themselves. They divide themselves into several groups, with one group being responsible for managing the project and setting time limits. This management group look at the museum day available to the school children and consider how much time is available to enable the groups to do their work with the children. The whole group discusses the issue, and however the directive is decided, there are always some ‘activity’ groups who are dissatisfied with the outcome. Some groups believe they can only work with the children for about 30 minutes at a time, whilst others determine that a more flexible approach to time is important to their work. This problem is always an interesting dilemma that has not yet ever been resolved to the entire group’s satisfaction.

**Carrying through an agreed responsibility**

Each year there is an effort made to resolve the difficulty of preparing the children for the visit to the museum. One year a group of student teachers created a website that showed images of the various environments where the learning activities would be held at the museum, as well as suggested pre-visit activities and required materials (e.g., Hats for outdoor, Art smocks for painting, etc.). They were bitterly disappointed that no class teachers accessed the site before the visit. Some year groups have tried visiting the schools before the visit, or at least telephoning to talk to the classroom teachers who are intending to be involved in Children's week. The personal visits proved very effective but ultimately were impossibly time-consuming for the student teachers. Christine Stevenson (2000) also emphasises the value of pre-visit discussion and activities, and the difference it can make to the children’s visit in her discussion about an Indigenous art exhibition project at the Art Gallery of New South Wales.
Student teachers: "We discovered the fundamental importance of the pre-visit, the visit and the post-visit as distinctly separate areas which are equally important."

The student teachers always recognise preparation of the children as an issue that would very positively affect the project and there is always much discussion on possible solutions. However it remains a problem that has not yet been adequately solved.

Negotiating and communicating with people in power

With regard to the issue of allocated time for the sessions at the museum with children, one of the groups voiced their need to the student teacher Management Group that they needed more than the 30 minutes for their Media sessions, in a year when such a decision had been made. Through negotiation with student Management they were able to improve their situation by having back-to-back sessions on two of the days — this gave them one hour with the same group of children. "It was great when we had more time—we could show them the digital cameras, we could work with them on the text."

The learning activity they were engaging the children in was being a 'reporter' who was looking and writing a news story about what was going on in the museum. This was their way of bringing this experience to a real life situation. The children were very involved in what they were doing - they had a 'Press Pass' and they used digital cameras to take pictures of their fellow students looking at the exhibition, or they might draw what they saw and write a reflective story about it.

This Media group's folio that was submitted for assessment was very interesting. They were able to articulate that they found it impossible to achieve what they wished to do in 30 minutes, but they learned by working with successive groups of children what was possible to achieve whilst still providing good learning. So this group became very good at changing and adapting what they planned if it didn't fit into the time allowance, and the children's abilities and ideas helped them understand what could work in the half hour.

Class teacher: "... I liked the idea of getting the children involved using a 'hands on' experience. It made the concept of 'museum' so interesting."

Understanding this issue of time 'limits' led another year group to timetable 45 minute sessions with 'spare' management team floating and assisting with engaging with children if they had completed all they wished in any of the activities.

Class teacher: "... planned with great thought... so involved with the children... overall a huge success..."

The issue of communicating with those in power also comes into play in the relationship between the student teachers and Subject Coordinator. In the lead-up and planning stages they all have to meet with the Subject Coordinator to discuss their ideas. They need to clearly explain and support their thinking and justify methods of evaluation they are intending to employ. It is important that they feel very well supported and have their ideas encouraged - this heightens their enthusiasm for the project.

The student teachers also have the opportunity to negotiate with Museum staff on allocation of space for activities, materials and resources. They communicate with class teachers on arrival at the Museum, during the activities, and sometimes before and after the visit. The Media are also contacted with media releases, phone calls, emails and faxes - student teachers prepare themselves for interviews and photographs when television and newspaper reporters cover their event. On some occasions the student teachers have had the opportunity to dialogue with other members of the community who are visiting the museum at the same time as the children. Other academic staff take an interest in seeing the student teachers 'in action' during the week as well.

Resolving conflict

The importance of social interaction and the building of relationships are fundamental to early childhood education. In the museum project group dynamics are very important - in their reflections and evaluations the student teachers report that they feel they can achieve high levels of commitment from their colleagues because they know they can work effectively with them. They are pleased they can choose the other student teachers to work with in their groups in order to work on collective strengths.

The Dance group also identified one particular group of children they worked with from a small regional school as being particularly rewarding. The student teachers felt much supported by their peers when involved in the activity and the relationships between the children made them a very interesting group to work with - they noted how these children "infected them with enthusiasm as teachers."

One strategy the student Management group used was to meet with the children before they entered
the museum or became involved in any activities. They devised some storytelling activities that helped them build a relationship with the children. The children responded very well and were very keen to see the exhibition and begin the learning activities.

**Student teacher:** “Children made proud connections with objects on display—‘My Grandpa’s got one of those!’” “Certain ‘treasures’ provoked particularly lengthy discussions, with children engaging in descriptive language and group problem solving.”

### Coping with stress and tension

Anticipating how they would cope with behaviour management of the school children was the predominant stress the student teachers identified. There has been quite a lot of literature written about what happens in museums, with regard to relationships between students, teachers and museum staff (Mathewson, 2001). As a society we also have expectations about how people will behave in museums – usually people visit with a friend, or at most with a group of 3 or 4. During Children’s week, however, the children were arriving in class groups of up to 30 or more. Coping with groups of these sizes provided an interesting challenge for the student teachers.

Mostly, this expected problem was resolved by limiting the number of classes that could visit or be in the museum at the one time. The class groups were divided further by arranging the children into groups of about 10. The student teachers believed by doing this they could channel the enthusiasm of the children and more quickly build relationships with them.

### Assessing strengths and weaknesses

Constructivist views and the Theory of Multiple Intelligences were integral to the planning of the project and the preparation of the activities for the ‘week’. The student teacher groups were trying to find those “different windows” that children could enter in order to find their way through the exhibitions effectively.

One student teacher group used Dance as the medium for children to express ideas. Their planning focussed on how movements or dance activity could be explored. They talked about observing children’s movement, listening to what the children had to say, helping children find different and interesting movements to create their dance. They wanted children to move beyond stereotyped shapes and movements. The group devised two lessons, one of which was to observe the location of the museum within the environment and ask the children to depict what they could see with their bodies and place them in space.

The student teacher group found they had to change the way they worked with the children – they were working with groups of children in large numbers (due to more children arriving at the museum than intended). They were working outside the museum where there were many distractions. “A lot of reinforcement was required in order to make this activity work; too many children for effective behaviour management; behaviour of the group had to be altered because of the children’s behaviour; teacher’s strategies had to be altered.” The learning activities had a lot of potential, but the student teachers needed to reflect and evaluate and change their strategies for learning in order for them to be effective. Also, as 3rd year student teachers, they lacked full confidence in front of the practising teachers who accompanied the children, so they became more focussed on achieving their outcomes without, perhaps, as much flexibility as they first intended.

The student teachers needed to document and demonstrate that children could also reflect on their own learning. They looked at the children’s work and discussed it with them, they talked about their learning and also about their reasoning. Many times they were able to show their understanding of the children’s metacognitive processes.

Student teachers become used to reflecting on their own lesson plans from their Professional Experiences, and so most groups included these types of evaluations to show how they changed their thinking and demonstrated how they adapted for different children’s needs.

**Subject Coordinator:** “Good ‘proof’ of acknowledging feedback and acting on it... Your adaptation with time constraints for know upcoming difficulties is excellent...”

### Adapting intuitively to situations and needs

The children are involved in a whirlwind of activity and enthusiasm when they visit the museum during Children’s Week. The student teachers needed to channel the intellectual receptivity and make allowance for the children’s ability to explore ideas. In considering the dispositions (Lambert & Clyde, 2000) of the
children, we see they have a definite inclination, or desire to be involved in the learning. The student teachers must evaluate very quickly the intellectual receptiveness of the children to new ideas and make allowances for the children to actively explore.

Some of the student teacher groups are very good at demonstrating their awareness of these ideas through documenting the discussion with the young children about the museum artefacts or the learning processes they are involved in. For example, the Media group, were able to demonstrate the understanding the school children had about the indigenous artefact Coolamon. The children drew and wrote about the artefact and showed they understood how they learned about it.

Even though the student teachers don’t know the children before they arrive at the Museum they have discussed beforehand how they might work with children of differing dispositions. This continues to be an issue of great interest in our planning.

Assessment documentation
The student teachers collect as much documentation about the whole process as they can. Then they have the responsibility of organising it and presenting it for assessment. They are very focussed on curriculum and they demonstrate this through detailed folio presentations. They document the children’s learning and refer to the appropriate syllabus outcomes. Kornhaber and Gardner (1993) remind us that our curriculum, assessment and pedagogy have been so based in linguistic and logical-mathematical domains that we miss many opportunities for excellence in submission.

The student teachers are allowed to consider the best way they think they can create their submissions, and they are given more time after the project week to think clearly through what they have done. The quality of these submissions is extremely high. They include photographs, digital photography, video, audiotapes of children’s ideas and interviews, drawings, children’s work, and often decorations of their own creation.

The amount of time and effort the student teachers put into their submissions far outweigh any numerical score that could possibly be awarded to them. But the folios are the record of their own learning as well as the children’s achievements. The satisfaction and pride invested in these folios shows that there is reward in creating them as well as the hope of achieving a high grade.

Final words
Children's Week at the Museum is one of a number of ‘real life’ projects that the B.Ed students on the Murray Campus of Charles Sturt University are involved in during their Undergraduate study. The staff of the Murray Education Unit are committed to providing many opportunities for student teachers to engage in the broader community as well as the education community. We understand that these projects provide chances to learn skills that are not specifically aligned to the education content of each of the subjects in the B.Ed – these skills are essential for teachers working within the school environment.

As the Museum project continues into its next decade there are even more exciting problems and opportunities for academic staff, and the student teachers, to work through and experiment with—the project never remains the same long enough to become stagnant. This year, 2005, the Museum was closed for renovation and so the project moved to the Albury Regional Art Gallery. This was a wonderful opportunity to widen the project—as more students are enrolling in the subject, and as the Albury Cultural Precinct grows its new buildings the project may finally be able to extend into museum, art gallery, library and other institutions planned in the future.

Also a brand new B.Ed (Middle Schooling K–12) is in its first years of being offered at Albury-Wodonga campus, and the 1st year students from this Course enrol in the Primary Arts subject that includes the Children’s week project. These 1st year students do not have the experiences and knowledge of the 3rd year EC students, and so mentoring, advising and researching are new explicit skills being asked of both cohorts of students. These changes will provide many issues and problems that need exploring by all involved in the project – and these are what make the project exciting, challenging, and most of all ‘real life’.
References
Preparing Middle Years Teachers To Meet The Needs Of Young Adolescents In New Times: The Story Of An Innovation In Teacher Education

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In 2001 a small team of teacher educators at Edith Cowan University (ECU) proceeded to design a new Graduate Diploma of Education in the Middle Years of Schooling. The vision of this diploma is to prepare employable graduates with the knowledge, skills and values required to teach in classrooms at the frontier of middle schooling reform. The first of its kind in Australia, it aims to address community concerns for the needs of young adolescents through the training of beginning teachers specific to that age group. As an innovative program it has a strong social justice philosophy, and uses constructivist approaches within a community of practice to provide an effective learning environment and achieve high quality student outcomes. Three years after introducing the diploma, the team received the 2004 ECU Vice Chancellor's Award for Excellence in Teaching. In this paper, using our own teacher education curriculum framework, we share some of our successes and current challenges in developing this course. We briefly present our vision of middle years teachers as agents for transformation across local domains and in global contexts, and in telling our story, we include the voices of our students by highlighting their commendations and recommendations in how well we ‘practised what we preached’.

Introduction

The purpose of this paper is to tell the story of our innovation in teacher education, namely our Graduate Diploma of Education in the Middle Years of Schooling which is offered in the School of Education, Edith Cowan University (ECU), Perth. The first of its kind in Australia, it aims to address community concerns for the needs of young adolescents through the training of beginning teachers specific to that age group. Three years after introducing the diploma, our teaching team received the 2004 ECU Vice Chancellor's Award for Excellence in Teaching. Our award, in part, was given to us in recognition of our attempt 'to practice what we preach' - one of the principles upon which the diploma is based. With particular reference to this principle, we wish to share our successes and current challenges associated with the development of our course. In doing so, we have chosen to use a teacher education curriculum framework synthesised from a curriculum framework used by a local community school, and the seven curriculum design elements for middle schooling from Turning Points (Jackson & Davis, 2000). To illustrate our successes and challenges, we have included the voices of our 2002–2004 graduates by highlighting their commendations and recommendations.

In telling our story, it is important to acknowledge that both the global and local education contexts played a significant influence in shaping our new middle years program. Educators in the 1990's were re-defining education and its purposes with particular concern for the adequacy of young adolescents' learning in a rapidly changing and increasingly unpredictable world of the 21st century. The late 1980's and 1990's was a period of intense rethinking by educators worldwide on the purposes of formal education, not only in terms of satisfying the needs and interests of young people, but in their preparedness as lifelong learners and active citizens to meet the needs of the knowledge society in the 21st century, with its built-in uncertainties and inevitable rate of change (Barratt, 1998; Bentley, 1998; Boyd, 1998; Delors, 1996; Fullan, 1993, 1999; Hargreaves, Earl, & Ryan, 1996; Williamson, 1998). Locally, our journey of curriculum reform in preparing teachers for young adolescents was triggered by the 1993 National Board of Employment, Education and Training project paper. One of the report's key findings on teacher education related to the "unpreparedness [sic] of many teachers to take responsibility for learning needs that might fall outside their subject specialisation" (p. 73). An implication of the report was that both pre-service and professional development courses in middle schooling philosophy and practices would add to
the repertoire of subject specialist teachers to the benefit of all young adolescents in the changing world of the 21st century (Harvey et al., 2001; Leggett, Lichtenberg, Newhouse-Maiden & Harvey, 2001). Our thinking extended to the development of a Diploma of Education designed specifically to prepare postgraduates as middle years teachers (Chadbourne, 2002, June; Newhouse-Maiden, 2002). This was in the context of middle schools being increasingly established in Western Australia (Chadbourne, 2003a; 2002a; Terry, 2002, July).

Our vision
Our shared vision of the Graduate Diploma of Education in the Middle Years is to prepare employable graduates with the knowledge, skills and values required to teach in classrooms at the frontier of middle schooling reform. We believe that good teaching for young adolescents demands the provision of developmentally appropriate learning experiences and our goal is to develop graduates with a capacity and commitment to:

- relate positively to young adolescents
- work collaboratively with colleagues in team
- establish a sense and the substance of community in the classroom
- design assessment that is authentic, outcomes-based, developmental
- construct tasks that promote cooperative, active, inquiry-based learning
- use information and communication technology as an educational tool
- teach mixed-ability classes using effective classroom and student behaviour management practices
- promote positive interpersonal and inter-group relations in the classroom; and help students take charge of their own learning
- cater for the diversity of student needs; and help students at risk
- contribute to school development policies, programs and processes and think like a middle years teacher
- engage with parents and community members to support students and the school
- teach discipline-based and integrated curricula.

As a team, we adopted a "Ready Fire Aim" curriculum strategy, first proposed in the leadership literature of Peters and Waterman (1984, in Scott, 1999, p. 37), which informed our cyclical process of planning, implementing and evaluating in the development of the diploma in 2002. It becomes essential that ... teacher education programs prepare graduating teachers to contribute to the construction of 'new order' curriculum practice and pedagogy, as well as new forms of interactive professionalism (Harvey, Leggett, Newhouse-Maiden & Lichtenberg, 2001, p. 1–2).

In 2001, in the planning stage of this innovation, we accepted that:

- our course materials would not be 'word perfect' for 2002
- our planning was well-researched for 'best fit' for the middle schooling context
- we would get on and try to 'practise what we preach' in terms of middle schooling philosophy
- we would monitor the diploma closely, gaining feedback from all stakeholders, and modify it along the way (after Scott, 1999), and finally,
- we would embrace Fullan's idea that our "shared vision must evolve through the dynamic interaction of organisational members and leaders", students, and the wider community and that "even then it is always provisional" (1993, p. 28).

Our curriculum framework
We have created a curriculum framework consisting of seven areas which we focus upon in preparing our middle years teachers (see Figure 1). This framework is an adapted synthesis of the Turning Points 2000 design (Jackson & Davis, 2000, pp. 23–26) and a framework used by Clarkson Community Middle School (1997), one of our local partnership schools. We have aimed at a synergy between the known 'best practice' in middle schooling in the context of an actual middle school (Barratt, 1998; Chadbourne & Harssel, 1999), and the modelling of middle school principles and practices in our university learning community. The
focus of our framework is to 'maximise success' for all our pre-service teachers with due regard to fostering excellence and equity. Our framework consists of seven inter-related areas, namely: 'Pastoral Care'; 'Organisational Structure'; 'Community Partners'; 'Curriculum; 'Teaching Strategies (Pedagogy)'; 'Professional Community of Educators', all contributing to the outcome of 'Excellence in Student Learning'. One of the key principles underpinning our framework is to 'practise what we preach'. This we do by endeavouring to model middle schooling principles and practices in the way in which we deliver the diploma. Key elements of this principle can be summed in words such as – excellence, equity, adolescent-centred schooling, community, constructivism, integration, rich tasks, and productive pedagogies. Focusing on 'practising what we preach', we have used our curriculum framework (Figure 1.) to describe our successes and challenges associated with the development of the diploma.

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**Figure 1.**
Curriculum design: Graduate Diploma of Education in the Middle Years of Schooling.

**Story of an innovation – preparing teachers for the middle years**
In the section that follows we describe briefly each of the areas of our diploma's curriculum framework. We include excerpts from student feedback to reflect success (commendations) and challenges (recommendations). Our reflections on the course are on-going and at the end of each year we have relied on critical feedback from community partners, mandatory unit and teaching evaluations completed by students, and qualitative feedback from three cohorts of students from 2002–2004 (see ECU Middle Years Website, 2004). Student reflections suggest that our approach to evaluation was appreciated:

Heaps of reviews of the course occurred and that doesn't usually happen so obviously in other courses ... (Graduate, 2003).
Response to issues raised were prompt and well tended to (Graduate, 2004).

**Organisational structure**
How well does the organisational structure of our course model the way in which middle schools are organised? We limit our intake to 90 students—comparable to the size of a middle school learning community. Much like you would expect in a middle school learning community, we have a team of four
core staff who teach the foundation units which focus on the young adolescent learner, youth studies, and the philosophy, curriculum, and pedagogy of middle schooling. To ensure course coherence and collaboration, the team also assists curriculum experts teach the curriculum units in English, Mathematics, Science, and Society and Environment. Our purpose-built facilities are designed to encourage a feeling of community, where the main teaching space consists of a large flat-floor room with a flexible divider that can accommodate whole cohort activities. Adjacent to this room is a fully equipped kitchen for staff and students. Orientation week is an important time for the team to establish a new community. Students are given name tags, group photographs are taken and displayed with names, and they are introduced to ways of building effective teams, communicating well, and working collaboratively. We conduct a weekly one hour forum for ‘town meetings’ and guest speakers. Our program also includes advisories, exhibitions of students’ work, group building activities, and social events. Electronic discussion boards provide a further means for students and staff to post messages, debate issues, ask questions, and generally support each other. Student commendations tended to focus on our relationship building, rather than our building arrangements:

They have a strong philosophy that they practise with the best of intentions … [they] demonstrate inclusivity, acknowledge everyone has a voice in this cohort (Graduate, 2004).
Town meetings are a great idea -- no other course I know of allows you a formal place to voice your concerns (Graduate, 2003).
Blackboard [was] fantastic way to get in touch with students and lecturers ... as a part-timer, ICT ... was a bonus I always felt I knew what was going on (Graduate, 2004).

Such qualitative feedback suggests that we are experiencing a measure of success in practising what we preach in terms of our organisational structure. In addition, it affirms for us, how important it is to include discussion of the theoretical basis and operational processes of a small middle school ‘community’ as a formal component within our units.

Pastoral care
Practising what we preach in terms of teachers relating positively to young adolescents is another process we endeavour to model with our students. Our whole team has developed explicit course strategies to provide a nurturing and supportive environment, and we contribute actively to fostering a sense of belonging and well-being in all our students. We take time to get to know each individual, his/her background, interests, qualifications, skills, passions, expectations of the course, strengths, and additional help they may need in terms of learning difficulties (e.g., dyslexia, ADHD, NESB), and single parents juggling time.

I think it is amazing they all seemed to get to know us on a personal level. Great modelling of MS (Graduate, 2003).

Some team members have particular expertise in individual counselling that serves to enrich the wider community of learning. We use a flexible problem-solving approach and work creatively to find support for students in need. For example, to assist students to manage complex lives we provided them with the option of going part-time, we changed their practicum schools, and we negotiated extensions on assignments:

Personally, I had a few issues that caused problems for my studying capacity ... these were greeted with both support and concern for my well-being. Thanks (Graduate, 2004).
From the bottom of my heart I want to let everyone know how much your support has meant to me ... I only hope I can display the kind of compassionate support - in the way you have shown me. Thank you (Graduate, 2003).

Within the formal curriculum, we encourage students to critique these relationship-building practices and what they might look like in a middle years classroom. In 2005, we developed an electronic version of our student questionnaire to create individual profiles that are online but secured for faculty access. A positive indicator of our attempt to be inclusive in eliciting feedback and responding to individual student concerns was a decrease in student appeals from 5 in 2002 to 0 in 2004.

Curriculum
Middle schooling aims to deliver a challenging, integrative, and adolescent-centred curriculum that is cognisant of how young adolescent students learn best. It is asserted that such a curriculum, especially if
negotiated, will have a lasting and influential impact on all students' lives (Beane, 1990). Integrating ICT across the middle years curriculum is another important feature of middle schooling. We feel that we have had mixed success in our attempt to model a typical middle schooling curriculum. This is largely due to the complex and often anomalous influences at play within and outside the university, such as the university norm-referenced system of assessment which is the antithesis of the criterion-referenced assessment we advocate, and our legal requirement to prepare teachers for a profession and maintain academic rigour. Nevertheless, we have had many commendations about the course implementation, content selection, collaborative process, assessment, its "ability to make students think" and our positive reaction to student feedback on the course:

Overall, the course has been very well run/presented. There has obviously been a lot of thought put into all aspects of a cohesive course. Well done and thanks (Graduate, 2003).

Excellent content – very broad areas of education covered – these areas were necessary so as to prepare us as future teachers. There was enough depth in each subject to make me aware of the enormity of the task of becoming a teacher and gave me excellent resources for future investigations (Graduate, 2003).

I learn well independently ... this course suits me to develop collaborative skills & explore other independent learning styles (Graduate, 2002).

I can honestly say that every piece of assessment I have done in this course has enhanced my knowledge of teaching (Graduate, 2003).

We considered two recommendations for "optional extras" in the curriculum:

Middle Years graduates will be expected to be flexible and the course is narrow ... I'd like to see more activities in non-MESS areas ... Incorporate more ICT training (Graduates, 2003).

Whilst we are open to negotiating small pedagogical changes with our students, we are constrained in our 'ready, fire, aim' strategy to negotiate any major curriculum changes with them - an ideal that middle schooling supports. This is because we are preparing students for a profession where mandatory competencies are required, hence our unit plans are legally binding and prepared well in advance of the course. Whilst we are comfortable with the curriculum we offer and as middle schoolers value life-long learning, in 2004 we introduced optional sessions in art, music, health and PE, special needs. In 2005, students now have a whole voluntary program with opportunities to upgrade their ICT skills. Those who chose to attend are given a certificate of attendance for their professional portfolios. It is the next cohort of students who benefit from the curriculum changes negotiated by graduates:

I understand that this is only the 2nd year of this course. From what I have heard the changes from last year have been substantial. Keep improving like this and you will have more satisfied people next year and in years to come (Graduate, 2003).

In 2006, we will have formally modified the course, such that students will develop competencies in Science and Society and Environment, as well as Maths and English, in preparation for their grades 6-7 practicum in semester one. In semester two, the Curriculum and Pedagogy unit will culminate in small groups each producing an integrated studies program which they exhibit for their cohort.

Teaching (pedagogy)
We contend that the real power of the program comes through innovative pedagogy that integrates and reinforces discipline skills and knowledge across the whole course. All units are taught by teams coordinated by specialists who take responsibility for keeping team members up to date with best practice in each field. It was clear to us that we could 'tell' students about best practice associated with middle schooling, and 'show' them what it is like in a middle school community. However, how well had we established congruence in what they actually 'saw and experienced' us doing day by day in the university classroom. In emulating middle schooling teaching strategies that are social constructivist in essence, encourage cooperative learning, and collaborative teaching, how well were we preparing all students to achieve higher standards and become lifelong learners (Newhouse-Maiden & de Jong, 2004)? Commendations suggested they watched, internalised middle schooling language, conceptualised the nature of academic rigour, and critically assessed the role of the middle years teacher played out by the lecturers:

The main strength of this course is its ability to make people think: deep analysis of subject content; pedagogical practices; and the theoretical backup of these, allowed for integration, and in turn understanding to occur (Graduate, 2003).
Teacher Education: Local and Global

... It’s the approach of lecturers practising what they are preaching, producing interesting lessons and lectures with varied approaches to tackling tasks and collaborating information, use of rubrics, introducing passionate and interesting guest speakers ... (Graduate, 2004).

The actual philosophy is a major strength of the course. Even if we don’t teach in a middle school, we have learnt some great methods of teaching (Graduate, 2004).

X had us write rubrics for A&E ... she gave us feedback and a second attempt and more feedback. It was a success ... and powerful to involve us in peer assessments [of an individual’s contribution to the group] (Graduate, 2004).

[I have found that] teamwork is the ability to practise in a multitude of contexts ... [practice] builds [our] confidence and enables us to attempt things we wouldn't actually do ... the variety of tasks helped us hone multiple intelligence skills ... it has clearly been a ‘practice what you preach experience’ (Graduate, 2002).

However, the following recommendations suggest that links have not been made between the principles and practices of middle schooling and the WA Curriculum Framework (1998) of which early adolescence is a major phase of development:

Curriculum Framework [sic] student outcome statements are still quite blurry, focus on CF at the beginning of the year ... give us time to learn what a lesson plan is like ... organise peer support during ATP (Graduates, 2003).

... don’t assume [on practicum] that someone else has given us practice and feedback on levelling, rubrics and programming ... mentor the mentor teachers (Graduate, 2004).

In 2005, we produced lesson plans in both practicum booklets to encourage students to make explicit links to the values and outcomes of the Curriculum Framework (1998). We have also constructed and modified an Observation Journal to assist students to make links between middle schooling theory and their practicums in schools. Mentor teachers will also be provided with a copy.

Professional community of educators

One of the marks of ‘academic rigour’ in middle schools is the way the course team is fully committed to discipline-related research and to a scholarly approach to teaching and learning (Chadbourne, 2003b, 2004). In ‘practising what we preach’ our expertise is invigorated and shared through team collaboration in relevant research, publications, conference attendance and presentations, and curriculum innovation. Some current examples include the commissioning of team members to contribute three chapters for a book on Middle Years Reform in Australia; write a literature review for the AEU on middle schooling in Australia; and undertake for MCEETYA a national project on best practice associated with student behaviour management.

... The lecturers are all highly skilled in their disciplines and have provided us all with their expertise (Graduate, 2002).

Strengths of the course are the lecturers: Their dedication, approachability and positive attitude. I like the ‘lifelong learning’ that is encouraged ... like the way they share their books and articles with us ... Excellent year, thanks to the staff, it was tough but very rewarding ... [The staff] are very supportive, helpful and understanding, sense of humour, ability to practise middle schooling philosophy during lecture presentations (Graduates, 2003).

We cajole our students into becoming part of our professional community and encourage them to create a climate of high morale, support, efficacy, trust, openness, honesty, optimism and a ‘can do’ approach to challenges. This has produced different reactions from the students:

Have forced us to create a learning community made us feel like we belong even though diversity in age and backgrounds (Graduate, 2004).

[In the weekly Forum] we had guest speakers who added life to a variety of teaching strategies and connections to real life ... can we have actual teachers of a learning area come in and share thoughts and ideas (Graduate, 2002).

Community partners

A crucial element of middle schooling is being in close and reciprocal partnership with the wider community, particularly the parents. It is also about giving adolescents responsibility for their own learning in real-life situations. In ‘practising what we preach’, we value the involvement of school communities and members of the local district office and private school associations as future employers, associate tutors, co-researchers, and as mentors in supporting our students’ teaching and healthy professional development on practicums (a distributed days/block praxis model). We have established a
strong e-management of practicum partnerships by creating an ECU Middle Years Practicum Website (Newhouse-Maiden, Campbell, & Sharp, 2004, February). This 'sea change' for students is both an uneasy 'whinge' time against the team and a time for students to take self-responsibility as a reflective practitioner. Most believed that the team had modelled the importance of 'contact' with the real world of teaching, and had identified "what teaching is going to be like in the real world, and does not give a glossy, idealised view" (Graduate, 2003). Another student suggested that "all complaints be written down ... this would reduce wingeing [sic] and [it would] be a real concern" (Graduate, 2003).

The high, rigorous teaching standards we 'preach' to our students are endorsed by the middle schooling teaching community and are standards that we attempt to 'practise' and use when evaluating our own teaching work. One of our critical friends observed:

Your students are achieving more in one year than many practising teachers. Students' knowledge [of the Curriculum Framework and Student Outcome Statements] is miles above the teachers. ... Fabulous training!!! (Member of External Review Panel, 2003).

This commendation encapsulated for us the launching and 'shared vision' of the course as a whole:

... thank you for making this year so enjoyable and rewarding. I really appreciate the effort and concern you all have shown me, and I am excited about my future as a teacher. I hope you continue to pump out successful, passionate graduates ... (Graduate, 2004).

We have tangible evidence that graduates are showing generosity in giving back to the professional community of educators locally and globally. For example, the class of 2002 requested a MYS Graduate Discussion Board which continues to be well utilised by graduates at home and abroad; John (2003) has asked Lesley to be his mentor, and he is peer mentoring three of the 2005 cohort in his middle school; Steve (2003), in Carnarvon, has written up his account of an integrated school program for the Middle Years Association of WA, and provided a gallery walk of the students' work for Orientation 2005; Darren and Jason (2004) have set up an independent website to encourage exchange of learning and teaching programs; and 14 graduates returned to the 2005 Orientation to encourage the new cohort. The class of 2002 are now offering to be mentor teachers on final Assistant Teacher practicum next semester.

Conclusion
Commitment to the act of critical reflection is a core principle of our Middle Years Team and has been a natural extension of the ECU Plan, Do, Review and Improve cycle. In the development and implementation of our innovative Middle Years course over the past three years, we have shared a journey with our students. Whilst we have still much further to travel, we trust that their story has confirmed our sense that we have tried to 'practise what we preach' in each of the design elements in Figure 1, and that our program has uniquely prepared teachers for middle schooling. Additionally, we have noted that graduates are becoming transformers of educational practice in both middle school and more traditional school contexts by competently, sensitively, and simultaneously implementing each design element of middle schooling to ensure success for every young adolescent. To give the final words to one of our graduates:

The entire program functioned as a journey. We set sail, encountered rough weather, moments of idyllic shipboard life and now there is a sense of pulling into port. There was always a sense of destination and the feeling that our route was well thought out, and planned out by a very able Captain and crew (Graduate, 2002).

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Learning To Be Teachers Of Visual Literacy And Teachers Of Multiliteracies

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This paper, based on a 2004 research project, challenges the assumption that teachers know what, and how, to teach about meaning in visual texts, in ways that are consistent with expectations for contemporary literacy teaching. Visual literacy is a critical literate practice required in technologically new times, and is considered as an integral dynamic part of multiliteracies pedagogy. English syllabuses in NSW schools require explicit teaching about how meanings are constructed, in print or electronic visual texts. While systematic professional learning about written texts has been available to teachers for some time, no commensurate professional learning about teaching visual literacy has been available. This exploratory project investigated what, and how, teachers were teaching about visual images and texts in Stage 3 classrooms. Four teachers, from four different primary schools in regional NSW, participated in a four-week research study. Data collected from teacher interviews, observations of classroom lessons, and reflective journals were analysed using qualitative methods. A number of core concepts were inferred from the research data, highlighting areas of focus which the teachers considered were central to their professional practice. Results provided a picture of primary teachers learning to be teachers of visual literacy, under learning conditions that were problematic. The teachers were mainly using print-based community texts to investigate how meaning is constructed in visual texts. The teachers actively developed conceptual frameworks about how visual texts work, and how they might teach visual literacy. The teachers experimented with 'given' and 'new' literacy teaching strategies to identify pedagogical practices for effective visual literacy teaching. One recommendation from this project is that systematic professional learning is made available to primary teachers, so that they can access coherent and practical frameworks for effective teaching about visual texts, in print or as multimodal texts, to maximise visual literacy outcomes for students. Another recommendation is for NSW English syllabuses to be reconceptualised, and rewritten, as multiliteracies syllabuses.

Becoming literate in technologically new times requires students to be multiliterate, and schools to be teaching multiliteracies (Unsworth, 2001). Accordingly, teachers are wanting to shift their identities, as teachers of literacy. Teachers who once were teaching almost exclusively about written language have been slowly shifting to teaching about visual images, and are now seen to be shifting to teaching about multimodal texts. While out-of-school literate practices change each year, literacy teaching in schools may typically reflect yesterday’s practices, unless teachers are supported in shifting their views and pedagogies to align with the technological realities of new times.

This paper argues that primary teachers are willing to shift their literacy views and classroom teaching practices, if they have opportunity to engage in action learning in their workplaces, and reflect on their understandings and practices with collegial support over time. As a literacy consultant working in primary and secondary schools in regional NSW for seven years, and considering the outcomes of three research projects focused on literacy which I supported in 2003-4, I can present a picture of primary teachers insisting on exploring their literacy views and critiquing their classroom teaching practices, so that they can identify as literacy teachers of the new millennium.

Teachers in NSW Department of Education and Training (DET) schools experience tensions which may promote or preclude their progress in learning to be teachers of multiliteracies. Syllabus imperatives for teaching multiliteracies, for example, are variable. In NSW, English K-6 syllabus (1998) outcomes largely focus on explicit teaching about written language and written texts, with some attention to teaching about visual images which occur across the primary curriculum. The more recent English 7–10 syllabus (2002) requires that students ‘compose, respond to, analyse and evaluate spoken, visual and multimedia texts from various perspectives’ (2002, p. 67). In the context of the DET State Literacy Strategy (1997-2001) teachers have been recipient to significant professional learning about how written texts are typically constructed in response to socio-cultural contexts (Halliday, 1978; 1985), enabling them to teach explicitly about the structures and language features of texts which present in subjects across the K-6 curriculum. In
contrast, teacher professional learning about theoretical or practical perspectives in relation to visual texts has not been systematically made available to DET teachers. Teaching multiliteracies requires explicit teaching about the cultural, critical and operational dimensions of meaning-making in digital texts (Green & Bigum, 2003), so that students learn to interpret, respond to, critique and compose texts available to them in new times. In the last few years, the research literature suggests that teachers have taken a technocentric focus when presenting digital texts in primary classrooms ie teachers themselves have been concerned with learning to operate the technologies, and engaging students in learning to operate technologies in schools, at the expense of teaching about the cultural and critical dimensions of digital texts. As well, research into literacy teaching practices in NSW primary schools has largely painted a picture of teachers remaining with pedagogies for teaching about written texts (Hammond & Makehorak, 2001), with limited evidence of teachers entering into curriculum experimentation required to teach about multimodal texts. Indeed, there is evidence that primary teachers engage ‘given’ literacy strategies that work for teaching about written texts (eg explicit teaching that scaffolds, models and guides student learning about the way texts work), for teaching about multimodal texts, and appear reluctant to explore ‘new’ ways of teaching multiliteracies (Healy, 2003).

Despite the above trends, it has been my experience that primary teachers are vitally interested in, and see themselves becoming effective teachers of multiliteracies, in line with new times. The discussion which follows is informed by drawing together the results of three major literacy research projects in regional NSW, during 2003-4. A Visual Literacy project during 2003 engaged twelve Stage 2-3 teachers in identifying theoretical perspectives and practical frameworks which supported effective teaching visual literacy across the primary school curriculum. A commensurate Critical Literacy project during 2003 engaged fourteen Stage 2-3 teachers in researching what was involved in taking a critical literacy approach to literacy teaching and learning in primary classrooms. In a further Visual Literacy research study in 2004, four Stage 3 teachers, with no professional learning in visual literacy, identified core concepts which they considered were central to their professional practices in teaching visual literacy. As a literacy consultant coordinating and supporting each project I took the role of co-researcher, using qualitative research methods to collect and analyse data in relation to teacher professional learning, to support the inquiry processes.

The results are discussed using an interpretive framework which reflects understandings about becoming literate in new times, theoretical perspectives about meaning-making in written/visual/multimodal texts, the range of texts which primary students need to learn about in new times, and teaching practices which support students in becoming multiliterate. The discussion identifies what these primary teachers found helpful in framing their understandings and practices for teaching multiliteracies, and considers the implications for all NSW teachers who want to become teachers of multiliteracies.

**Becoming literate in new times**

Teachers recognized that contemporary out-of-school literate practices require that primary students learn to read, view, speak, listen to and write texts in schools, and to learn about the way texts are constructed to make their meanings. They recognized that all texts respond to social and cultural contexts (Halliday, 1978; 1985), that texts can reflect structures and grammatical features which are characteristic of subject discourses, and that text consumers engage with texts from multiple perspectives. The teachers became aware that analysis of text features (which are critical to the meaning) assists students in realizing how texts position readers towards particular points of view, and in students realizing critical literacy outcomes (Lankshear, 1994). They acknowledged that conceptualizing about contemporary roles of the text reader (Luke & Freebody, 1997) was commensurate with expectations about becoming literate in relation to multimodal texts ie that text consumers are code-breakers, text participants in making meaning, text analysts in identifying how texts are constructed to reflect ideologies and viewpoints, text users who make decisions about what to do or what to think about the texts that they engage with. All teachers were interested in teaching students about the cultural and critical dimensions of texts, so that their students could be in control of texts, and not be controlled by them (Christie, 1990). Teachers were interested in including digital texts in their views of classroom literacy learning, and were engaged in their schools in learning to operate the technologies that would support students accessing and composing digital texts in schools. Teachers believed that they needed to teach students about the cultural, critical and operational dimensions of texts, in integrated ways (Green & Bigum, 2003). Such beliefs were enacted in observed classroom lessons, where students were supported in learning about how texts were constructed in response to social and cultural contexts, in analyzing critical features of texts which revealed particular meanings and points of view, and in teaching students how to operate digital technologies so that they could access and compose digital texts.
Implications: teachers need to know that

- literate practices change, and be able to identify them
- out-of-school literate practices need to be taught in school
- teachers and students need to operate digital technologies
- students must learn about the social and cultural dimensions of texts
- students need to analyse texts so that they have critical understandings about them.

Frameworks and metalanguages for teaching multiliteracies

Teachers had a range of frameworks to organize their thinking for teaching about written texts. For example, the English K–6 syllabus (1998) provides a framework for planning a balanced program of literacy teaching. Teachers were familiar with the way Halliday (1978; 1985) framed understandings about how written texts make meaning in the ideational, the interpersonal and the textual dimension. Teachers had working knowledges about typical features of text genres (Macken et al., 1989; Derewianka, 1990; Martin, 1993). Teachers were increasingly comfortable with using conventional English grammar as a metalanguage to talk and teach explicitly about the language features of texts that present across the primary curriculum.

Teachers were not familiar with theoretical perspectives which frame thinking and teaching about visual texts. In the course of the 2003 Visual Literacy project, teachers identified that theoretical perspectives provided by Kress and van Leeuwen (1996), which conceptualized that meaning-making in visual images can be considered in the representational, interactive and compositional dimensions, were most helpful in framing their thinking and teaching about visual texts. Moreover, these and teachers in other projects recognized that the ‘visual grammar’ identified by Kress and van Leeuwen (1996) provided a commonsense, meaning-oriented metalanguage for talking to students about how meaning is made in visual images, that present in print formats. Teachers in the 2004 study, with no formal professional learning about visual texts, consulted ‘expert colleagues’ to learn about how they could frame their teaching about visual images, and how they could use a ‘visual grammar’ to talk about the design of visual images. These teachers expressed concern that they did not have access to professional learning which could adequately frame their thinking and teaching about visual texts.

Importantly, teachers from all projects became aware of connections between the theoretical perspectives of Halliday (1978; 1985) and Kress and van Leeuwen (1996) which framed three dimensions of meaning-making in verbal and visual texts. Importantly also, the teachers used this framework for conceptualising and planning classroom teaching about how meaning is made in multimodal texts. All teachers recognized that metalanguages to talk explicitly about verbal and visual texts would be useful in teaching about critical features of multimodal texts, and tried out these ideas in action in the classroom.

Implications: teachers need to know that

- meaning in any texts can be organized into three dimensions ie the ideational/representational, the interpersonal/interactive, the textual/compositional
- these three dimensions are helpful in organizing teacher thinking and planning for teaching about most texts, including multimodal texts
- metalanguages for explicit teaching about verbal and visual texts can support teaching about multimodal texts.

Range of texts used in the classroom

All teachers used written texts, in print formats, in literacy lessons. Most teachers used visual texts which presented visual images alone, or visual images combined with written text, in literacy lessons. Most teachers used illustrations from picture books to talk about meaning in visual texts, in their literacy lessons; some teachers purposefully included visual images from factual texts eg diagrams, boxes, headings, logos, flowcharts, to teach about how meaning is made in particular subject discourses. Some teachers made printed colour copies of digital texts eg a website homepage in lessons when computers were not available to class students. Most teachers were interested in using multimodal texts in literacy lessons eg video excerpts, taped television advertisements, websites, video games, and experimented with how they might talk about meanings in digital texts.
All teachers used community texts (Comber, 2000), or texts from popular culture, to engage their students in purposeful learning about the way texts are constructed in the out-of-school world. Community texts in print formats eg letterbox advertising materials, film posters, supplements in newspapers, were ready sources of multimodal texts. Popular digital texts eg film, television advertisements, websites were included in literacy lessons to teach about text purposes and text constructions. Despite the fact that some teachers were still learning to operate digital technologies, and still learning about how digital rhetorics make meaning, these teachers insisted on 'having a go' and sharing strategies to ensure that digital texts could be included in classroom literacy lessons.

Teachers were not comfortable with teaching about multimodal texts presented in digital formats, when it came to discussing timing, sound and gesture. While most teachers were comfortable teaching about verbal and visual modes of meaning-making, there were no commensurate frameworks or metalanguages available to them for talking about meanings made in other modes. Some teachers experimented with talking about sound as making meaning in the ideational dimension of the text ie contributing to the narrative or concept, and as making meaning in the interpersonal dimension of the text ie contributing to the interpersonal relations between viewer and digital text. While the New London Group (2000) has proposed a theory to consider all meaning-making modes in multimodal texts, no overarching theory about multiliteracies has generated metalanguages to talk about the digital rhetorics of sound and timing, for example. Indeed the New London Group (2000) invites curriculum experimentation to this end.

Implications: teachers need to know that
• syllabus outcomes require that students learn about visual texts that relate factual and literary concepts
• print and digital formats of texts need to be included in literacy lessons
• community texts engage students in exploring how meaning is made in multimodal texts, and in making links between out-of-school literate practices and literacy learning in schools
• digital rhetorics need to be identified in relation to how they are 'made', and how they make meaning in digital texts
• they will need to assist students in composing texts using digital rhetorics and digital technologies.

Curriculum experimentation
In all observed lessons, all teachers linked 'given' literacy teaching strategies into teaching about multimodal texts. All teachers believed that student learning about multimodal texts could be scaffolded with explicit teaching about critical text features, and with modelled and guided practice opportunities for investigating how texts work. In all projects, teachers insisted upon engaging with 'curriculum experimentation' (New London Group, 2000) for exploring new ways of teaching multiliteracies. In working with websites, some teachers supported their students learning to surface read, and to engage visual memory and visual rehearsals to recall pathways to particular information. In learning about elements of visual design using print advertisements, some teachers and students collected demonstrations of particular design elements eg gaze, and stored them in A3 display books for students to retrieve in the classroom. In working with television advertisements, some teachers experimented with devising their own 'commonsense framework' and 'commonsense questions' to guide class discussion about the way multimodal texts are constructed, and how they encode their meanings using digital rhetorics.

Most teachers experimented with using the three-dimensional, meta-functional frameworks (Halliday, 1978; Kress & van Leeuwen, 1996) to guide their thinking and teaching about multimodal texts. All teachers experimented with using metalanguages (or what they knew of metalanguages) to support explicit teaching about the way texts work.

Implications: teachers need to know that
• 'given' ways of literacy teaching may be effective in teaching multiliteracies
• they are invited to experiment with 'new' ways of teaching about multimodal texts, and teaching multiliteracies
• all pedagogy can be critiqued, and improved
• collegial inquiry supports curriculum experimentation.
Conclusions

There is evidence that, when supported, teachers are shifting from teaching about written texts, to teaching about visual texts, and to teaching about multimodal texts. There is evidence that teachers are learning to be teachers of multiliteracies. However, many teachers have not had access to professional learning about visual literacy or teaching multiliteracies, and they are finding contemporary literacy teaching problematic. The above discussions in relation to teacher professional learning and research projects demonstrate the need for school systems eg NSW DET to provide systematic teacher professional learning about visual literacy, and about teaching multiliteracies. Teacher professional learning can occur in networked training sessions, or in action learning in the workplace ie schools, and is sustained by reflective practices and professional support over time. Primary teachers need to be invited into curriculum experimentation for teaching about multimodal texts, so that they can become teachers of multiliteracies.

References


The Artful Practice Of Practicum Assessment

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This paper presents an overview of the findings from a study that sought to identify the power-knowledge regimes within which tertiary supervisors produce early childhood practicum assessment strategies. Surveillance, normalisation, confession, documentation and a consensual, democratic form of examination are the official practices of assessment sanctioned and legitimised by the practicum assessment documents. They are produced as possible and desirable within the meta-discourses of positivism and liberal humanism. It is from within these discourses that the tertiary supervisors construct their assessment practices. When I explored the tertiary supervisor's perspectives on practicum assessment what formed was a picture of assessment operating not as a logical, rational process but as a complex dynamic art, achieved by positioning within specific strands of liberal humanist discourse. The tertiary supervisors enacted the practices of surveillance and normalisation as they were required to do and enabled to do through the documents but not in a 'rational' (scientific) way. They practised them in a humanistic way; the surveillance and normalisation were artful, subtle and shifting, on themselves, the field supervisor and the student.

Introduction

The study reported on here explored tertiary supervisors' perceptions of the early childhood practicum assessment process. It sought to identify the power-knowledge regimes within which tertiary supervisors produce practicum assessment strategies, explore the discourses within which they understand and practise assessment and how power is exercised within those discourses. In this paper I focus on presenting and discussing the findings and my interpretation of them. It is not my intention to discuss implications for practice. The practicum supervision and assessment literature reviewed for this study has been presented elsewhere (see Ortlipp, 2002); therefore I begin with a very brief summary for the purpose of establishing a rationale for the study and justifying the choice of the theoretical (and methodological) lens used. Drawing on the poststructuralist literature, particularly the seminal work of Michel Foucault, I then outline the theoretical constructs used to analyse the data. The remainder of the paper presents key findings arising from the poststructuralist discourse analysis in relation to: 1) the official practices of practicum assessment produced in and through the institutional documents; 2) the discourses of the documents and how they contributed to the tertiary supervisors' understanding and practice of assessment; and 3) how the tertiary supervisors enacted practicum assessment in artful and strategic ways within these discourses.

Background and rationale for the study

The practicum is an integral and assessed component of tertiary early childhood courses, which in Australia are offered through Institutes of Technical and Further Education (TAFE) and universities. The specific approach to assessment varies from institution to institution. Most commonly a combination of methods is used. For example, a modified clinical supervision method used in conjunction with competency based assessment (CBA) which is carried out through a triadic assessment process (Fleet, 1993; MacNaughton, 1991; Mulcahy, 1996; Swinburne University of Technology, 2000). In some instances CBA used in conjunction with a criterion-referenced grading system is used (Webster & Byrne, 1994). All the institutions that the tertiary supervisors in this study worked for utilised the approach that combined modified clinical supervision, CBA and triadic assessment. Those who supervised university students had also used criterion-referenced grading in combination with the above approach.

My review of the literature revealed a very limited amount of research dealing specifically with assessment of the early childhood practicum and no Australian or international research that focused on the role of the tertiary supervisor in the practicum in early childhood courses. In addition, the research literature around assessment practices, particularly the assessment of practical performance using competencies, is concerned with the postivist notions of validity and reliability, and measuring and
quantifying learning, with a focus on efficiency and outcomes (McAllister, 1999). The dominant discourses in the assessment research literature are positivist and liberal humanist discourses within which it is possible and desirable to implement rational, valid and objective assessment processes and achieve reasonable, responsible, democratic and fair assessments.

Although the gaps in the practicum assessment literature suggested that a study focusing on early childhood practicum assessment from the tertiary supervisors' perspective may provide some new insights and potential for change and improvement, I did not want to simply reproduce what appeared to be repetitive findings and recommendations. The traditional literature could not explain why and how practicum assessment has come to be practised in the way that it is. For me, as a tertiary supervisor who was using competency-based assessment methods which were implemented through a triadic assessment process, Foucault's notion of disciplinary power (1991) with its techniques of hierarchical observation (surveillance), normalisation, documentation and confession was compelling. I saw the potential of using these concepts for analysing the data in my study and, thus, a way of coming to understand practicum assessment, and tertiary supervisors' understanding and practice of this process, in a different way than had been made possible through the traditional literature.

Methodology and conceptual framework

The methodology for this study has been reported on elsewhere (Ortlipp, 2002), therefore the focus in this section is on the conceptual framework. In summary, seventeen tertiary supervisors participated in the study. They supervised and assessed TAFE and/or university early childhood students. The range of experience in practicum supervision was from two to eighteen years. All participants were qualified early childhood teachers at degree level or above. Only one of the participants was male. Data were generated through focus group interviews, individual interviews, and reflective journals and email conversations. Interviews were transcribed and through this process transformed into text suitable for a poststructuralist discourse analysis. Practicum assessment forms and practicum policy and procedure documents provided to the tertiary supervisors by the institutions that they worked for were additional forms of data collected for the purpose of analysis. These included the requirements for students and the role and responsibility of the tertiary supervisor. The assessment forms included the competencies to be achieved, and criteria and standards for judging the achievement of competency. All the textual data were analysed using a conceptual framework that drew primarily on Foucauldian poststructuralist constructs, for example, discourse, subjectivity, power-knowledge and technologies of power.

Foucault (1982) proposes that power is a relationship in which one individual (or group) seeks to direct the actions of another. Power, therefore is not possessed, rather it is exercised. It is a productive force, producing reality, objects, subjects, discourses and truth (Foucault, 1980, 1991). Power depends on knowledge in that in order to exercise power, knowledge must be used (Foucault, 2000). According to Foucault (1991) disciplinary knowledge is produced and exercised through specific techniques that he referred to as "technologies of power". These involve surveillance and normalisation (which together constitute an examination), documentation and confession. The exercise of power is only possible in and through the actions of the subjects constituted by the knowledges and discourses that power produces. Thus, it is individuals (or groups) that exercise power through the technologies of power.

Weedon (1987) claims that, "Power is exercised within discourses in the ways in which they constitute and govern individual subjects" (p. 110). The constitution of subjectivity is therefore an exercise of power. Subjectivity is the "conscious and unconscious thoughts and emotions of the individual, her sense of herself and her ways of understanding her relation to the world" (Weedon, 1987, p. 32). An individual's sense of self, from a poststructuralist perspective, is formed as the individual participates in the discourses available and to which they have access. Individuals constitute their subjectivity as they speak and act from within these discourses.

Discourses are systems of knowledge, often institutionally based, that act as the truth according to which individuals understand the world and their life in that world (MacNaughton, 2000). They provide norms, values, principles, rules and standards that act as truths upon which a range of subjectivities are constituted, particular practices are formed and privileged and relationships of power are produced. Discourses are systems of possibility. They make it possible to think, speak and act in some ways and not others, and they determine who can speak, when, how, and with what authority (Ball, 1990).

Using these understandings the aim was to identify the discourses that were produced and reproduced in and through the documents and the tertiary supervisors' talk. I focused on the patterns and regularities in the language of the documents and in how tertiary supervisors spoke about themselves and the
practicum assessment process, and the values and beliefs expressed in and through the documents and the tertiary supervisors' words. When I examined the data, I explored how the documents provide for the possibility of the exercise of power through surveillance, normalisation, documentation and confession. I looked for examples of when, how and why tertiary supervisors took up these techniques of power, modified them and/or produced their own specific strategies of assessment, and used them to exercise power in the practicum assessment process.

In what follows I present a discussion of the findings in the three areas outlined in the introduction. I draw on the voices of several tertiary supervisors (including my own) to illustrate the findings. Pseudonyms are used to ensure confidentiality. Joan, Bron, Tegan, Mary, Louise and Kieran were employed full-time as teachers in TAFE-based early childhood courses. Supervision of the practicum was part of their teaching role. Ingrid and Evelyn were employed as practicum supervisors on a casual basis by various TAFE institutions and universities. Nola, Olivia and Glenys were employed as associate (casual) supervisors for one university, but Olivia had previous experience with TAFE students. The voices of Nola and Tegan are featured more often as their examples capture the nuances that are typical of the tertiary supervisors' approach and style.

**The official practices of practicum assessment**

The way that early childhood practicum assessment is to be organised and carried out is outlined in the practicum handbooks and policy and procedure manuals that are provided to students, field supervisors and tertiary supervisors. According to these documents, the practicum assessment process involves the tertiary supervisor in specific practices aimed at producing knowledge about the student, for the purpose of making a judgement about that student's achievement. Analysis of the documents using the conceptual framework outlined above showed that the practices produced in and through the documents and enacted by tertiary supervisors can be understood as technologies of power: specific micro-practices, or local practices, linked with surveillance, normalisation, documentation and confession. Organising the visit, observing the student and checking the written work involve indirect and direct surveillance by the tertiary supervisor — these are practices of surveillance. Recording examples of students' progress against the competencies and providing feedback use the knowledge produced through surveillance to document the student's progress against specific standards or norms — these are practices of documentation and normalisation. Discussing the student's progress and achievement involves a process of normalisation, because the discussion is focused on achievement of the competencies or norms for the practicum — it is a practice of normalisation. The triadic discussion functions as a confessional in which the student provides verbal and written evidence of her achievement or non-achievement of the competencies — it is a practice of confession. Making a judgement is a practice of normalisation: it is a judgement that is made against the competencies to be achieved, the norms for the practicum, and thus, it is a normalising judgement. In this way, the practices that the documents construct are specific techniques of power, that parallel Foucault's (1991) technologies of power — surveillance, normalisation, documentation, confession.

The institutional documents produce and circulate knowledge about practicum assessment and how it is enacted. In providing rules and norms for all participants in the assessment process the institutional documents function as a discourse. The practices that the documents produce are possible and desirable within positivist and liberal humanist discourses. For example, within a positivist discourse surveillance is the logical and correct way to get to the truth about the student's progress and achievement. The surveillance that goes on in practicum assessment, according to the documents, is also possible and desirable within a liberal humanist discourse because all three participants carry it out equally. The practice of normalisation and the enactment of a normalising judgement based on official norms (for example, the Child Care National Competency Standards or the Framework for Beginning Teaching which are utilised in the report forms) is right and proper from within a positivist discourse. The collaborative and consensual form of normalisation used in the triadic assessment achieves the humanist ideals of democracy and equality and is therefore produced as desirable from within liberal humanist discourses. When the tertiary supervisors enact the practices of the documents, they take up and use these techniques of power. In doing so, they are positioned and position themselves as objective observers, collaborative examiners, and judges and as they speak and act from these positions, they mobilise the discourses of positivism and liberal humanism.
The discourses of the documents and tertiary supervisors' practices

The tertiary supervisors' understanding and practice of the practicum assessment process has been (at least in part) constructed in and through the documents and the discourse(s) that those documents produce and reproduce. The purpose of surveillance, documentation and confession, according to the documents, is to produce knowledge that can then be used to make an accurate, objective, valid, normalising judgement of the student's progress and achievement. The tertiary supervisors engaged in these practices. Their words expressed a belief in the logical processes set out in the documents and a desire for standards and guidelines. For example, Joan and Bron expressed faith in the process of surveillance and normalisation that the documents set up for assessing the student's achievement:

If the students are documenting very real practical ways in which they are demonstrating a particular element of competency, if the workplace supervisor will comment on specific things, and if we go in and see it too, and if a student gets a variety of children's services, with workplace supervisors who are commenting on what the student's performance is, I think that maybe, in the end, we're getting a pretty fair judgement of the student's capabilities. (Joan, FG3)

If you've got the competency book, the checklist, or whatever you want to call it, at least we know what we're supposed to be looking for. (Bron, FG1)

And as Evelyn's words below suggest, the documents also provided norms for the tertiary supervisors' practice:

I need parameters to work by. I need guidelines to work by, not only from the point of view that I'm doing the right thing but also that there is still the general trend being followed by a group of people who are individuals within the system. So it's a quality control mechanism as well (INT7).

While the tertiary supervisors enacted practicum assessment according to the documents they expressed some doubts about following the template, and at times they stepped outside it. They applied their own techniques and used their own style as they went about the practicum assessment process. Kieran, for example, explained:

I walk in and I assess the student overall, and I have a sense as to whether the student's doing all right or not. And then I'll go back to use those indicators to indicate the areas that they're not meeting and the areas that they are meeting. So I actually do it the other way around. I make a holistic judgement. I think that it is stuff that competencies break it all down to, but you actually still need to look at them as a whole. (FG3)

Practicum assessment went beyond the format prescribed by the documents; beyond the rational and logical practices of organising and preparing for the visit, observing, checking, recording, providing feedback, discussing students' progress and making a judgement. It was, as Kieran put it, "an opportunity to assess how they're feeling in terms of the workplace communication stuff" (FG3). According to Evelyn, "You go in and you get that overall feel of what's actually happening" (FG4). Thus the visit was not just about surveillance, it was about getting a "feel" for how things were going beyond the requirements. These comments suggest that tertiary supervisors infer what is going on based on what they observe, find out indirectly, and feel. To do this they can't just observe the student and his/her practice. The tertiary supervisors' observations were not only focused on student practice against the competencies, or on whether or not the bookwork was adequate; they took in the whole situation — personalities, feelings and interactions. Practicum assessment was not only, or necessarily, an objective application of official norms; many tertiary supervisors interpreted the norms creatively and strategically and used their professional judgement based on their own subjective professional norms rather than the "objective" performance criteria. Ingrid, for instance, admitted:

We make the interpretation, I suppose ... It's not written there — I mean, we can't say it's there in black and white. Our professionalism and our experience make that decision. (FG4)

According to Mary and Glenys, it is possible to "tell" what is going on, the tertiary supervisor can intuit, interpret and infer:

I think, as an experienced tertiary supervisor, you can just tell. Like you go in there and, immediately, you can see whether somebody really has their heart in it or not. (Mary, INT3)

You can usually tell — the way the children respond to somebody is fairly telling — you can usually tell if somebody's getting on. You can usually tell if something positive's happening — well, you're pretty sure that that's alright. (Glenys, INT5)
I gained the impression that there was an art to practicum assessment and that it was much more complex than carrying out each step in the process according to the documents. The tertiary supervisors' practice of practicum assessment was artful and strategic.

**Enacting practicum assessment: the tertiary supervisors' artful practices**

Surveillance, normalisation, documentation, confession and a consensual, democratic form of examination were the practices that actualised the relations of power operating in the early childhood practicum assessment process that this study investigated. These practices are produced as appropriate and desirable within the meta-discourses of positivism and liberal humanism, and were taken up and enacted by tertiary supervisors as subjects of these discourses. However, the practice of practicum assessment through such technologies of power was not achieved without shifts, ruptures and transformations. There were contradictions and resistances. The tertiary supervisors held contradictory beliefs about how to produce the truth about a student's competence and suitability for the field. For example, they believed that competency based assessment (CBA) provided benchmarks that enabled them to achieve a more objective assessment, but they were also suspicious of the promise of objectivity. Tegan, for example, believed that she should be objective in her assessment of the student, however at the same time she was not sure it was possible or in fact desirable, as her comments below indicate:

> You have to go in there being quite as objective as you can, but being really careful that you're not taking too much of your opinion and your values into that assessment.
> I don't know how to get around that [taking your own values and using your own judgement] ... I don't know if there is a way because you're always going to take some of yourself into it. And I think if you didn't, you know, I don't know what sort of a teacher you'd be if you didn't ... (INT10)

Others felt that they could achieve a fairer assessment if they knew the student outside of the practicum situation. For example, before Mary went out to visit a student she liked to "know what they're like in class, and as a person". She felt that it was fairer because she was "looking at the big picture, the whole person, rather than just going in and getting a three hour glimpse of one person and judging on that one visit" (INT2). It was not only background knowledge about the student that was used to ensure fairness. For example, when Louise was faced with a field supervisor who was known to be difficult with students she determined to "support the student in fairness" (INT 2).

These beliefs and practices have been constructed in and through the discourses of progressive education and early childhood education. Although derived from humanist and liberal humanist discourses they provide different sets of rules by which the "truth" is produced (Foucault, 1991): the truth about the student's achievement and the truth about how to be a teacher (or tertiary supervisor). Within these discourses education is holistic, fair and equitable. It is desirable to know the individual and their unique situation and the teacher is a caring and nurturing. The tertiary supervisors practised assessment and exercised power artistically and artfully, creatively and strategically in and through these discourses. They produced specific strategies of assessment that functioned as techniques of power. I have called these techniques detailed inquiry, holistic surveillance, inference, interpretation, discretion, individualisation and regulation. The analysis showed that all of the supervisors enacted at least one and more often each of these particular strategies. Most strongly evident in the data were holistic surveillance, interpretation, inference and discretion.

**Detailed inquiry**

The tertiary supervisors sought to establish the "truth" about students by finding out about the whole situation, the "big picture" as many referred to it. They asked those who were regarded as knowledgeable about the student — the practicum coordinator, the field supervisor and at times the student herself. Nola, whose strategies and style were typical of the tertiary supervisors' practice of this technique, contacted the practicum coordinator to ask how the student was progressing in the theory classes. During the visit she asked the field supervisor subtle and indirect questions which sought to discover how much help the field supervisor was providing for the student. For example, "Had you talked to her about what your current planning was to help?" and "I wonder how she'd [the student] get that information or idea". Knowledge of the student was thus produced through a detailed inquiry that went beyond the practicum context. According to Nola, "You have to, I think, take a full view just to find out if there is a personality problem or something ..." (INT9).
Holistic surveillance
The tertiary supervisors’ surveillance involved a gaze that took in more than just the student: their practice was linked to a "network of gazes" (Foucault, 1991, p. 171). It extended beyond the student to the field supervisor and the children. As Nola explained, "You have to be aware of each of their personalities, how they're interacting, and how the teacher is feeling about the student" (FG2). The tertiary supervisors observed the field supervisor, her practice and her interactions with the student. For example, Ingrid explained that sometimes when visiting a student she would be able to see that the situation was not suiting the student, that sometimes "a field supervisor [is] not flexible...is not prepared to listen to who the student is" (FG4). Similarly, Nola's surveillance also took in the field supervisor. When she visited the student Nola observed that the field supervisor was "a good teacher in groups, a good example to the student" (INT 9), but she was not giving effective feedback to the student about her planning. Nola and Glenys both observed the children's reactions to the student. Nola said, "You can tell a great deal from the children, the children's reactions. That's very important in assessment" (FG2), and for Glenys also, "the way children respond is fairly telling" (FG4).

Inference
The tertiary supervisors used the "big picture", the "full view", which detailed inquiry and holistic surveillance produced, to interpret what they saw and heard and used it as the basis for drawing inferences. Inference is a way of seeing and understanding what is going on, and in this way, it can be understood as a technique of surveillance, a creative practice of surveillance. Using the technique of inference, tertiary supervisors extract knowledge about the student and the situation and use this knowledge to guide them in their actions and decisions — to exercise power. For example, Louise's surveillance during a visit revealed that "there just wasn't communication" between the student and the field supervisor. Based on her holistic surveillance she inferred that "a lot of it came down to a personality situation... almost a personality clash", and she sought to act upon the field supervisor's future actions toward the student by saying to the field supervisor, "that student needs support" (INT 2). Other examples come from Nola and Glenys, who both used their observations of the children's responses to students to infer how well the student was progressing. The knowledge produced through these inferences was used as part of the evidence generated about the student's level of competence. Nola used the evidence that she had of "all the negative things [the field supervisor] said about the student" to infer that she was not "encouraging or helping that girl" (INT9).

Interpretation
The technique of interpretation was used by the tertiary supervisors to make the subjective appear objective. They interpreted the official norms — the competencies — creatively and strategically. For example, when Tegan found that there was "something not quite right" with a student's performance, but it was "just a feeling" rather than something rational and capable of being observed and objectively identified, she believed she had to "pin it down to a competency". However, as she said, "There's usually somewhere in that form that you can slot that in, and say this student hasn't met competency" (INT10). Others engaged with this technique, as is evident in Ingrid’s comment (cited earlier) where she admits that there is nothing in black and white, the tertiary supervisor has to interpret. Evelyn interpreted a competency quite broadly when she believed a student had not had the opportunity to demonstrate it. She admitted that in order to "fulfil that, to tick it off in other words [I] would manipulate it because the physical circumstances were not possible" (INT7).

Interpretation draws on the norms held and produced by the tertiary supervisors in and through their own professional experience. The tertiary supervisors had their own ideas about what should be demonstrated as an early childhood student and future professional. For example, they talked about attributes such as "warmth", "care", "commitment" and "initiative". Mary wanted to see that they "had their heart in it" (INT3), and for Olivia "good practice means caring about what's fair and what's equitable" (INT8). These were difficult things to express in competencies and thus the tertiary supervisors, in order to uphold their standards, their "bottom line" as Ingrid referred to it, used the technique of interpretation. In this way interpretation is a technique of power that makes it possible to 'extract [interpret] knowledge and constitute knowledge' (Foucault, 1991, p. 185) and to exercise power through making a normalising judgement.
Discretion
Evelyn's interpretation of the competencies as discussed above links with the technique of discretion. She used her discretion to overlook a requirement she believed could not be achieved. This was a consistent practice among the tertiary supervisors. Discretion was used in order to allow the tertiary supervisors to achieve fairness. For example, Joan was prepared to overlook certain requirements when she checked the student's bookwork because she "had that feeling that she was doing her best and she wasn't achieving within that environment, and I think that was fair on the student. I think we have to be fair" (INT1). Joan interpreted the situation, made an inference and employed the technique of discretion. She exercised the power to enact a fair assessment, to deem the student competent despite incomplete work.

When the tertiary supervisors' observations indicated that the centre practice was a poor role model they used their discretion and overlooked relatively minor instances of undesirable practice on the part of the student. As a tertiary supervisor I recorded in my own reflective journal:

In triadic assessments, I can also make allowances for some things students may be doing in their program that would not be what I had taught but would be something the centre wanted done. (1996)

Discretion draws on knowledge produced through the practices of detailed inquiry, holistic surveillance and inference. It is linked with the technique of individualisation which tertiary supervisors used to respond to individual circumstances and situations in order to achieve fairness. In this way it can be understood as a technique of power: it is a way of exercising the power to produce a fair assessment, a fair tertiary supervisor and a competent student.

Individualisation
The tertiary supervisors individualised their assessments rather than sticking rigidly to the template provided by the documents. This is evident in the above examples. Often the individualisation was in response to knowledge gained by way of detailed inquiry, holistic surveillance and inference and it was achieved through interpretation and discretion. For example, Tegan allowed a student to pass a placement despite the fact that key elements of the written work were incomplete because the student had struggled on in the face of a major personal crisis, and it was a first placement. In another situation she allowed a student to pass a placement even though the field supervisor had given the student two NC grades (not competent) for two elements of competence. As Tegan explained:

We certainly look at each individual student on their own merit; so we would never say, "Two NCs, that's it". We look at which NCs they are ... and the situation surrounding that. (INT10)

Regulation
While the tertiary supervisors used individualisation and discretion: techniques that enabled them to achieve a fair assessment, they often tempered their discretion by using the technique of regulation. Gore (2002) defines regulation as "controlling by rule, subject to restrictions; adapt to requirements; act of invoking a rule" (p. 7). Tegan's discretionary decisions and individualised assessments as outlined above were "subject to restrictions", and the students had to "adapt to requirements". For example, despite allowing the students to pass the practicum she was careful to write on one of the student's work what needed to be done, and "gave her clear dates for that to happen, what was outstanding, what had to come in" (INT 10). In the case of the other student, the NCs she was allowed to carry into the next practicum had to be converted to CAs at the first visit.

Regulation is a technique of normalisation because it "invokes a rule" and the rule functions as a norm, a norm that guides practice. The tertiary supervisors are also "subject to restrictions" through the official documents that require them to act in particular ways and through the rules that they produce for themselves. These rules required Tegan to "look at each student on their own merit" and not to fail a student simply because she had two NCs. However, regulation also enabled the tertiary supervisors to exercise the power to uphold official standards, to ensure that in the end the student does complete the work and achieve the required competencies.

In summary
The tertiary supervisors' artful practice of assessment involved the use of specific techniques of surveillance — detailed inquiry, holistic surveillance, and inference — an artful surveillance. These produced knowledge about the students, their progress and achievement in relation to the practicum requirements and competencies, as specified in the documents. These artful practices also produced
knowledge about the student outside of the practicum context, knowledge of the field supervisor, the practicum setting and the overall situation. The tertiary supervisors used this knowledge; they extracted it, appropriated it and applied it (Foucault, 2000) in the visit and the triadic assessment, and the effect was a subtle, careful, strategic, invisible exercise of power. Their creative and strategic practice of assessment involved the use of specific techniques of normalisation — interpretation, discretion, individualisation and regulation. These produced a normalising judgement that appeared to be based on the competencies and requirements (norms) set out in the documents, however, it was based on the tertiary supervisors’ norms and expectations for appropriate early childhood practice, and guided by the principles of fairness, support and responsibility. These artful and strategic practices of assessment are produced within discourses of early childhood practicum assessment that privilege positivist concepts of rationality, validity and objectivity, and liberal humanist ideas such as reason, responsibility, democracy and fairness. Through the artful practice of practicum assessment, the tertiary supervisors were able to position themselves as the fair, reasonable, rational, responsible subjects of liberal humanist discourses (specifically progressivism and early childhood education), but also as the independent, objective investigators and assessors within the discourse of positivism.

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References
Virtual Teachers: Negotiating New Spaces For Teaching Bodies

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In 2002 the authors reviewed the educational and technical performance of the Virtual Schooling Service (VSS) during its first two years of operation in 2000–2001 (Pendergast & Kapitzke, 2004; Pendergast, Kapitzke, Land, Luke, & Bahr, 2002). The VSS provided by Education Queensland utilises synchronous and asynchronous online delivery strategies and a range of learning technologies to support students at a distance (see http://education.qld.gov.au/curriculum/service/virtual/). The service commenced in the year 2000 with a focus on senior secondary subjects. At present there are over 500 students in almost 80 schools across the state enrolled in 8 subjects. In response to the recommendations of the study, a series of professional development activities were conducted with the VSS teachers by the authors. This included a focus on the development of pedagogical innovations relevant for VSS teachers, utilising the Productive Pedagogies as a platform. Following this, skills around critical reflection were introduced, including consideration of the ways in which the teachers were developing as a learning community. Some data were collected from the teachers in order to develop an understanding of how the VSS teachers construct themselves. This included visual representations. This paper reports on the ways in which VSS teachers constructed themselves.

Introduction

The shift to online educational services is part of the Smart State policy agenda, which seeks to make the state a key player in the global information economy. Education Queensland's Virtual Schooling Service (VSS) initiative was established as part of that broad agenda and as a response to the 1999 report, Application of New Technologies to Enhance Learning Outcomes for All Students. This report confirmed that traditional print-based distance education delivery approaches fell short of delivering access to the kinds of cultural capital required for participation in knowledge economies, and that subject choice and learning outcomes for students who are geographically isolated, or unable to access school subjects locally, needed addressing.

Virtual learning environments like VSS provide rich and largely untapped pedagogical spaces for research on the question of teaching and learning as embodied and agentive practice. Online initiatives like VSS are typically viewed as test-beds for curricular and pedagogical innovations that feed back into and inform conventional classroom cultures and practices. There is, then, a sense that online teaching and learning environments are important and productive sites for rethinking longstanding educational curricula, pedagogy, and assessment.

This paper applies a social semiotic approach to a corpus of written and visual texts, which are constructions of the professional identities of 25 teachers of the VSS who work solely in an online mode. It raises a number of questions about schools today and what they might become in the future. Some of the issues it canvasses are, how does virtual schooling enable and constrain how teachers think about and construct themselves as professionals? What does "going virtual" mean for the "school" to which they belong? How can schools be imagined and practiced differently to better reflect and connect with the highly complex and differentiated times and spaces of fast capitalism?

Teaching as embodied and embedded practice

Three decades ago, social theorists and feminist philosophers rejected the classical Platonic binary separating the mind from the body and privileging the former over the latter (cf., Grosz, 1994). Research today largely conceives teaching as embodied social and discursive practice, and argues that people adopt, construct, and enact certain identities through social interaction and relationships. Feminist and poststructuralist theories, in particular, have reframed conceptions of teaching and learning by foregrounding the body in teaching as a discursive construction (cf., Berzonsky & Adams, 1999;

Frameworks like the Productive Pedagogies that are based on face-to-face communications spaces. Allen (2000) explores the possibilities of multiple online identities and asks how professional identity plays out in the spaces of online learning environments and what does it mean for teachers and learners to interact as largely unscripted, disembodied “others” through the mediation of computer screens. Initially, virtual space was considered an immaterial, neutral milieu characterized by a post-humanist state that was largely free of the conventional identity markers of gender, race, age, body image and so on. Feminist theorizing (e.g., Chernaik 1999; Haraway, 1997; Lykke & Braidotti, 1996; Wertheim, 1999), and work by Featherstone and Burrows (1995), in particular, posed challenges to this assumed neutrality and the hegemonic discourses of techno-scientific rationality that underpinned it. This corpus showed instead that, like so-called “meat space,” cyberspace was constituted in and by spatially-specific practices and cultural relations that were open to critical analysis, resistance, and reconstitution.

Issues of place and space are especially acute in the study of virtual environments considering that teachers and learners interact as largely unscripted, disembodied “others” through the mediation of computer screens. Initially, virtual space was considered an immaterial, neutral milieu characterized by a post-humanist state that was largely free of the conventional identity markers of gender, race, age, body image and so on. Feminist theorizing (e.g., Chernaik 1999; Haraway, 1997; Lykke & Braidotti, 1996; Wertheim, 1999), and work by Featherstone and Burrows (1995), in particular, posed challenges to this assumed neutrality and the hegemonic discourses of techno-scientific rationality that underpinned it. This corpus showed instead that, like so-called “meat space,” cyberspace was constituted in and by spatially-specific practices and cultural relations that were open to critical analysis, resistance, and reconstitution.

We similarly propose that online environments for teaching and learning constitute new spaces which differentially enable and constrain teacher identity and pedagogical practice. In order to conceptualize these new kinds of technologically infused spaces, Kapitzke and Bruce (in press) coined the phrase, arobase space. ”Arobase” is the French word for the symbol ”@” commonly used to signify online milieux such as that of email addresses. The symbol has a long and varied history which Kapitzke and Bruce have continued by using it to represent emergent discursive practices infused with, and which in turn infuse, technological values, logics, and practices. In this context then, VSS comprises arobase space because it is an effect of spatial and discursive practices that are shaped by, and also shape, virtual technologies, while simultaneously manifesting the historically constituted facets of place (e.g., the physical classroom). The changing subjectivities of VSS teachers—framed in and by the (im)possibilities of virtual space—in turn (re)constitute online pedagogy and in so doing has potential to reconfigure face-to-face teaching.

Because students spend increasing amounts of school and leisure time in worlds that comprise arobase space, it is important that teachers understand this interface of virtuality, pedagogy, technology, the body, and identity. As facilitators of online educational communities like those of Education Queensland’s The Learning Place, it is vital that teachers become aware of potential personas that students may draw upon in virtual exchanges and interactions. Allen (2000) explores the possibilities of multiple online identities and provides a vocabulary for understanding constructions of the self used to engage with, and to attract, or repel others. In online environments one cannot assume that offline and online bodies and persons are the same thing. ”Bodies” are, in fact, edited, traded, possessed, and deleted because they exist only in and through textual self-revelation. Hence, identities are complex, socially situated entities, created in dialogue, and always in formation. Allen provides six dimensions of the ”cybered self,” including the corporeal Me, the material Me, the social Me, the multiple Me, the historical Me, the narrative Me. The question for us is how does professional identity play out in the spaces of online learning environments and what does it mean for frameworks like the Productive Pedagogies that are based on face-to-face communications spaces.

Virtual Schooling Service as pedagogical space

In 2002 the authors undertook a review of the educational and technical performance of Education Queensland’s Virtual Schooling Service during its first two years of operation, 2000-2001 (see Kapitzke & Pendergast, in press; Pendergast & Kapitzke, 2004; Pendergast, Kapitzke, Land, Luke, & Bahr, 2002). i Now in its fifth year of operation, the VSS uses a combination of synchronous and asynchronous services to deliver school subjects to secondary students without access to local teaching expertise. Nine school subjects—including German, Modern History, Economics, Dance, and Information and Processing Technology—are delivered currently to approximately 700 students in 89 schools throughout the state.

Classes are held online via an audiographic conferencing system supported by offline access to lessons and learning materials through Internet-based software applications. Audiographic conferencing in lesson
time enables synchronous communication through the use of loudspeaker phones and computer graphics with up to 8 students in different locations. Web-based resources enable students to access subject content and materials of individual lessons flexibly from home or school in their own time. Further multipoint interaction occurs through email and telephone contact between individual students and the teacher, and email discussion lists for class engagement. The teachers are virtual in the sense that they are not a present body.

In response to the recommendations of the 2002 study, the authors conducted a series of professional development activities with a group of 25 VSS teachers. The teachers were encouraged to engage in some critical reflection exercises introduced through a listserv discussion over a 4-week period prior to a 2-day program of face-to-face activities. The discussion included consideration of the ways in which the group was developing a sense of themselves as a learning community, and a focus on the development of pedagogical innovations relevant to VSS teachers utilising the Productive Pedagogies platform (Lingard et al., 2001). A survey was administered to the entire cohort of VSS teachers (20 of the then 22 VSS teachers were in attendance). The information collected was used along with other material to further understandings of the newly emerging VSS teacher, as part of the professional in-service process. Some elements of this are considered in this paper. Specifically, respondents were asked to list up to five words they would use to describe real, typical VSS teachers, and ideal VSS teachers. They were also invited to suggest up to three advantages and three disadvantages of being a VSS teacher, and to draw a visual representation of a VSS teacher.

**A snapshot of responses**

To describe a typical VSS teacher, the virtual teachers used a total of 87 different terms. A large proportion of teachers used the term "creative" (80%). Other commonly used terms included: "enthusiastic" (30%), "knowledgeable" (25%), "adaptable" (25%), and "technologically capable" (20%). Some less favourable terms also appeared—though infrequently—including tired, time-poor, insecure, and frustrated. Other interesting terms used included: lucky, excited, glad, and happy.

When asked to provide up to five (5) words they would use to describe an ideal virtual teacher, respondents used a total of 82 different terms. Again, a very large proportion of teachers used the term "creative" (90%). Other commonly used terms included: "knowledgeable" (35%), "enthusiastic" (20%), and "patient" (15%). Some interesting terms also used were: rich, happy, and popular.

The study sought to identify advantages and disadvantages of being a virtual teacher. There were more advantages (42) than disadvantages (33) of being a virtual teacher noted by respondents. With respect to advantages, the following categories and the number of respondents suggesting this advantage are presented for those categories with more than one respondent:

- Opportunity to be creative and to innovate (9);
- Flexibility (7);
- Opportunity to develop real relationships with students (4);
- Fewer students (3);
- Opportunity to experience students from different schools (3);
- Paid to have fun (2); and
- Less stress (2).

Similarly for the disadvantages of being a virtual teacher, the following categories were formulated from the responses:

- Lack of contact with students (7);
- Not being able to see students (7);
- Technology failure (6);
- Personal isolation from the school community (3);
- Not understood by other teachers (3).

With respect to the images produced by the teachers, nineteen (19) were presented. These can be summarised as:
• Complex representations including a teacher image and artefacts such as computer, headphones, telephone, often with teacher sitting at computer table (7);
• Smiley face taking up whole page, no additional features (4);
• Stick figures, no additional features (3);
• Smiley face with prominent halo (1);
• A world globe with a balancing figure (1);
• A stick drawing of a person with the words "I get back problems from sitting down too much" (1);
• A stick drawing of a person kneeling, with a headstone in the background and the caption "please God of VSS, make nothing go wrong this week please" (1);
• The words "photograph any teacher" across the page (1).

A new space for virtual teachers
Virtual teachers have created a new space in and through teacher identity. Table 1 presents a compilation of findings from other studies using similar data collection techniques, which ask respondents to list terms describing the typical teacher identity (Pendergast, 2001; Pendergast & Wilks, 2005) and provides a useful basis for comparison. All of the frequently used terms to describe virtual teachers have a positive valence, as do home economics, hospitality, and pre-service middle school teachers. This starkly contrasts with the predominance of negative valence terms used by the practising middle years teachers. The virtual teachers also have the highest agreement for the highest frequency term selected, with an astounding 80% using the term "creative" to describe themselves. The terms "enthusiastic" and "knowledgeable" also appear in other teacher self constructions, but "technologically capable" and "adaptable" are terms uniquely used to describe virtual teachers. This is perhaps not surprising, given that the "new tools of the trade" for virtual teachers are no longer the typical icons associated with teaching—blackboards, books, desks and apples—but an entirely new set of icons—computer, headphone, telephone, and computer table.

Table 1
Top five terms used to describe typical teacher types

<table>
<thead>
<tr>
<th>TEACHER TERM FREQUENCY (PERCENT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Schooling Service Teachers (N=20)</td>
</tr>
<tr>
<td>Enthusiastic 30</td>
</tr>
<tr>
<td>Knowledgeable 25</td>
</tr>
<tr>
<td>Adaptable 25</td>
</tr>
<tr>
<td>Technologically capable 20</td>
</tr>
<tr>
<td>Middle Years Teachers* (N=48)</td>
</tr>
<tr>
<td>Frustrated 35</td>
</tr>
<tr>
<td>Stressed 33</td>
</tr>
<tr>
<td>Caring 29</td>
</tr>
<tr>
<td>Overworked 23</td>
</tr>
<tr>
<td>Middle Years Pre-service Teachers** (N=61)</td>
</tr>
<tr>
<td>Knowledgeable 19</td>
</tr>
<tr>
<td>Caring 15</td>
</tr>
<tr>
<td>Patient 13</td>
</tr>
<tr>
<td>Creative 12</td>
</tr>
<tr>
<td>Hospitality Teachers*** (N=117)</td>
</tr>
<tr>
<td>Hardworking 41</td>
</tr>
<tr>
<td>Dedicated 38</td>
</tr>
<tr>
<td>Enthusiastic 37</td>
</tr>
<tr>
<td>Creative 34</td>
</tr>
<tr>
<td>Home Economics Teachers**** (N=199)</td>
</tr>
<tr>
<td>Professional 43</td>
</tr>
<tr>
<td>Organised 39</td>
</tr>
<tr>
<td>Resourceful 35</td>
</tr>
<tr>
<td>Practical 30</td>
</tr>
</tbody>
</table>

Notes: * Pendergast (2002); ** Pendergast – unpublished study; *** Pendergast & Wilks (2005); **** Pendergast (2001)
It is notable that seven (36%) of the images drawn by VSS teachers were complex representations including what might be considered to be unique VSS teacher artefacts such as in images 1.1, 1.2, and 1.3 in Figure 1. This is in stark contrast to image 1.4, which is a stereotypical depiction of a classroom teacher: desk, board, apple, pencils, books, along with her frustration and stress levels, and with the teacher clearly gendered (Pendergast, in press). A pedagogical relation of hierarchy and authority are also represented here with the location of the teacher removed from students and separated by the intrusive desk. Alternatively, only 4 of the virtual teacher images included some aspect or form of a desk. What the images suggest is a new way of constructing this group of teachers, which is clearly removed from the iconography and bodily constraints of traditional teachers and their embodied practices.

The computer imagery is further magnified in image 2.1, which replaces the teacher head and face with a computer screen - the virtual teacher becomes the computer. This reinforces the virtuality and anonymity of the virtual teacher, which was also identified as being among the disadvantages: lack of contact with students (7); not being able to see students (7); personal isolation from the school community (3). The images communicated a certain sense of uncoupling or disconnection from the material world as noted in
images 1.2, which states that the virtual teacher needs "magnetic shoes" for "suction" "to keep teachers grounded" and to "stop them from floating away." This feeling of detachment is similarly symbolized in Figures 1.3 (figure floating above the chair), 2.1 (keyboard but no desk), 2.2 (see above), 4.1 (teacher has no body), and 4.2 (use of tombstone in cemetery and ghost). Image 2.2 suggests the removal of geographical physical place, and the end of the enclosed classroom. The teacher is balancing on the world, suggesting access to its content and resources as held in both hands or with bright ideas being juggled.

Another interesting point of note from the visual images is the positive valence of the images. All but one image where a valence could not be determined was clearly positive, typically represented as a smile. This can be seen in Figure 3 in the smiley face images of virtual teachers. This positive identity is reinforced in the written text, which notes the advantages of being a virtual teacher include being paid to "have fun." Other task related benefits that help put a smile on these teachers' faces might include the other factors identified as advantages: opportunity to be creative and to innovate; flexibility; having fewer students; and less stress—all characteristics of teachers' work in the collective teacher workforce that research has demonstrated leads to professional dissatisfaction (Hargreaves, 1999; Maclean, 1999).
Two further images are worthy of note in this brief analysis. Figure 4 includes an image with the text "I get back problems from sitting down too much", which highlights the different way in which the teacher's body is utilised and inscribed as a virtual teacher. Finally, the image captioned "technology troubles" captures the biggest single factor found to be impacting on the potential effectiveness of the Virtual Schooling Service—the reliability of the technology used for the delivery of classes (Pendergast et al., 2002). With the caption "Please God of VSS let nothing go wrong this week please" and a headstone in the background, the image clearly captures what for this teacher characterises virtual teachers — that is, a reliance upon the whims of technology, such that their teaching becomes ineffective in times of resource failure. This is confirmed in the text responses of the disadvantages of being a virtual teacher.

![Figure 4.1. Body realities.](image1)

![Figure 4.2. Technology troubles.](image2)

**Virtual teachers: Hybrid teaching identities**

Because of the relative recency of these kinds of initiatives and the small number of participants available, the study has raised more questions than provided answers. Nonetheless the language and visual imagery from the self-constructions of the professional identities of these VSS teachers confirms that the abode space of the virtual classroom can potentially be free of conventional identity markers such as gender, race, age, and body image. These teachers foregrounded issues of creativity, innovation driven by flexibility. There is evidence also of a reconstitution of what it means to be "teacher," and specifically a virtual teacher, with new icons, new signifiers, new pedagogical relations, new affordances, and new constraints. Is there a danger then that virtual teachers are producing themselves as a sort of cyborgian (non)entity? And if so, what impact might this have on the sustainability of virtual teaching and hence virtual schooling? Learning if, after all, learning within and about communities and workplaces... Indeed it seems that the historical clichés and stereotypes from place-bound industrial schooling models are being transferred to, or translated into, some de-materialized equivalent. The question that needs now to be considered is, what do shifts in teacher sensibilities signify in terms of social, cultural and educational transformations, and what do they imply for face-to-face classroom teachers and teacher education programs more broadly?

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1 See URL http://education.qld.gov.au/learningplace/
References

"I Felt Like A Teacher Today": Beginning Teachers And Professional Identity

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University of Tasmania

In this paper, we consider the way in which beginning teachers seek to construct their professional identity as they enter the teaching profession. We report on findings of an ongoing research project into the experiences of beginning teachers in NSW in the course of their first two years in the profession. We argue from case studies and a state-wide survey that the employment contexts in which beginning teachers enter the profession appear to affect significantly the capacity of newcomers to the profession to develop strong personal professional identities as teachers. We explore the construct of professional identity in the light of beginning teachers’ images of teaching and the formation and re-formation of their views about teaching and their place in it as they move from teacher education institutions to take up differing teaching positions in schools. The findings suggest that those involved in teacher preparation programmes and in the induction of beginning teachers into the profession need to understand, acknowledge and strengthen the individual’s view of self as teacher in the early year of teaching in order to ensure that commitment to the profession can be sustained through the difficulties inherent in early experiences of learning to teach.

Introduction

Many beginning teachers in NSW enter the profession because they have "always wanted to be a teacher." They come to pre-service teacher education with images of teachers and ready-made metaphors which for them define teaching. They also come with personal beliefs and values about the moral purpose of teaching and about the role of the teacher in relationship with students – beliefs and values which precipitate a choice of tertiary education program, which in itself usually precludes other professions. In the course of tertiary study, they experience mixed roles as sometime student of teaching and sometime teacher of students in schools, developing increasing knowledge, experience and skill, and gradually increasing their understanding of what it is to be a "real" teacher in a "real" school as practicum succeeds practicum. Having completed usually four years of tertiary study, they then enter the profession, usually by accepting permanent, temporary or casual appointments to schools. Graduates of pre-service teaching are deemed by the community outside schools to have the requisite knowledge and skills to act as professional neophytes; what becomes clear in the narratives of beginning teachers is that the receipt of a formal designation as teacher arrived at on completion of pre-service teaching, comprises only a small part of the process of developing an identity of self as teacher within the context of a school and can in fact be easily displaced in the early years if other factors do not quickly come into play.

The purpose of the study

This paper reports part of a wider study which investigated the experience of beginning teaching in schools across New South Wales in 2003, as reported by teachers in their initial two years in the profession. The study sought to draw out the effects of variation in employment pattern and context on teacher socialisation, professional learning and professional identity and the interplay of these three processes in locating and retaining beginning teachers in the profession. This paper, like the work of Connelly and Clandinin (1999) is an attempt to explore and understand the interrelationship and interconnectedness of knowledge, context and identity in the work lives of teachers.

Methodology

The study used both quantitative and qualitative methods, resulting in the development of complementary sets of data (Pietsch & Williamson, 2004, July.), pertaining to the process of beginning teaching. The broad state-wide picture of beginning teachers was drawn from the responses of teachers located in different geographical and socio-economic regions of New South Wales to a postal questionnaire. The
more personal account from the perspective of individual teachers who were engaged in the process of adapting from university student to beginning teacher was elicited from eight beginning teachers who agreed to participate in a collective case study (Stake, 2000) which utilised interviews and participant observation as the primary data collection methods.

**Survey-questionnaire: The state-wide picture**

In order to make contact with "first year out" teachers who were working in permanent, temporary and casual positions in public primary and central schools throughout New South Wales, teachers were approached through two sets of gatekeepers: (former) District Superintendents and school principals in the NSW Department of Education and Training. From an initial population of 1709 schools representing 38 of the 40 districts, 992 schools (58%) responded. Of these, 243 (25%) were identified as having beginning teachers on staff. Questionnaires were subsequently sent to 383 beginning teachers through their principals and 232 of these beginning teachers (61%) responded. Eighty-seven percent of respondents were female and 20% were over thirty years of age at the end of their first year of teaching. Questionnaires from the remaining two metropolitan districts continued to arrive during April 2004.

**Case studies: The individual and personal view**

Eight self-selected students at a rural university responded to an invitation to participate in the case studies. Data were drawn from initial semi-structured interviews (either individual or in a focus group setting) held prior to the commencement of teaching, followed by two personal recount interviews conducted over the course of the "first year out" with each teacher. Each initial recount interview took place after four to six weeks of teaching and was a personal recount of the "settling in" phase. The subsequent interviews, held after a further six months and eighteen months of teaching, combined participant observation of the classroom by the researcher, in-depth interviewing, and stimulated recall, and focused on the teacher's decision-making and reasoning in the course of the teaching day. As well, during each of these interviews, each teacher constructed and explained a concept map (Morine-Dershimer, 1989; Mostert & Tankersley, 1994) giving a "snapshot" of their own changing views on "teaching". Interviews were audio-taped, transcribed and returned to participants for verification. Preliminary analysis of interview data was supported by the use of the NUD*IST software program to code, categorise and compare data.

**Negotiating professional identity**

**Professional identity: The construct**

'Professional identity' appears to be an explanatory construct useful in attempting to identify what lies behind differentiation in teacher practice. It represents a way of explaining the effect on teacher decision-making, and therefore on teacher practice, of beliefs, ideals and values, and a way of describing a teacher's perception of self. It appears to be grounded in both personality and experience, both of the profession and outside it and in the beliefs and values that inhere in both the personal and the professional realms. It seems likely that professional identity - the perception of self-as-teacher - is not separate from personal identity - self-as-person - but is intricately bound to it. If identity constitutes "the dynamic configuration of the defining characteristics of a person" (DeRuyter & Conroy, 2002, p. 510) then teacher professional identity can be regarded as those characteristics which define a teacher and which simultaneously differentiate a teacher from a member of a different profession. What remains at issue is whether personal and / or professional identity is in essence personally constructed, or socially constructed, or a mix of both processes. People choose to become teachers because of beliefs, values and experiences that inhere in personal lives. Once they are working as teachers, the experience of the profession may sustain, enhance, change or conflict with personal beliefs and values, concepts and images of both self-as-person and self-as-teacher, and beliefs, ideals and values about teaching and teachers. There may well be an overt and a covert "identity" where the personal beliefs and values that underlie professional action and define and sustain the identity of self-as-person remain active but unarticulated, and an overt identity where only those beliefs, ideals and values that are represented in accepted discourse and action for teachers are expressed. Where these sets of beliefs, ideals and values are in tension, difficulties or dissatisfactions in practice may occur and may remain unacknowledged and therefore unremedied. Herein lies the significance of the construct in evaluating mentoring and professional development programs for beginning teachers. At a stage where the personal process of construction of professional identity is only just beginning, programs of induction, mentoring and development need to proceed with due regard for the established personal identity and for the need to develop professional identity which coheres with established personal values.
For the purpose of this paper, professional identity will be regarded as a facet of personal identity. The self-as-person encompasses a multiplicity of facets, each one influenced by fundamental personal beliefs and values, knowledge and experience. These in turn impinge on the professional facet, underlying and at times overriding the professional beliefs and values which guide specific decision-making and action in the workplace and which are acquired through the development of personal practical knowledge of teaching in the contexts of schools.

**Developing a view of self-as-teacher**

Connelly and Clandinin (1999) describe professional identity as a teacher's "story to live by," (p. 95) multi-faceted, composed, sustained and changed in the course of a teacher's life. Professional identities are born and grow in the histories of teachers. The starting points for some are early, for others much later - but survey respondents and interviewees within this research project could recall a personal beginning point, a time when they began to see themselves as future teachers, and for most this was well before entering a teacher education course.

In response to the question, "Why did you become a primary teacher?" survey respondents offered a range of reasons: 60% regarded teaching as a way utilising the qualities they perceived in themselves; 28% based their decision on the personal experiences they had had in families or work; 65% chose teaching because it conformed with their beliefs about the societal role of teachers or teaching; and 25% identified the values which they held and which they perceived to be also embodied in the profession of teaching. Only 1% of respondents was unsure of their reasons and had "just drifted into teaching."

**Early formulations of professional identity: the teacher in the person**

Respondents to both survey and interview frequently identified the existence of a long-standing personal quality (expressed in such terms as such as "liking children") which seems to have been recognised long before formal teacher education was considered. This personal quality becomes part of the confirming experience and as such becomes embedded in the personal narrative giving meaning and sense and coherence for many to that much later decision to "become a teacher".

Survey respondents' reasons were embodied in statements such as:

I believe that the 'art' of teaching comes naturally to me. It is my passion and it's what I do best. (040901)

I did work experience as a teacher and like it better than other jobs I had previously had (020401)

I thought it would be a satisfying career, where I could impact on the lives of children today and create a fun learning environment for them. (040301)

Fiona, a journalist for seven years before re-training as a teacher, in interview drew her desire to change professions from her comparisons of teaching with journalism which she described as "challenging but [not] rewarding. And teaching…it's fundamental to our society that children are educated as best they can be, and I want to be a part of that... (Individual interview, 2.07.03, p. 1)

**Early formulations of professional identity: the teacher in the child**

Many survey respondents remembered family situations where they were involved with young children and these were seen as experiences which established them as people (or even children) who understood young children,

Coming from a large family I have always been involved with children (030401)

Have always had a natural "knack" with children, lots of younger cousins when growing up... (040701)

Fiona also identified her first desire to be a teacher as arising at the age of ten, when she "used to teach" her sisters ..."it's just something I've always wanted to do". (Individual interview, 2.7.03, p.1)

In addition, this personal leaning towards working with children initially arising in family relationships is often affirmed by memories of the school situation itself. For many of these beginning teachers, conceptions of professional identity appear to lie in memories of particular teachers known in their own school days. That these are important, well-retained images in the minds of beginners is reflected also in the narratives of interviewees.

Bianca, reflecting on her own reasons for becoming a teacher, sought explanation in both her family situation and her schooling.

I wanted to be an early childhood worker from primary school... about Year 5 in primary school... probably the fact that I have a lot of brothers and sisters and cousins and always liked working with young children, being around young children." (Bianca, Focus group interview, p. 1)
Her first ideas of what teaching constituted were expressed through remembering her own teachers. I think I pictured two or three of my favourite teachers in primary school and I thought well, I’d like to be like them... they were generally the people that always had a smile... had the time of day to sit there and have a chat – always made class interesting... and the smile... I think the smile is what I pictured most on their face... (Bianca, Focus group interview, p. 3)

Later, when Bianca had spent several particularly frustrating and difficult days as a casual teacher, she described herself, using the same image almost as a yardstick for her view of a “good teacher.”

I don’t know if I am [a good teacher]... I don’t feel that I know I’m a good teacher... in that programming-assessing-day-to-day teaching... I mean I feel like I can be a good casual... I feel that I can walk in and still smile at the end of the day... if I can do that I feel like I’m a good teacher if I can do that... I haven’t lost it... (Individual interview, 09.03, p. 47).

Like Bianca, Graham had a long-remembered understanding that he would one day be a teacher and his own image of a teacher was based specifically on those of his own teachers he had liked or disliked during his own schooling.

I’d always... this is going back from years and years ... I’ve always wanted to be a PE teacher from as long as I can remember... it’s something that I kind of always wanted to do. I think it came from me having teachers that I didn’t like... that if I could have a chance to be a teacher there’s no way that kids that I taught would ever think about teachers in that regard. Thinking about the teachers that really made a difference to me ... and thinking that I’d like to be like that... (Individual interview, 28.07.03 p. 13)

The interconnectedness of personal and professional identity

As pre-service student teachers, factors outside the personal come into play as they become practising teachers, if only for a short while, in the course of university practicums. It is in these periods as a “student teacher” that the professional first becomes integrated into the personal - and it is here that student teachers may first need to reconcile discrepancies between the established personal facets and the emerging professional facets of their identity as they face the realisation that the pragmatics of the classroom may at times force compromises in the practical expression of long-held beliefs and values about self and teaching. According to Bullough et al. (1992), beginning teachers "seek to establish a coherent and integrated professional identity that is consistent with the inner self" (p. 8). This coherence between the professional identity and the "inner self" is one that is reflected in many of the narratives of this project.

Graham, a mature aged entrant who had spent five years in scientific laboratory work prior to commencing his teacher education programme, described his early thoughts about teaching in relation to teachers he liked and those he did not. His perception of teachers “having that attitude of being an army sergeant” as those who were not to his liking, was embodied in his own attitudes to students revealed in classroom observations. No matter what the provocation, he remained true to his original image of who not to be and of his developing perception of himself as teacher, which he perceived to be a professional outgrowth of himself as person.

I try and stay as calm as I can... I’m not one to raise my voice... I try and use my voice and project it... also giving the child an option... so just keeping a calm demeanour and like... that's the type of person I am as well... like even in general life... and whatever else, I tend to go about my way without getting too cranky and too fussed and too stressed... so just not letting the children see that I may be getting flustered over something that might be trivial to them which could be important to me... yeah... just going about my way in a calm and professional manner. (Graham, Individual interview, 28.07.03, p. 3)

In discussing her progress as a teacher at the end of eighteen months of teaching, Cate also linked the personal to the professional and saw them as too closely entwined to separate. Early in her career she had described the difficulties of moving out of home at the same time as taking up her first teaching position and the difficulties of adjusting to the responsibilities of independent adulthood as well as professional teacher. At the end of eighteen months she reflected:

I can't separate the professional from the personal because they have affected each other, and yeah, I feel a lot more settled, now, I've got the house and that's... I'm settled into that... I'm settled in adulthood. Last year was a shocker... I mean, I was ready to quit teaching, I was unhappy... and this year it's been completely different. I think I'm just at school and I made a decision to be myself, to not worry what other people thought or said, or anything like that. (Individual interview, 9.08.04, p. 24)
When beginning teachers experience difficulties in their first year of teaching, it appears to be their self-as-person that suffers. While self-as-teacher is still being composed, the longer-established self-as-person appears to undergo diminution when teachers begin to feel that they are “failing”. Without sufficient knowledge to draw on, and particularly in the absence of colleague support, it is the personal self that suffers. When Cate was finally appointed to a school as a permanent teacher, the supports offered by the school were minimal and left her feeling less self-confident than she had felt as a student.

“I’ve never had anyone really doubt me, and think that... I’ve never had the feeling that people have thought that I was a complete idiot that didn't know what she was doing until I came here... Individual interview, 9.8.04, p. 41)

Unable to achieve the target for Kindergarten reading levels set by the school, she believed it had to do with her own inexperience. ...

because I was new, I thought I’m doing something wrong, I’m doing something wrong, there's something I’m missing out on... this can't be right... (Individual interview, 9.8.04, p. 25)

Talking about a time when a school cancelled the casual “days” they had previously booked with her, Dianne could acknowledge that perhaps the school situation may have changed, but her reflections were based in feelings of personal inadequacy.

Sometimes you think, is this just me... maybe he'd [the principal] decided that he wouldn't have me there because that's where I had limited experience and maybe that looked like I didn't know what I was doing... And I just felt that was a reflection on me. (Individual interview, 17.3.03, p. 15)

Schools and professional identity

Whether professional identity is imposed by the profession, or self-created as teachers reflect on their practice, or some combination of these is a matter for debate. Nias (1986, p. 3) suggests that “the professional socialisation of teachers must be understood as an active process in which individuals seek to preserve within the school and the profession, their sense of personal identity.” Sachs (2001, p. 153), however, has suggested that professional identity is “used to refer to a set of externally ascribed attributes that are used to differentiate one group from another.” In these terms, teacher professional identity can be regarded as prescribed (and proscribed) behaviour pertaining to the role of teacher, and adopted by those who work as teachers. Professional identity is “negotiated, open, shifting, ambiguous, the result of culturally available meanings and the open-ended, power-laden enactment of those meanings in everyday situations” (Sachs, 2001, p. 154). It has to do with “fitting in” with the culturally prescribed norms of language of the groups in which teachers work, and it is in this sense that professional identity becomes a product of the process of professional socialisation occurring in school settings. In this view, “being a teacher is a matter of being seen as a teacher by himself or herself and by others; it is a matter of acquiring and then redefining an identity that is socially legitimated” (Coldron & Smith, 1999, p. 712).

Schools provide the context in which professional identity is honed as teachers develop personal practical knowledge of teaching and, as well, an understanding of the culture of the school as both organisation and community in which they have membership. “Teachers' professional identities are manifested in their classroom practice” (Coldron & Smith, 1999, p. 715) as they exercise choices within possibilities constrained by the norms, customs and traditions of the school, the system and the profession and their own developing practical knowledge of teaching. Schools provide first and foremost, the experience of teaching children; in addition, they provide the role models, and the advice and support of experienced colleagues, the social setting and the experience of the micropolitics of the school with which all teachers need to learn to contend. For many beginning teachers, accessing a school which can provide a stable environment for the development of teacher knowledge and understanding of the culture of teaching represents the first and most difficult step in the journey which each takes in developing a realistic view of self-as-teacher.

Professional identity and beginning teachers' employment contexts

The first problem confronting beginning primary teachers in New South Wales is that of gaining employment in a situation of apparent over-supply. Of the 241 entrants to teaching represented by the survey respondents, about one in four respondents (26%) began their first year of teaching in the same way as previous generations of NSW teachers had done, by teaching on their own class in one school from the beginning of their careers, with the prospect of continuing at that school in the following year.
By the end of their first year of teaching, a total of 39% of survey respondents had received full-time permanent appointments to Department of Education and Training schools, 88% of these appointed in the course of the year under the Graduate Recruitment program, known colloquially as the “targeted grad” program. While a further 31% of respondents taught in a temporary, class based relieving position for most of their first year, there remained 30% of survey respondents who had spent their first year working in day-to-day casual situations or taking short blocks of relief work.

There were thus 74% of survey respondents who began their careers in fragmented teaching situations quite unlike that generally reported in the literature on beginning teachers (see for example, (Bullough, 1989; Bullough, Knowles, & Crow, 1992; Huberman, Grounauer, & Marti, 1993). These teachers’ employment situations limited their access to professional development, induction programs, role models, professional advice and membership of a teaching community. The consequent development of professional identity in these teachers was far more tentative than that of their colleagues in full-time class-based positions, with less commitment to the profession as a whole.

The beginning teachers who participated in the case studies, had similar experiences to those of the survey cohort with some in short- or long-term temporary positions; some in day-to-day casual positions and some in full-time permanent positions. All but two of the interview cohort had begun their teaching with day-to-day casual relief work and with varying degrees of success had then been accepted for block work or permanent work in the course of their first year. One interview participant went interstate to obtain a permanent position immediately on graduation; one remained a day to day casual teacher for the full 18 months of the project.

Given that only 30% of all survey respondents began teaching with the stability of their own class in their own school, the opportunities for the development of professional identity varied with the employment context in which these graduating teachers entered the profession. Teachers who spent their first year in permanent or temporary work on their own class were able to see themselves as accomplished teachers. Those who had spent their first year in casual work were far less inclined to have developed a strong self-image of themselves as teachers and as such, were those most likely to be considering leaving the profession.

“Teachers’ professional identities are manifested in their classroom practice” (Coldron & Smith, 1999, p. 715) as teachers exercise choices within possibilities constrained by the norms, customs and traditions of the school, the system and the profession. The first year is one of steadily increasing confidence for those who have the school and classroom settings within which to develop their professional knowledge. Casual teachers on the other hand, were limited in their access to professional development and were also given less opportunity to take responsibility for school programs and to contribute to school decision-making. For Bianca, the day when she “felt like a teacher” (Individual interview, 11.8.04) was the exception rather than the rule in her experience s a casual teacher. Without the opportunity to match experience with beliefs about teaching, the acquisition of a perception of the self-as-teacher is beset by fragility as the demands of “making a living” begin to overtake the commitment to teaching; as disillusion with a system that cannot employ them leaves between 25% and 40% of graduating teachers employed elsewhere after three to five years (Ewing & Smith, 2003, p. 15).

Cate, in reflecting on her day-to-day casual experience, admitted that as a casual she did not see herself as a ‘real’ teacher:

“It was disheartening]... you don't get any continuity with it and there's...I always felt guilty at the end of a casual day because I don't feel I've taught... feel like I've baby sat rather than taught... (Cate, Focus group interview transcript, 6.11.02, p. 40)

And 18 months later, she reflected:

“I didn't feel like a teacher... because I couldn't... you walk into the classroom and the teacher might have left stuff but you can't see where the kids have been and you can't see really where they're going, so you're just... basically as a casual I just got through the day and thought, well, you know, it's the teacher's [responsibility]. (Cate, Interview transcript, 26.2.04, p. 4)

Conclusion

Understanding the process by which professional identity is formed, sustained, and changed and its relationship with the personal, the “inner self” may help to explain why some fragmented employment contexts cannot provide sufficient support to beginning teachers in their quest for an identity as self-as-teacher. The place of the first school teaching experience in providing the context within which the professional identity is initially formed and re-formed as the teacher negotiates the culture and develops
the professional knowledge to build self-efficacy as a teacher appears to be central. Until beginning teachers have opportunity to articulate beliefs, ideals and values and to realise these in professionally and personally meaningful teaching assignments their attainment of professional identity is likely to be curtailed and their commitment to the teaching profession remain undeveloped.

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Federal And State Policies On Multiculturalism And The Teaching Of Culture: A Focus On Primary Education

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Introduction

Successive waves of migration have contributed to the social composition of all the states in Australia (Brändle, 2001; Horne, 1985; Jupp, 1988, 2001). In 1901, the newly constituted Federal Parliament passed The Immigration Restriction Act 1901 in an attempt to exclude non-Europeans from migrating to Australia. This act is informally known as the 'White Australia Policy'. This has been described as "an expression of both nationalism and racial prejudice" (Brändle, 2001 p. 5). The policy derived, in part, from opposition to the presence of large numbers of Chinese, mainly in the goldfields. As a result of the Act, migration to colonial Queensland and other states was mainly by Anglo-Celtic background people with an added focus on immigration by Northern Europeans. This policy was defended in terms of economic necessity and national priorities. This racist policy was officially abolished in 1966 and formally laid to rest in 1973 by the Whitlam Government (Brändle, 2001).

Anderson (1993, p. 75) defined multiculturalism as "an officially endorsed set of principles designed to manage ethnic diversity" as well as a "harmonious metaphor for fashioning a concept of nation". In Brändle's (2001) history of multiculturalism in Queensland, he noted that the term multiculturalism was coined in Canada in the late 1960s to describe a society that included those who were neither French Canadians nor English. He recorded that the use of the term arose in Australia in the 1970s with radical shifts in government noting that the governments of Whitlam, Fraser, Hawke and Keating promoted societal pluralism as a national goal over a period of 21 years. He argued that between 1964 and 1973 the conformist notion of assimilation as a desirable goal was replaced by integration policies. Brändle (2001) explained that by integrating with the host society, migrants were allowed to retain some of their distinctive cultural features without jeopardising their joining the mainstream on an equitable basis. Migrants could speak their languages freely without resentment by locals and press in those languages was allowed (p. 7). By 1973, multiculturalism was explained in terms of a "cosmopolitan life", "social justice", "dynamic social interaction", "maintenance of languages and cultures", and "the family of the nation" (p. 8). This happened at the same time that Australia was becoming increasingly independent from Britain that gradually became a foreign country like the others. Liffman (1988) noted that Australia's history has held a "visible tension between those urging diversity and those calling for adherence to a dominant, Anglo-Saxon value system" (p. 914).

The current realities of globalisation and internationalisation invalidate claims for the relevance of an Anglo-dominated Australia. However, as Vasta (1988) and Brändle (2001) have noted, the multicultural policies of the 1960s and 1990s have not resulted in a real alternative societal model. In this paper we
explore recent developments in federal and state policies on multiculturalism in order to understand their enactment and the potential that they hold for Australian education and teacher education.

**Review of recent Australian federal and Queensland state government policies**

In this section, we provide an overview of federal and Queensland state policies and reports published since 1999. Five of the former and nine of the latter are included to illustrate trends in policy definitions of multiculturalism and cultural diversity. All are available online and were accessed between August 2004 and April 2005.

**Australian federal policies**

Since 1974 many official reports have been written in relation to immigration and multicultural issues. The National Multicultural Advisory Council (NMAC) was appointed by the Minister for Immigration and Multicultural Affairs, Phillip Ruddock, "to develop a report to recommend on a policy and implementation framework for the next decade that is aimed at ensuring that cultural diversity is a unifying force for Australia" (1999b, p. 4). The NMAC explained that public policy has evolved in the past half century "from the White Australia Policy to a non-discriminatory immigration policy, with the parallel transition from assimilation to integration and then to multiculturalism (1999a, p. 9).

In December 1997, the NMAC published an Issues Paper called Multicultural Australia: The way forward. Then in April 1999, they released a report called Australian Multiculturalism for a New Century: Towards Inclusiveness that drew on the public consultation following the Council's 1997 Issues Paper. The Australia Council advocated the importance of the individual's freedom "to express and maintain one's cultural and artistic preferences" (1999a, p. 52). They argued that culture is not static but a continuum that retains its link to Australia's cultural heritage and continues growing by interactions of people through artistic and cultural activities. Australian multiculturalism is depicted as the major achievement of Australian culture. Moreover, the Council described Australian multiculturalism as:

> the core values and principles of our democratic society that define the characteristic Australian identity of our society. While Australian multiculturalism acknowledges that diversity is a fact of life, and supports policies allowing people the freedom to maintain ethnic identities, values and lifestyles, it insists that this must be done within an overarching framework of common laws and shared values and institutions. English is our national language, and our legal and Parliamentary systems are largely British in origin. Multiculturalism does not diminish, but arises out of, this inheritance. In addition, Australian identity includes the influence and heritage of our indigenous people, as well as of migrants from all over the world. (1999a, p. 53).

This definition from the 1999 NMAC report advocates for the right of individuals to maintain their ethnic identities, values and lifestyles and describes all ethnic heritage groups living in Australia as equally important to the shape of Australian identity. This report highlighted the importance of "continued government support for Australian multiculturalism as a fundamental requirement and opportunity arising out of the cultural diversity of Australian society" (p. 40). It was argued that "this commitment be reflected in all government policies" (p. 40). The report included 32 recommendations that emphasized the importance of recognising the value of multiculturalism for all Australians. Point 10 of these recommendations stated, "multiculturalism in its inclusive sense is crucial to our developing nationhood and Australian identity" (p. 54). The Council recommended that future multicultural policies and strategies should give high priority to the notion and promotion of inclusiveness. In terms of accountability it was also recognised that funding should be given "the same scrutiny as all government programs" (p. 89). The 1999 report reflected an assimilationist approach in terms of the dominant hegemony derived from British heritage.

In developing new programs for multicultural awareness, three funding and selection criteria were recommended. These were a) need, b) benefit to Australia, and c) social justice and equity. "Need" was defined as "where an individual or a group has a need arising out of ethnicity or other cultural difference" (p. 67). "Benefit to Australia" was defined as "where it can be demonstrated that addressing a problem or exploiting the advantages of cultural diversity provides an economic, social or cultural benefit to Australia" (p. 67). "Social justice and equity" was defined as "all programs should be adjusted to address disadvantage or loss of entitlement arising out of ethnicity or cultural differences" (p. 67). These three criteria were justified in terms of disadvantage, social justice, democratic principles and economic and social benefits.

The Council argued that transparency in this process would "ensure that all multicultural programs are justified on objective grounds, effectively answering unfounded criticism and leading to increased public support for Australian multiculturalism" (p. 67). This reflected some public dissention at the time in the
funding of programs. Finally, Point 25 stated “future multicultural policy should give high priority to initiatives in education and training able to promote productive diversity principles and develop the skills needed to maximise the diversity dividend" (p. 72). Goot (2001, p. 823) explains that the term productive diversity is "a set of management ideas that originated in Australia because of the intensity of our engagement with local diversity and global markets". This 1999 report reinforced the Australian government’s commitment to multiculturalism and strongly linked its definition to notions of cultural diversity and inclusion with the addition of a new, economic dimension to the concept. The importance of multiculturalism to national identity was highlighted. In addition, the criteria established for funding reinforced these discursive constructions of multiculturalism and cultural diversity.

In April 1999, Commonwealth, State and Territory Ministers for Education, met in Adelaide at the 10th Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). At this forum, they established the Adelaide Declaration (www.dest.gov.au/schools/adelaide/index.htm). This stated the new National Goals for Schooling in the Twenty-first Century. According to this declaration, "students' outcomes from schoolings are free from the effects of negative forms of discrimination based on sex, language, culture, ethnicity, religion or disability" (Point 3.1). In addition to this statement on discrimination was the goal that "all students understand and acknowledge the value of cultural and linguistic diversity, and possess the knowledge, skills and understanding to contribute to, and benefit from, such diversity in the Australian community and internationally" (Point 3.5). This statement reinforced the Federal policy's emphasis on social justice and equity issues as well as economic and social benefits. Also evident were pedagogic implications of the federal policy with linguistic attributes added to the discursive construction of multiculturalism.

In December 1999, the ensuing Federal policy on multiculturalism was released from the same department as a government response to each recommendation put forward by the NMAC report Australian Multiculturalism for a New Century. This document was entitled A New Agenda for Multicultural Australia (http://www.immi.gov.au/multicultural/ inc/publications/agenda/index.htm). In recommendation 4 of the report, a new definition of Australian multiculturalism was adopted:

Australian multiculturalism is a term that recognises and celebrates Australia's cultural diversity. It accepts and respects the right of all Australians to express and share their individual cultural heritage within an overriding commitment to Australia and the basic structures and values of Australian democracy. It also refers to the strategies, policies and programs that are designed to:

• make our administrative, social and economic infrastructure more responsive to the rights, obligations and needs of our culturally diverse population;

• promote social harmony among the different cultural groups in our society;

• optimise the benefits of our cultural diversity for all Australians.

In this new definition of multiculturalism, there is a major emphasis on celebrating Australia's cultural diversity. It also mentions the importance of social harmony among the different groups and the importance that government infrastructure can play in responding to cultural diversity and benefit from it. The policy acknowledged the 32 recommendations from Australian Multiculturalism for a New Century: Towards Indusiveness and vowed to support them. The policy outlined the benefits of cultural diversity and promoted equality and multiculturalism through four main domains. These were a) Civic Duty, b) Cultural Respect, c) Social Equity, and d) Productive Diversity. Significant to the evolution of policy definitions was the explicit acknowledgement of legal and economic facets of multiculturalism and cultural diversity. These were seen in terms of legal rights and responsibilities as well as economic dividends arising from cultural diversity. In the policy, a plan of action based on a public information and education strategy was proposed. It identified the need “to raise awareness and understanding of the benefits of Australia's cultural diversity, counter myths and misunderstandings to promote behaviour patters and attitudes that build community harmony” (p. 9). The main aim of the educational strategy proposed was “to promote community relations and harmony, with a particular emphasis of raising awareness of the relevance of Australia's multicultural policy for all Australians” (p. 9). Discursively, the policy established a clear public educational agenda in promoting multiculturalism as a positive concept in Australian identity building.

In 2001, the Commonwealth, State and Territory Ministers for Education, Training, Employment Youth and Community Services released the report Stepping Forward: Improving Pathways for all Young People (http://www.mceetya.edu.au/forward/index.htm). Stepping Forward was a joint declaration by these Ministers from various portfolios. Their intent was to promote a holistic approach to the range of options that young people face as they move towards independence (2002a). In Point 4 of this declaration, they
recognized that the main challenge was to ensure that their governmental systems "recognise the diversity of young people through being inclusive, flexible and adaptive". They presented a vision in which "young people benefit and flourish through sustaining networks of family, friends and community, and through their engagement in education, training, employment, recreation and society". The term 'culture' arose when listing 'barriers' to achievement:

We recognise the emotional, physical, cultural and learning barriers faced by these young people and the social, economic and locational factors that may negatively impact on their lives. There are opportunities for governments to address these barriers so that young people can achieve their best

In 2003, the Australian government through the Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) released the report entitled Multicultural Australia—United in Diversity—Updating the 1999 New Agenda for Multicultural Australia: Strategic directions for 2003–2006 (http://www.immi.gov.au/multicultural/_inc/pdf_doc/united_diversity/united_diversity.pdf). This recent update of the New Agenda for Multicultural Australia (1999b) re-affirmed the fundamental principles of Australian federal policy on multiculturalism. In the update, the current Prime Minister, John Howard, claimed that "the government remains committed to nurturing our inclusive society with its proud record of community harmony" (2003, Foreword, p. 1). The Minister for Immigration and Multicultural and Indigenous affairs, Philip Ruddock, added, "Australia today is a culturally and linguistically diverse society and will remain so" (p. 2). Finally, the Minister for Citizenship and Multicultural Affairs, Gary Hargrave, commented on the evolution of the multicultural agenda by mentioning that in 1999 the aim was on communicating the relevance of multiculturalism to all Australians, while between 2003 and 2006 they refocused and renewed their strategic directions "to furthering harmonious community relations, ensuring equity in the provision of government services and harnessing the economic benefits of diversity" (2003, Minister's message, p. 3). In this report the Australian government acknowledged cultural diversity as one of Australia's greatest strengths and inclusiveness as the key to the success of Australian multiculturalism (p. 5). The policy stated that Australian multiculturalism "encourages diversity in ways of thinking and stimulates innovation and creativity" (p. 8). The values promoted by this policy were:

- Responsibility of all: all Australians have a civic duty to support those basic structures and principles of Australian society, which guarantee us our freedom and equality and enable diversity in our society to flourish;
- Respect for each person: subject to the law, all Australians have the right to express their own culture and beliefs and have reciprocal a obligation to respect the right of others to do the same;
- Fairness for each person: all Australians are entitled to equality of treatment ad opportunity. Social equity allows us all to contribute to the social, political and economic life of Australia, free from discrimination, including on grounds of race, culture, religion, language, location, gender or place of birth;
- Benefits for all: all Australians benefit from productive diversity, that is, the significant cultural, social and economic dividends arising from the diversity of our population. Diversity works for all Australians.

This current multicultural policy continues the discursive work of the 1999 policy with little shift in terms of the four guiding principles, the original being a) Civic Duty, b) Cultural Respect, c) Social Equity, and d) Productive Diversity. Their descriptions parallel those of the 2003 values listed above. This policy promotes a culturally diverse Australia by saying that "Australian multiculturalism recognises, accepts, respects and celebrates cultural diversity. It embraces the heritage of Indigenous Australians, early European settlement, our Australian-grown customs and those of the diverse range of migrants now coming to this country" (2003, p. 6). Further on, this document describes Australia's multiculturalism as an important resource and introduces the term Productive Diversity, by saying that multiculturalism "encourages diversity in ways of thinking and stimulates innovation and creativity. It helps us to forge links with the rest of the world that can deliver increased trade and investment through the expansion of markets and the development of diverse goods and services" (2003, p. 8). In the New Agenda culture is describe as:

including Indigenous Australians, our British and Irish heritage, our Australian-grown customs, and those of our more recently arrived migrant groups as part of a dynamic, and interacting set of life patterns. Australians all share a common culture, but every group and individual its own unique contribution to it. For multiculturalism to be a unifying force in our developing nationhood and identity, it needs to be inclusive. (2003, p. 7).
Overall, the analysis of these five federal policies has shown major discursive elements in defining multiculturalism in the Australian context. These include a) the commitment to the democratic values and structures of Australia, b) the relationship between ethnic cultures and languages and Australian identity, c) the importance of community relations and social harmony, d) the benefits of a multicultural population, e) the importance of access to services and equity for all everybody living in Australia, and f) the defence of individual rights to express and share their individual cultural beliefs. Significant to the evolving discourse surrounding multiculturalism is the movement in its definition from mostly humanist notions to the addition of economic principles and an emphasis on a democratic political agenda. Queensland state policies on multiculturalism and cultural diversity indicate similar trends.

Queensland state government policies
Multicultural Queensland Affairs (MQA) through the Queensland Government: Department of Premier and Cabinet released the Multicultural Queensland Policy in 1998. This defined multiculturalism as "a strategy for all Australians to express, share and value one another's cultural heritage." (p. 1). The government recognised that Queensland is and will remain a culturally diverse society and affirmed that multiculturalism was the best way to manage this cultural diversity. The 2001 policy update provided a rationale that "Queensland is a dynamic and diverse society with a great variety of cultures, languages and religions. Multiculturalism is about the continuing development of one cohesive, harmonious society from this diversity" (http://www.premiers.qld.gov.au/library/pdf/default/policy.pdf). The 2001 Multicultural Queensland Policy defined multiculturalism as:

a strategy for all Australians. It encourages all Australians to express, share and value one another's cultural heritage. Multiculturalism aims at ensuring that all Australians have equality of opportunity to benefit from, and contribute to, all aspects of life without prejudice or discrimination. Multiculturalism is based on the premise that everyone should have an overriding and unifying commitment to Australia and to its interests and future, first and foremost. Multiculturalism exists within the structures and principles of Australian society - the rule of law, Parliamentary democracy, freedom of speech and religion, English as the national language and equality of the sexes. In this framework, it promotes universal ideals of human rights based on mutual respect, cooperation and a fair go for all (p. 1).

In this report, the government recognised that Queensland is and will remain a culturally diverse society and affirmed multiculturalism as the best way to manage this cultural diversity. As in the federal policies above, multiculturalism was seen here as the domain of all Australians. The three main principles of multiculturalism in this report were a) Access, b) Participation, and c) Cohesion (p. 1). These echoed the first three principles of the 1999 and 2003 federal policies but did not explicitly pick up the federal notion of 'productive diversity' (1999) or 'benefits for all' (2003). Of discursive interest is the view of multiculturalism as a 'strategy'. The strategies proposed were community infrastructure, community relations' plans, and community relations' information. Under the last strategy, resources were provided to appropriate organizations to develop and deliver information material to support positive community relations. The report explained that assistance for projects was provided to community organizations to undertake multicultural projects. Particular emphasis was placed on events and programs that promoted an understanding and acceptance of multiculturalism.

The most recent policy on multiculturalism is the Queensland Government Multicultural Policy 2004 which was released in January 2005 as part of the Premier of Queensland's Smart State initiative. In terms of reflecting federal policy, this current Queensland policy supports the four values of multiculturalism noted above. This document, however, reflects a strong discursive shift in the enactment of these values. The language of implementation now picked up earlier federal policy moves towards 'productive diversity' stating that the 'successful management of multiculturalism involves capturing the economic advantages of our cultural and linguistic diversity" (p. 3). The document is worded in more strongly economic terms with "improved opportunities for Queensland in the import and export sectors, tourism, arts, education, trade and business" linked to "more jobs for Queenslanders" (p. 3).

The 2004 policy is depicted as addressing key issues in Queensland's "economic and social future" (p. 3). In keeping with the economic tone of the discourse was the establishment in the current policy of a "plan of action" for all government departments (p. 3). This plan of action has four key strategies that are strongly linked to performance outcomes for all government departments. These key strategies place productive diversity at the forefront of the Queensland policy. The four strategies are a) Productive diversity economic strategy, b) Supporting communities, c) Strengthening multiculturalism in the Queensland public sector, and d) Community relations and anti-racism. Specific guidelines and expected
outcomes are tied to each of the four strategies. Of note are four shifts in policy. The first is the stronger reinforcement of the notion of 'productive diversity' with clear links made between global movement, language, cultural diversity and economic benefit. The second is the explicit direction and accountability processes recommended to monitor the enactment of the policy. The third shift is in the strong encouragement for promoting immigration to Queensland, especially in regional areas. Finally, the policy document makes much more explicit a "community relations and anti-racism strategy" (p. 5). This extends one of the values promoted in earlier federal policies on community rights and responsibilities to include a stronger approach in explicitly addressing racism.

The third strategy is of particular interest as it reflects a 'hard line' approach to the enactment of the multicultural policy in government departments. This reflects a shift from earlier policies focusing on humanistic goals of social cohesion and harmony to a stronger focus on accountability. Imperatives for improving the Queensland public sector's delivery of the multicultural strategy are explicitly tied to an accountability process. All Government departments are directed to "incorporate diversity into their core business" (p. 4). The strategy for this is detailed as a process that moves from a) leadership performance indicators, to b) departmental annual action plans, to c) action teams assisting implementation, to d) evaluation and continuous improvement of those plans through, to e) the final reporting to the Government on implementation (p. 4).

The Queensland Government Multicultural Policy 2004 reflected a much stronger stance on the implementation of the multicultural policy (http://www.premiers.qld.gov.au/library/pdf/MAQpolicy05.pdf). While maintaining a focus on identity, rights and harmony, it aligned with the Smart State imperatives by tying specific economic goals to the implementation of the state's multicultural policy. In the following section, we examine how these state policies have been reflected in the Education sector in Queensland and discuss possible impacts of the Queensland Government Multicultural Policy 2004 on the local education sector.

**Enactment of policy in Queensland education**

In this paper we review two key documents published by Queensland Education (EQ) to provide strategic direction and support for state schools in Queensland and to establish a culture of improvement and accountability. These are Queensland State Education-2010, and Destination 2010. In addition, we examine three Department of Education Manuals (DOEM) to identify how Australian multiculturalism is defined and addressed within EQ. In this section, we explore briefly the implications that the multicultural state and federal policies described have for primary education in Queensland.

In 1999, EQ released the first document of this strategic direction, the Queensland State Education 2010 (QSE-2010) through the Queensland Government Office of Strategic Planning and Portfolio Services (http://education.qld.gov.au/corporate/qse2010/pdf/strategy.pdf). In February 2000, ESQ-2010 was endorsed by the Queensland Government as "a statement of policy and strategic direction for state education for the next 10 years. It was developed through extensive community consultation and research into the future needs of state education in a Smart State" (2004, p. 4). In the introduction, Peter Beattie, the current Premier of Queensland, argued:

If we in Queensland want access to the benefits of the knowledge economy of the future, we have to ensure the education levels and skills of our people are up with the best in the world. Students who complete year 12 or its equivalent have better life chances. Increasing the number of our young people who achieve this gives them a "fair go" at life's opportunities and will improve our economic performance. It is the basis of a Smart State. (QSE-2010, 2000, p. 3).

Both the Queensland Government Multicultural Policy 2004 and the QSE-2010 connect with the Queensland government's Smart State agenda. One of the long-term aims of this agenda is to improve Queensland economic performance. The belief behind this is that "countries that achieve competitive levels of qualifications are more likely to develop competitive work skills and competitive industries that those that do not" (QSE-2010, 2000, p. 7). This document talks about education, as Queensland is moving into the information technology era where longstanding relations of time and space are changing. Moreover, it describes the importance of social capital, meaning the importance "to become a learning society - the Smart State in which global forces favour the adaptable, and the key resources will be human and social capital rather than just physical and material resources (p. 8).

The goals of QSE-2010 were to improve the quality of the education experience of the student and to increase the number of young Queenslanders that complete Yr 12. The aim was to encourage schools to apply policy frameworks rather than to enforce rules (p. 23) and to develop new approaches that suit the emerging information age (p. 4). Schools were positioned as key sites for promoting social cohesion,
harmony and a sense of community (p. 7). It was acknowledged that changes affecting society require changes in pedagogy. Six forces for change were identified. They were a) changes to families, b) a cultural melting pot, c) economic change, d) information technology, e) a new role for government, and g) workforce skills and competitiveness. In terms of this paper's focus on multiculturalism, QSE-2010 described society as "a cultural melting pot" in which "students face a diversity of experiences of different cultures - from the diverse ethnic groups in our society and from technologically and globally driven changes to our culture" (p. 4). Further on, Education Queensland linked the concept of Australian multiculturalism to student identity:

Their concept of identity has to deal with Australian Multiculturalism - an attempt to avoid divisiveness, to stress inclusiveness and emphasise the things that unite us as people - our common membership of community, the benefits of diversity, a shared desire for social harmony and our evolving national character and identity (NMAC Report 1999 p. 7). Knowing who we are will come through understanding our cultural origins, reconciliation with our past and drawing strength from our cultural diversity. This is a prerequisite for learning the communication and inter-cultural skills to work confidently in diverse cultural environments at home and abroad and to make discriminating choices about global culture. The principles of "civic duty, cultural respect, social equity and productive diversity", drawn from multiculturalism, should inform the development of curriculum and be part of the purpose of schooling. Teaching English as a second language is important, particularly since English is the language of global communication. Learning other languages is part of a broad approach to inter-cultural communication. (pp. 4-5).

This definition cited the 1999 NMAC report and stated that the principles of multiculturalism that should inform the curriculum and be part of the purpose of schooling were civic duty, cultural respect, social equity, and productive diversity (p. 5). This definition also incorporated the element of promoting "social harmony", mentioned in previous federal and state multicultural policies, through avoiding "divisiveness" and stressing "inclusiveness" to unite Australian people and enhance national identity. Finally, it incorporated the benefits of multiculturalism mentioned by the NMAC Report 1999 to empower students to work in a diverse cultural context in Australia and the world. Specific pedagogic implications were seen in the teaching and learning of: a) communication skills; b) inter-cultural skills; c) languages, including English as a second language.

The QSE- 2010 policy identified the main challenge for schools as "ensuring that the existing disparities in opportunity of students (different cultures, socio-economic status) are addressed by the dedication to an equity principle that gives everyone the chance for the same outcomes", and that "schools must accommodate the individual learning need by removing gender, cultural and generational discrimination" (p. 8). The stated aims included "fostering the development of an Australian identity in a multicultural society and world" and "creating a safe, tolerant and disciplined environment within which young people prepare to be active and reflective Australian citizens [...] and be able to engage confidently with other cultures". An outcome of this was the directive that "the Central Office of ED will adopt a charter to govern the standard and quality of service it provides to teachers and schools. The charter will reflect the need for an organisational culture that values learning, creativity, innovation, qualitative and quantitative data in decision-making and dialogue, and an acceptance of the diversity of backgrounds and needs of children". In this document "fostering the development of an Australian identity in a multicultural society and world" is described as "the most difficult factor" (p. 13) because:

It includes recognising the contribution to the Australian identity of many people with their own cultures and customs. It includes reconciliation with our past. We should think about the character this gives us as a country, and the image it provides of us to the world, particularly in regional geopolitical, cultural and economic relationships. After all, learning means different things in different cultures, and as globalisation converges values and aims on a global scale, there is a consequent search for local cultural identity (p. 13).

Here "citizenship" was identified as the central organizing idea with "citizenship as part of a shared democratic culture, which emphasises participatory political involvement and which strives to avoid social disadvantage that denies individuals full participation in society" (p. 12). This is important in establishing a case for the explicit teaching of the principles of multiculturalism. The success of our political, national and international identity was linked to the multicultural agenda.

In 2002, Education Queensland released an action plan entitled Destination 2010 (http://education.qld.gov.au/strategic/accountability/docs/dest2010.pdf) for the period between 2002 and 2005 to implement the aims outlined in QSE-2010. This document was revised in 2003 and 2004. One of the visions and purposes of Destination 2010 was to "equip young people for the future to enable them to contribute to a socially, economically and culturally vibrant society". The values promoted were
"inclusiveness" by recognising diversity and treating all people with respect and dignity (p. 4), and "participation" by encouraging community participation and involvement of parents in partnership in schools and supporting young people's access to diverse learning pathways (Point 3). This established the pedagogic objective of "implementing a learning framework to prepare students for living in complex, multicultural, networked societies" (p. 8). In addition, it aimed for schools to create learning communities that meet diverse students and community needs (2004, p. 10). One of the intended outcomes was to build the capacity of the school community by implementing "Partners for Success to promote genuine partnerships between schools and Indigenous communities" (p. 1). Discursively, the QSE - 2010 and its ancillary policies established a strong focus on notions of inclusion and community partnerships.

Another Education Queensland policy document released in 2002 that explained further its policy on multiculturalism was Years 1-10 Curriculum Framework for Education Queensland Schools Policy and Guidelines: A framework for the future (http://education.qld.gov.au/public_media/reports/curriculum-framework/docs/y1_10cf.doc). This was based on QSE - 2010’s objective to develop a curriculum for the future. The Years 1-10 Curriculum Framework defined the approach to core learning and associated pedagogy, assessment and reporting for all students in State schools in Years 1-10. The paper contained policies and guidelines addressing the school curriculum plan, core learning, pedagogy, assessment, and roles and responsibilities. The Curriculum Framework "recognises and enables schools to respond to the geographical and cultural complexity and diversity of Queensland" (2002a, p. 1). One of the educational values encouraged by this report is "differentiation: a creative and flexible educational response to the needs of students (individuals and groups) places a premium on diversity, flexibility, and building the social capital of communities" (p. 3). The report directed that "the school curriculum plan will reflect diversity and respond to the educational needs of all students in school-wide and classroom practices" (Point 4). The recommended approach was for teaching strategies that would "promote intellectual quality, global and local connectedness, supportive social environments and recognition of difference" (2002a, p. 11). Moreover, it provided pedagogical guidelines for teachers and principals as:

- effective pedagogy should be implemented across all key learning and subject areas and should incorporate teaching strategies that support intellectual engagement, connectedness to the wider world, supportive classroom environments and recognition of difference (Point p) (emphasis added)
- when pedagogical practice recognises difference, it brings into play diverse cultural knowledges, makes deliberate attempts to increase the participation of all students of different backgrounds, builds a sense of community and identity and attempts to foster active citizenship in all students" (Point u) (emphasis added) (2002a, p. 10).

Also in 2002, Education Queensland released the report called CS-15: Principle of Inclusive Curriculum in Department of Education Manual (DOEM) (http://education.qld.gov.au/corporate/doem/curristu/cs-15000/sections/preface_.html). In this report, EQ detailed its current educational policy on Inclusive Curriculum. This aimed "to include, value and use as a basis for learning the perspectives, contributions and experiences of the full range of social and cultural groups, by acknowledging diversity both within and among these groups" (Point b). In addition, it aimed "to develop the knowledge, skills, attitudes and processes necessary to empower people to participate as equals" (2002b, Point c. iii). This report raised the issue of accountability by stating that "all educators must apply these principles of inclusive curriculum as a checklist to plan and review teaching practices and learning experiences for the full range of social, cultural and ability groups (Point c). This document reinforced the discursive thrust of the QSE – 2010 documents by placing cultural diversity under the umbrella of inclusive education.

Another Department of Education Manual on cultural and language diversity was released by Education Queensland in 2002. This policy was entitled the CS-16: Cultural and Language Diversity in Department of Education Manual (http://education.qld.gov.au/corporate/doem/curristu/cs-16000/sections/preface_.html). The main aims of this policy were "to recognise and value cultural and language diversity of every school ad community" (2002c, Point a), and "to address inequalities through the reshaping on the curriculum in responding to the educational needs of culturally and linguistically diverse groups and deciding on cultural learning on all students" (2002c, Point b). In acknowledging cultural and language diversity in society, EQ made a commitment to:

- the achievement of a socially-just curriculum which reflects the range of culturally and linguistically diverse groups represented in Australian society (Point a.i)
- the achievement of a socially-just curriculum which recognises the student's knowledge, experiences and perspectives as a basis for their learning and assessment (Point a.ii)
• develop students' knowledge and skills to recognize and challenge injustices that are cultural and linguistically based (Point a.v)
• develop the provision of opportunities for parents and caregivers from diverse cultural and language background to participate effectively in school processes and decision-making (Point c).

This policy reinforced the humanistic aspirations of earlier federal and state policies by focussing on equity, social justice and participation. However, other aspects of multiculturalism identified in the earlier documents such as productive diversity and social capital were not evident.

One further Education Queensland policy report relevant to multiculturalism was published also in 2002. This was called the CS-17: Anti-Racism in Department of Education Manual (DOEM) (http://education.qld.gov.au/corporate/doem/curristu/cs-17000/sections/preface_.html). This policy on anti-racism stated that EQ:
• rejects racism in all its forms, direct and indirect, overt and covert (2002d, Point a);
• values, affirms and responds to cultural and language diversity in Australian society through its curriculum, teaching and organization of schools (2002d, Point b)
• values, affirms and responds to cultural and language diversity in Australian society through all departmental policies (2002d, Point c).

Specific accountabilities for principals and staff were established in that they should: "model and promote anti-racism attitudes, language and practices" (Point a); "implement programs that address this anti-racism policy" (Point b); and "inform the school community of this policy" (Point c). A strong social justice stance was taken which was directly tied to practices in schools.

Implications for Primary school teachers and teacher educators

Adjusting to cultural change and promoting intercultural understanding are challenging topics for all members of a multicultural society (Spencer-Rodgers & McGovern, 2002). However, schools can play a major role in helping students, teachers, and the wider community to gain multicultural knowledge and acquire intercultural communication skills. The policy reports reviewed in this paper suggest some insights on how to approach the issue of multiculturalism in schools. In the Australian context, Multicultural Education is defined as "an evolving approach for reconstructing education" (Davis, Galvis, Lingatore & Premier, 2002, p. 19). The authors suggested that cooperation among staff, parents and local community is the key to create an effective Multicultural School Policy. Lifman (1988) argued, "without community involvement, understanding and acceptance, multiculturalism will fail" (p. 915). Currently, Queensland schools reflect differing levels of 'take-up' in terms of federal and state policy directions in multiculturalism. While they may be seen to be following the earlier federal values of civic duty, cultural respect, and social equity, it will be an interesting question as to how all schools and teacher educator programs interpret and enact the latest policy trends towards productive diversity which orient towards economic output, performance and accountability frameworks.

The policy analysis presented in this paper is the first phase of a concerted program of research into multicultural education. This analysis prompted researcher reflection on the following questions:

• How culturally diverse are various educational contexts? What are the challenges and opportunities for each context?
• What is their philosophy on "multiculturalism" or "cultural and linguistic diversity"?
• How is intercultural understanding promoted?
• What resources are accessed to support the implementation?
• How does the institution foster notions of Australian identity in a multicultural society?
• What is the future direction for the teaching and learning of multicultural awareness and intercultural communication?
• What are the implications for professional development and teacher education?

The second phase of this research is currently addressing these issues whilst conducting ethnographic research in Brisbane. The study is documenting examples of best practice in the enactment of multicultural education in state primary schools. The outcomes of this second phase and the policy analysis above will be two of the catalysts for an action-research project. At the end of this year, the third phase will be the development of a community-based approach to the teaching of multicultural awareness.
and intercultural communication in primary education. The outcomes of this future research will be shared in upcoming publications.

References

Using Video Stimulated Recall And Concept Mapping In Reflective Teaching Practices: Strengths, Limitations And Potential Threats

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The strengths of video stimulated recall and concept mapping as tools to assist the development of reflective skills is well documented. Video stimulated recall has been shown to be an effective tool to make explicit the beliefs and implicit theories of teachers. In this way video stimulated recall allows for the elicitation of ‘knowledge-in-action’ or interactive cognitions. Concept mapping is an effective method for assessing conceptual change. By comparing successive maps the teacher can see how their knowledge is structured in the course of acquisition. Concept maps are regarded as particularly useful for beginning teachers who seek an understanding into how their mentor teachers construct their own concept maps. Other researchers, however, point to factors that may mitigate teachers’ recall of their thoughts, while others argue that concept maps are of limited use when they are used in short term studies. In this paper the advantages of these methods for professional development are discussed. The experiences of four beginning teachers will be shared. In doing so, the possible threats that might be associated with their use will be considered.

Introduction

This paper is a continuation of “Providing a space for professional growth through research” (Reitano & Sim, 2004) presented at the ATEA Conference in Bathurst, New South Wales, Australia. The potential of video stimulated recall (VSR) and concept mapping and accompanying Think Aloud Protocols (TAP) in educational research was discussed as a way of providing professional developments for participants. The paper used the research of Clarke and Hollingworth (1994; 2002) to argue that effective professional development should be based on a coherent theory of learning that takes into account the "social situatedness" of teachers' work (Clarke & Hollingworth, 2002, p. 955). Strategies used in this type of professional development are therefore incorporated into the teacher's own professional world of practice, which involves changing both teacher knowledge and teacher practice in what Clarke and Hollingworth (2002) call an "interconnected model" of professional growth (p. 951).

These methods were used in a longitudinal study dating 2002 and 2003, of ten beginning social science teachers as they moved from their final year of teacher preparation to their first year of teaching (Reitano, 2004). Reitano and Sim (2004) proposed that the research tools used in the longitudinal study can be powerful tools enabling teachers to examine, reflect and suggest changes to their professional knowledge that would take into account the significance of the "social situatedness" of their practice. This paper examines the strengths and limitations of these research tools. The experiences of four beginning teachers will be shared. In doing so, the possible threats to teachers' professional growth that may be associated with their use will be considered.

Video stimulated recall

Video stimulated recall is used being more often in educational research and professional development of teachers. This section of the paper reviews the strengths associated with this technique as an instrument for capturing teachers' interactive cognitions.

Strengths

During the teaching process in the classroom the teachers' goals may remain constant or may vary, and their purposes and intentions towards the lesson may change depending on how they interact with their students, and how students respond to teachers (Calderhead, 1981). No matter how sophisticated an observer's checklist, the evidence presented to the teacher by the observer will not contain evidence of how that teacher made decisions, thought about what he/she was doing in the classroom, and the nature
of the complex environment in which he/she must perform (Wojcik, 1993). There is little evidence to show that interactional analysis of interviews between observer and participant is an effective tool in disclosing the interactive decision making of teachers-in-action (Meade & McMeniman, 1991). In this sense, the use of interview data cannot adequately recreate the teaching context and can be unreliable in terms of eliciting a teacher’s reasoning. While a think aloud protocol, which involves an explanation of metacognitive thoughts would be, on most occasions, an appropriate method to use when studying an individual’s interactive thoughts, this is not possible at the same time as teachers are engaging in the complex and entangled environment of the classroom (Meijer, Beijaard, & Verloop, 2002).

For these reasons, video stimulated recall is an effective technique for identifying and examining teachers’ thoughts and decisions, and the reasons for acting as they do. Pirie (1996) argues that video stimulated recall is the least intrusive and yet the most inclusive way of studying classroom phenomena. It allows the teacher to ‘relive’ an episode of teaching by providing, in retrospect, an accurate verbalised account of his/her thought processes (Calderhead, 1981). Furthermore, videotapes give the teacher more time to reflect on classroom events and look for answers (Pirie, 1996). In short, video stimulated recall allows teachers to reflect and revisit recorded scenes at anytime; the videotapes can be examined to gather further specific evidence when necessary; it allows the teachers to decide for themselves what they want to focus on; and, others - critical friends - can watch episodes and make suggestions (Pirie, 1996). Importantly, teachers can be the ones who are in control of stopping the tape at any time when they see themselves making a decision, describe what they were doing at that time, what alternatives they had considered and what they decided (Beyerbach, 1989; Marland, 1984).

Limitations

The limitations of video stimulated recall are both affective and cognitive. At the extreme level, researchers report that teachers viewing a videotape of their lessons may find the experience highly stressful (Fuller & Manning, 1973) and may negate teachers’ preparedness to report on what they have recalled (Pirie, 1996). Other research indicates that teachers watching videotapes of their lessons may initially be distracted by their own physical appearance. Pirie (1996) allowed for “giggle-time” or “pre-viewing” for her students in order to deal with their embarrassment before being asked to comment on portions of the videotape.

Teachers’ interactive cognitions are not always retrievable and therefore may be difficult, if not impossible to recall retrospectively. Meijer et al. (2002) cite the research of Anderson (1987) and Berliner (1992) who state that experienced teachers tend to “compile” their thinking, resulting in routine sets of behaviours which may prevent them from making explicit their interactive cognitions and therefore, making their verbal responses of their interactive thinking incomplete. Furthermore, teachers who view their videotapes from an already formed mindset just described will not be able to view the classroom objectively (Pirie, 1996).

Calderhead (1981) refers to the “tacit knowledge” that has been built up through experience and is not readily available for spontaneous verbalization. In fact, some areas of a person’s knowledge have never been verbalised and therefore, may not be elicited in a verbal form in a video stimulated recall interview. Calderhead identifies experienced teachers especially as reaching a state of “automatization” whereby certain low level behaviours have become an automatic part of teachers’ daily lives may not explicated, because they are not aware of them.

Even though video stimulated recall appears to have a number of shortcomings, its potential strengths as a professional development tool is clear: teachers are able to relive their classroom experience, to critically reflect, and hence make explicit their implicit understandings of their teaching practice. Concept mapping, along with think aloud protocol, is another tool that teachers can use to enhance professional growth by visually representing their knowledge structures at different points in time.

Concept mapping

Concept mapping is also a tool that is used in professional development and in research. The accompanying think aloud protocol provides an extra dimension to the knowledge structure of the concept map. This section of the paper is concerned with the strengths of this technique as a means of eliciting the ‘what’ and ‘why’ of teaching.

Strengths

Most human beings have poor memories when it comes to recall specific details of information, but their recall of specific visual images is extraordinary (Novak & Gowin, 1999). Concept maps, then, are an
effective way to visualize concepts and the linkages between them. As Rye and Rubba (1998) note, the concept map is a "... graphic metacognitive tool which provides external representations of structural knowledge - a visual image of a two dimensional semantic network" (p. 522). It also allows people "... to make explicit their views about how different concepts are related and why certain links are more or less valid" (Prawat, 1989, p. 11). Furthermore, the concept map has the potential to develop working memory; encourage critical thinking; and, increase recall of knowledge held in the long term memory (Rye & Rubba, 1998). A part from helping to make evident the key concepts to be learned, the concept map can also establish linkages between new knowledge and what has already been learnt (Novak & Gowin, 1999).

The concept map is intended to reveal the knowledge representations of its author rather than the reproduction of facts (Jonassen, Reeves, Hong, Harvey, & Peters, 1997). The construction of a concept map, then, is unique to the author, "... reflecting his/her experiences, beliefs and biases in addition to his/her understanding of a topic" (Kinchin, Hay, & Adams, 2000, p. 44). As Novak (1990b) stated, "... the primary benefit of concept maps accrues to the person who constructs the maps" (p. 37).

When ‘Think Aloud Protocols’ (TAPs) (Ericsson & Smith, 1996) are used in conjunction with the concept map diagram the author is externalising and elaborating his/her understandings and reasons for the selection of concepts (Rye & Rubba, 1998). Gordon, Schmierer and Gill (1993) have shown that the use of interview questions during the construction of concept maps allows for greater understanding of knowledge structures. It may encourage greater reflection on what they know and what they say and therefore encourage further recall and elaboration (Wandersee, Mintzes & Novak, 1994).

**Limitations**

Not all learners will be comfortable with a visual image of their learning, and may prefer to explain or extrapolate their knowledge structures in other ways. Gardner (2002) suggested that there are multiple intelligences rather than one single capacity. People have different cognitive strengths. He proposed eight intelligences, one of which "spatial" - the capacity to perceive visual information and to transform or modify this information and create new visual images. Learners who lack "spatial" intelligence will therefore not respond to concept mapping because it requires them to recreate a visual image of their understanding of hierarchies and linkages of concepts on a map.

Teachers may also have difficulties engaging in think aloud protocol when they are at the same time constructing their concept maps and reflecting on their thinking. Either metacognition will prove impossible, or the act of engaging in think aloud protocol will be in some way changed (Ericson & Simon, 1996). Pirie (1996) cites the work of Phelan (1965) who argues that there may be occasions when the concept has been accessed but is not available for verbalization. Furthermore, incorrect verbalizations may somehow askew the concept, or a recently formed concept may be lost in favour of the verbalised version, and in the worst case scenario, a concept in the embryonic stage could be destroyed by the unsuccessful attempt to verbalise it (Phelan, 1965, in Pirie, 1996, p. 9). The significance of these findings is that there may be some teachers who may not be able to participate in a professional development program that requires them to construct concept maps and simultaneously engage in think aloud protocol. The following responses from a questionnaire indicate where respondents saw the strengths and limitations of video stimulated recall and concept mapping.

**Four teachers’ early career views on their experiences and impact on professional growth**

In February 2005, the author surveyed Jane, Isabella, Lara, and Emily about the value of video stimulated recall and concept mapping in their professional growth. However, the author decided that it would be also valuable to send the questionnaire to other participants who participated in the study (Reitano, 2004). Three of the participants, by this time, had taken up teaching positions overseas, while the other three were teaching in north Queensland. Only one of the teachers in north Queensland responded to the questionnaire. Four teachers responded to the questionnaire. The responses to the first question, “Do you think video stimulated recall (VSR) is a useful tool in helping teachers critically reflect on their teaching?”, was positive. Answers ranged from "Yes" to "Absolutely" and "Yes, most definitely". Asked to explain why, the respondents answered in the following ways:

- It is great to have a visual representation of your teaching that shows how you respond to students your teaching. You are able to comment and reflect on everything that happens in the classroom as you see it happening. It also jogs your memory. (Isabella)
- I am a very visual person so VSR helped me in my teaching by allowing me to ‘see’ my strengths and weaknesses. (Lara)
For the first time I saw both my ability to ‘perform’ as a teacher and was able to see many ways I could improve my practice. (Emily)

We often reflect on a lesson based on our teaching/learning behaviour strategies we have planned for - but fail to identify what ‘really’ happens in a classroom, that is, teacher instructions/ seating/ modelling. VSR showed me ‘other’ parts of my teaching experience and helped me improve. (Jane)

However, Lara felt that just doing two video stimulated recall interviews in a twelve month period was not sufficient enough to give her an insight into changes in her teaching. Emily said that a ‘third party’ such as a senior teacher would have been helpful to point out the “... good or bad about my methods”.

All respondents identified some general limitations in video stimulated recall, such as the presence of a video camera in the classroom. Emily said that “... students were aware of the taping and their behaviours were not typical on a normal teaching day”, while Isabella explained that the video camera cannot

... capture the real situation in the classroom as everyone in the room is aware of the camera. For example, during the videotaping of my lesson I don't feel that students acted entirely as they normally would. I also feel that I was very aware of the videotape and didn't act as normally as I should.

Lara's concern about the general limitations of video stimulated recall was twofold: first, "... VSR was too soon - straight after the lesson... needed time for reflection"; and, second,

Perhaps VSR without the researcher present - may have seen more insightful comments... a little intimidating with an experienced educator present - you don't want to lose face.

Jane said that a list of cues that focused on behaviour, procedures, explanations, and strategies would have been preferable, rather than having the decision when to respond left to her – as was the case in Reitano's (2004) doctoral study.

With the exception of Emily, who preferred the spontaneity of video stimulated recall and concept mapping - “I liked the fact that it was an exploratory activity for myself”, others felt that it was important to be given some background knowledge and training in the use of these tools. For example, Isabella said that participants in a study such as the one she participated in should be given an "... idea behind concept mapping; the overall picture you are trying to obtain", while Lara stated that she had

... been taught (and I teach my kids as a result) that one should present information in a manner that makes meaning for them. As a result, some training/background knowledge is necessary to produce a meaningful concept map.

Jane agreed. She said that

... all learners come to this situation with a range of skills and experiences. It would be beneficial to ensure the participant has some training in the procedure they are about to undertake (so they know what the expectations are)

Apart from Emily who felt that think aloud protocol was a matter of "... chatting my ideas with Paul...", Isabella felt that this method of collecting data "... can be difficult as I am not used to saying everything that I am thinking". Lara spoke of the difficulty to "... judge how much (or little) the researcher wanted you to comment on. Difficult to discuss one's thought processes aloud". Jane said she "... wasn't sure exactly what I should be explaining or how much detail to give. In my second 'think aloud' I was very conscious of 'speaking too much', so I was fairly reserved”.

All respondents said that the third concept map was the easiest to do. For example, Lara said that "... by the [time I did the] last concept map I had more experience and knew the expectations of the researcher". Emily did not see any general weaknesses in concept mapping as a learning tool. Jane said that the concept map "... allows the participant to provide elaborations on basic answers", but Lara found it "Restrictive - couldn't write more information in explanation (I'd rather write than [engage in] TAP)", while Isabella said that it was "... very difficult to put everything down into a concept map and link it altogether".

Despite the issues raised about video stimulated recall respondents felt that it would be a useful tool in teacher professional growth. Isabella, however, gave qualified support for the use of VSR in professional development. She said that

It would be a valuable as it would allow teachers to share ideas, but I can’t see that teachers would be willing to watch and discuss videos of their teaching. They would see it as an intrusion and most teachers would be so embarrassed, it would be difficult for the activity to be constructive. (Isabella)
Others were more forthright in their support for the use of this tool in professional development:

As a new teacher unsure of 'how-you-are-going' when in action in the classroom, these sessions allow us to
review, alter, and change our methods so we can work more effectively as teachers. It's now great to go back
and look at those tapes and see how much your methods have changed for the better. (Emily)

I believe that this activity would be very beneficial if you have a panel that can give advice/highlight strengths
and weaknesses that the individual cannot see (too close to the project/bias). This will work, providing it is
done in a supportive environment as some teachers can become defensive when questioned about their
practices. They need to realise that it is not a personal attack (for example, I have seen this between educators
who have taught for many, many years). (Lara)

Constructive criticism from a variety of viewpoints [that] promotes personal development and encourages
teachers to be more reflective. It is a valuable to [help one] become a reflective teacher. While it is
'confronting', reflecting on your own teaching is very beneficial. (Jane)

Whilst the respondents have taken issue with aspects of both video stimulated recall and concept
mapping, the overall response to these tools to their early professional growth has been positive. The
responses to the questionnaire also indicate that video stimulated recall is less problematic than concept
mapping, that is, there were fewer criticisms about the mechanics of using the tool and its use in learning
in terms of the reflective practices.

Conclusion
More than a century ago, Dewey suggested the need for an intervention program in the learning to teach
processes that would facilitate the development of student teachers' knowledge in action. Dewey said that
preservice teachers should be involved actively in the reflective inquiry process in order to understand
refers to as a "...meaning-making process that moves a learner from one experience into the next with
deeper understanding..." (p. 845) of the relationships and connections with other experiences. Reflection
is a disciplined way of thinking that needs to happen in interaction with others, and it requires an attitude
that values "...the personal and intellectual growth of oneself and of others" (Rodgers, 2002, p. 845). It
involves "reviewing, reconstructing, re-enacting and critically analysing one's own and the class's
performance, and grounding explanation in evidence" (Shulman, 1987, p. 15). In the main, video
stimulated recall and concept mapping has been shown to be a most effective tool for early career teachers
to reflect on their knowledge in action and to promote professional growth. The next stage of the
investigation is to determine how accomplished teachers respond to using such tools in professional
development activities.

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Appendix

SURVEY

Paul Reitano

Video stimulated recall and concept mapping

NAME: ________________________________________________________________

Do you think that video stimulated recall (VSR) is a useful tool in helping teachers critically reflect on their teaching?

______________________________________________________________________

If your answer was 'yes', please explain how VSR helped you in your teaching.

______________________________________________________________________

______________________________________________________________________

If you answered 'no', please explain why.

______________________________________________________________________

______________________________________________________________________

Can you suggest other ways of doing the VSR that would have helped you during this study?

______________________________________________________________________

______________________________________________________________________

Do you see any general weaknesses in VSR? If your answer was 'yes', in what way?

______________________________________________________________________

______________________________________________________________________

Do you think that participants in a study like the one you participated in requires training in using these tools, especially concept mapping? If your answer was 'yes', what sort of training/background knowledge, and for how long?

______________________________________________________________________

______________________________________________________________________

Did you have any difficulties in engaging in think aloud protocol (TAP) as you constructed your map? If your answer was 'yes', please explain how and why.

______________________________________________________________________

______________________________________________________________________

Can you suggest an alternate method of using TAP when constructing a concept map?

______________________________________________________________________

______________________________________________________________________
Paul Reitano

Did you find it easier to construct your third/final concept map? Why or why not?

Do you see any general weaknesses in concept mapping as a tool for learning?

The use of videotapes in which groups of teachers watch and discuss episodes of their classroom teaching has been shown to be a useful tool in professional development. What value do you see in this sort of activity?

Any other comments you would like to make about video stimulated recall and concept mapping?

THE END

Thank you for participation in this survey!
Providing A Space For Professional Growth Through Research

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Our interest in this paper is to explore the potential for particular data gathering tools used in educational research to provide opportunities for the professional development of participants. The particular methods are video stimulated recall (VSR), concept mapping and accompanying Think Aloud Protocols (TAPs). These methods were used in a longitudinal study of ten novice social science teachers as they moved from their final year of teacher preparation to their first year of teaching. As with most educational research the impact of the researcher can never be underestimated. It is not always the case that participants experience positive outcomes of the research process. The findings of this study do suggest that the methodologies used to gather data did have a valuable role in the knowledge growth of these novice teachers. In this sense these methods may have implications as professional development tools.

The relationship between educational research and practice

Researchers such as Richardson (1994) and Skhedi (1998) have identified that many teachers judge educational research as too removed from everyday classroom practice and dismissive of practical knowledge. This is despite the fact that one of the major purposes for conducting educational research is to contribute to our understandings of what teachers and learners do during the process of learning and what this means potentially for the education of teachers (Dewey, 1974). As Richardson (1994, p. 5) explains, "research on the practice of teaching has recently shifted from a focus on effective behaviors toward ... understanding how teachers make sense of teaching and learning".

A national study conducted in Australia in 1999 investigated the impact of educational research on practice. This report looked at the extent to which teachers' practices were affected by the findings of research. McMeniman et al. (2000) contributed to the study by investigating the issue of the theory-practice 'gap'. In doing so, these researchers implemented video-stimulated recall and concept mapping as major tools to elicit from experienced teachers the extent and ways that research influenced their practice. The evidence gathered through these data gathering tools provided a depth of insight into teachers' knowledge in action.

These data gathering methods because the researchers were aware of the importance of the accurately representing the complex pedagogical knowledge teachers draw on to teach. As Puttnam and Borko (2000) argue 'as researchers trying to understand what teachers know and how they learn we must be particularly attentive to the support and guidance that we provide' (p. 13). An important outcome of the McMeniman et al. study (2000) was that the participants became very involved in examining their practice through the use of the video of their teaching. Thus the information they shared with the researchers not only informed the study but informed them also.

This therefore leads to consideration of the potential for such tools in the professional growth of teachers. Literature in the area of teacher change or growth is substantial. In particular the research of Clarke and Hollingsworth (1994; 2002) is used as a basis for the proposal put forward in this paper.

Professional development

Clarke and Hollingsworth (1994) suggested a number of interpretations for "teacher change", each linked with a particular perspective on professional development. One perspective is of significance to the purpose of this paper in arguing for particular strategies that would provide for professional growth. This perspective— change as growth or learning— relates to the notion of a community of practice: "teachers are themselves learners working in a learning community" (Clarke & Hollingsworth, 2002, p. 948).
Research studies in professional development have criticised the professional development activities of the past that consisted in the main of one off workshops focusing on particular skills and knowledge. Their failure is well documented as Clarke and Hollingsworth (2002) testify. Therefore the complexity of professional growth for change is now strongly represented. The argument presented by research over recent years is that to be effective, professional development needs to be based upon a coherent theory of learning that takes into account the “social situatedness” of teachers' work (Clarke & Hollingsworth, 2002, p. 955). In this way, the nature of the individual teacher's professional world of practice is incorporated in the strategies used for professional development. The focus of inservice cannot be about either changing teacher knowledge or changing teacher practices. These are inextricably linked. As a consequence Clarke & Hollingsworth (2002) present what they term an “interconnected model” of professional growth (p. 951).

Establishing and maintaining an effective professional development approach by schools should be a priority. Current policy developments in Australia at both national and state level reflect overseas trends of establishing professional standards for teachers that would be used for evaluative purposes. In Queensland, discussion by State education officers is now focussing on how teachers might demonstrate their achievement of these standards. This has led to increased debate over professional development provision that enables teachers to develop evidence of their growth. Both initial teacher education programs and inservice professional development programs are influenced by this development.

The role of the teacher educator is one of mediation between the theoretical research literature and the practice experiences of beginning teachers and experienced practitioners. In attempting to pull theory and practice together, ‘reflective practice’ has become an integral part of the discourse of teacher education. However, as a ‘standard’, this can be difficult for teachers to develop and to demonstrate. Nearly twenty years ago, Zeichner and Liston (1986) investigated the incorporation of “reflective” teaching into five components of the teacher education curricular. They recognised then the difficulties and impediments caused by the complexity of teacher education.

If professional development plans were the approach taken to teacher inservice, and were based on an interconnected model of professional growth, how might a teacher be guided and have personal input into the personal plan, and gather evidence of teaching? In this paper we propose that the research tools used by the one of the authors in a longitudinal study on professional growth of novice teachers could address this question. In the following section three case studies are briefly presented to demonstrate the ways in which videostimulated recall and concept mapping can be powerful tools for teachers to examine, reflect, propose changes and gather evidence of their professional knowledge and growth, that will also take in to account the significance of the 'social situatedness' of their practice.

The study
The study reported here was a longitudinal study conducted in 2003 on the knowledge growth of ten novice secondary social science teachers. Three sets of data were elicited during the phases of the study: at the end of the first semester; in their final year of preservice preparation; at the conclusion of that year; and after six months of independent teaching.

This study sought to identify trends in the development of knowledge of ten novice teachers as they progressed from preservice to inservice teaching by establishing a profile of each participant with a specific focus on pedagogical content knowledge. Research by Shulman (1987) informed the framework for the Study. He investigated through a "portrait" of teaching expertise, asking the question:

What does Nancy believe, understand, and know how to do that permits her to teach as she does? Can others be prepared to teach with such skills? (Shulman, 1987, p. 8)

Shulman concluded that Nancy possessed a body of knowledge that included not only content, curriculum, learners, contexts, values and purposes, but a unique body of knowledge, pedagogical content knowledge that is the “province of teachers, their own special form of professional understanding” (p. 8). He argued that pedagogical content knowledge should be an integral part of teacher education because "... it identifies the distinctive bodies of knowledge for teaching" (p. 8).

Shulman’s knowledge base of teaching provides meaningful categories that can be identified using a number of data collection methods:

- General pedagogical knowledge (GPK) incorporating behaviour management (BM), teaching strategies (TS), classroom communication (CC), personal beliefs (PB);
- Content knowledge (CK);
- Curriculum knowledge (Curr K);
- Knowledge of learners and learning (KLL);
- Knowledge of educational contexts (K of Ed Con);
- Knowledge of educational ends, goals, purposes and values (EEGPV); and,
- Pedagogical content knowledge (PCK).

Other frameworks for investigation were considered, such as 'productive pedagogies' (The Queensland School Reform Longitudinal Study, 2001), the novice/expert model (Dreyfus & Dreyfus, 1986), and Sternberg and Horvath's (1995) prototype of teaching. However, Shulman's (1987) research approach to distinguishing the knowledge base of teaching was determined to be more suited to the focus of this study on the interconnectedness between knowledge and pedagogy as represented by the growth of pedagogical content knowledge.

It has been argued by some researchers (Sosniak, 1999; Beynon & Geddis, 1992; Turner-Bisset, 1997) that it is difficult for initial teacher education programs to achieve the development of pedagogical content knowledge in novice teachers. In fact, Turner-Bisset (1997) linked the acquisition of pedagogical content knowledge to experience suggesting it takes years to develop. One finding of this study suggests that if particular methods of professional development are incorporated into teacher programs it is possible for early career teachers to have a strong sense of pedagogical content knowledge.

As this study progressed, the methodology for gathering evidence of the complexities of the knowledge needed to teach, the question emerged: to what extent did this research methodology also become a professional development opportunity? In responding to this question an effective, on-site approach to professional development is proposed.

The methodology

Videostimulated recall

Videostimulated recall is a term used to denote a variety of techniques, usually involving making audiotapes and videotapes of skilled behaviour, which are then used to help participants recall their thoughts at the time of that behaviour. Video stimulated recall has been used to investigate a range of thought processes including teachers' decision making, teachers' cognitive beliefs, preservice teachers' personal theories of teaching, preservice teachers as reflective practitioners, and sources of teachers' knowledge. This tool was used twice during the twelve months of the study.

Each time, the researcher arranged with participants to videotape one of their lessons, usually just before lunch break or on the last period of the day, so the thoughts of the lessons were still fresh in their minds for the video stimulated recall interviews. Review of the videotape took place as soon as possible after the lesson either in the participants' classroom, the school library or somewhere quiet in the school. The interviews were audiotaped, the transcription of which formed the basis for analysis. The interviews were unstructured, using Nespor's (1985, p. 204) technique, "... would you like to stop the tape when you see yourself making a decision and tell me what you were thinking at that point". At the conclusion of each recall session, the participant and researcher would engage in a discussion about his/her classroom teaching, a form of debriefing and feedback on the experience of the participant. The interviews were then transcribed and categorized by the researcher according to Shulman's categories of knowledge for teaching. Each commentary within a transcript was assigned one or multiple knowledge categories depending on the nature of the commentary. For example, pedagogical content knowledge was assigned when the commentary satisfied Shulman's definition of reworking content knowledge that was pedagogically accurate and "... adaptive to the variations in ability and backgrounds presented by students" (p. 15). Participants in this study used a range of key words and phrases, such as 'clarifying', 'unpacking', 'bridging the gap', 'connecting ideas', 'modelling', and 'linking ideas', to describe how they sought to transform their knowledge for student understanding.

Concept mapping

Concept mapping is an effective method for researchers wishing to examine teachers' conceptual change because it gives an insight into how they construct their concepts and by comparing successive concept maps the researcher can see how knowledge is structured in the course of acquisition (Cary, 1986; Markow & Lonning, 1998). The concept map is a schematic device that provides an external representation of structural knowledge (Novak & Gowin, 1984). In other words,

Concept maps allow people to make explicit their views about how different concepts are related and why certain links are more or less valid (Prawat, 1989, p. 11)

Studies have already shown that student teachers have found concept mapping useful because (a) the instrument was able to elicit thoughts behind their mentor teachers' teaching; (b) student teachers found
the concept mapping exercise useful to reflect about their teaching; and (c) they found they were able to make useful comparisons between their mentors' and their own maps (Meijer, Zanting & Verloop, 2002).

In this study, this tool was used three times with the participants over twelve months. Each time, after participants had written down as many concepts they could think of and rearranged them into a hierarchy, the researcher turned on the audiotape and asked participants to 'think aloud' their reasons for using such concepts and the reasons for their location within the map. At the end of each concept mapping activity, the researcher and participant discussed the structure of the completed map, and in the case of their second and third concept maps, participants were allowed to peruse and reflect on their previous efforts. The concepts were also then categorized by the researcher according to Shulman's knowledge base of teaching.

Both techniques are integral to this paper. In considering the potential of these research tools as professional development strategies the important factor is that the study was longitudinal.

Connecting knowledge and practice for professional growth

In this section data from the study is examined to demonstrate that through the use of the data gathering tools, it is possible to propose that participants' professional growth is facilitated. Three case studies from the research are used. As explained all participants were in the last six months of their teacher preparation when they first had a lesson videotaped and were interviewed using that videotape. This was followed by each student providing a Think Aloud Protocol (TAP) while completing a concept map that represented his or her understandings of what constituted effective social science teaching. Six months after this first episode of data gathering, the researcher returned to the student teacher and a second concept map and TAP were completed. Once the teachers graduated and were placed in a school as a full time professional, the researcher returned for the final data gathering session - six months from the time of appointment. This included a videostimulated recall episode, followed by the third concept map and TAP. For all participants, the researchers found that over the twelve-month period of the study, the conceptual structures of all participants indicated both consistency and change. For the purpose of this paper the tools used to gather data are focussed on as a means to continue the teacher's professional growth.

Case study one: Johannes

From the first data gathered, Johannes was strongly focused on pedagogical content knowledge (PCK). This continued throughout the study. From his interviews relating to the videos of his teaching and from his three concept maps, the data shows a strong personal understanding of the knowledge needed teaching the social sciences. This is evident from the first data-gathering episode six months before he graduated. He had limited practicum experience.

Thus as Johannes watched himself for the first time teaching a lesson, he responded to what he saw in the following ways:

... trying to unpack the terminology in the standards... and relate it to the actual learning
... I'm trying to bridge that gap... we're talking bridges all the time
... between the formal written standards and the classroom language... (VSR 1, p. 2)

So as a student teacher, six months from graduating, the evidence demonstrated that Johannes identified the significance of knowing how to connect what to teach with his actions as a teacher. Immediately following this interview he completed his first concept map on this very aspect. This map demonstrated that Johannes had developed a conceptual structure of teaching that already incorporated Shulman's category of pedagogical content knowledge (PCK).

His first Think Aloud Protocol indicated his understanding of PCK (TAP 1, p. 2)

... PCK becomes that real art of knowing... having the disciplinary knowledge... through you academic studies... and then studying pedagogy in teaching studies ... finding that way of melding the two into something that is really appropriate and relevant to students...

Six months later, data is gathered this time only using the concept mapping technique and its TAP. Johannes has completed his course work and is about to graduate. The researcher found a continuity in Johannes's explanations of effective teaching. Pedagogical content knowledge is referred to:

... the ability of the teacher to take that disciplinary knowledge that you have learnt through ... either through academic experience or professional experience... and relate it to students that is useful to students (TAP2, p. 5)
He emphasises that for effective social science teaching, he views the overarching principle as...

...getting away from the transmissive model... the focus is away from the teacher as imparter of knowledge and students are deemed best to learn... among themselves... and the most valuable knowledge is that which they can construct among themselves...

In the final data-gathering episode, six months of full-time teaching had passed. A second video-stimulated recall session was used, together with the third concept map and TAP. Johannes continued to focus on 'bridging' that gap between his content knowledge and student understanding. What is emerging though is his growing awareness of the complexities of interconnecting theory and practice. Johannes explains a particular event in his video to the researcher,

Having those prior conceptions challenged just enough... to cause conflict... but not so much that... that it's totally foreign or disjointed... from our prior knowledge ... If you remind them of something in their everyday experiences... they are more likely to remember the abstract concepts... (VSR 2)

This continues in his TAP

... make the student aware of that (their existing knowledge) ... then provide learning experiences that challenge students to move a little further outside that circle of knowledge that they are actually at... (TAP 3, p. 328)

Here is evidence of significant reflection. It is possibly a conscious link by Johannes between theory—Vygotsian proximinal zone (Wertsch, 1979) encountered during teacher preparation—and what it can mean in practice.

The authors recognised from the first meeting with Johannes his well-developed personal practical theory of teaching, which included a strong understanding of the significance of Shulman's 'pedagogical content knowledge'. The data gathered over time provided the researchers with further evidence of his ability to consistently connect knowledge about teaching with actual practice. The opportunities presented by having videos of his teaching, examining them, and talking it through with another educator, led Johannes to revisit his beliefs and attitudes. There is evidence of changes through his elaborations.

At the point of leaving the data gathering with Johannes some findings supported the literature on novice teachers—their major preoccupations with behaviour management and content knowledge. Significant to Johannes however was the sophisticated links he made between these two aspects and pedagogy.

Case study two: Antonio

Antonio's development throughout the three data collection phases indicated a growing sophistication of his teaching practices. He showed in his first video-stimulated recall that teacher modelling and having students engage in collaborative learning were important aspects of his teaching.

... I started to do map reading skills... like you've got the substation... let's follow the substation... the electrical lines... to find where the other two are... Bridges... we follow the river... and there's your bridge... which students picked up on... Some students were feeding off each other... So... in that respect... they are having an idea of the workings of the group work... cooperative... (VSR 1, p. 2)

Antonio's thoughts about teaching practice at the second data collection point reveal a concern for content that links with context because

... if it's a predominantly female class... you know... looking at the Roman Empire... we might look at the Roman Empire through the eyes of women... So... to find that right approach ... (TAP 2, p. 3)

The authors noted a stronger presence of pedagogical content knowledge in Antonio's teaching practice at the third point of the data collection. At this point he held a teaching position in a large regional mining town, some considerable distance from the coast. One of the topics he had to teach in an integrated social science class was coastal landforms. Antonio had applied some significant pedagogical content knowledge to assist the students to understand what was for them quite an unfamiliar landscape. For example Antonio spoke about his use of visual representation and explanation to describe the action of waves by using a piece of rope to indicate a

... whip motion on the table... see the little bump... on the rope kind of move down the rope... and the class to discuss what the rope is moving... (VSR 2, p. 3)

Antonio drew upon the local area to explain and show students what a 'stack' along a coastal landform looked like. On watching this event on video he explained to the researcher
If you use an analogy like that...they can see...they look out the window...and they can see the chimney...So...literally it is in their world that you are linking...so if you can draw upon the real life experiences...that they can actually touch and see...that works well for them...

Antonio's other teaching area of drama was a significant factor in his ability to create a choreographed version of the action of waves on beaches in ways that students could relate to. The central character in the story was "Joe", a pebble. Antonio explained to the researcher as he watched himself on the video:

...gets picked up by the water...and gets pushed down the beach...and from there I create this big melodrama about why Joe moved down...because Josephine cheated on a sand pebble...So...now when I say "long shore drift"...they say..."Yep...Joe"...getting in his car...he runs out of fuel...which is why he goes back down...and gets more fuel...and then another wave hits it...and so forth...So now...they've got this little...Joe in a car...that's what welded them...VSR 2, p. 4)

Six months into his teaching practice, Antonio was keen to portray an image, as part of his educational ends, goals, purposes and values, as a teacher who cared about his students and wanted them to set goals that went beyond the classroom. He said that it was imperative that as a teacher, you

...let them know why you are here...and why they are here...and I think that honesty is...to show them that you really...authentically...and which I do...honestly say to them..."Well...I'm here because...I want you to do something greater than just go grade 10 or 12..." (TAP 3, p. 4)

Antonio stressed the importance of being "...emotionally in control..." and "...not fall into spiral..." but maintain a form of classroom communication that

...at least shows them you are in control...even though on the inside...I mean...I've gone to the staffroom...and punched the cabinet...because I need to vent this immense energy of pain these kids are giving me...an insanely hard class...I've been dealt a pretty raw deal with them...Most of them are pretty good kids...they're just hard to teach..." (TAP 3, p. 2)

He also spoke of being realistic in following through with disciplinary measures, especially when giving out lengthy detentions that students may have to do during the lunch hour, because "...I am going to lose all my lunch hours and preparation time because I've got to keep an eye on him in detention...". His behaviour management strategies also included informing students of

...what I expect from them...what they expect of me...I said to them...this school has four principles that they go on...safety...respect...learning...support...We did the whole discussion..."What is safety in the class"?...They say..."You don't throw...pens...you don't throw chairs...you don't swing off fans"...a bit of fun...And then I actually put little posters on the wall...saying..."This is what we have agreed upon..." (TAP 3, p. 7)

All of these comments on behaviour management express an examination of his practice and provide evidence for him of his ongoing growth in this area of his teaching. Both the TAP associated with concept maps, as well as the talks with the videos, provided Antonio with important insights about himself as teacher, now and for the future

Case study three: Winona

As with the previous two cases, Winona's conceptual structure indicates a consistent focus of pedagogical content knowledge in her teaching. For example, in relation to a history class she had taught, Winona was aware of the importance of relating the topic to her students:

...look at child labour...in medieval times...and talk about whether that was the right thing to do...and why child labour is not practised today...in Australia...so it's drawing something out of history... (TAP 1, p. 2)

Video stimulated recall commentaries at the first data collection indicated a preference for learner-centred teaching approaches where students were given activities that reflected her understanding of constructivist theory. She explained her videotaped actions as she watched them:

...students are given the information...and construct their own meaning...from that. Now...as a teacher...I have provided a lot of scaffolding...I don't stand out the front and tell them very much at all...about what Ramses II did. It's in the information...and their partner in collaborative work...allows them to feed off each other's knowledge... (VSR 1, p. 4)
Winona's conceptual structure at the first point of the data collection indicated a strong emphasis on classroom communication. She spoke of the importance of establishing a particular type of learning environment:

... kids know they can trust me... that they can respect me... and that they can have positive relationships with each other... and that they are actually loved in my classroom... without that... I would not enjoy my job... (TAP 1, p. 3)

Winona's focus on strengthening her personal relationships with students at every opportunity were evidenced in the video, and her explanation of the taped events:

... walking around... with the 3D thing... making good use of one-to-one time... and I'm trying to connect with students... as they got the glasses on... I'm holding the book... so you'll see with basically every student... I moved the picture around and held it up to their noses... and just smiled at the kids... I'm setting up good relationships... (VSR 1, p. 2)

Her comments on behaviour management at the first stage of the data collection, like classroom communication, expressed sound theoretical understandings. She said that effective behaviour management is based on

... good school policy... the whole school... all the students understand this... explicitness... for teachers and students understanding... and processes that policy that follows... a good policy... is a forward... responsible... thinking program... and that's great... the kids know it works... (TAP 1, p. 4)

After six months of teaching her experiences had caused her to have uncertainties about her beliefs on effective behaviour management strategies. It is at this point that the dialogue with the visiting researcher using the concept map tool could be seen as occurring at a crucial time in her professional growth. Her commentary reflected an emerging self-awareness.

... in my mind... I had a concept of how students should act in the classroom... I just thought this would come naturally... I had a concept of appropriate behaviour and inappropriate behaviour... I found that I... made a lot of mistakes in the classroom... I used to be really reactive... I would get angry... I was furious that people would do that in my classroom... and then I realized that was a very unrealistic attitude to have in the classroom... (TAP 2, p. 7)

Six months later, the uncertainties were no longer evident. Winona expressed few concerns about behaviour management. Her comments were positive rather than negative. For example she described one class as

... a real dream to teach... they get on so well with me... there is no real need to discipline the students... (VSR 2, p. 3)

In fact, Winona spoke of her class as "... a really supportive classroom..." and one in which she seemed to be in total harmony. For example, she asked them

... if they would mind if I spoke while they were copying it down... and they said that it would be irritating... they could not do both at once... so I complied with that one... (VSR 2, p. 3)

After 12 months of independent practice, Winona continued to show her knowledge in action of Shulman's research about teachers amalgamating their content and pedagogy in ways that suit the needs of learners. In this case Winona used visual representations to develop a

... map in their minds where each of these landforms are... and what they look like... one is a photograph... a literal representation of the landform... the other is a map... that allows them to picture in their heads... where... each of the landforms are positioned in relation to one another... and the topographic map allows them to visualise where each of the landforms are placed... (VSR 2, p. 4)

Implications and future applications

The effectiveness of video stimulated recall and concept mapping in capturing the professional knowledge held by these participants has significant implications for future professional development strategies. Video stimulated recall provides for the specific contextual complexity of professional knowledge that is essential for professional growth to occur and allows the teacher to make explicit their implicit understandings of their the interconnectedness fo their knowledge and practice. Concept mapping and Think Aloud Protocol complement video stimulated recall as they help the teacher come to grips with the
"what" and "why" of teaching. As such these methods could be well suited to professional development approaches that promote professional growth as "embedded into the ongoing work of a school" (Johnson, 1996, p. 12).

Clarke and Hollingsworth's Interconnected Model of learning is a valuable framework though which professional growth can occur. Videostimulated recall and concept mapping compliment this framework by enabling the professional to make explicit their knowledge, belief and attitudes when examining a teaching event or moment.

The significant factors for a professional development program such as this could be described as:

1. regular use of the tools over an agreed time span (such as three at 6 monthly intervals, but certainly could be closer in time);
2. the development of a collegial approach. As research tools, the participants spoke to the researcher. The researcher was not in a position of power and this is important in any application of this as a professional development strategy. The 'community of practice' notion should be upheld with trust and professional growth as the foundation. Thus the establishment of peer partnerships in a 'learning community of practice'; and
3. organisationally providing time for the dialogue that should immediately accompany the use of video and concept mapping.

As a research tool the videostimulated recall in particular is an effective way of eliciting teachers' knowledge in action. At the same time it can provide the research participants with valuable time out to examine what it is they do and why. We have a strong research basis that clearly indicates effective professional development programs need to be acknowledging the interrelatedness of knowledge, practice and situation. A policy context is now emerging that uses the language of 'evidence based teaching', professional standards, and individual Professional Development Plans. There is a strong need for individual schools in partnership with their teachers, to establish ongoing professional development programs that can provide a professionalised view of teaching. We suggest two strategies that should be considered to contribute to this are the videostimulated recall and concept mapping - with Think Aloud Protocol. The influence of the school context can be addressed using these methods. The opportunities for professional experimentation can be identified with peers working in a 'community of practice'. The enactment of any change can be documented and reflected upon both at a personal level and at that community level - facilitating an environment conducive to change and growth.

References


Transforming Frameworks: New Approaches To CCTs And The Pursuit Of Educational Equity

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Teacher educators throughout the world are increasingly under pressure to develop educational programs and school-based relationships which respond simultaneously to the multiple consequences of changed and changing technologies, new understandings of identity (what it means to be a teacher and a student) and persistently uneven patterns of educational (and social) success. Responses to these challenges regularly draw upon computer and communication technologies (CCTs) in the sometimes optimistic belief that this will improve the chance of any educational reform having a positive impact on students at risk of educational alienation and failure. Unfortunately, the gap between the hopeful embrace of technology and the actual outcomes delivered by technologically mediated educational innovations is often quite considerable. This paper investigates the kinds of educational conversations that are necessary to allow us to move beyond these optimistic adoptions of technology to address long standing patterns of educational success and failure and outlines a framework for transformative work in this area.

Introduction

Teacher educators throughout the world are increasingly under pressure to develop educational programs and school-based relationships which respond simultaneously to the multiple consequences of changed and changing technologies, new understandings of identity (what it means to be a teacher and a student) and persistently uneven patterns of educational (and social) success. Responses to these challenges regularly draw upon computer and communication technologies (CCTs) in the sometimes optimistic belief that the use of CCTs will improve the chance of any educational reform having a positive impact on students located 'on the margins'. Unfortunately, the gap between the hopeful embrace of technology and the actual outcomes delivered by technologically mediated educational innovations is often quite considerable. Uneven patterns of educational success and failure persist well into the 21st century, some twenty years after schools first began to systematically make use of CCTs. Nevertheless, educators interested in either technology or equity more generally are able to point to enough instances where technologies have been used to re-engage alienated students to easily justify continuing investigations in this area. A key question, then, is how to maximise the potential of these kinds of initiatives: how, in short, to make creative use of technologies that contribute to reworking the relationship between schooling systems and at risk youth.

This paper proceeds from the belief that in order to move beyond the hopeful embrace of technology in the pursuit of transformative educational agendas teacher educators need to develop a more robust understanding of both CCTs and marginality. More specifically, we will argue that teacher education faculties have a particular responsibility to ensure that discussions about CCTs and educational 'risk' are consistently and persistently intertwined so that knowledge generated within one field becomes fundamentally connected to the other. A core skill for contemporary teacher educators, then, is the capacity to conduct not only conversations but critical analysis and research based interventions that reflect an understanding of the historical relationship between CCTs and diverse student populations.

This is a significant challenge. Responsibility for educating pre-service teacher about the key issues in each of these fields has long rested with quite distinct groups: some academics work in technology education and have responsibility primarily for this area; some academics work in the broad fields of 'educational philosophy, 'education studies' or 'education and diversity' and have responsibility for raising pre-service teachers' understandings about persistent and emerging forms of educational risk. While this division is neither rigid nor all pervasive it is reflected both in the divisions found within educational faculties and in the education conference circuit generally which is characterised by some conferences (or conference strands) focused explicitly on education and technology and others focused explicitly on...
equity, disadvantage or ‘risk’. While there is nothing peculiar about these kinds of groupings, it is possible to argue that they help to contain ‘robust’ understandings of the key challenges related to each field and that in the contemporary context, meeting the needs of diverse learners might be more easily achieved if these domains were able to speak to/with each other more consistently. This paper outlines the challenges of opening up and sustaining dialogue between these two, relatively discrete domains and explores ways in which one particular set of educational innovations—those resulting from The Knowledge Producing Schools (KPS) project (http://www.deakin.edu.au/education/lit/kps) operating in Queensland and Victoria—has taken up the challenge of working transformatively across domains with teachers, teacher educators and students in the pursuit of positive educational outcomes for a heterogenous student population.

The contemporary literature focused on either schools’ relationships with CCTS or on-going patterns of diversity that in the contemporary context, meet the needs of diverse learners might be more easily achieved if these domains were able to speak to/with each other more consistently. This paper outlines the challenges of opening up and sustaining dialogue between these two, relatively discrete domains and explores ways in which one particular set of educational innovations—those resulting from The Knowledge Producing Schools (KPS) project (http://www.deakin.edu.au/education/lit/kps) operating in Queensland and Victoria—has taken up the challenge of working transformatively across domains with teachers, teacher educators and students in the pursuit of positive educational outcomes for a heterogenous student population.

The need for conversation: Bringing together critical perspectives on CCTs and student diversity

The contemporary literature focused on either schools’ relationships with CCTS or on-going patterns of educational risk and disadvantage is considerable. Teacher educators, policy makers, social commentators, parents and community members alike express considerable anxiety about the capacity of schools to prepare diverse children for the so-called ‘changed and changing times’ of an ‘information age’ and a ‘knowledge economy’. While perspectives vary widely there is widespread agreement that schools must respond in active ways to an increasingly technologised, increasingly ‘globalised’ heterogenous social scene which makes new demands on all of us as citizens, workers, learners and so on.

The need to ‘update’ understandings about the core responsibilities of education has been illustrated clearly by recent moves throughout the state education departments of Australia to re-define the core skills, ‘new basics’ or ‘essential learnings’ that must now underpin school education. Whilst each of these frameworks make use of different terminology and highlight different issues in their choice of key words even a brief analysis of their rationales and proposed content reveal a fundamental interest in: the consequences of globalisation; the rise of a ‘knowledge based’ society; the significance of new technologies in this society, and the emergence of new social patterns all of which require the development of new social and personal relationships if societies are to function effectively and peaceably.

This latest wave of curriculum reform is paralleled by research conducted within the broad fields of ‘CCT and education’ and ‘education and diversity’ which separately and together highlight areas of urgent concern. Researchers focused on schools’ interactions with CCTS, for example, consistently identify uneven patterns concerning student’s access to and mastery of various technologies; a disparity between the ways schools deal with technologies, and the competencies students display beyond school boundaries (Rowan & Bigum, 2004); the proliferation of instances of technological ‘busy’ work (Cuban, 2001); the failure of dedicated CCT subjects or programs to engage diverse learners and the persistence of gendered and classed based patterns of subject selection (Collins, Kenway, & McLeod, 2000).

At the same time, research into patterns of educational access and success continues to draw attention to the ways in which some groups of students—particularly those from low socio-economic backgrounds, from homes where English is a second language, from Indigenous families, from rural or isolated communities, or those who have one or more disability—remain consistently less likely than their white, middle class, English speaking, city dwelling counterparts to experience educational success (Vinson, 2004; Teese, 2000). The key point here is that responding to both the persistence of patterns of educational disadvantage and changing contemporary environment—with all its technological dimensions—requires an understanding of research in both areas. But while both of these domains—CCTs and educational equity—have occupied significant researcher and teacher time since (at least) the 1980s, significant sustained conversations across these domains have been the exception rather than the rule. While there are several ‘light house’ projects in Australian educational history that have focused on the ways in which particular uses of technology can underpin or influence initiatives explicitly designed to address issues of educational marginality and disadvantage, projects motivated by either technological agendas, or equity agendas, are more likely than not to be conceptualised and conducted independently of each other.

This has had several significant effects including the risk that when projects from either field seek to move into the other (that is when technologically based projects seek to address an equity challenge; or equity-based initiatives choose to make use of technology to achieve a particular goal) they often do so in
ignorance of what has previously been trailed, achieved (or not achieved) in the other field. This can result
in well motivated initiatives spending significant times and resources on projects that do not demonstrate
the necessary understanding of all relevant issues.

The difficulty of speaking across this particular digital divide was made extremely clear to me during a
keynote presentation that we were asked to deliver a couple of years ago. The address was at a conference
explicitly focused on educational technology but we were asked to provide a 'big picture' discussion of the
landscape within which educational technology was located. One of us brought to the discussion a
detailed understanding of schools' historical uses of technologies, and the capacity to talk about any
number of technologically based school initiatives. His primary goal, however, was to make the case that
schools really needed to go beyond finding educationally 'useful' things for technologies to do, towards
creating 'real world' learning opportunities for students. In this context, the technology would be
significant only in so far as it supported a fundamental change in school/community relationships. So if
we really wanted to respond to the contemporary technological environment then we needed to recognise
all the limitations of traditional 'schooled' approaches to CCTs, to move beyond some of the more
pervasive 'myths' about technology (including the oft cited claims that technologies enable learning; or the
reverse position that technologies are 'just tools') and craft more reflective agendas which recognise that
technologies—like any thing else added into a classroom—can change what is done, and how it is done,
but these changes may not necessarily be reflective of the 'real world' they are intended to prepare
students for.

The other of us sought to pick up on this point to argue that technology—like every other aspect of
education—had the potential to either reinforce or challenge traditional patterns of educational access and
that if we wanted to be in the transformative camp then we needed to understand all of the work that has
already been done (with or without technological 'aids') to understand issues of disadvantage. This would
allow us to minimise the chance that our technological innovations would continue long standing patterns
of treating particular groups of learners as homogenous: a situation commonly seen in technologically
'reinvented' classrooms where all boys, for instance, are expected to be immediately technologically
interested while girls are expected to need particular 'girly' tasks to become engaged. My point was that
anyone seeking to work creatively with technology in the complex social landscape might want to
understand how student diversity has previously been dealt with—and what we had learnt about the
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understand how student diversity has previously been dealt with—and what we had learnt about the
benefits and weaknesses of various takes on student equity—in order to maximise the impact of our
initiative and have a chance of changing patterns of educational success and failure.

Rather naively, both of us had thought that this kind of evidence based, but still cautiously optimistic
approach to technology and equity would be well received. And indeed, those members of the audience
who had either a strong sense of the history underpinning schools and technology or schools and diversity
(including those who were themselves members of 'minority groups') were extremely pleased to hear these
points being made. But in an auditorium that was filled to the brim with people eager to sell or to
purchase the latest 'learning technology', with its quick fix promises of improved 'learning outcomes'
points being made. But in an auditorium that was filled to the brim with people eager to sell or to
purchase the latest 'learning technology', with its quick fix promises of improved 'learning outcomes'
advice to hasten slowly was clearly not very welcome.

Rather startled by this experience (for we were both aware that the same arguments, made in other
contexts would have been regarded as all but self-evident) we continued to have discussions about the
difficulties of reaching across our two domains. This challenge became particularly apparent to us during
another joint activity. We were working on a joint presentation and seeking to illustrate what we saw as
either traditional or transformative approaches to educational technology and difference. One of us
provided some notes about an educational initiative the other worked from these notes to argue that the
case in question was a classic example of how well intentioned attempts to respond to student diversity
can actually work to privilege a very specific kind of learner. After this case had been written up as an
example of a traditional, limited, use of technology to respond to student diversity, we realised that it had
actually been provided as a positive example...

The point here is that although both of us would claim familiarity with the other's more specific field
of expertise, we clearly do not have sufficiently detailed understanding of what might perhaps be
described as 'best practice' in the other field. Her technological innovation was his technological banality.
The reverse was also often the case. This brings us to the key question challenge that informs this paper: if
research within the two separate domains of 'educational technology' and 'education and diversity'
individually acknowledges that schools still have much to achieve in terms of responding in 'real world'
sustainable ways to contemporary landscape, and if this research exists at an historical moment when
schooling systems throughout Australia are quite dramatically reshaping what they see as their ‘core business’ and their ‘essential learning’ frameworks, then it is surely critical that people with an interest in the outcomes of these frameworks work towards developing a clearer understanding of all relevant domains. It is in this spirit that a small number of teacher and teacher educators located in Australia, New Zealand and the United Kingdom have conducted a number of research and practice based conversations between 1998 and 2005 designed to respond to precisely this challenge: how to initiate, sustain and legitimate conversations across these domains in order to maximise the opportunities that schools can take up the challenges of integrating technologies into their programs whilst also responding to a heterogenous student population. These conversations were originally motivated by an interest in dealing differently with technology in schools and became known as the Knowledge Producing Schools initiative. Over time, the group has increasingly focused on the ways in which particular types of educational innovations appear to respond to the contemporary challenges of making meaningful use of technologies and engaging diverse and changing student populations. While there is insufficient space within this paper to outline all of the background to this initiative—and while it is still very much a work in progress—in the next section we will briefly outline the kinds of guiding principles that have emerged from this conversations.

The paths of transformation: Frameworks for responding to CCTs and diversity

Discussions within the Knowledge Producing Schools project began with an interest in making more creative, ‘real’ and externally legitimated uses of technology within schools. Phase one of the project involved identifying the key challenges associated with technology education in schools. During these discussions teachers and teacher educators shared their prior experiences with technologically based ‘innovations’ and carefully mapped the ways in which attitudes to technology have (or have not!) reflected the role of technology in broader social contexts. Through these discussions the key point was made that traditionally, schools have been in the business of finding educationally useful things to do with the technologies and programs sold to them by various computer vendors and that many of these initiatives were artificial in the sense that they did not reflect the ways in which technologies were operating within the broader context. A key point here is that ‘schooled’ technologies tended to be used for minor, ‘pretend’ tasks, evaluated by teachers that bore little or no relationship to the way the technologies were being used/understood/monitored/manipulated/transformed in the wider context. This reflected the continual positioning of schools as both consumers of knowledge and consumers of particular forms of technology. Transforming schools' relationships with technologies, then, necessitated a change in several key relationships: relationships between schools and technologies; between schools, technologies and communities; and between schools, technologies, communities and knowledge. It was the recognition that relationships were at the heart of new social formations that gave rise to the term Knowledge Producing Schools. This focus on relationships rather than technology per se is a distinguishing feature of the KPS approach. As Bigum writes:

In these repurposed schools, the new computing and communication technologies are employed to great effect but they are not the focus. The focus is the examination of the new relationships and partnerships a school can engender with its local community. The student and teacher learnings that occur are considerably beyond those that might be realised by current, existing, discipline-based curricula. The products of such work are different from typical 'school projects'. They have real outcomes for a community. They matter. Their quality is paramount. (2002, n p.)

If one was to summarise the KPS approach to education (and, by extension, to technology in schools) the following points would be prioritised:

- Schools can be brought into new relationships with knowledge, with their communities
- Access to community expertise, and the construction of schools as new sites of expertise, can be facilitated through the use of various technologies
- Developing new relationships and production of knowledge depends upon providing students with 'real world' projects, that have some external purpose and life beyond the classroom
- Responsibility for these projects must rest with students
- Students must be supported in diverse ways as they develop a range of skills needed to complete particular projects

These kinds of principles informed the first phase of KPS work and gave rise to a number of
significant technologically mediated innovations: projects where students worked, for example, on 'real world' externally valued initiatives including from the production of a recycling program for a small suburb of a regional town in Queensland; the preparation of brochures for local tourist initiative; the development of a series of short oral history videos that were subsequently featured in a local museum; the development of CD-based orientation package for students and families new to one particular community the preparation (by the students) of speeches and presentations focused on the KPS approach at various educational forums. (see http://www.deakin.edu.au/education/lit/KPS/projects.html for details).

It is significant to note here that the primary agenda underpinning these activities was a desire to transform schools' relationships with technologies via a parallel re-working of schools' relationships to knowledge. Soon after these projects were under way, however, it became apparent that many of the initiatives also had much to offer in terms of addressing another issue of pressing educational concern: patterns of student success and failure. Several of the schools involved in the KPS initiatives reported a significant increase in student engagement and student achievement. This was found not only among the students who were routinely experiencing educational success but also among those students who had previously been identified as 'at risk' including kids from lower socio-economic backgrounds, kids living in rural or isolated communities, and kids with literacy and numeracy difficulties.

This awareness provided a significant bridge between those of us on the team whose primary interest was in equity, and those whose primary interest was with technology. As discussions developed it became apparent that the KPS projects which were having the greatest impact upon student engagement and retention appeared to have several features in common:

- Links between the students' own lives and interests and the project work
- A capacity to value multiple forms of contribution
- Positive feedback to all participants, including feedback from people beyond schools
- Projects based upon team work and relationships with diverse contributions expected and rewarded
- Opportunities for students to take up different kinds of roles within different kinds of projects
- Student-to-student mentoring

Each of these factors builds upon an analysis of the various ways in which schools have traditionally responded to the challenge of difference. One common response—equity of access—sees the removal of overt barriers to participation by various 'target' groups (girls, students with disabilities and so on). In this phase emphasis is placed upon access, with students expected to accommodate themselves to the standards of the place they have entered. When this kind of mindset was used to shape policy and practice regarding technologies, schools worked to ensure that all kids had equal access to technology, often through roster systems, or other procedures to ensure that girls, for example, had as much opportunity to use computers as did boys.

Another response—valuing difference—recognised that some of these students actually brought with them different experiences and knowledge bases that might usefully be valued by schools. So in this phase educators often sought to 'value' the differences of particular groups by finding out what they were 'really like' or how they 'best learn' and building learning activities around this framework. In this approach, attempts to improve patterns of usage of computers for under represented groups generally sought to identify the 'real' interests of the student: so girls were encouraged to use computers to format assignments, do creative writing activities, make use of word art and so on. Extreme variations on this approach gave rise to the kind of 'pink PC' Barbie Computer paraphernalia that is still popular in some circles.

A third approach—often known as a socialisation framework—recognised that perhaps schools needed to go beyond valuing students 'as they are' and to put forward a range of alternative futures for kids; in this phase students were encouraged to recognise the ways they may be socialised into particular futures, whilst being capable of following other pathways. Yet another approach builds upon the insights of all previous phases to acknowledge of the diverse ways in which personal choices and futures are socially shaped to recognise that students—all students—negotiate their sense of self at the intersection of multiple and competing discourses. Educating those at 'the margins' therefore involves introducing, circulating and legitimating multiple stories and images about being a student, a learner, a citizen an
Australian and so on, whilst also providing multiple pathways for learners to travel.

The KPS agenda is increasingly reflecting these more post-structural takes on difference. Key arguments developed within post-structural perspectives on difference include (but are not limited to) the following. First, educational transformation depends on circulating diverse understandings of 'learners'. In other words, changing patterns of educational success and failure necessitates a transformation of dominant images of learners and learning. Second: these new images of learners and learning cannot be willed into existence; we must always begin by recognising the power of traditional notions of 'the good student' (and the kind of body this fiction is historically been associated with). In Braidotti's (1994, p. 169) terms, "the new is created by revisiting and burning up the old"—a process she refers to as metabolic consumption where educators must work to denaturalise the traditional at the same time as they introduce the new. This point is important to keep at the forefront of any intervention, or reform project: many projects 'fail' or run out of steam because the participants place too much faith in the power of good will, good intentions and good ideas. Getting new ideas, new practices, new understandings into circulation requires a willingness to engage over and over again with that which exists, and to identify, over and over again, the reasons why transformation is important. This leads to the third key insight: transformation requires constant attention and repetition Trinh Minh-ha captures this point well when she notes that displacement of mainstream practices comes from repetition:

By questioning over and over again what is taken for granted as self-evident, by reminding oneself and the others of the unchangeability of change itself. Disturbing thereby ones own thinking habits, dissipating what has become familiar and clichéd, and participating in the changing of received values—the transformation (without master) of other selves through one's self. (1990, p. 332)

Taken together, the points outlined above draw attention to the complex nature of transformation and the fundamental interconnection between ongoing critique and the achievement of truly innovative, sustainable education agendas. Transformation, in this sense, is about drawing attention to that which exists, highlighting the silences in mainstream practices, and introducing into circulation—into consciousness and possibility—alternatives to the 'original'. Thus transformation begins with critique, but moves necessarily into the development of strategies designed to denaturalise that which is taken for granted, and to introduce and legitimate alternative educational performances.

This interconnection is captured well by Elizabeth Grosz who writes:

Strategy involves recognizing the situation and alignments of power within and against which it operates. It needs to know its adversary intimately in order to strike at its most vulnerable points. It must also seek certain (provisional) goals and future possibilities with which it may replace prevailing norms and ideals, demonstrating that they are not the only possibilities. They can be superseded. (1990, pp. 59–60)

From this basis the list of attributes associated with KPS work began increasingly to reflect an interconnection between understandings of the need to move beyond the traditional ways in which schools have engaged with technology and student diversity. KPS projects were neither about either technology or about diversity; it was very much a both/ and framework. In this phase various members of the KPS collective began to present stories about the project at national and international conferences. It was during this phase that we recognised the potential for projects with quite different motivations, and quite different kinds of agendas, to be 'read' or interpreted as 'the same' as the KPS innovations. At one conference, for instance, a teacher educator put forward the idea that way associated with Webquest was an instance of a KPS agenda, for it made use of real world resources (a select of carefully constructed websites) to engage students in investigating particular problems, by reference to real world situations. One popular example—A cell is a small city—asks students to use a set of predetermined links that provide them with explanations, definitions, diagrams and fill in the blanks sentences to support learning various parts of the cell in order to "build" a cell in the manner that a city might be built. The students "share their research notes with other members of the group" and then using the role assigned (one of Architect/ City Planner; City Builders; Reporter) "your group will work together to plan, design, and construct a 3-D "Cell City" based on your research of the organelles and what their function is." (Winstead, 1999).

The claim made during this presentation was that this style of activity certainly achieved the same outcomes as a KPS framework, for students enjoyed the process, learned 'real' skills regarding technology, and were able to investigate scientific issues through reference to the real world they were part of. But as we reflected on this initiative later on, several questions quickly emerged: how did the activity actually engage with the external environment? What kinds of 'real world' feedback do students get? What do they
learn about knowledge creation when the source of their ideas are provided directly to them? What kind of authentic product was produced? How is the initiative substantially different from other worksheet activities? An understanding of student diversity also prompted other questions: what procedures were put in place to ensure that in the selection of their 'roles' some students weren't automatically assigned the role of architect or planner while others (from lower socio-economic backgrounds) weren't automatically assigned the role of builder. Were all the girls reporters? How was access to the materials negotiated? Monitored?? Was any of this selection process considered or discussed? In short, what agenda regarding student diversity informed the design and conduct of the program?

The answers we came up with in our analysis of the webquest phenomenon led us to the conclusion that while it could play a part within an overall transformative agenda it was not, itself, an example of a stand alone KPS-like initiative. Yet the discussion that ensued around this example made it extremely clear that in addition to the kinds of technological principles informing a KPS initiative, every project needed to be examined and re-examined to see precisely how it related to existing, dominant patterns concerning schools relationships with technologies and schools' relationships with diversity. It was at this point that the KPS agenda began to engage with an analytical framework one of us had worked for some years: a framework conceptualising educational transformation put forward by the members (such as myself) of the Quality Learning Research Priority Area at Deakin University (QLRPA) (www.deakin.edu.au/education/quality_learning). With an interest in critiquing dominant educational practices in order to produce more inclusive (and thus transformative) educational environments that respond to the challenges posed by new understandings of student identity, the QLRPA has outlined a number of questions to facilitate reflection upon any educational innovation.

Specifically, the QLRPA argues that educational systems are in dramatic need of transformation if they are to take up the challenge of addressing ongoing patterns of educational success and failure. This transformative work must clearly interact with the realities of the external world including changing social formations, new understandings of what it means to be a teacher, a student and so on— as well as a tendency for contemporary society to seek 'quick fix' ‘off the shelf solutions' to complex social problems. In this context, members of the QLRPA have argued that transformative work must be paralleled by constant and ongoing interrogation of any educational initiative. This analysis can be structured around the following simple questions:

- What understanding of 'the learner' and 'learning' underpins a particular text, context or practice?

- What consequences does this have for all involved in the learning community?

Answering these overarching questions is facilitated by the use of some simple sub-questions:

- Who/what is included/represented or excluded/not represented?

- What kinds of participants are assumed? What degree of heterogeneity is acknowledged? What recognition is there of diverse needs? Learning styles? Interests? Prior knowledges??

- Who/what is valued or devalued? How do we know?

- What kinds of participants ‘do best'? What kinds of rewards are available and who has access to them? What kinds of 'punishments' exist? Who does this most commonly affect? Who has access to the resources or materials most valued in that context? Who has the most freedom?

- Who/what is represented as natural/normal and, by extension, who/what is represented as aberrant, deviant, unnatural or ‘other'? How does this reflect or challenge traditional patterns?

- What assumptions (and what mistaken, narrow or limited assumptions) are made about participants in a particular text or context? What assumptions are made about their interests, experiences, backgrounds, knowledge base, hopes, fears and desires?

- Which learners are attended to in the day-to-day work and which learners are ‘added on' for short term or tokenistic inclusion at various times? What kinds of stories about 'valuable' knowledge, or behaviour are told? Which groups are left out? What experiences are forgotten?


Working through these questions allows us to distinguish between projects that begin on a KPS pathway—with the dual commitment to reworking schools relationships with technologies and diverse students—and those with the greatest potential to stay the distance. Schooling practices concerned with
technology and disadvantage, are most likely to be productive/transformative etc when teachers:

- recognise the existence of differences within and among their students and seek to respond to and value these differences without stereotyping individuals or groups
- provide students with opportunities to reflect upon the meanings ascribed to difference, and the ways in which people can and do move beyond the limitations attached to these meanings
- work towards transforming dominant cultural understandings of difference
- use technologies to work on authentic out-of-school projects that are valued and valuable to both students and the community
- understand the purposes and limitations of various technologies and the limits, assumptions and approximations built into hardware and software
- acknowledge the endless nature of any transformative project
- locate literacy and technology practices in the ‘bigger picture’
- recognise and respond to the existing interests of students and acknowledge the potential differences between mindsets of teachers and students in relation to technology and school.

Implications for teacher education

Taken together, the insights developed by the KPS projects on the traditional and transformative approaches to technology and traditional or transformative takes to difference have provided a powerful mechanism for conceptualising, designing, implementing and evaluating educational innovations. This framework does not, in any sense, guarantee the success of a particular journey, or the attainment of desired outcomes. Nevertheless, the kinds of reflective practices encouraged by the KPS framework appear to offer much to educators genuinely attempting to respond to the full range of challenges found in the contemporary landscape.

From a KPS standpoint, then one key challenge for teacher educators is to ask ourselves the extent to which our programs prepare teachers to work in these transformative ways. To what extent do teacher education faculties encourage their students to see themselves as the producers—rather than the consumers—of knowledge? What percentage of teacher education students’ time is spent on ‘authentic’ projects? How much support are students given to think critically and reflectively about traditional approaches to technology or diversity? And how well do teacher education programs foster the interconnection of the two domains at the heart of the KPS agenda—education and technology; education and student diversity. Given the current pressures upon teacher educators to defend their practices and assumptions to an increasingly public audience, and factoring in a widespread public understanding that education continues to benefit some students more than others, it is perhaps more important than ever that teacher educators confront their own relationships with technology and with student diversity to determine the extent to which our own work could benefit from taking a transformative turn.

1 We use the descriptive terms computer and communication technologies rather than the more common attributional terms such as “information” technologies.
2 See for instance projects conducted by people such Stephen Heppel, Nicola Yelland, Neil Davis.
3 Key members of the KPS team include Trudy Graham, Carmel McGrath and Rob Walker.
4 Clearly, inclusion by itself is not necessarily a signifier of a ‘quality’ experience. Consideration of inclusion/exclusion to be tied directly to consideration of who is valued/devalued after inclusion.
5 Education impacts powerfully on teachers, family, care givers, community members as well as students.
6 Common ‘rewards’ relate not only to good grades and positive feedback, but also things like actual attention; during one reform project we worked on the students in the class commented on how surprised they were that when they asked a question someone actually heard it as a question and not just as noise.
References


Meeting The Skill Requirements Of Vet Practitioners In New Times

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As one part of the larger education system, vocational education and training (VET) practitioners are invited to play a role in contributing to the broader social goals of education. This broader focus is important because it helps to sharpen thinking on the specific skill requirements for VET practitioners beyond that required by current VET policies and it also counters 'silo mentalities' which sees each sector of education as a discrete section rather than as parts of a whole. Using the outcomes from a number of recent studies, this paper will examine some the key characteristics of the VET workforce and the changing nature and scope of work that practitioners are expected to perform. Issues and challenges shaping attempts to meet the skill needs of VET practitioners will be considered. Some of the issues and ways in which the task of preparing and supporting VET practitioners in their work might be approached will be examined. It will be argued that pedagogical practices needed to support the skill requirements of contemporary VET practitioners (particularly for those whose full time occupation is VET) can only be achieved by adopting a number of models of professional development—all of which have at their core, genuinely collaborative partnerships between individual practitioners, their employers, professional associations and universities.

Introduction

Education systems play a vital role in shaping the sort of society we create. The VET sector, as one part of the education system, plays a particular role in responding to a range of policy agendas (Gill, Dar, & Fluitman, 1999, p. 405). Issues relating to unemployment, skills shortages, workforce development, deficits in basic skills (such as numeracy, literacy and language skills), attracting students from overseas countries, reducing inequality and promoting access, all fall under the remit of the VET sector. But in addition to these specific issues, the VET sector, with its provision of education and training to literally millions of Australians, is also part of a larger endeavour where it makes a contribution to the overall goal of education working towards 'shaping a fairer society, where all people have the capacities to lead full and productive lives' (University of South Australia, 2001, p. 25). Set in this broader context, it is important for all educators, including those educators in the VET sector, to develop the capacities to actively engage in learning which will enable them to work as agents for change in whatever locale they may find themselves operating. This paper will argue that VET practitioners share with their colleagues in other educational sectors the challenge of addressing a range of issues beyond those of the immediate skill agendas related to workforce development and greater attention needs to be paid to the broad range of work VET practitioners are expected to perform. This argument will be illustrated by way of reference to VET practitioners employed within the TAFE SA environment. The implications of this wider role in the education sector for the models of professional development that are needed to support VET practitioners will be examined.

VET – one sector of a larger education system

Concerns for issues related to inclusion, social justice and equity are not new to the VET sector. Indeed, they form part of the philosophic rationale for the sector developed out of the landmark Kangan Report (Australian Committee on Technical and Further Education 1974). This report laid the foundation for providing significant new funds for physical resources the beginning of a national focus for program / curriculum development and resources for infrastructure such as libraries and workshops for the newly named TAFE sector. It also provided the sector with a clear mandate and a philosophical basis for its work that acted to unite the sector across state and territory boundaries whilst still retaining its key characteristic of responsiveness to local issues and needs (Goozee, 1995, p. 11; Schofield, 1994, p. 58).
The Kangan Report elaborated the view that the primary purpose of technical education was to meet the needs of the individual person who wishes, within the limits of his (sic) capacity, to develop his (sic) capacity to the best advantage of himself (sic) and the community, including industry and commerce (Goozee 1995, p. 23).

This philosophy, which became one of the cornerstones of many TAFE teachers' practice until well into the 1990s, stressed the importance of the individual's needs over those of industry (Peoples, 1994, p. 3). It also embodied a broad notion of technical training that emphasised technical as well as social and educational goals (Ramsey, 1994; Schofield, 1994, p. 60). Despite the apparent battering that this philosophy has taken as TAFE has been reformed into the VET sector, the key ideals of learner-centred practice and meeting the needs of individuals still remains central to the work of many VET practitioners' and a powerful unifying force across all providers regardless of their size or branding as public or private entities.

The question of meeting the skill requirements of VET practitioners needs to be seen in this broader context, understanding and acknowledging VET practitioners as one of a number of groups of educators working in a global context where there is continual reworking the boundaries of previously separate educational sectors. During the last 20 years, there have been a number of significant global trends that have impacted on education provision. These include the rise of the global economy (Lingard, Porter, Bartlett, & Knight, 1994, Seddon, 1999), emergence of the 'new competitive state' (Cerny, 1990), retreat from intervention by governments in favour of market forces as the 'primary steering mechanism' (Lingard, Porter, Bartlett, & Knight, 1994 p. 2), and the rise of economic rationalism and corporate managerialism. Within this changed economic and social context, strong links have been established between economic prosperity, international competitiveness and development of human capital. There is a growing recognition of the importance of knowledge and knowledge creation in many types of work (Avis, 1999; Waterhouse, Wilson, & Ewer, 1999), while the growth and change in information technology have also impacted on the way in which workplaces are organised (Young & Guile, 1999). Such changes to work pose significant challenges for VET practitioners, both in terms of the nature of vocational learning that they need to promote, as well as the ways in which they might respond to promoting learning experiences to equip workers for emerging roles. However, despite this set of common contextual factors it has been noted in the literature that VET practitioners differ from their colleagues in other sectors (most notably schools) in a number of ways which necessarily impacts on the ways in which they should be supported in development for their work (Smith, 1998; Simons, 2002).

Who are 'the VET practitioners'?

One of the most significant features of the VET workforce is its diversity (Harris, Simons, & Clayton, 2005). In addition to those employed in government departments, Industry Skills Councils and other government instrumentalities supporting the VET system there is a very diverse group of practitioners and managers. Further evidence of the growth in the diversity of the VET workforce can be found in the growing numbers of private training providers who are registered to deliver nationally recognised VET qualifications, particularly those based in enterprises and those who operate for profit, commercial entities (Harris, Simons, & Clayton, 2005). The phenomenal growth of these organisations has been accompanied by a rise in the numbers of VET practitioners whose primary occupation is not that of a teacher or trainer (as traditionally conceived in the pre-reform era when TAFE institutions were largely the dominate providers). Many of these new VET practitioners are people who have a range of qualifications (for example specific trade, human resource development / management) and who are working under a variety of non-teaching awards and conditions (ACIRRT, 1998, p.8). Across the VET workforce four groups of practitioners can be identified (Harris, Simons, & Clayton, 2005).

The first group of practitioners are those employed full time in the sector across a range of roles – teachers, trainers, support staff (including materials developers, IT specialists etc.) and managers. They are located in public and private institutions and the larger enterprises, though their work may take them outside their organisations. They have responsibility for managing delivery and assessment processes, as well as for developing materials and online delivery, and taking the lead in entrepreneurial activity. This group of workers requires a more 'holistic' perspective of training and assessment systems (Mathers, 1997, p. 72) and whilst often employed directly by VET institutions, they may also be self-employed consultants, engaged by organisations on a contractual basis to work on a defined project or deliver a set of specified outcomes. Secondly, there is a growing cohort of practitioners with a part-time role in VET, or...
increasingly, several part-time roles across more than one provider (Harris, Simons, & Clayton, 2005). They are found mainly in industry, schools and as part-time staff in both public and private providers, with the primary role of teaching and assessing VET, although this may not be solely restricted to institutional settings. A third definable group of VET practitioners comprises workers in industry who assist in a small way with vocational education and training in their organisation (Harris, Simons, & Clayton, 2005). They are involved primarily with the core business of their organisation, but help others learn in apprenticeships and traineeships, often in terms of assessment. They may be involved in some way with an external provider, but work within their organisation. A fourth group of VET practitioners includes those in industry who are fulltime workers in the core business of their enterprise but who, in the course of their regular work, informally help others learn in the workplace (Harris, Simons, & Bone, 2000). Their learners may be in formal programs such as apprenticeships and traineeships, but often are likely to be fellow workers who need assistance on the job. For this group of VET practitioners, work and learning are inextricably intertwined but their formal links to the VET sector may be tenuous at best.

In addition to these particular structural features of the VET workforce there are also a number of other significant features particularly associated with those persons for whom work in the VET sector is their primary occupation. Firstly, for the majority of these VET practitioners, work in the field of education is usually the result of a significant career change (Chappell & Melville, 1995). Many come to VET teaching and training after a period of time in industry or they remain in industry but the focus of their work shifts. If they are employed part-time in the sector, they often continue to be employed in industry. They are usually older than beginning school teachers and the training undertaken for their teaching role can vary widely (Lowrie, Smith, & Hill, 1999, p. 12). In many respects, VET practitioners are valued predominantly for their technical expertise. Opportunities to develop their teaching expertise often come after their employment as teachers or trainers, particularly for those who find employment within public training providers (Harris, Simons, Hill, Pearce, Blakeley, Choy, & Snewin, 2000). Secondly, work in industry has a strong influence on the ways in which VET practitioners approach their facilitation of learning (Mealyea, 1988). In the trades areas, for example, strong hierarchical relationships, which were often a part of the teacher's own apprenticeship, are recreated in efforts to replicate what is normatively viewed as 'good' training (Gleeson, 1994, p. 7). Other writers have noted that TAFE teachers favour a model of teaching that values mastery of skills by processes of imitation and practice (Lowrie, Smith, & Hill, 1999, p. 12). Teachers also value their role in mentoring students and supporting them in their journey towards becoming a member of an occupational community (Gleeson, 1994).

**What is the nature and scope of VET practitioners' work?**

The diverse nature of the VET workforce is further underscored by the nature and scope of VET practitioners' work. Recent studies (Callan, 2001; Mulcahy, 2000) have identified two different groups of VET managers, each with distinct but overlapping roles. The first group of managers identified in the VET workforce are senior managers to whom other managers report. These positions usually involve high level, specific responsibility for an organisation, school, section or sector and are outward focusing and strategic in nature. These roles are usually well integrated, allow a great degree of autonomy and centre on five broad functions:

... business management and development; strategic leadership; change leadership; people-centred management and boundary management (focusing on the external environment) (Mulcahy, 2000, p. 96).

The second group of managers are front-line managers. This group includes persons who have responsibility for coordinating the work of others rather than managing other managers. This role is usually more diverse and dispersed in nature and 'directly involved in the operational or service delivery end of the organisation' (Mulcahy, 2000, p.96). These managers perform six broad functions:

... financial management; administration and operational management; strategic management; people-centred management; consulting (internal and external); and educational leadership (Mulcahy, 2000, p. 96).

This group of practitioners are most usually concerned with the task of educational leadership. However, this term does not appear very often in texts describing their role, and it is instructive to reflect on what educational leadership looks like in the sector; how it might be developed and sustained in an environment where considerable emphasis is placed on 'business management leadership' (Mulcahy, 2000, p. 101). This issue is also important in light of apparent preferences for a largely casualised workforce and the ageing profile of the VET workforce which points to the imminent loss of considerable expertise and knowledge from the system due to retirements and continued restructuring.
Conceptions of the work of VET practitioners in workplaces and HRD practitioners often appear to rest on notions of the ‘workplace trainer’, which tend to be founded on assumptions of formality, structured contexts and large business environments, and be based on the premise that ‘one size fits all’ (Harris, Simons, & Bone, 2000). For those practitioners who, as part of their work in formal VET institutions, go out into the workplace, it is not merely a matter of transferring classroom-based techniques to the workplace but rather coming to fundamentally new ways of conceiving and carrying out their roles. Johnston and Chappell (2001), in supporting these observations, note that often the provision of training is viewed as a function that is shared among groups of people including ‘learning specialists’ (both internal and external to the organisation) as well as a range of people who do not hold any formal qualifications in training and development. Attwell (1997) argues there is a convergence in the interests of human resource development professionals and VET practitioners. In the past, VET practitioners (usually defined as those working in technical colleges or specialist VET centres) have been largely concerned with the attainment of vocational expertise, while human resource development professionals have been interested in promoting learning that would further organisational goals and on-going professional development of staff (Attwell, 1997). Research evidence (for example Celerrio & Miguel, 1996) illustrates the emergence of new multiple roles for human resource development professionals that include the imperative for greater cooperation between themselves and other training consultants, a shift to views on management and training which are more in keeping with trends towards improving corporate competitiveness through the valuing and development of learning organisations and the promotion of work as a means of achieving a learning society. Similarly, the work of VET practitioners is increasingly becoming more intricately linked with enterprise goals and promoting growth (both socially and economically) within industries, communities and regions.

VET practitioners employed in institutional settings have experienced significant changes to their work which have impacted on the ways in which VET practitioners understand or construct their professional identities and view their relationship with other parts of the VET sector (Chappell & Johnston, 2001). VET practitioners in both public and private training providers have also experienced considerable shifts in aspects of their role (Harris, Simons, & Clayton, 2005). Broadly speaking, changing work roles can be understood in terms of role expansion and diversification which has often resulted in role tension for individual practitioners.

Role expansion arises from changes to VET practitioners' work where are now required to work in different contexts (e.g. institutes, schools and a wide variety of workplaces) and develop relationships with a range of specialist service providers now operating in the provision and administration of the VET system (for example, National Apprenticeship Centres) (Harris, Simons, & Clayton, 2005). The convergence of VET and HRD (mentioned above) has required the development of skills areas such as career development, organisational development and business development. Structural changes to VET organisations such as the introduction flatter management structures has resulted in more practitioners spending greater time and energy on management functions and taking greater responsibility for functions such as managing budgets, being more aware of funding opportunities and the need to generate income.

Role diversification results from the broadening of work underpinned by a growing press to link VET practitioners' work to the wider policy context which goes beyond education and training policy to focus on local, regional and state/territory development. By way of example, this newly emerging vision for VET practitioners was clearly articulated in the Skills for the Future Enquiry in South Australia which laid down the challenge that skill development for South Australia needed to be ‘pulled back from an inward-looking education and training focus into a context of work and community life’ (Government of South Australia, 2003, p. 7). The concept of workforce development, rather than education and training, was chosen as the key organizing concept to fulfil these goals. Workforce development is defined as

... those activities which increase the capacity of individuals to participate effectively in the workforce throughout their whole working life and which increase the capacity of firms to adopt high-performance work practices that support their employees to develop the full range of their potential skills and value (Government of South Australia, 2003, p. 7).

The Skills Inquiry Report goes further, emphasising the critical role that the public provider TAFE has to play, as a ‘community owned resource' that offers ‘stability and continuity of supply in the face of cyclical commitment to training by industry’ (Government of South Australia, 2003, p. 38). The report clearly signals a role for TAFE beyond that shared with private VET training providers. Specifically, TAFE could play a role in generating local employment; supporting innovation and technology diffusion;
assisting enterprise to prosper; forging close and more integrated relationships with the adult and community education sector; implementing industry, economic and social policies of government; and helping to attract investment in industries and regions (Government of South Australia, 2003, p. 47).

As a result of these emerging shifts in expectations relating to the work of VET practitioners, many have experienced role tension (Harris, Simons, & Clayton, 2005). This tension manifests itself in a number of ways including a tension between what VET practitioners perceive to be their core activities (teaching, training and helping other learn), and the press to become involved in other work functions (revenue raising, administrative functions). Role tension is also shaped by the sector in which VET practitioners are located and the policy frameworks which regulate their work. The Australian Quality Training Framework (AQTF) sets out the requirements of ‘quality’ VET practice and, together with Training Packages, regulates who is designated a VET assessor or trainer. These mechanisms effectively establish the currently accepted ways of being a VET assessor or trainer and often compete with previous understandings held by teachers and trainers in relation to effective performance of their work. For public sector VET practitioners, the introduction of commercially focused activities and the demands to adopt a ‘business focus’ within a public sector framework, require practitioners to operate within contradictory structures (Chappell, 2001). Not all practitioners within public VET institutions are equally able to be involved in these new commercial activities. Conversely, practitioners in private sector institutions tend to use discourses of business rather than discourses of education. Across both public and private VET institutions, the majority of VET practitioners value the relationship they have with their learners as a core component of their work (Harris, Simons, & Clayton, 2005). Thus both within and across institutions, VET practitioners’ work is further divided with ‘clashes of cultures’, exemplified in the competition between educational and business discourses - for example, students versus clients, needs of individual versus needs of industry, individual needs and aspirations versus the good of the industry (Chappell & Johnson, 2001). Chappell argues that these changing discourses have particular importance for TAFE practitioners who are being asked ‘in effect…[to]…construct new professional identities…which interact and compete with the traditional discourses that once provided TAFE teachers with a distinct and separate educational identity’ (Chappell, 2001, p. 21).

This reality of a more complex role for VET practitioners signals the need for wider and potentially more demanding skill formation agenda - particularly for those whose primary employment is in the sector and also arguably for those employed in public VET institutions. Just as the task of workforce development requires movement beyond an overly narrow and instrumentalist concept of skills, so too do the skill requirements of VET practitioners need to move beyond this conception to emphasise VET practitioners as knowledge producers and their role in the development of productive workers (and citizens) who require ‘general cognitive abilities and behavioural dispositions rather than technical expertise’ (Chappell, Solomon, Tennant, & Yates, 2002, p. 10). Meeting the skill requirements of VET practitioners demands the use of pedagogical practices that enable simultaneous development of the abilities of VET practitioners to deliver on these new agendas as well as enabling them to manage the changes to their identities and their work. Meeting the skill requirements of VET practitioners involves attention to VET practitioners as both agents of change and subjects of change.

Building the capability of VET practitioners – issues and future directions

Within such a climate of re-ordered relationships, more complex political agendas and changing patterns of work within the VET sector, the ways in which the capabilities of VET managers and practitioners are built assume critical importance. Current research emphasises an increasingly differentiated VET workforce with growing numbers of people less affiliated with the core functions of VET involved in the task of facilitating learning for and through work (Harris, Simons, & Clayton, 2005). VET practitioners need to be appropriately skilled in order that their practice reflects the new sectoral requirements emerging from this increasingly differentiated workforce in VET. For some trainers, the focus of their contribution to VET delivery will be very narrow; some may be employed almost solely for their technical currency and have minimal training in instructional techniques. Clearly, what is needed will differ as a result of the individual’s function and affiliation with the VET system.

However, building the capability of VET practitioners is not solely confined to alignment of function within a specific work role or to the identification of perceived gaps in knowledge, skills and attributes of specific groups of VET practitioners. Meeting the skill requirements for VET practitioners also needs to address how practitioners might be supported to develop the knowledge, skills and attributes necessary to transform themselves and their work in line with the emerging agendas. This transformation needs to be also
seen in the wider context of the contribution that VET, as one part of the education system, can make to the achievement of the broader vision held for education with our society. If this is to be the case, meeting the skill requirements for VET practitioners will require pedagogical practices which focus on the career long development of content expertise; capacities to work with and in industry to foster high performance work practices; pedagogical skills which promote culturally inclusive practices for learners from diverse backgrounds and address issues of exclusion and disadvantage (including developing responses to language, literacy and numeracy needs of these groups); critical thinking capacities to support a high level ability to continually evaluate research and practice as new ways of working emerge within and across education sectors; understandings of VET practice that transcend the traditional binary of theory and practice to positions which place theorising and thinking as integral to practitioners' work as knowledge producers; capacities for research and collaborative enquiry across sectors; and capacities for professional advocacy. Meeting a skilling agenda of this size and scope is clearly not possible within the confines of any one particular model of professional development. Various approaches, involving a number of different stakeholders, need to be combined across the working life of VET practitioners to optimize the potential for professional development. A three-fold typology developed by Garry Hoban (1997) offers a starting point for thinking about the types of models of workforce development that will enable VET practitioners to develop the knowledge, skills and attributes needed to fulfill their emerging roles (Table 1).

<table>
<thead>
<tr>
<th>APPROACH</th>
<th>RATIONALE</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside-in models</td>
<td>VET practitioners are invited to explore to new ideas and be provided with opportunities to expose their practice to new theories and seek out alternative perspectives using knowledge generated by others</td>
<td>Learning and development undertaken outside of work / organisation context usually with researchers and others</td>
</tr>
<tr>
<td>Inside-in models</td>
<td>VET practitioners are engaged in practices which encourage them to draw upon existing knowledge they have generated from their practice and to reflect on this knowledge as a basis for developing new knowledge and action</td>
<td>Learning and development undertaken inside of work / organization context usually with colleagues</td>
</tr>
<tr>
<td>Inside-outside models</td>
<td>VET practitioners are engaged in practices which draw on their knowledge of practice and combine this with knowledge generated from outside – the development of ‘communities of discourse’ (Cochran-Smith &amp; Lytle, 1993)</td>
<td>Learning and development undertaken in collaborative partnership with others (including VET researchers and academics)</td>
</tr>
</tbody>
</table>

Source: Adapted from ideas by Hoban (1997, pp. 2-11)

Each approach on its own holds particular advantages and disadvantages. For example, there are inherent dangers in professional development processes relying solely on information provided by experts from outside the context in which VET practitioners work. This approach does not fully address the kinds of knowledge that are needed to inform practice in the complex and dilemma-ridden environments in which VET practitioners operate. Furthermore, professional development processes which promote only the development of ‘practical knowledge’ – that is, knowledge generated as part of practice and bound by the situation in which it is generated (as can occur, for example, in some action learning projects) – also has its limitations in terms of restricting thinking to practitioners' existing frames of reference and restricting genuine critique to extend potential ways of acting (Hoban, 1997). The use of what Hoban (1997) has labelled as ‘inside-outside’ models of professional development offer the potential to meld the knowledge that VET practitioners generate in their daily work with the knowledge of others outside of this context (for example, VET researchers and academics) This approach can also offer potential for the development of evidence-based approaches as a mean of further improving the quality of VET and perhaps best points the way forward for the development of appropriately articulated learning pathways between skill development practices in the VET sector and those offered by the higher education sector.

In addition to offering VET practitioners the opportunities to develop the knowledge, skills (broadly defined) and attributes to meet the demands of their emerging roles, the pedagogies underpinning the skill development needs of VET practitioners also need to enable practitioners to develop a sense of coherence and self-efficacy in an environment riddled with change fundamentally directed to challenge practitioners'
norms, beliefs, values and practices. An environment characterised by the absence of spaces for genuine critique, acknowledgement of practitioners' accumulated expertise and the reality that change starts from and is experienced in individualised ways both within and across contexts, is problematic and not conducive to meeting the professional development needs of practitioners. In these circumstances, there can be significant pressure for development practices to be disempowering, reduced to an exercise in substituting, eliminating and extinguishing current practices rather than providing opportunities for new ways of working to emerge.

At the heart of dilemmas relating to meeting the skill requirements of VET practitioners, particularly for those for whom VET work is their career, is the degree to which the pedagogies adopted for these processes enable the development of a renewal about what we understand professionalism in the VET sector to be. The concept of ‘democratic professionalism’, prevalent in the discourse of teacher professionalism in the schools sector, offers some valuable signposts:

Democratic professionalism does not seek to mystify professional work, nor to unreasonably restrict access to that work; it facilitates the participation in decision making...it seeks to develop a broader understanding in the community of education and how it operates. As professionals teachers must be responsible and accountable for that which is under their control, both individually and collectively... (Preston cited in Sachs, 1999, p. 2).

Professionalism in VET resides in the capacity of practitioners to engage individuals, employers, industries and communities into processes to support the development of a workforce that is inclusive and better positioned to meet both social and economic goals.

However, no matter what professional development processes are implemented for VET practitioners it is important to be realistic about what we expect practitioners to be able to do individually. Professional development, in and of itself, will not solve issues relating to the work intensification felt by practitioners or the lack of job security experienced by growing cohorts of part time and casual employees. Issues relating to the ways in which practitioners' work is counted and valued, particularly in the light of the impact of information and communications technologies will only be addressed by new industrial relations and human resource practices (Schofield, Walsh, & Melville (2000). Meeting the professional development needs of VET practitioners, while a pressing and critical issue, should not be presented as a panacea for all the issues currently being experienced in the VET sector. The impact of the best approaches to professional development will only be felt if integrated into a wider context of attention to the development of the VET workforce.

Conclusion

The work undertaken by VET practitioners needs to be understood in relation to the role of education as a key agent for the ways in which a society shapes and renews itself over time. In the current context, meeting the professional development requirements of VET practitioners relies ultimately on a renewal of the concept of professionalism within the VET sector. Further, meeting professional development requirements of VET practitioners necessarily revolves around the use of a range of pedagogical practices. These practices are best met through the development of collaborative partnerships between individual practitioners, their employers, professional associations and groups and university-based researchers and providers of VET education. Meeting the professional development needs can be viewed as a narrow instrumental process. This risks casting VET practitioners as technicians who work within limited contexts with lessening degrees of autonomy. A renewal of professionalism should rest on the acknowledgement of VET practitioners as knowledge producers, who work in complex and unpredictable environments, who are reflexive and critical, and whose primary role is to transform educational systems through their work.

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Emotional Intelligence: Why It Affects Language Learning

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This paper, titled "Emotional Intelligence: Why it affects Language learning" presents two concepts of the relationship between emotional intelligence and English academic performance. This study has been conducted in Thailand, for the reason that English is taught there as a foreign language. The first concept is a study which considers how the relationship between emotional intelligence and achievement in English can be explained for Thai students in lower-secondary years of schooling. The second was based on how other variables such as family encouragement for learning English, study habits, levels of engagement, and attitudes might support this explanation. Structural Equation Modelling (SEM) was the method used to analyze the data. Results suggest that emotional intelligence has a direct effect on Thai students' achievement in English. In addition, it suggests that emotional intelligence effects achievement in English indirectly, through family support, study habits and levels of encouragement. Findings will be of interest to language educators and researchers throughout the world. In particular, teacher educators in student-training institutions will benefit because they will be able to make informed decisions about the training they provide to pre-service teachers and to teachers during in-service workshops.

English education in Thailand

Globalisation, assisted by the development and application of communication technologies, has resulted in dramatic changes that have caused local markets throughout the world to be displaced by global trade. Thailand has realized the need to remain a competitive force in the face of increasing globalisation by preparing its people to compete in a globalised market (Chinnawongs et al., 2003). Since English is the language of communication in a globalised economy (Kachru & Nelson, 2001), it has gained importance for Thai people. Knowledge of the Thai language alone is no longer adequate for full participation in a global marketplace. Moreover, English is widely used for studying and gaining knowledge. This is due to the fact that texts of different fields are written in English, particularly texts that are studied at advanced levels of education. It is then recognised that competency in the English language is essential for success in every field of study. As Kachru (1992) acknowledged, "English will be the most respectable language in the world and the most universally read and spoken in the next century, if not before the close of this one." (cited in Kachru, & Nelson, 2001, p. 9). In an era of rapid world development, it is crucial for Thai people to be familiar with English at all times. Exposure to English for Thai people varies with one's work and socio-economic status (Pienthunyakorn, 1996). For example, those in managerial positions will use English extensively as part of their everyday work. However, Thai people who are not required to use English in their job are often exposed to English language through their interaction with manufactured products where signs, labels, trademarks and directions are provided in English. In addition, English words are also frequently found in Thai songs, and films. English names are becoming more popular in Thailand and common objects such as CDs and tapes are referred to in English.

The Office of the National Education Commission (2003) recommends that all Thai children receive 12 years of basic education. This means that with equal rights to education, Thai students are able to learn English without interruption during their primary and secondary schooling. The new education curriculum places an emphasis on life-long education for self- and social- development through cognitive, emotional, moral, ethical, and cultural growth. The attributes of the curriculum are flexibility, continuity, unity, emphasis on knowledge integrated with ethics, and universality with global and local concerns. These attributes are intended to develop learners to be fully developed in all aspects of "physical and mental health; intellect; knowledge; morality; integrity; and desirable way of life so as to be able to live in harmony with other people" (Office of the National Education Commission, 2003, p. 4). Additionally, learners are expected to be aesthetically sensitive, proud of being Thai, and able to learn, think, decide, judge and solve problems by themselves. Furthermore, they are expected to develop into intelligent citizens of Thailand.
and the world (Office of the National Education Commission, 2003). Clearly, to be a citizen of the world, students need to develop competence of the English language.

It is necessary to explain the limited achievements of Thai students when learning English, especially for students in lower-secondary schooling (Office of the National Education Commission, 2001). As Pienthunyakorn (1996) indicated, limited achievement in English contributes to students' decisions to leave school on completion of the lower-secondary-school years when their education is no longer supported under the Education Expansion Project. An explanation for this decision would seem to be that low achievement affects students' levels of dissatisfaction with learning English. As a result, levels of boredom and discouragement increase for students who are reluctant to proceed with further studies in English. This phenomenon, where students are caught in a cycle of negative affect and limited achievement, has been described by Stanovich (2000) as the Matthew Effect. Therefore, the purpose of this study is to investigate the relationship among a set of variables that influence Thai students' level of achievement in their English subject. Of primary interest is the relationship between emotional intelligence and Thai students' achievement in English.

**Emotional intelligence**

For centuries, psychologists considered intelligence as a construct that is associated with cognitive problem solving (Hedlund & Sternberg, 2000). However, during the twentieth century, a purely cognitive construct of intelligence was challenged with proposals from many, including Thorndike (1920), Wechsler (1972), and Gardner (1983). In 1920, Thorndike introduced the notion of social intelligence, which he distinguished from abstract and mechanical forms of intelligence. He proposed that social ability was an important component of intelligence and defined social intelligence as the ability to understand and manage others to behave intelligently in human interactions. Fifty years later, Wechsler further developed this proposal, suggesting that there were three additional forms of intelligence: (a) emotional, (b) personal, and (c) social that complemented cognitive forms. Wechsler defined “intelligence” as an overall ability to achieve goals, to have reasoning ability, and to deal with situations efficiently. Additionally, he emphasised that intelligence tests were limited if they measured cognitive forms of intelligence and excluded emotional, personal and social intelligences. Similarly, Gardner (1983) supported the view of non-cognitive forms of intelligence. He described these as intrapersonal intelligence, which is the ability to understand one's own emotions, and interpersonal intelligence, which is one's capacity to relate well to others. In recent years, the proposal that there are intelligences that are unrelated to cognitive aspects has received further support (Hedlund, & Sternberg, 2000).

Mayer and Salovey (1990) viewed emotional intelligence as the ability to process effective information as an intellectual aptitude. They described it as being comprised of five key elements. The first element was self-awareness, which is the perception of one's own real feelings, opinions, and emotions, and the ability to control one's emotions. The second element was the ability to manage one's own emotions appropriately. For example, one must have the techniques to reduce stress and worries quickly. The third element was the ability to recognise emotions in others and to empathise. The fourth element was the ability to motivate oneself, to be optimistic, and to act in a particular way in order to achieve a desired goal. The final element was the ability to manage relationships in a positive way. Goleman's (1995, 1998) view of emotional intelligence was similar to that of Mayer and Salovey (1997) in that he described five subscales comprising emotional intelligence that matched the five key elements proposed by Mayer and Salovey. His interpretation was different, however, in that he emphasised two dimensions of emotional intelligence: (a) Personal Competence, and (b) Social Competence. The dimension of personal competence included self-awareness, self-regulation, and motivation while the dimension of social competence included empathy, and social skills. In addition, Cooper and Sawaf (1997) interpreted emotional intelligence with a focus on Emotional Literacy. Their interpretation emphasised emotions that improved personal power and improved the quality of life. Cooper and Sawaf suggested that emotional literacy enhanced levels of emotions resulted in improved relationships, created loving possibilities between people, made cooperative work possible, and facilitated the feeling of community.

In defining emotional intelligence, Weisinger (1998) referred to the ability to use emotions intelligently. Like Goleman (1995), he described emotional intelligence as two dimensions: (a) intrapersonal emotional intelligence, and (b) interpersonal emotional intelligence. Weisinger suggested four methods to develop levels of emotional intelligence. First, he proposed that an opportunity be provided to perceive, interpret and express one's emotions correctly. Second, one must be assisted in understanding his or her emotions and feelings. Third, one must learn to control emotions and, fourth, opportunities should be encouraged.
to build up positive behaviours. Bar-On (2000) defined emotional intelligence as the ability to physically, mentally and socially adapt oneself to the environment successfully. Bar-On’s concept of emotional intelligence offered five elements. Similar to Mayer and Salovey (1997) and Goleman (1998), Bar-On proposed five subscales comprising emotional intelligence, however, his interpretation was different in that he emphasised (a) Intrapersonal ability, (b) Interpersonal ability, (c) Adaptability, (d) Stress Management, and (e) General Mood.

While there are subtle differences among the definitions of emotional intelligence provided by theorists, there is agreement that emotional intelligence is the ability of a person to control their own emotions through their intelligence and to manage other people’s emotions. Controlling one’s emotions includes the ability to understand, control, and motivate oneself appropriately and ethically. The management of other people’s feelings includes feeling empathy to others, understanding and perceiving other’s feelings, and encouraging as well as managing their emotions for peaceful living. Therefore, emotional intelligence receives a special attention in this study as it has evolved the ability to perceive emotions accurately and to express them. In addition, emotional intelligence involves the ability to: a) access or generate feeling so as to facilitate thought, b) understand emotion and emotional knowledge, c) regulate emotions, and, d) promote emotional and intellectual growth (Goleman 1995; Mayer & Salovey, 1997). This definition connects intelligence and emotion because it is underpinned by the ideas that controlled emotion contributes to the process of thinking more intelligently, and that one should think intelligently about emotions. From this point of view, a person with these abilities is considered a well-adjusted and emotionally skilled person. The lack of these abilities renders a person socially and emotionally handicapped. Therefore, according to Goleman (1995), people who have emotional intelligence will be happy and creative, and well equipped to study.

Methodology

Sample
The sample consisted of 273 students (136 males, and 137 females) attending a government, secondary school in Thailand. All students were Thai natives, and aged between 13 years and 15 years. They were completing Year 8, which is the second year of lower-secondary school in Thailand. All students studied English as part of their program at school with Year 8 classes being taught by two teachers who had specialised in English Language Teaching (ELT). While 75.5% of students were receiving additional tuition in English outside school hours, approximately 67% of students had begun studying English prior to formal instruction that had begun in Year 1. This suggests that over two-thirds of students’ families valued the learning of English to the extent that private tutors were engaged to conduct English lessons with their children. Almost 70% of students were from families that the school described as representing either medium or high socio-economic status. The researcher explained that students’ participation was voluntary; however, all students agreed to participate in the study and later completed a set of five questionnaires. These were:

1. Thai Emotional Intelligence Screening Test;
2. Family Encouragement for Learning English Questionnaire;
3. Study Habits Questionnaire;
4. Level of Engagement Questionnaire; and,
5. Attitudes toward Studying English Questionnaire.

Data preparation
Data were imported into Analysis of Moment Structures (Arbuckle, 1997) files, that is, AMOS files with the purpose of critiquing each of the scales used to obtain data in relation to the constructs of: emotional intelligence, family encouragement for learning English, Study habits, level of engagement, and Attitudes to studying English. Items for each scale were subjected to confirmatory factor analyses (CFA). The fixed variance of each latent variable was set at 1. A selection of goodness of fit indexes was examined along with modification indices. Items were removed from CFA on the basis of either low standardized beta weights, or on the basis of high intercorrelation of error terms. No more than half of original items were excluded to allow for the breath of measures required to substantiate a valid and reliable scale. Thus, when a scale was revised, the final version of each scale included a minimum set of lower regression values or significant error correlations.
**Results**

A simple SEM model is proposed in the conceptual model in Figure 1.

![Conceptual Model of Relationships](image)

**Figure 1.**

This conceptual model of relationships among EI overall, family encouragement, study habit, engagement, attitude and GPA in English.

**Discussion**

There were direct and indirect links between emotional intelligence and English achievement as suggested in the model proposed. In view of the present results, emotional intelligence appeared to directly influence achievement, and to affect achievement indirectly. This direct relationship is supported by the literature as expected. For example, Sylwester (1998) mentioned that emotions are meaningful to education as they can either drive or inhibit attention, which in turn drives learning and memory. Both positive and negative emotions have been shown to affect students' motivation to learn, and their achievements. Kearney (1998), with her investigation of passive writers, noted that negative emotions tended to be a disruptive factor in students' thinking when writing; whereas Boud, Keogh, and Walker (1985) stated that positive feelings and emotions can greatly enhance the learning process by keeping the learner on the task and providing a stimulus for new learning. Reasoning that takes emotions into account is part of what Mayer and Salovey (1997) referred to as emotional intelligence. They suggested that social and emotional learning is critical to success in school and the workplace, and in sustaining healthy relationships with family and friends. For example, when children are not aware of their feelings, they will find it difficult to make reasoned decisions, control impulsive action, or say what they really mean. Moreover, Elliot (2003) mentioned there is strong evidence to suggest that learning can be enhanced when levels of interpersonal skills are increased. Interpersonal skill is described as a component of emotional intelligence by Gardner (1983, 1993), and by Bar-On (2000). In addition, studies by Buaprasert (2002), Towboonchoo (2003), and Thetkayan (2002) confirmed that emotional intelligence can be taught to Thai students. This fact, in combination with the findings of this study, suggests a way to improve Thai students' achievement in their English subject.

Furthermore, family engagement strongly linked with emotional intelligence, where EI predicted levels of family encouragement. Emotions provide people with valuable beliefs and feelings about themselves and how they relate to others. Therefore, emotional intelligence can influence society at all levels. If it enhances family interactions, it is affecting the smallest social group within society. It is also affecting society as a whole because society is comprised of individual family groups. Besides influencing family encouragement, emotional intelligence also had an effect on study habits. Students who are aware of their emotions and can manage them will be willing to interact with teachers and students, and be confident in asking questions and taking risks. They will be able to self-regulate their behaviour to optimise outcomes associated with a learning situation. In effect, they will have good study habits. Moreover, Elliot (2003) suggested that the link between effective study habits and positive learning outcomes was levels of engagement. Engagement was found to influence attitudes toward the learning of English as well as
English achievement. This suggests that students who are committed and engaged when participating in English activities develop positive attitudes toward learning in English classes. The attitudes of a learning community can affect and develop motivation for both learners and teachers, with positive attitudes influencing positive learning outcomes (Ellis 1985).

**Significance of the study**

Results of this study offer a perspective on the meaning of intelligence that supports the work of theorists (Gardner, 1983, 1993; Goleman, 1995; Mayer & Salovey 1990, 1997) who have insisted that intelligence is much more than a cognitive, problem-solving ability. These results also support Stanovich’s (2000) proposal of the Matthew Effect, which suggests a bidirectional relationship between attitudes and achievement. The conceptual model provided has implications for curriculum design and instructional approaches that will enhance students' academic and personal achievement. Results of the study have also allowed the identification of three principal factors that can influence students’ language learning: (a) engagement, (b) study habits, and (c) family encouragement. As these factors are either directly or indirectly predicted by emotional intelligence, the role of emotional intelligence in the learning process and its influence on achievement is better understood.

In addition, the findings of this study will help policy makers in Thailand’s Educational Ministry recognize the important effects of emotional intelligence on learning English. Therefore, teachers should be encouraged to observe and determine students' levels of emotional intelligence before English instruction begins. Where students are lacking emotional intelligence, teachers should find ways to challenge negative effects and to encourage attitudes and practices that are "emotionally intelligent". Students will then improve their intrapersonal and interpersonal skills, and as a result their English achievements will be enhanced. Without a doubt, there will be ways to design curriculum so that in the process of learning and teaching, students' emotional intelligence is promoted along with English language ability. Additionally, there is cause for policy makers to consider how existing pre-service and in-service programs promote levels of emotional intelligence for teachers.

Finally, findings of this study can inform the practice of parents and caregivers. When responsible adults know that family encouragement is predictive of achievement in English, they will try to support the children in their care. This support should provide a cycle of effect. For example, the child who has English competence will recognize the family's contribution, and will be wanting to contribute as an adult member of the family to English competence of the next generation.

**Summary**

While academic achievement is dependent on students' innate ability, their performance is influenced either positively or negatively by a range of variables that shape their language-learning context. Emotional intelligence is one of these variables. It directly and indirectly influences further variables such as family encouragement, study habits, levels of engagement, and attitudes to influence students' English achievement. Therefore, students who have high levels of emotional intelligence should be encouraged to maintain and improve this ability, while students who lack emotional intelligence should be assisted in developing it. From this study, the findings will benefit the work of classroom teachers in Thai schools who are responsible for providing effective English-learning pedagogy for students. Additionally, findings of this study will benefit the work of authorities in the Ministry of Education in Thailand in developing educational policies and providing English-learning curriculums.

**References**


Professional Experience And Undergraduate's Self-Efficacy For Teaching

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Professional experience is a core component of pre-service teaching degrees and provides opportunities for teachers-in-training to develop workplace competencies and skills as well as opportunities to relate theory to practice and assist in the formation of a neophyte’s identity as a teacher. The professional experience is also thought to contribute to the student’s growing sense of confidence—or self-efficacy—in general and specific pedagogical practices. This study was designed to examine how student teachers’ perceptions of self-efficacy for teaching changed as a result of their participation in a three-week professional experience program in a school. Fifty-five students, enrolled in two different undergraduate education courses in a regional New South Wales university, participated in the research. Pre and posttests were administered to determine change in self-efficacy perceptions for undertaking a range of curriculum, teaching and learning duties during professional experience. Self-efficacy results are compared to interview data and professional experience reports to gain insights into the development of student teachers in the two undergraduate courses.

It is amazing how much experience you gain on your pracs without realizing it. You pick up ideas from different teachers such as various methods of settling a class, dealing with interruptions, and running different styles of lessons to suit the subject areas (Liz Sheldon in Harrison, Allan, Phillip, & Reid, 2004, p. 63).

Professional experience is a significant component of all pre-service teacher education programs. It is seen as an opportunity for student teachers to integrate their academic learning with concrete knowledge within a professional setting and is valued by academic staff and student teachers as an integral part of the formation of teacher identity. Across Australian universities, the models and timing of professional experience may vary, but in general it is a block time when student teachers work in a school setting for several weeks. Each professional experience placement and its subsequent length, is usually determined by the stage of learning within the teaching degree.

Background

The value of the practicum

... practicum is the most effective means of preparing pre-service teachers to teach the curriculum that schools are accountable for, to prepare then for assessment, reporting and administrative responsibilities, and for the human relations dimensions required for developing relationships with students, colleagues and parents (2005, p. 139).

The role of the teaching practicum is strongly endorsed in current conceptualisations of teacher education both by agencies of review (e.g., Ramsey, 2000) and also within the vocational educational sector itself (ACDE, 2001). Though the precise nature of the practicum, its timing, duration and articulation with other elements of the teacher education program are not always a matter of agreement amongst all stakeholders, the implicit value of this component of teacher education is not contested. For many, the siting of the professional experience component in the school adds a special level of validity to the learning that is expected to accrue for the students in this component of their studies. Indeed, for some, the professional experience in classrooms is a powerful testing ground for knowledge and skills developed during the on-campus period of a student’s professional studies. In present times, it may even be seen as a compensatory element in the teacher education program for the perceived ‘lack of practical teaching strategies’ developed in the university classroom (Education and Training Committee, 2005, 104ff).

The value and interpretation of the practicum has been the subject of inquiry in both the academy and government and private think tanks (for example, ACDE, 2002; ACER, 2003; Committee for the Review of Teaching and Teacher Education, 2003; Education and Training Committee, 2005; Ramsey, 2000).
While those inquiries take a far from equivocal view of the need for the professional experience in teacher education courses, the rationale for that need is often built on assumptions rather than evidence about how the professional experience actually affects student teachers and their progression toward becoming a neophyte member of the profession (Perry & Power, 2004). Traditional views, for example, of the teaching practicum argue that learning completed in the university setting is organised and developed by the student and then implemented in the classroom during periods of practicum. That is, the process of learning to teach is a largely a matter of ‘arming’ student teachers with certain knowledge and strategies and then using the practicum as a kind of staging ground to evaluate the extent of the learning of such knowledge and efficacy of strategy deployment. The research on the professional experience component in teacher education courses, however, offers little support to such notions (Wideen, Mayer-Smith, & Moon, 1998). Rather, the evidence tends to support an understanding of professional experience effects being complex and dependent on the unique contributions of the student and their behaviours and the contextual enhancements and limitations presented by the learning environment in the professional experience. The complexity of the effects is multiplied when one takes into account the great diversity of practicum situations that individual students will experience in the standard teacher education program.

**Changing conceptions of the practicum**

Some of the diversity in the practicum that students experience arises through the structure of schools and grade levels in which student teachers work. For example, students sent to a multi-age classroom in a smaller regional school will experience a very different model of pedagogy to their colleagues who teach in a single year level classroom in a large school in the city. Other sources of diversity include the degree of ethnic enrolment, religious affiliation of the school, and the socioeconomic background of students in the school.

Another source of diversity in the practicum comes from the nature of the practicum within the teacher education course structure itself. For example, traditional approaches to practicum in teacher education follow a model where the student receives instruction in teaching methods and curriculum content at the university and then, at the conclusion of semester classes, the student embarks on a block placement of practise teaching. The assumptions about student teacher learning and the practicum in this model closely match those identified above and the model has been criticised for presenting the relationship between student teacher learning and the practicum too simplistically (Perry & Power, 2004; Wideen, Mayer-Smith, & Moon, 1998).

More innovative approaches to the practicum include models that acknowledge the ‘dialogue’ between university classroom and school classroom (see Perry & Power, 2004, 130ff). These models of teacher education attempt to organise the practicum in ways that support the students' need to understand the lessons that they execute in schools and the ‘lessons’ they learn about pedagogy and identity through their experience in schools and the university setting. As a consequence, new practicum models have emerged that have moved from typical ‘end on’ approaches where block practice follows the university class schedule to approaches where the practice teaching is more thoughtfully incorporated into the weekly university class schedule (see, for example, White, 2004 and also Clark, 2004) with or without a block practice teaching session.

While innovations in the design and delivery of teacher education occur less frequently than might be desirable, there are opportunities that arise from time to time within the institutional setting that encourage a new responses to elements of the teacher education program. This paper reports on a new approach to the organising and scheduling of the practicum in one of the courses offered in the Murray Education Unit. The Unit provides 3 education degree programs within the Faculty of Education of Charles Sturt University at its campus in Albury-Wodonga on the border of New South Wales and Victoria. The paper reports on an innovation in the practicum for a new degree in Middle Schooling that was offered for the first time in 2004. The innovation developed in response to practicum scheduling difficulties that arose following the reorganisation of another degree program that shares the same initial primary school placement. The scheduling differences meant that the normal timing of the professional experience for the new Middle Schools course had to be significantly delayed. The paper outlines the solution that was adopted and presents data indicating the effect of the practicum innovation on student teachers' observed and reported learning in the placement as well as the students' reports of perceptions of self-efficacy for teaching as it developed during the practicum.
Changing the timing and nature of the in-school experience

The existing structure for the first primary school practicum included enrolment in a 'professional experience' subject in which was embedded a standard 3 week block practice teaching experience in a Kindergarten to Year 2 classroom. This practice teaching experience was normally undertaken mid-way through the lecture series. After the 3 week block practicum was complete, students returned to university where classes resumed in the professional experience subject with teaching and learning redirected from preparation and the building of foundation knowledge and skills to more critical and reflective activities, including the completion of a journal detailing the student's experience and their responses to the challenges and dilemmas faced during the block placement. Evaluation of the subject and the teaching practicum had endorsed the subject curriculum and the role of the practicum in the subject. In addition to their enrolment in the professional experience subject, students were enrolled concurrently in a K–6 Literacy and a K–6 mathematics subject. The learning in these subjects was also supported by a range of practical requirements built into the block teaching practicum. The practicum therefore was a central component of the professional experience subject and the literacy and mathematics subjects taught in the same semester.

The Bachelor of Education (Middle Schooling) was the second degree course developed by the Murray Education Unit and, as might be expected, economies with respect to subject offerings in the new degree were found through incorporating subjects from existing degree curricula. The initial primary school placement subject and its associated practicum was one such economy in curriculum design for the new degree. However, after some late changes to the structure of the new Middle Schooling degree, it became clear that the timing of the subject and the associated practicum were going to be problematic. Of particular concern was the problem that the practicum in the professional experience subject could not be undertaken in the normal timeslot allocated in the subject's program. In fact, the Middle School students' timetable meant that the placement could only be completed near the end of the school year - a time when few teachers were interested in supervising student teachers. Moreover, given the role of the practicum in the teaching and learning program in that subject, it became clear that a new approach for the Middle Schools students' first practicum was required.

After some discussion and liaison with schools it was determined that the professional experience placement would occur in the year following the teaching of the subject content for that professional experience. That is, the students would complete lectures and workshops related to the preparatory elements of the practicum in the spring semester and then complete the field-based activities early in the next year. Follow-up activities - for example, the reflective journal - would be done following the placement in the autumn semester.

The rescheduling of the placement provided an opportunity for students to experience how teachers prepare to teach a new classroom cohort. Such experiences had been suggested as worthwhile by students in the Unit's courses and these views reflect practices adopted overseas:

A further common feature of international models is the opportunity (or requirement) for pre-service teachers to experience school settings from day one of the new academic year, to give them the opportunity to experience the process of setting up a new classroom and how relationships are formed with a new group of school children (Education and Training Committee, 2005, p. 147).

Thus, after consultation with schools, arrangements were made to have students start the practicum at the beginning of the school year. In spite of the fact that this would occur outside the normal university teaching time, there was no opposition to the proposed scheduling.

A final concern the Unit faced with respect to the rescheduling of the practicum was that there would be no opportunity for students to engage in the practical learning tasks which formed part of the literacy and mathematics subjects. The learning tasks in literacy and mathematics were designed to be completed as these subjects were being undertaken, with the completion of key learning tasks during the mid-semester practicum. The formative processes built into the subjects' learning and assessment tasks were likely to be compromised if these tasks were moved to the proposed timing of the practicum.

A solution to this problem arose through the establishment of a new program of weekly school visits for all students enrolled in the literacy and mathematics subjects. The weekly visits to classrooms provided opportunities for Middle School students to implement curriculum activities normally done in the mid-semester practicum. It also allowed for the establishment of a new weekly reflection for all students back in the university setting on teaching and learning in literacy and mathematics.

In summary, the Middle Schooling students:
Participated in weekly visits to an assigned classroom for literacy and mathematics work
Participated in weekly debrief and discussion on their literacy and mathematics activities in the classroom
Engaged in fortnightly workshops in preparation for the practicum
Returned to the same classroom teacher in the following year to complete the block practicum with a new class group.

Measuring the effect of the changes
We were interested in measuring how the proposed changes to the practicum and the curriculum subjects would affect student teacher learning and competence. We selected three sources of data related to pedagogical learning and practice: supervising teacher reports, student professional experience journals, and a measure of teaching self-efficacy.

Reports and journals
At the end of the student teacher block practicum the supervising teacher is required to make a report on the student's progress toward a range of teaching competencies. Supervising teachers rate students on competencies such as lesson preparation and evaluation, approach to diverse learners, interpersonal skills, and ability to engage in meaningful dialogue with supervisory staff at the school. Supervising teachers are then invited to add further comment to the report in terms of the student's strengths and areas needing improvement. Students are given a final rating as either 'satisfactory, unsatisfactory or marginal'. Students who receive a 'marginal' are provided with closer supervision in the next teaching practicum.

The student professional experience journal is another source of data on student learning. The journals provide the reader with an insight into the student's growing capacity to be able to be reflective about issues relevant to their stage of development as a student teacher. The journals reveal the degree of self-awareness of the individual student and they also offer insight into the level of pedagogical analysis students are capable of as they attempt to interpret and evaluate the lessons they have tried to execute or the events they have attempted to manage.

Teaching self-efficacy
As noted by other teacher educators (e.g., Gibbs, 2003; Morell & Carroll, 2003), self-efficacy perceptions can provide a powerful insight into the likelihood that individuals will attempt to use new skills or will persist at tasks to achieve valued goals. In teacher education, self-efficacy is helpful in assisting teacher educators to identify how students may be developing new levels of performance or where they are arrested in their performance.

According to Bandura (1997), the individual's self-efficacy perceptions are informed by four different sources: enactive competency, vicarious learning experiences, feedback from internal states, and verbal persuasion.

Enactive competency
Individuals receive clear and unambiguous information about their efficacy from the process of engaging with and performing tasks. Students, for example, will receive immediate and concrete evaluative information on their ability to effectively settle children for story time through engaging with this task in the practice teaching classroom. The student teacher's enacted competency is 'concrete' evidence that the student can do whatever is required to achieve certain goals.

Vicarious learning
Students may also view model lessons or observe other demonstrations of competence during the practicum or in the university classroom. Such demonstrations allow the observer to encode, store, and mentally rehearse particular teaching routines or skills. An evaluation of one's capabilities in the light of observations of other's performance can lead to enhanced feelings of self-efficacy for performing on similar tasks. Such learning by the example of others - or vicarious learning - was postulated by Bandura to be another important source of self-efficacy information.

Verbal persuasion
Receiving positive feedback about our performances from esteemed others and responding to their encouragement to perform to one's 'best' is known to have an effect on how we perceive our capabilities and our adequacy to meet task demands. Bandura's third source of efficacy information—verbal persuasion—is an extremely common source found in the practices of teachers and others adopting a
supportive role with learners everywhere. While there are limits to the effectiveness of verbal persuasion, all people are aware of the enabling effect of encouraging words from valued mentors and friends as we assess our capability to achieve goals in our lives.

**Emotional arousal**

Finally, Bandura points out that how we feel about, and respond emotively to, the activities we pursue or the tasks we face in our lives has an effect on our confidence to pursue such activities or face such challenges. Fear and anxiety are debilitating to our performances and such emotions also impact our own estimations of capability (self-efficacy) for future performance. Reducing anxious thoughts has been shown to increase self-perceptions of efficacy which in turn lead to better performances than people have previously exhibited.

As students complete their practicum experiences in educational sites they no doubt have an opportunity to practice teaching skills, observe others teach, experience the emotions associated with success and failure on teaching tasks, and also receive feedback and advice on their teaching performances. Self-efficacy development can be a valuable measure therefore of the individual's growing sense of pedagogical competence.

In this study we used a recent measure of teaching self-efficacy designed and validated by Megan Tschannen-Moran and Anita Woolfolk Hoy (2001). The Teachers' Sense of Efficacy Scale includes 24 items which focus on efficacy perceptions for student engagement, instructional strategies, and classroom management. The measure was administered just prior to the commencement of the teaching practicum and soon after the completion of the practicum.

**Findings**

The results for this preliminary investigation into the effects of a significant change to the organisation and timing of the student teacher practicum are outlined below. The data related to self-efficacy are presented first after which data gathered from the student school performances and journals are presented.

**Student teacher self-efficacy**

The level of self-efficacy of the Middle Schools group was compared with self-efficacy perceptions of another degree cohort who completed the normal spring semester enrolment related to the first primary school practicum. The comparison group had completed the practicum in the usual mid-semester position. Although, they experienced the school visits for the semester as the Middle Schools students did, they had only participated in a maximum of 3 classroom visits for literacy and mathematics tasks prior to the commencement of the practicum placement.

The mean level of teaching self-efficacy at pretest for the Middle Schools cohort was 6.12 on a 9 point scale. This represents a moderate level of self-efficacy for teaching. The comparison group achieved a mean score of 5.82, also a moderate level of self-efficacy at pretest. A one-way ANOVA performed on the pretest scores showed that neither group differed significantly in terms of self-efficacy at pretest ($F(1,54) = 0.64, p > .05$). Thus, although the Middle Schools group had experienced a very different curriculum prior to the placement (and had waited nearly 3 months to begin the practicum) there were no discernable negative effects on student teachers' sense of teaching efficacy resulting from the change to the practicum and the other curriculum in the spring semester.

The mean level of teaching self-efficacy following the experiences of the practicum rose significantly for the middle school cohort ($t(27) = 4.55, p < .001$) and also for the comparison cohort ($t(22) = 4.59, p < .001$). As Figure 1 shows, the mean level of self-efficacy rose for both groups irrespective of the form of practicum and curriculum they experienced. Mean levels of efficacy were similar for both groups ($F(1,48) = 0.15, p > .05$), indicating that the changes to the practicum and the spring semester curriculum had not disadvantaged the middle schools group.

The Teachers' Sense of Efficacy Scale is composed of subscales for student engagement, instructional strategies and classroom management. Exploration of the subscales data for the two cohorts confirmed that, as before, there were no significant differences between either cohort with regard to initial sense of efficacy on each subscale and post-practicum sense of efficacy (all $F$s < 0.92, ns). Paired samples $t$ tests conducted on each subscale for the separate cohorts showed that students in the Middle schools cohort increased their sense of efficacy across the three subscale domains (all $ts(27) > 3.26, p < .005$) with the greatest effect occurring in the subscale dealing with classroom management ($t(27) = 5.15, p < .001$). The
comparison cohort also made significant increases from pretest to posttest on the three subscales with classroom management also showing the greatest effect ($t(22) = 5.45$, $p < .001$).

![Self-Efficacy Graph](image)

**Figure 1.**
Student teachers’ sense of efficacy before and after the practicum.

### Journals and supervisor reports

The analysis of journals and supervisor reports for both groups yielded mixed findings. On the one hand, supervisory reports were generally more positive and affirming for the Middle School cohort. On the other hand, Middle School student journals did not appear to evidence more reflective qualities than the comparison group. Students tended to take a relatively surface approach to their analysis of lessons, classrooms, policies and practices and other items focussed on in the journal. Although our analysis relied on only a sampling of journals from students there seemed to be no reason to assume that our technique had been biased.

The supervising teachers had been especially pleased with the abilities of the Middle School cohort, describing them as ‘competent’, ‘strong students’ who had very good understandings about pedagogy and basic classroom operations. Indeed, one of the supervisory teachers who had been working with various practicum cohorts over the past 10 years called the first author to let him know that she felt the students placed at her school were the best she’d seen. This teacher felt that the University had ‘got it right’, that the cohort at her school was exceptional.

While it is tempting to conclude from this—as the teacher had—that the cohort made the difference, there is more to consider in understanding the improvement cited by the teacher. For instance, Middle Schools cohort students had been in classrooms longer (by as many as 10 days by the commencement of the practicum) and they had longer to familiarise themselves with classroom and the teacher as well as the school and staff generally. Moreover, the students from the Middle Schools cohort were at the school at time when ‘extra hands’ could be very valuable. The value of another adult in the room in the first days of a K–2 classroom should not be underestimated. Kindergarten teachers especially may have found the presence of a known student from the previous year who possessed a good working knowledge of the classroom and the school a particularly rich asset.

### Conclusion

The present data sheds some light on how the practicum and the curriculum surrounding it can be modified with at least no ill effects for student teacher development. The effects found for Teacher Self-Efficacy reveal that practicum has a measurable effect on individual’s sense of personal competence and achievement. At this stage, however, it is unclear as to how differential effects of self-efficacy for pedagogical competence might be related to teacher education program changes that expand the duration of contact between students and schools. For now, all that can be said is that program changes, such as
those described in this paper, provide student teachers with at least as much support in their development as other less extensive programs.

The extent of enhancement of teaching self-efficacy that occurs through the teacher practicum is a vital interest to teacher educators (Gibbs, 2003; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), especially as this relates to increasing calls from stakeholders to increase the amount of practicum experience mandated in teacher education programs. We should not be increasing the amount of time in practicum purely on the basis of 'more is better' but on the basis of how changes to the practicum have measurable effects on the development of student teacher pedagogical expertise. The approach of 'more is better' is quite unhelpful in a climate of rising costs of the practicum in the university sector against a backdrop of concern from the schooling sector that they are already overburdened with the demands placed upon them by teacher education programs.

On the other hand, the evidence from supervising teachers in this study indicated that they were dealing with a qualitatively different type of student. The fact that the supervising teachers were so pleased with the Middle Schools cohort on their first practicum placement points to important effects of the changed practicum and the program modification described in this paper. Moreover, it points to effects that are not so much to do with pedagogical skill (and self-efficacy for teaching) as they are to do with student teacher understanding of the classroom and the school and also the relationships that must be formed and maintained in this type of professional environment (White, 2004).

References
The Use Of 'Collective Biography' For Narrative Inquiry In Teacher Education Placement Research

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A major issue in initial teacher education is the quality of school-based placement experiences. This paper explores the qualitative method of a research project, which will develop, reshape and validate a model of distance teaching placements, and as such is a work in progress. Collective biography has grown out of memory-work, a feminist social-constructivist paradigm (Small & Onyx, 2001, p. 63) where the experiences of those taking part are paramount, for researchers and participants. Narrative inquiry, well established within the qualitative paradigm of teacher education research (Clandinin & Connelly, 2000), is anchored in the view that “people live storied lives”, and seeks to “collect data to describe and explain these lives” (Marshall & Rossman, 1995, p. 86). One data generating method used in this study will be ‘biographical’, drawing on the stories of the individual participants, and ‘collective’ in that the stories used will reveal the ways in which these participants were collectively shaped as “coherent subjects” (Gannon, 2001, p. 788). Success of this inquiry may be dependent on how well this male researcher can become embedded in the experiences in terms of space and temporality, seeking to understand the past and present stories of the mainly female participants (Clandinin & Connelly, 2000).

Introduction

“Unless we take a broader perspective on the question of determining good student teaching placements than we have to date, the enduring problems of student teaching will be with us for a long time to come” (Zeichner, 2002, p. 63). The problems Zeichner alludes to may be associated with relationships, communication, collaboration and the partners’ knowledge of the specific teacher education programme goals and practices. The quality of any school-based teaching placement experience will only improve when student, teacher and lecturer (the partners in teaching education) know and understand what makes for success. While there is a growing quantity of research focusing on the students' perceptions of successful placement, this paper is based on an ongoing research project involving all three partners associated with distance teacher education.

Practical classroom experiences are considered a significant part of the teacher education programme for the first and second year student teachers in the distance version of the University of Waikato’s BTchg (primary). These students are required to attend a placement at their local primary school (called a base school) one day a week throughout the first four semesters of their programme. This extended period is commonly sited in one base school but for a number of reasons it may not be with the same classroom teacher (called a coordinating teacher or CT). This practical part of their programme is supported by online study material and week-long residential courses. While the students also have extended practicum experiences in each of their three years, this research project focuses only on the weekly one-day base school placement.

The hypothetical foundation of this research project is a model created and developed by the researcher, based on personal knowledge and experiences of such teaching placements. The research process is designed to evaluate and reshape the model based on the voices and experiences of students, teachers and lecturers involved in this distance programme. To achieve this connection, an interpretive epistemology is used within a qualitative paradigm. Exploration of experiences of these placements must occur simultaneously in four directions: inward (looking at feelings, hopes, aspirations, aesthetic reactions and moral dispositions), outward (considering the environment and context), backwards (such as temporal past and present), and forwards (considering temporal present and future) (Clandinin & Connelly, 2000, p. 50). This paper presents a work in progress considering the method being employed to understand and interpret the first year experiences of a group of second year student teachers.
Methodology

**Employing a qualitative paradigm**

Explanation of the world of a teaching placement for the students, teachers and lecturers in a distance teacher education programme depends on good interpretive inquiry, achieved by employing a qualitative paradigm (Creswell, 1994; Merriam, 1998). Such naturalistic research is premised on the search for meaning and understanding of human action. The focus of this research project will be on probing the experiences and meaningful relationships, which will help to better describe and explain why and how a diverse group of people interpret their teaching placement.

Using qualitative inquiry permits researchers to accept that reality is nominally co-constructed through the 'world views' of all those involved in the research (Cohen, Manion, & Morrison, 2000; Creswell, 1994; Merriam, 1998), allowing a freedom for the researcher to follow hunches and to renegotiate practices and procedures. Qualitative researchers endeavour to build a "complex, holistic picture" from the parts (Creswell, 1994, p. 164) by investigating carefully all aspects of a phenomenon such as these students, teachers and lecturers of these placements. Using a naturalistic approach to this study allows me to interact with each of the participants within their own setting, minimizing the 'distance' between researcher and participant (Creswell, 1994). Also, using a qualitative paradigm allows me as researcher to acknowledge and exploit all my own experiences and background knowledge of placements. Having a commitment to a constructivist epistemology, acknowledging that social realities are always locally constructed (Cohen et al., 2000; Miller, 1997) recognizes that such realities are embedded in the language and actions of the participants.

Using interpretive inquiry focuses this study on the co-constructed realities and world of the participants and researcher. This research will endeavour to interpret and understand the participants' actions and language and those of others involved (Babbie, 1995). The 'realities', captured through stories, conversations and interviews, will be examined comprehensively to fulfill the intention of this study. Using only my own experiences and knowledge would impose serious limitations on the study (Cohen et al., 2000) therefore it is necessary to include both reasoning and research in order to come to grips with the placement environment and understand the characteristics of such distance teaching experiences.

**Narrative inquiry**

Giving student participants the opportunities to retell and share their experiences through narratives, empowers their voices in this project. Narrative inquiry has become a familiar methodology within the qualitative paradigm of teacher education research. Such a strategy assumes that "people live storied lives" and seeks to "collect data to describe and explain these lives" (Marshall & Rossman, 1995, p. 86). This research proposes to study the participants' meanings of their experiences and behaviours in context and in their full complexity, while at the same time building on the personal knowledge of the researcher (Cohen et al., 2000). Such research is demanding of inquirers, having to "work within the space not only with the participants but also with [them]selves" (Clandinin & Connelly, 2000, p. 61). The strategy being used must be a move from the framework and voice of the researcher to a stronger elicitation of participants' voices (Marshall & Rossman, 1995). People's individual life stories and voices are the primary focus of narrative inquiry and such stories become valuable sources of data (Bell, 1999). Such inquiry seeks to understand groups, communities and contexts through "individuals' insights about their lived experiences" (Marshall & Rossman, 1995, p. 87).

Successful narrative inquiry requires the researcher to become embedded in the midst of the experience in terms of space and temporality, seeking to understand the past and present experiences of all participants (Clandinin & Connelly, 2000). My experiences and background have me immersed in teaching placements, past, present and future. Narrative inquirers are complicit in the experiences they study therefore every situation requires a great deal of consideration and empathy between researcher and participants. Personal accounts of human experiences as they live out their lives, allow for deeper insights into a setting such as placement (Connelly & Clandinin, 1999). Where storying and retelling have been carefully negotiated between researcher and participants, such insights will be "personal and multifaceted" (Bell, 1999, p. 17), providing an effective and powerful way of knowing. In using narrative inquiry I will be giving the students the opportunity to retell their experiences and this will be an opportunity for them to become a "world traveler", for every student participant to 'experience the experience' of others in similar placements (Clandinin & Connelly, 2000). In the writing and sharing of stories, each participating student will also be taking into account the experiences and stories shared among colleagues both online and at
Teacher Education: Local and Global

such inquiry gives people of dissimilar cultural backgrounds the opportunities to work together and share their stories and to better understand "motives and sequence of actions described within a story format" (Bell, 1999, p. 17).

The model

The foundation of this project is a model of teaching placement developed by the researcher from personal knowledge and experiences. As an inductive inquiry it is intended that the process of data gathering and analysis will generate empirical evidence to evaluate the model - "to move from data towards theory" (Henwood & Pidgeon, 1993, p. 16). The model being used was created and developed using a strategy developed by Northcutt and McCoy (2004). Over a period of time, the researcher recalled features and events associated with such teaching placements. The aspects were generated, sorted, re-sorted, clarified and theorized into characteristics. Following this, each characteristic (referred to as an affinity by Northcutt and McCoy) was assigned an influence (see Northcott & McCoy, 2004, pp. 147–194) which is the foundation for the model. After several revisions a current version was determined. At this point the model is a representation of the ideas and experiences of the researcher only.

Drawing on my own experiences as a teacher, lecturer and placement supervisor is important. My own experiences and knowledge, and the reviewed literature, is the foundation that has allowed me to create a preliminary model of practice in placements. This model is a hypothetical model for the purposes of guiding this study and other participants will not have an opportunity to look at it before data generating is completed. However, it is intended to share the model with other 'experts' in the field to get initial feedback and advice, for instance, fellow teacher educators and other teachers involved in the distance programme. Exploring how students, teachers and lecturers make sense of the base-school placement in this distance programme is fundamental to testing the model (Creswell, 1994) rather than imposing theory on each setting. Critical to evaluating the model will be the gathering of empirical evidence from the students, teachers, lecturers and documents (such as literature and programme policies and guidelines). Naturally, in creating, developing and evaluating such a model, the values and biases of researcher and participants will be influential so it is important to adopt a methodology that accepts and acknowledges that such circumstances are present and unavoidable, in fact can be utilized to co-construct theory.

Method

The data gathering process

Triangulation of the data used to evaluate the model will be an important part of the data gathering process. The process will involve individual student narratives, focus group discussions, teacher and lecturer conversations and interviews. This process is not about "why we think the things we remembered happened or what judgments we want to make about them" (Davies, Browne, Gannon, Honan, Laws, Meuller-Rockstroh, & Petersen, 2004, p. 372) but rather to understand the placements for these distance students in order to evaluate the model. As researcher I will not be involved directly in each placement site as a participant observer, but will observe from a distance. Stage 2 of the project will be the student participants' own, individual reflections and writing of stories about particular events and episodes based on trigger topics. Stage 3 will be a collective examination of the memories of all members of this 'collective' based on the trends and patterns identified by me as researcher in the narratives, during which time the stories will be further explored in a focus group discussion. During this stage, new meanings and memories may emerge. In order to successfully carry out narrative inquiry, I must become embedded in the midst of the placement experience, seeking to understand the past and present experiences of the student participants (Clandinin & Connelly, 2000), without imposing my own experiences and understandings on the student ideas. This method may highlight the tensions between the individual and the collective, being both the foundation of the placement and the source of it (Gannon, 2001). A major challenge will be ensuring that each student's voice can be "heard" in each collective story.

In the listening to and sharing of stories I will be looking for the students to articulate concrete evidence that is often obscured and made irrelevant in such research. This will best be achieved in such interpretive inquiry through attention to detail in the research methodology and validation of information by triangulation across a range of sources. Triangulation is about validating the study, getting it right (Stake, 1995). Such triangulation should occur in several ways. Stake (1995) and Burgess (1991) indicate three of Denzin's (1970) triangulation protocols would be appropriate for this study: data source, theory and methodological. Data source triangulation is an effort to make sure that the field data gathered "carries the same meaning when found under different circumstances" (Stake, 1995, p. 113). Firstly the
sharing of the model with experts in the field who are not also participants will provide a source of validation. The validation of the student voice will be achieved through the sharing of the stories in both written and oral form. All students will get to read each others' narratives and then share their ideas in the focus group discussions. Their ideas will then be validated in the teacher and lecturer conversation, which will finally be validated through a triad interview involving a student, teacher and lecturer associated together at individual placement sites. Having colleague and teacher experts consider the model of placement created from the literature and my personal knowledge, will be an attempt at theory triangulation and sharing this study with supervisors and colleagues will account for the important protocol of methodological triangulation. This process will allow for triangulation as well as validation of the concepts, trends and patterns identified in the research.

Memory work

The method used in this research is designed to suit the overall project research questions. Phase 4 of the research design will provide opportunities for a sample of students to write, share and discuss their placement experiences, borrowing from the work of researchers such as Haug and others' 'memory-work' (1987) and further adaptations such as Crawford et al.'s (1992) and Davies and others' 'collective biography' (2004). Memory-work and collective biography have grown out of a feminist social constructivist paradigm (Small & O'nyx, 2001). Haug and others (1987) (and other feminist writers) “focused very strongly on what might be called ‘therapeutic outcomes’ in their work, the intention being to bring about change by developing in themselves a greater capacity for resistance to oppressive versions of femininity” (Davies et al., 2004, p. 369). The method used by such researchers is guided by strict protocols. These include writing the narratives about a specific episode as a descriptive story. The story is written in the third person using a pseudonym, as if it happened to another person, with as much detail as possible. Each of these guidelines is supported by practice exploring and explaining the intention of such protocol. The next phase of the strategy, the sharing, is also guided by protocols such as each member reading their story aloud to other group members to elucidate ideas. All participants are encouraged to express an opinion about each narrative, and for the participants to seek out the similarities and differences among the stories. In this project the student narratives will be 'biographical' in that they will draw on the memories of the individual distance students, being faithful and respectful of their experiences. While the work of other researchers involved therapy, this study will not be used as an opportunity for social change, as it was first developed by the feminist tradition, although this may be an unintended outcome (Small & O'nyx, 2001).

Collective stories

Collective stories, created by the researcher from the student narratives and group discussions, will be used in order to retain anonymity and confidentiality between the groups, as well as provide the student participants with an opportunity to check the ‘trends and patterns’ the researcher has identified. Placements consist of groups of individuals acting independently and collectively who construct and create their own realities through words and actions. Such realities may be in conflict with the ideas of others, particularly when specific events or episodes involving students with teachers or lecturers. Such situations may be open to power and control opportunities so anonymity of stories between groups may be critical. This data gathering method will be ‘collective’ in that the process through which the stories are used is one which will reveal the ways in which these students were collectively shaped as “coherent subjects” of placements (Gannon, 2001, p. 788) without exposing individuals to the conversations with others, for instance, their coordinating teacher or liaison lecturer. Individuals construct their knowing and identities through their own and others' stories. As the researcher I will be "collaboratively constructing the narrator's realities" (Marshall & Rossman, 1995, p. 87) which demands that both participants' and
researcher’s voices are heard. The intention of this theorizing is to identify concepts associated with the placement model and also for the researcher to produce a ‘collective story’ which will become the foundation for the semi-structured interviews with coordinating teachers and lecturers - a potential site of conflict if confidentiality is not maintained.

Interviews and conversations

There must be a connection between the three participant groups. With there being such a diverse range of individuals within any “world” and particularly in this project, all wanting diverse ends, it is inevitable that there will be conflict between people wanting to pursue their own goals (Cohen et al., 2000). This is apparent from my own experiences, particularly as a liaison lecturer. There are potential sites for conflict between coordinating teacher and student within the classroom and school, between the student and liaison lecturer, and between the liaison lecturer and coordinating teacher. The social realities and actions embedded in placements are products of individual initiative (Cohen et al., 2000) rather than shaped by larger social forces, such as the university or wider school community. The conversations and interviews to be utilized in this research will provide opportunities for participants to consider the perspective of others. Having the chance to shift position, whether vicariously or in reality, will also shift the knowing for participants, researcher and readers. The collective stories of the student participants will be used as a “reading” for critique during the individual interviews with teachers and lecturers. This reading and consequent discussion will also provide the researcher with another perspective on the placements and therefore provide further evidence relating to the model. “[U]nderstanding the phenomenon […] from the participants' perspectives” (Merriam, 1998, p. 16), possibly a very diverse perspective over a range of placement sites, will make the tasks of analyzing and interpreting demanding.

The participants

Their storied lives and experiences

The storied lives of these participants is the critical voice in evaluating the teaching placement model. The students’ individual ‘life stories’ will provide the foundation data for evaluating the model but will be validated against the stories and experiences of the coordinating teachers, lecturers and researcher. The opportunity to share individual experiences will allow participants to reflect and revisit oft forgotten events through others. This will be achieved through having the students share their stories as a collective and then sharing the collective stories with the teachers and lecturers. As researcher I know what I know because of my background and experiences and, likewise, the other participants will “know [only] what [they] know because of where [they] are positioned in life” (Clandinin & Connelly, 2000, p. 17). Using personal stories to gather field data will be an effective and powerful way of coming to know and understand the characteristics of these teaching placements in base schools. Providing participants with the opportunities to tell their own stories from the past and present will often lead to the retellings of these and other stories by the participants, researcher and readers (Clandinin & Connelly, 2000). During this stage, "details and half-forgotten stories emerge as the stories told spark off one another and the participants discuss the stories 'in terms of everyday' cultural knowledges" (Gannon, 2001, p. 789).

Trusting the researcher

Developing a sense of trust and being faithful to the word of all participants is critical to gathering worthy data. This project involves ten female student teachers, all in the second year of their three-year programme. This could be considered an opportunity for students and other participants to reflect on their practice. The narratives written and shared by these students are drawn from events and episodes they remember from their first year as well as currently. In evaluating the model it is significant that the participants search back, remembering events, beginning from their decision to become a teacher and enroll in this programme, as many of the characteristics manifest themselves at the outset of the relationships and placement experiences. Of course some of these events may relate to conflict, whether between student and coordinating teacher, student and lecturer, or lecturer and coordinating teacher. Because of such circumstances in this study it will be essential that I embrace more than the surface features and content of the data and any documents but respect the power relationships developed or embedded within such field data during analysis and interpretation. In this case of teacher education power resides with the teachers and lecturers and even then it may be considered that some have greater access to the power than others (Cohen et al., 2000). It must be acknowledged that organisations such as placements are dependent on the “people and their goals” and such organisations may be used as
"instruments of power" which some individuals control and "use to attain ends which they see as good" (Cohen et al., 2000, p. 9).

Earning and maintaining the trust of the participants, especially the students, will best be achieved in such interpretive inquiry through attention to detail in the research methodology and validation of information by triangulation across a range of sources. Management of this situation will require "a great deal of sensitivity and understanding between researcher and researched" (Marshall & Rossman, 1995, p. 87). Openness with all student participants will be paramount. Making sure that all aspects of the design process are transparent will help develop the trust. Assuring the students that their stories will not be read by coordinating teachers or lecturers and returning all written narratives and transcribed conversations to the respective and relevant participants, giving them the opportunity to edit, revise, withdraw or add to the discussions and collective stories, will be essential.

**Issues**

Having designed the research process, some ongoing issues exist that are being considered in terms of the overall success and thoroughness of the project. These issues primarily stem from the choice of method being employed to gather evidence to be used to evaluate the model. Adapting the concept of "collective biography" in a situation where the researcher is male and embedded in the site is seen as a challenge and has not been reported in any research located to date.

**Embeddedness**

It is frequently reported that being embedded in the site of the research project without acknowledging this can distort data. While it is important for a researcher to start any study with knowledge and experiences, it is equally important to acknowledge any subjective bias if utilising this knowledge to co-construct theory. In order to successfully carry out narrative inquiry, it is desirable to become embedded in the midst of the placement experience, seeking to understand the experiences of the student participants (Clandinin & Connelly, 2000), as well as to further explore my own experiences without interfering with any existing placement sites. In narrative inquiry it is impossible for me as researcher to "stay silent or to present a kind of perfect, idealized, inquiring, moralizing self" (Clandinin & Connelly, 2000, p. 62). The student and lecturer participants all know me, as I have worked with them, closely in course work and administration or nearby as a tutor of parallel groups or strands in courses. The coordinating teachers may know of me, whether through coursework, or conversation with their student teacher about coursework. I am fully embedded in the placements and programme of this distance teacher education degree.

This embeddedness may be a hindrance in some instances. It may have discouraged potential student participants, inclining them to not offer their time and stories because of past relationships or dealings with me. It may mean that some student participants will not fully disclose about some events because of previous involvement with me. Likewise, other coordinating teachers or lecturers may be reluctant to participate because of previous associations. As a result of these situations the potential participants' pool may have been markedly reduced and the data gathered may thereby be distorted or not fully explored.

**Connection**

Adapting what has, in the past, been a female methodology may make the research data and overall project vulnerable. The question may well be asked: "Have I been true to the method?". Memory work was developed by female researchers as a method to theorise about the memories of personal experiences. This enabled the participants to gain a better understanding of their lives and to implement "social change or liberation" (Small & O'nyx, 2001, p. 1). This research project is not about social change or liberation but it is about using the stories and experiences of a group of women students to theorise about their teaching placement and then to use that data to discuss with other participants and evaluate the model. In this instance, the adaptations to the method must be reliable, making a strong connection between the researcher and the researched.

Conducting inquiry in this way demands that researcher and participants understand each other and collaborate (Marshall & Rossman, 1995). They must work together in the telling and retelling of the participants' realities (Marshall & Rossman, 1995) often having to reconstruct their own stories and knowing together in order to find a truth. Being able to understand the placement fully requires both researcher and participant to consider the setting from another's perspective. It may prove challenging for a male researcher to truly connect to the female stories and perceptions. Gathering field data from a "world" such as placement, it must be acknowledged that the data are contextual and as such "cannot be
separated from the objects, persons or circumstances that they describe or the language [used] to describe them" (Miller, 1997, p. 25).

Understanding
Understanding participants' dilemmas with an open mind is critical to the evaluation of the model. Narrative inquirers are complicit in the experiences they study therefore every situation requires a great deal of consideration and empathy between researcher and participants. As a researcher I will be relying on the stories and information offered to me by the participants but it will be contingent on me showing that I fully understand the stories as told by others. As it is not appropriate for this study to 'interfere' with any placement site in any manner the task of fully understanding will have to be achieved through the stories and discussions.

In order to gain understanding of such "worlds", researchers must explore how the different individuals interpret their own world (Cohen et al., 2000) and then attempt to explain the rules that link such words and actions across groups, the characteristics of such placements as highlighted in the model. Having an intimate understanding of each specific setting is important and this will be achieved through interactions with the students, teachers and lecturers rather than through direct observation. Such understanding of the settings will be reinforced through the exploration of 1 or 2 cases involving a student, teacher and lecturer from the sample, associated with one base-school. It will be essential to provide the opportunity to peruse all transcribed conversations and openly discuss suggested changes.

Fair Interpretation
Having the student participants affirm the collective story as a fair representation is critical for the teacher and lecturer conversations. Where there is such a diverse range of individuals within any "world", all wanting diverse ends, it is inevitable that each may be wanting to pursue own goals (Cohen et al., 2000) and ensuring that all are fairly represented will be a challenge. Each individual involved in such a setting brings their own social reality to each interaction (Cohen et al., 2000) and those realities should be apparent within the collective stories without being individually identifiable. Balance between a story not too long for the teachers and lecturers and yet containing enough detail to represent all student voices and experiences is an important task.

As the researcher I will need to make sure that all student participants are given ample time to read and consider each of the collective stories in turn before they are shared with the teachers and lecturers. I will also need to be open to the suggestions of others as a closed mind may impair the representation of the true story. Having already completed a good amount of research and study, with regards to the model, it is possible that I could become 'closed' to other preferences and considerations. The individual and collective suggestions and data gathered as evidence will need to be used absolutely as points of evaluation of the model.

Such embeddness, connection, understanding and fair interpretation will underpin the evaluation of the hypothetical model. If the model is to be true to the research then the need to reshape, redevelop or in fact start again, must be considered carefully and candidly.

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References
Traditional courses in foundation studies for pre-service teachers include large amounts of information. University students with busy lifestyles experience a tendency for superficial learning. This poses a challenge for lecturers to find innovative ways of developing quality learning and especially critical thinking. In the subject Human Development, studied by first-year pre-service teachers in a multi-campus Australian university, a new pedagogical approach that drew upon the NSW Quality Pedagogy framework was adopted. It involved pre-service teachers in a critical writing assessment task, done on two occasions over a twelve-week semester, centring on real problems in the classroom and beyond. Part of a larger project across two campuses, this paper outlines the theoretical background for this approach, notably the way it draws upon various expressions of social constructivism, and describes the approach used and the major results. The "real problems" for student activity were found in a learning object, Bridgeport virtual school, developed at the University of Newcastle. Pre-service teachers used Bridgeport as a context for their application and critique of developmental theories. Student evaluations of their learning, achieved through a survey comprising indicators of the pedagogies and the virtual school, are discussed, along with follow-up research plans.

Background

Tertiary students and learning

Unlike those of a generation ago, current university students lead extremely busy lives, usually combining part-time jobs with full-time study. The effect on the quality of their study varies with factors such as on-campus or off-campus residency, curriculum major, age and cultural background (Lundberg, 2003, Curtis & Williams, 2002). For professional preparation degrees, the pressures lead students to reduce the complexity of their learning during pre-service programs. This reduction occurs despite the commitment of university teacher educators to notions of critical thinking and deep learning. Some authors see an urgency to enable university students to exceed superficial thinking (Gordon, Simpson, & Debus, 2001), in some cases linking deeper thinking to a capacity to understand social complexity (Jenlink, 2001). Yet several difficulties exist in realising such aspirations. Carini and Kuh (2003, p. 396) appeal for greater cognitive challenge, particularly with "living units organised around themes relevant to teaching ... and capstone projects that require rigorous integration and synthesis of knowledge". Many teacher educators (e.g., Gore, Griffiths, & Ladwig, 2001) follow their lead, believing that, if pre-service teachers see tasks to be relevant to teaching, they are more likely to be motivated to think more deeply. This matter is not new, being addressed by Dewey (1916, cited in Delisle, 1997): "Methods which are permanently successful in formal education ... give pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking, or the intentional noting of connections."

Quality teaching and learning

Quality assurance (standards and benchmarks)

In Australia, there is currently much dialogue surrounding the exploration of standards and benchmarks to be applied to teaching and learning in higher education. The search for these standards has been driven by the establishment of the Australian University Quality Agency with a brief to conduct regular quality audits of higher education institutions in Australia (Oliver, 2003). Oliver proposes a framework of four elements that links quality teaching and learning with standards for quality assurance. Using one of these four elements, the provision of appropriate learning experiences, this study aimed to develop and to evaluate learning experiences and teaching strategies linked to authentic assessment tasks.
Authentic pedagogy and "quality pedagogy"

In the last decade, there have been several systematic and sustained research programs concerning school pedagogy and assessment. A foundational school-based study conducted in the early 1990s across several U.S. states by Newmann and associates (1996) identified forms of teaching that produce improved student learning. The study revealed the importance of real-world connectedness in both pedagogy and assessment. To capture this sense of reality or relevance, they introduced the terms "authentic pedagogy" and "authentic assessment". The results showed that, when students recognised the relevance of content and learning tasks, and see their application to the world beyond the classroom, they became more engaged and learned more effectively. Follow up work (Lingard & Ladwig, 2001) that verifies and extends these results has been conducted in Queensland, Australia, supporting the development of Education Queensland’s (2001) New Basics curriculum. In particular, the Queensland School Reform Longitudinal Study (n.d.) conducted in Queensland schools reported that "The key finding is that levels of intellectual demand and social support both have significant links with improved productive performance in schools and, hence, with improved student outcomes." Subsequently, work done in New South Wales and published as the NSW Quality Teaching initiative (NSW DET, 2003) has modified the model and also developed substantial professional learning materials for teachers in that State.

Until recently (but see Gore, Griffiths, & Ladwig, 2001, Hall, 2004), these findings from school-based research have not been replicated in higher education or in the specific field of teacher education. However, together with the results of reviews into teacher quality (e.g., Ramsey, 2000), awareness of the busyness of tertiary study and pre-service teachers' lives, and the shortness of teaching semesters and the relatively large classes produce teacher educator concern that tertiary student thinking might also often be relatively shallow. Thus, initiatives designed to develop models that address the depth of thinking in teacher education might meet two needs: to increase the quality of pre-service teacher thinking prior to entry to the profession and to provide pre-service teachers with a model that they can use to foster their own students' higher order thinking.

Social constructivism and student learning

The learning theory underpinning this study is social constructivism, based largely on Vygotsky's framework (Vygotsky, 1978) that stresses constructing knowledge through social interaction, together with building on the zone of proximal development (ZPD). According to this view, knowledge is constructed first through social interaction, and then internalised by situating students in meaningful contexts. If there are "experts" available to the class, then they can help learners move to the upper limit of their ZPD. Recent researchers into online learning (e.g., Bonk, Ehman, Hixon, & Yamagata-Lynch, 2002) have exposed students to the strategies and skills of more experienced peers or expert teachers in an authentic context, providing students with opportunities to transfer their insights and ideas to the practice field. This "authentic context" has been developed through various online initiatives such as interactive conferencing tools or shared resource areas (Bonk et al., 2002).

The evolving theories of situated cognition and situated learning (Stein 1998, Wilson & Myers, 2000) also support relevance as a key pedagogical element. Designers of situated learning activities typically seek to embed them in real-world contexts or at least in simulations of such settings. Wilson and Myers (2000, p. 67) remark on how, in situated cognition, individual thinking is set in the larger context of physical and social interactions and culturally constructed meanings. Brefo (1994, p. 29) sees the notion of situated cognition as "shifting the focus from the individual in environment to individual and environment".

Information technology (IT), used with constructivist principles, has been seen as a rich resource for linking individuals to environments. Jonassen (2000, p. 8) has written extensively about students learning with, and not simply about, IT. Thus, to help students to think, learn and solve problems, they need deliberate and planned assistance to perceive themselves as constructors of ideas and defenders of those constructions. They are encouraged to employ both mindfulness and self-regulation. Jonassen (2000, pp. 272–274) sees this shift from an instructivist model to a constructivist philosophy as a significant challenge to teachers: "In most classrooms from kindergarten to graduate school, students are told what and when to learn and are tested to be sure that they have learned it." Land and Honnafin (2000, pp. 6–7) make an explicit link between constructivism and relevance and suggest an implication for information technology: "Pedagogically, constructivists favour rich, authentic learning contexts over isolated, decontextualized knowledge and skill, student-centred, goal-directed inquiry over externally directed instruction, and supporting personal perspectives over canonical perspectives."
The study

The author teaches at Australian Catholic University, which has campuses across several eastern states in Australia. This paper discusses Stage 1 of the research that began in early 2004 with two student groups in the semester 1 of a four-year Bachelor of Education course. Parallel work was done on a Sydney campus by two colleagues. The author teaches a first-year subject called Human Development on Canberra campus. This study evaluates a teaching initiative that aimed to do for pre-service teachers what Carini and Kuh (2003) describe as the "right things" in teacher education: the fostering of deep learning and critical thinking. The teaching was designed to do this by incorporating a combination of several overlapping elements into both the pedagogy and assessment: (1) a high degree of cognitive challenge, (2) strong teacher support by instruction about, and modelling of, notions of critical thinking and deep learning, and their application and critique, and (3) problems derived from "real-life" teaching situations embodied in a learning object, a virtual school, Bridgeport, developed at the University of Newcastle, New South Wales (Richards & Schofield, 2004).

As recognised by Wiley (2000) and Bannan-Ritland, Dabbagh, and Murphy (2001), effective learning objects need to include both technical requirements and carefully planned instructional elements. Appropriate pedagogy is needed to "wrap around" or operationalise the learning object. This reflects the argument made by Jonassen (1994) where he distinguishes earlier forms of technologies of instruction (conveyors of information) from more recent forms (cognitive tools). Employing a constructivist perspective, Jonassen challenges earlier simplistic models of students as predictable responders to information, urging instead a metaphor of learners as designers. It is attractive to consider applying such tools to the teaching of pre-service teachers.

Using the learning object Bridgeport as a microworld

Bridgeport is a microworld: "an exploratory learning environment that presents a simulation of some real-world phenomena wherein learners can manipulate, explore, and experiment in different ways" (Jonassen, Howland, Moore, & Marra, 2003, pp. 190–191). It is designed as a technologically unsophisticated program, to enhance usability across a range of computers and types of online connection. Each of its two parts, a primary school and a high school, focuses on one class and their teacher. Anyone visiting the school can find information about a student in the classroom (text of a lesson, work samples), the playground, the staffroom (a brief portrait of staff and the text of a staff discussion of the class members), and the administration office (student records, parent-teacher interviews, correspondence). The program gives a snapshot of the class and teachers, providing limited information. It includes no learning activities, so that choices of pedagogies are left to instructors. Thus, unlike many learning objects, Bridgeport acts as one element of effective teaching, to be combined with pedagogy.

When my pre-service teachers navigated the school, they did so with a task in mind, a task called a Critical Reading Response (CRR) designed to embody several of the pedagogies in the Quality Pedagogy framework (see the next section). The task involved pre-service teachers choosing a child in the class, identifying a problem preventing the child from reaching her/his potential, and then applying a theory from their class work to explain how the problem had arisen and what might be done about it, justifying their discussion from relevant literature. This allowed considerable student direction in choices of material and aimed to foster deep knowledge and critical thinking. The pedagogies (student direction, higher order thinking and relevance) and the learning tasks "wrap around" Bridgeport. Effective pedagogy is central to the implementation of the Bridgeport microworld.

Quality pedagogy as the pedagogical framework

Recent research-based teaching and learning models provide a valuable scaffold for both teachers. This study made use of the Quality Pedagogy framework recently adopted by public schools in New South Wales (NSW Department of Education and Training (DET), 2003). This framework has a basis in the large-scale U.S. authentic pedagogy and authentic assessment work (Newmann et al., 1996) and in the major Australian adaptation developed and trialled in Queensland government schools (Education Queensland, 2001). The refined NSW model conceptualises quality teaching and learning across three dimensions: intellectual quality, a quality learning environment and significance (Table 1 below). The dimension of intellectual quality concerns focusing pedagogy on making demands for high quality thinking on all students. Quality learning environment emphasises that a strong, positive and supportive learning environment leads to improved student outcomes. Significance refers to the ways teachers make meaningful links to students' non-school contexts, developing ways to engage them by showing that classroom
learning actually matters for their lives. Research in the U.S. and Australia has shown that the elements in the framework all produce learning gains for all students (Newmann et al., 1996, Queensland School Reform Longitudinal Study, n.d.).

Table 1
The three dimensions of Quality Pedagogy and six elements of each dimension

<table>
<thead>
<tr>
<th>INTELLECTUAL QUALITY</th>
<th>QUALITY LEARNING ENVIRONMENT</th>
<th>SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep knowledge</td>
<td>Explicit quality criteria</td>
<td>Background knowledge</td>
</tr>
<tr>
<td>Deep understanding</td>
<td>Engagement</td>
<td>Cultural knowledge</td>
</tr>
<tr>
<td>Problematic knowledge</td>
<td>High expectations</td>
<td>Knowledge integration</td>
</tr>
<tr>
<td>Higher-order thinking</td>
<td>Social support</td>
<td>Inclusivity</td>
</tr>
<tr>
<td>Metalanguage</td>
<td>Student self-regulation</td>
<td>Connectedness</td>
</tr>
<tr>
<td>Substantive communication</td>
<td>Student direction</td>
<td>Narrative</td>
</tr>
</tbody>
</table>

A selection of these eighteen elements was chosen as the pedagogies applied in this study. Intellectual quality elements included deep knowledge, deep understanding, problematic knowledge and higher order thinking. Quality learning environment comprised engagement and student direction. Significance involved the elements of background knowledge, cultural knowledge and connectedness. Indicators were developed for each of these elements (see statements in Table 3). Apart from its strong research basis, this framework was adopted for two reasons. Firstly, it offered a straightforward framework for thinking about pedagogy to foster deep student learning. Secondly, it provided a language for conversations about effective teaching, hence promoting dialogue. This second point is particularly important in teacher education where a key step for pre-service teachers is to "get on the inside" of the profession, particularly to think like a good teacher. This point is taken up later.

The method of the study
This cohort of approximately 70 pre-service teachers were preparing to teach in primary schools. The author conducted all the teaching, including an online learning site (WebCT) and four tutorial groups. Teaching and assessment were based on the above principles of Quality Pedagogy that centre on deep knowledge and critical thinking. The hypothesis was that using this Quality Pedagogy in combination with teaching interventions - instruction about critical thinking and deep learning, plus setting an assessable task in the form of a problem set in the Bridgeport virtual schools - would enable pre-service teachers to deepen their engagement with developmental psychology principles and develop stronger higher order thinking.

Student surveys provided the major source of data for the study. These were used to ascertain student perceptions of how well the following three elements assisted their engagement with learning and their higher order thinking: (i) the teaching using this Quality Pedagogy and especially about higher order thinking, (ii) the assessment task based on the virtual school, and (iii) the virtual school's role as a learning tool. The survey statements were constructed with reference to the selected elements of the NSW DET Quality Pedagogy model outlined above. The survey comprised two parts. Part 1 related to pre-service teachers' perceptions of the teaching and assessment in the subject, while Part 2 related directly to the Bridgeport virtual school as a tool for learning. Part 1 comprised twenty-two statements (see Table 3). Pre-service teachers scored each statement on a 1–4 scale according to how true it was for them, with 1 indicating "definitely not true", 2 indicating "not really true", 3 indicating "sort of true" and 4 indicating "very true". There were three open-ended questions, covering three areas: additional learnings not addressed in the statements, pre-service teachers' opinions of the value of Bridgeport as a site, and comments on the assessment task and the related teaching. Part 2 of the survey included twenty statements, scored by pre-service teachers in the same manner as Part 1. The first ten referred to how pre-service teachers used the tool, while the final ten judged its efficacy as a learning tool. It also included three open-ended questions about pre-service teachers' use of the site and asked for general comments about the site.

Results and discussion
The accompanying teaching
As mentioned earlier, care was taken to design teaching to scaffold the learners in the challenging critical writing task (CRR) described previously. The table summarises the key steps taken and feedback received.
Table 2
Summary of key steps taken in teaching for higher order thinking and student responses

<table>
<thead>
<tr>
<th>STEPS TAKEN IN TEACHING</th>
<th>PRE-SERVICE TEACHER RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample CRR on WebCT</td>
<td>Very helpful in showing possible format, how to reference sources</td>
</tr>
<tr>
<td>Discussion of draft CRR (whole group and in</td>
<td>Relieved much stress as pre-service teachers saw what others had</td>
</tr>
<tr>
<td>pairs) week before CRR1 was due</td>
<td>done and discussed uncertainties and offered suggestions</td>
</tr>
<tr>
<td>Specific, individual written feedback on</td>
<td>Taken very seriously and some pre-service teachers saw it as</td>
</tr>
<tr>
<td>individual CRRs</td>
<td>enabling them to do significantly better work on CRR2 (and score</td>
</tr>
<tr>
<td></td>
<td>a higher grade).</td>
</tr>
<tr>
<td>Written CRR feedback to whole class</td>
<td>Most pre-service teachers found it helpful but some saw little</td>
</tr>
<tr>
<td></td>
<td>benefit</td>
</tr>
<tr>
<td>Ensuring lectures provided discussion of</td>
<td>Found to be helpful and adequate, although some felt need for</td>
</tr>
<tr>
<td>relevant theories prior to CRR writing</td>
<td>greater assistance, especially with more complex task in CRR2</td>
</tr>
<tr>
<td>In lectures taught about critical thinking and</td>
<td>Many pre-service teachers explicitly valued the material on critical</td>
</tr>
<tr>
<td>deep knowledge on several occasions</td>
<td>thinking, but more was needed on deep knowledge</td>
</tr>
<tr>
<td>Offered to give feedback on draft CRRs</td>
<td>Approx. 10-15 pre-service teachers did this and most said it</td>
</tr>
<tr>
<td>Suggested forming study groups</td>
<td>helped them</td>
</tr>
<tr>
<td></td>
<td>Those that did found them very encouraging and illuminating</td>
</tr>
</tbody>
</table>

Student perceptions of the pedagogies
In the twelve week teaching semester, pre-service teachers were surveyed twice, in week 3 after their first CRR and again in week 10 after completing a second CRR. The second survey included questions about the Bridgeport site. Both surveys also contained three open-ended questions. Table 3 shows the twenty-two statements used in relation to the chosen pedagogies and the average (mean) student responses on the 1-4 scale. Any mean above 2.5 was regarded as positive, while any result below 2.5 was deemed negative.

For the closed responses in both weeks 3 and 10, one striking result was the high degree of agreement with all statements, with all but five statements having means over 3. (In what follows, the week 3 results appear first and those for week 10 follow in brackets.) Overall, it was pleasing to note that the positive week 3 responses to the task associated with Bridgeport were even more positive in week 10. The item with the lowest degree of agreement (seen as a score over 2) rated 61% (68%). In week 3, only five items scored less than 70% (week 10, one item). In week 3, six items scored particularly high. In intellectual quality, 98% (96%) of pre-service teachers agreed with the deep knowledge item ("The task led me to locate, and then think deeply about, the key concepts and ideas involved in the theory chosen"); 96% (95%) agreed with the statement about deep understanding ("I found myself building a deep understanding of the key concepts and ideas involved in one or more theories"), while 93% (100%) agreed with the higher order thinking item ("The task required me to organise and analyse information from the school site and textbook, rather than reproduce or summarise it"), and 85% (95%) agreed with the problematic knowledge statement ("The task helped me realise that there are multiple ways of seeing and solving a problem"). For significance, high scores of 97% and 88%, respectively (100%, 95%) were given to two items of connectedness ("I was able to apply knowledge to what seemed like genuine real-life contexts and problems" and "This type of task and connected website will significantly help me in my forthcoming teaching prac"). In quality learning environment, 93% (95%) of pre-service teachers agreed with the student direction item ("This task required me to find out the information about students rather than having it provided").
### Table 3
Student perceptions of the quality pedagogies: Survey results in weeks 3 and 10, as means (n = 70)

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>WK 3</th>
<th>WK 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (Deep knowledge) The task led me to locate, and then think deeply about, the key concepts and ideas involved in the theory/ies chosen.</td>
<td>3.72</td>
<td>3.59</td>
</tr>
<tr>
<td>2a. (Deep understanding) In doing the task, I found myself building a deep understanding of the key concepts and ideas involved in one or more theories.</td>
<td>3.59</td>
<td>3.41</td>
</tr>
<tr>
<td>2b. I found it necessary to form links or make comparisons between theories and how these may be applied.</td>
<td>3.04</td>
<td>3.31</td>
</tr>
<tr>
<td>3a. (Problematic knowledge) In doing the task, I came to see that all knowledge, including theories and ideas, are subjectively constructed based on assumptions, prior knowledge and ways of seeing the world, and thus open to question.</td>
<td>3.26</td>
<td>3.27</td>
</tr>
<tr>
<td>3b. The task helped me realise that there are multiple ways of seeing and solving a problem.</td>
<td>3.45</td>
<td>3.46</td>
</tr>
<tr>
<td>4a. (Higher order thinking) The task required me to organise and analyse information from the school site and textbook, rather than reproduce or summarise it.</td>
<td>3.59</td>
<td>3.63</td>
</tr>
<tr>
<td>4b. The task required me to apply, synthesise (combine ideas to form a new bigger theory) and evaluate theory/ies in particular instances.</td>
<td>3.12</td>
<td>3.37</td>
</tr>
<tr>
<td>5. (Metalanguage) In doing the task, I found myself thinking deeply about the way language – including choice and meaning of words – was used.</td>
<td>3.22</td>
<td>3.29</td>
</tr>
<tr>
<td>6a. (Substantive communication) In classes, I was engaged in oral conversation that elaborated, justified and/or explained the key concepts and ideas involved.</td>
<td>2.72</td>
<td>2.84</td>
</tr>
<tr>
<td>6b. The written task required me to engage in written discussion that elaborated, justified and/or explained the key concepts and ideas involved.</td>
<td>3.33</td>
<td>3.34</td>
</tr>
<tr>
<td>6c. The online discussions helped develop a sustained discussion of key concepts and ideas.</td>
<td>2.77</td>
<td>3.09</td>
</tr>
<tr>
<td>7. (Background knowledge) The task led me to draw upon, and use explicitly, my own background knowledge, e.g., of home and school.</td>
<td>2.92</td>
<td>2.74</td>
</tr>
<tr>
<td>8. (Cultural knowledge) The task involved me to think about the needs of diverse social groupings (e.g., class, gender, ethnicity, race, sexuality).</td>
<td>3.38</td>
<td>3.31</td>
</tr>
<tr>
<td>9. (Knowledge integration) I found myself making links between ideas and fields of knowledge, integrating ideas across units.</td>
<td>3.03</td>
<td>3.09</td>
</tr>
<tr>
<td>10. (Inclusivity) The task led me to accept contributions from other students different in background from myself.</td>
<td>2.68</td>
<td>2.71</td>
</tr>
<tr>
<td>11a. (Connectedness) I was able to apply knowledge to what seemed like real-life contexts and problems.</td>
<td>3.71</td>
<td>3.66</td>
</tr>
<tr>
<td>11b. Having control over identifying the problem in the class and providing potential solutions seemed like being a real-life teacher.</td>
<td>3.19</td>
<td>3.09</td>
</tr>
<tr>
<td>11c. This type of task and connected website will significantly help me in my future teaching pracs.</td>
<td>3.40</td>
<td>3.40</td>
</tr>
<tr>
<td>12. (Narrative) The task involved me in reading and thinking about, and perhaps using in conversation or writing, stories about students and others.</td>
<td>3.10</td>
<td>3.00</td>
</tr>
<tr>
<td>13a. (Engagement) The task encouraged me to engage fully in class discussions and in the set tasks.</td>
<td>3.01</td>
<td>2.88</td>
</tr>
<tr>
<td>13b. In group work, I made an equitable contribution to the task.</td>
<td>2.82</td>
<td>3.03</td>
</tr>
<tr>
<td>14. (Student Direction) This task required me to find out the information about students rather than having it provided for me.</td>
<td>3.63</td>
<td>3.68</td>
</tr>
</tbody>
</table>

**Questions about the Bridgeport site and open-ended responses**

The three open-ended questions were: (i) In addition to the above, I also achieved some other learnings. (ii) My opinion of the Bridgeport site included the following. (iii) My general comments about the task and the teaching about the task are as follows." The responses to the open-ended questions and to the week 10 questions about the site revealed several other points related to the Quality Pedagogy dimensions of intellectual quality, quality learning environment and significance, as well as concerning the site and its suitability for the learning task.

Additional learnings: Several pre-service teachers wrote about valuing the teaching and the associated class discussion about academic literacy. Coming from first-year university students many of whom are new to academic writing, this is not surprising. Two further clear themes were the recognition of the depth of understanding of the theory that pre-service teachers required in order to address the problem faced by their chosen Bridgeport student and the links perceived in the teaching to pre-service teachers' own development, given as illustrations of the theories. For the latter, one student described (in ways reminiscent of Dewey's "intentional noting of connections", noted earlier) "[I was] thinking a lot more about my personal human development and applying theories to my situation".
The site. Ninety-one percent reported enjoying the Bridgeport website and finding it straightforward to navigate. Requiring pre-service teachers to search out information, sometimes in places that are not obvious, was seen by 83% as enjoyable. One said "I had to play the role similar to a detective." In the week 10 survey, 89% of pre-service teachers agreed that "I enjoyed having to find out the information about students rather than having it provided for me." The information was commonly described as realistic. Some pre-service teachers stated that "real-life application of the theory helped give greater understanding of that theory." A few pre-service teachers spoke of appreciating the wide variety of different social and cultural backgrounds represented. Some pre-service teachers clearly felt very engaged in addressing their chosen child's problem, one saying she/he had actually "dreamt about Donna's problems"! Many recognised the limited amount of information on a child, with some noting how realistic it was and how it required them to think very carefully and to use their imagination. Some pre-service teachers actually imagined themselves developing a learning object like Bridgeport; for example, "Gave [me] ideas for future development of a similar site once I'm teaching."

The assessment task and accompanying teaching. Many pre-service teachers remarked on enjoying applying a theory to a student and learning more deeply as a result. One student wrote "I can only hope that the rest of my university studies are as interesting." Some said this critical writing challenge stretched them to think at a higher level, including "discovering that solutions are complex and not easily solved by any one theory". Although there was evidence that some quieter pre-service teachers felt they contributed little in tutorials; (these pre-service teachers probably gave the low scores to questions 6a-c, Table 3), overall the class discussion proved valuable for most pre-service teachers. That multiple approaches to a problem could be intellectually acceptable was a novel but reassuring notion for some pre-service teachers who had previously thought there was one right answer. Many pre-service teachers appreciated scope for student direction, valuing the chance to make their own choices of child to discuss and of theory to apply. One student wrote that "Too much information on students would not allow us to discover our own view of the child."

Overall, there was a high degree of pre-service teacher satisfaction with the value of combining teaching with several elements of Quality Pedagogy and using Bridgeport in an assessment task for engaging them in deep learning. The original hypothesis was that a combination of teaching interventions — instruction about critical thinking and deep learning, plus setting a cognitively demanding assessment task based on a learning object that seemed "real"— would enable pre-service teachers to deepen their engagement with developmental psychology principles and develop stronger higher order thinking. This has been validated. It seems clear that making high intellectual demands in the context of a real problem was central to student outcomes and that the Quality Pedagogy model worked well for both pre-service teachers and lecturer. For the lecturer, personal outcomes included (i) the successful use of the Quality Pedagogy model as a framework for discussion of pedagogy with these pre-service teachers, (ii) improvements to my own teaching, (iii) a stimulus and an effective framework for researching my teaching and for working with colleagues to develop the four year BEd program.

Conclusion
The findings confirm the value of the Quality Pedagogy framework for fostering higher order thinking and also its adoption early in teacher education programs. Coupled with the Quality Pedagogy model, the Bridgeport virtual school has been a highly effective learning object, perceived by pre-service teachers to be very usable and high on relevance thus promoting engagement. They reported that its focus on children in context stimulated them to think deeply about developmental theories. Gore, Griffiths and Ladwig (2001) argue that the sooner Quality Pedagogy is employed in a teacher education program through combined instruction, teacher modelling and integrated program design, the sooner it becomes part of student discourse about effective teaching. The Quality Pedagogy model offers a new language that centres on quality teaching and learning. For developing teacher identity, such conversations can play a vital role in helping student teachers to problematise their subjectivity. In the tradition of critical pedagogy, a common hope of teacher educators (e.g., Australian Catholic University, Mission, n.d.) is that pre-service teachers will as graduates employ critical thinking directed towards goals of social justice and build democratic classrooms that seek to empower their students. However, as Klein (2001, p. 258) notes, pre-service teachers come to university shaped by institutionalised schooling and interpret much of the teaching received through existing discourses that "galvanise oppressive positionings in power/ knowledge relationships". Perhaps, over four years, when alternative ways of thinking about self-as-teacher are made explicit and modelled by lecturers and discussed with and practised by pre-service teachers, the hopes are more likely to be understood and chosen.
The findings encourage the planning of several overlapping projects. A contribution is currently being made to the development of the Bridgeport program, particularly suggesting further material for Bridgeport High. A second step is to refine the survey, adjusting indicators to produce more clarity and to target pedagogies more accurately. To go beyond student perceptions of the effects, a third is to analyse samples of student work (e.g., a final reflection task) for evidence of higher order thinking. Recognising that student learning about higher order thinking (especially critical thinking) is a long journey, a fourth step is follow up work with colleagues to construct a developmental plan for incorporating the Quality Pedagogy framework across the four years of the Bachelor of Education degree. One case is some current work with final (fourth) year pre-service teachers, checking to what degree they have integrated the Quality Pedagogy framework into their thinking. Fifthly, discussions will be conducted with colleagues teaching other subjects concerning further strategies for using Bridgeport, especially directed towards discussions of teacher positioning and subjectivity that are central to the development of teacher identity.

References


New Times, New Teachers: Valuing Social And Emotional Wellbeing In Teacher Education

Karen Vincent & Trevor Hazell
Hunter Institute of Mental Health

Jennifer Allen & Tom Griffiths
University of Newcastle

Today’s tutorial focused on mental health. I was pleased to cover this topic, as I believe I need more knowledge on this topic. I was unaware that there was a major distinction between mental health, mental health problem and mental illness. ... I found it helpful to know some of the protective factors to promote resilience so as a teacher I can help on building these qualities within my students.

- Pre-service teacher, Victoria, 2002

Schools and education authorities increasingly support a student-centred approach that recognises the relationship between young people’s social and emotional wellbeing and their behaviour and learning outcomes. This support is reflected in federal, state and territory policies and frameworks and a variety of school-based programs designed to build resilience or assist students at risk. Such initiatives advocate a whole-school approach in which student wellbeing—and the creation of a supportive environment—are not only the province of health or welfare staff but are central to the entire school ethos. Quality teachers have always been aware of the social and emotional dimensions of teaching and learning, but schools are now taking a more formal and systematic approach to social and emotional wellbeing. Can our teacher education programs pro-actively prepare graduates for this challenging school context? This paper will explore the inclusion of social and emotional wellbeing in teacher education programs, with a focus on the Response Ability project, a collaborative undertaking between teacher educators and health professionals. The project provides free multi-media resources and support for teacher educators throughout Australia. The presentation will provide an overview of the resources, with qualitative and quantitative feedback from lecturers and pre-service teachers who have used the material.

Introduction

Australian and international research is uncovering evidence for strong links between young people's social and emotional wellbeing and their success at school, as well as their health and social outcomes. Aspects of this evidence come from various research domains and are expressed in diverse terms, such as resilience, mental health, supportive learning environments, motivational research and studies of effective teaching practice.

Fuller et al. (2002) have described resilience as ‘the happy knack of being able to bungy jump through the pitfalls of life.’ This was initially a health-related construct grounded in a risk model, whereby young people who achieved positive health outcomes in spite of an adverse risk factor profile came to be known as resilient. Researchers developed an interest in the features associated with resilience, to identify protective factors against substance abuse and mental health problems.

Subsequent work has translated the concept of resilience from a health-risk construct to an educational context, by drawing on educational theory, research and practice. Benard in particular has written extensively about school systems and teaching practices that help to build resilience, through caring and connectedness, high but achievable expectations and opportunities for genuine contribution (Benard, 1991; Benard, 1997). There are clear connections between these concepts and the principles of a supportive learning environment, as reflected in Australian policies, curriculum frameworks and pedagogical models (Griffiths & Cooper, 2005).

A number of useful tools and review publications are available on the connections between social and emotional wellbeing and school success, through the web site of the Collaborative for Academic, Social and Emotional Learning (CASEL) at the University of Illinois (www.casel.org). The organisation has also developed tools for educators and identified itself as an advocate for school change in this area. A similar
movement can be noted in the Australian context, for example through the development of whole-school mental health promotion programs such as MindMatters, the Gatehouse project and other initiatives (Rowling et al., 2002).

**New times: A change in school context**
The stronger and more systematic focus on mental health, or social and emotional wellbeing, is creating a new school context for early career teachers. This is reflected in patterns of teachers' professional learning, with 79% of schools in Australia with secondary enrolments having sent staff to professional development courses offered by the national MindMatters program (Zilm, 2005, personal communication). Teachers that attend come from the full range of school faculties, indicating support for wellbeing as a whole-school concern.

A further indicator of the importance given to social and emotional wellbeing was noted by Griffiths and Cooper's (2005) review of on-line policies and initiatives in state and territory education departments, with support from the Response Ability project. The review showed that concern for young people's social and emotional wellbeing is firmly established in the policies of all states and territories. The review categorised the identified policies and initiatives according to the nature of their reference to elements of social and emotional wellbeing, as follows:

1. Policies promoting students' social and emotional wellbeing through: developing specific aspects of wellbeing; minimising the risks of social and emotional harm; and meeting the social and emotional needs of students at risk.

2. Policies linking students' social and emotional wellbeing to other core educational policy outcomes. Links were identified between social and emotional wellbeing and: student achievement in and beyond school; learning outcomes for specific groups; and students' preparation for life.

Such policies support the argument that school systems and education authorities recognise the importance of wellbeing as a mediator of behaviour and learning outcomes and are attempting to create a systematic approach to the integration of this issue into teaching practice and school culture. However, as Griffiths and Cooper point out, the existence of policies is no guarantee of their widespread use and influence in practice. This requires the commitment of practitioners in schools and could be augmented by reinforcing underlying principles through both pre-service teacher education and professional development.

Whole-school approaches (such as those espoused by MindMatters and Gatehouse) and supportive learning environments (as reflected in selected policies and pedagogical frameworks) necessitate the participation and commitment of all school staff, not only those who perceive themselves to have a particular role in students' health or welfare. All teachers have a duty of care to recognise and refer young people who are at particular risk of mental health problems, disorders or self-harm. Further, in line with the approach of broad frameworks like NSW's Quality Teaching (2003) or Victoria's Principles of Learning and Teaching (2004), teachers in all specialisations need to be aware of the impact of social and emotional wellbeing on their students' learning.

Arguably, primary school structures and teaching practices are more conducive to holistic student-centred approaches than are secondary schools. Secondary teachers' specialisation in specific subjects provides relatively fewer opportunities for teachers to develop a relationship with their students. Teacher education for the secondary setting frequently reflects this distinction, with a strong focus on mastering subject discipline content and teaching practice in a particular learning area. Issues such as social and emotional wellbeing or mental health can easily be relegated to health pedagogy units alone and not explicitly or comprehensively addressed with other pre-service teachers.

Addressing social and emotional wellbeing more explicitly in pre-service training, particularly in secondary education, may help early career teachers to feel more confident about creating supportive environments, participating in whole-school programs and responding to troubled young people. It may also aid teacher retention by ensuring that these aspects of their role are not unexpected and unduly stressful. There are specific skills that can be explored in the pre-service setting, particularly by using practical and interactive instruction such as case studies, role-plays and discussion groups. The national Response Ability program provides one set of resources designed to support such an approach.
The Response Ability program
Response Ability is an initiative of the Australian Government Department of Health and Ageing, with the objective of supporting the inclusion of mental health issues in secondary teacher education programs. It commenced in the late 1990s when the national strategy focus was on the prevention of youth suicide, but has evolved considerably during that time, as reflected in Figure 1. This shift reflects developments in resilience research, suicide prevention approaches and the growing evidence of links between wellbeing and school success. The program is implemented by the Hunter Institute of Mental Health, a mental health promotion and education organisation, in collaboration with the University of Newcastle. Using strategies based on extensive consultation, the project team provides free resources and support for teacher educators, as well as advocating for the more systematic inclusion of wellbeing in teacher education. The project team also works with a group of academic advisors drawn from five other Australian universities.

![Shifts in focus in the Response Ability Program.](image)

The Response Ability multi-media resources
The Response Ability team has developed and distributed free multi-media resources for use in pre-service teacher education programs. A resource package was distributed in 2002 and a supplementary CD-ROM and video were disseminated in February 2005. The material is based on a series of case studies, with the provision of optional discussion questions and activities for use with pre-service teachers. The case studies and activities were developed collaboratively by teacher educators and health professionals. The resources also present a drama piece by secondary school students and a focus group discussion with young people. The flexible content can be readily linked with existing units and modules of teacher education programs and allows teacher educators to integrate a focus on social and emotional wellbeing, while minimising preparation time.

The broad contents of the resources include:

- Outline and PowerPoint presentation to support an introductory lecture about key terms and concepts, suggesting additional resources and handouts; the presentation can be saved and adapted.
- Case Study One - video scenario and activities exploring mental health and the school setting, with a focus on a troubled male student who has reflected his emotions through artwork and poetry.
• Case Study Two - video scenario and activities relating to a withdrawn female school student; explores the issues of supporting the quiet student and offers an opportunity to discuss bullying among girls.

• Case Study Three - video scenario and activities about a disruptive male student, that also provides opportunities to discuss substance use and bullying among boys.

• Case Study Four - video scenario and activities relating to a student's return to school following a suicide attempt, provides opportunities to explore suicide prevention and postvention.

• Supplementary Case Study - video scenario and activities relating to a girl who has made the transition from primary to high school, which explores the middle years, resilience and supportive environments.

• The Black Dog - a short drama piece written and performed by secondary school students about depression, stigma and suicidal behaviour, explored in their own language with the use of comedy and music.

• Young Lives (Supplementary) - a short film showing focus group discussion with first-year high school students, including a girls' group, a boys' group and a mixed group.

The resources are complemented by further information about young people's mental health on a website at www.responseability.org. Web delivery of this component was suggested by teacher educators to avoid an information-dense and overly-detailed resource package. The site provides additional information for those who are interested and can be readily updated with new statistics or research findings, or additional content.

Feedback from teacher educators and pre-service teachers
The multi-media resources and the support offered by the project team have been welcomed by many teacher educators throughout Australia. At the time of writing this paper, 24 campuses utilise the resources in a foundation unit while a further 18 campuses use them in the context of health pedagogy or an elective unit.

Throughout the project, formal and informal feedback has been collected from teacher educators using the material, yielding considerable positive feedback regarding the content, presentation and flexibility of the resources. In a survey of 28 teacher educators using the resource, conducted at the end of 2003, 96% indicated that the material was easy to use. Ninety-six percent of the sample considered that their students were receptive to the material. Eighty-two percent felt that the availability of the materials had increased their level of confidence in teaching about mental health issues, while 79% reported that the project had led to an increase in the coverage of mental health related issues in their university's teacher education program.

Several teacher educators have collected qualitative and quantitative feedback from their pre-service teachers, which has been passed on to the project team for analysis. The quantitative data strongly suggest that the majority of pre-service teachers find the material interesting and useful and feel more confident about relevant issues after sessions using the Response Ability material. Approximately 180 feedback questionnaires have been collected from pre-service teachers following short sessions, while over 250 baseline and follow-up questionnaires (unmatched) have been collected after more detailed treatments of the topic. Results from the latter are summarised in Table 1.
Table 1
Mean level of agreement among pre-service teachers, before and after use of the Response Ability resources

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>MEAN LEVEL OF AGREEMENT: BASELINE &amp; FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre N 112</td>
</tr>
<tr>
<td>Schools and teachers can have a positive effect on the mental health of young people and help to prevent suicide.</td>
<td>8.06</td>
</tr>
<tr>
<td>It is important for student teachers to learn about mental health promotion and suicide prevention at university or college.</td>
<td>9.26</td>
</tr>
<tr>
<td>I am interested in learning more about mental health promotion and suicide prevention in Australian schools.</td>
<td>8.69</td>
</tr>
<tr>
<td>I have a reasonably good understanding of mental health problems and mental illnesses in adolescence, such as depression, eating disorders, anxiety and schizophrenia.</td>
<td>7.14</td>
</tr>
<tr>
<td>I have a reasonably good understanding of how schools approach the issues of suicide prevention and responding to youth suicide.</td>
<td>5.17</td>
</tr>
<tr>
<td>I am confident about responding to and working with a young person with a mental health problem, such as depression or an eating disorder.</td>
<td>6.23</td>
</tr>
<tr>
<td>I am confident that I would know how best to respond to a young person who is thinking about suicide.</td>
<td>5.56</td>
</tr>
</tbody>
</table>

Qualitative feedback from pre-service teachers also provides support for their level of engagement with the material and the value they place on topics relating to young people's mental health:

This week we watched a video titled 'Response Ability.' ... It was an interesting video that painted the picture of a school setting quite well. The activities were quite helpful for prospective teachers and the fact that the video question about 'what happened to Vince?' was left unanswered was good ... (Pre-service teacher, Victoria, 2002)

By discussing mental health issues in teacher training it will help me to become a better teacher, because I will be more in tune to my students’ needs ... This course gives me more confidence in recognising this behaviour, because this course uses case studies and real life situations to explain mental health. (Pre-service teacher, NSW, 2003)

Opportunities and future directions
While the program has been successful in augmenting the inclusion of social and emotional wellbeing in teacher education programs, there are a number of issues for further consideration. It should be noted that the aim of the project team is to support the inclusion of relevant topics, rather than to champion the
use of the Response Ability resources themselves. The Response Ability materials provide a useful tool, but the team also supports teacher educators wishing to utilise other resources and approaches to integrate wellbeing into their units.

In some universities using the resources, the issue is explicitly taught only in relation to health curriculum and pedagogy, or in elective units. The result is that pre-service teachers preparing to teach in other disciplines, or those who do not have a particular interest in this area, may not be exposed in any systematic or comprehensive way to the relevant principles. This does not indicate that they have no appreciation of social and emotional wellbeing in learning, either intuitively or though some reference to the issues in a foundation unit. However, they may be less thoroughly prepared or confident than some of their peers in promoting resilience or responding to troubled young people.

While in-depth exploration of this material may be particularly suited to specific curriculum or elective units, it would be helpful for all students to have some introduction to the key concepts. Ideally, social and emotional wellbeing should be integrated broadly across teacher education programs, being explored from different perspectives in a number of units, so that its fundamental contribution to learning can be reinforced. The content should include not only recognising and supporting young people at risk, but also using the principles of resilience and supportive environments to promote learning.

It will help me be a better teacher because Response Ability makes you aware of issues and problems that may affect students' mental health. It also gives me ideas on how to identify problems and how to get help for students. All teachers should use this course because it provides information that may help teachers improve learning and it may help to save a life. (Pre service teacher, completing an elective unit, NSW, 2003)

The size and complexity of many faculties and schools of education is a barrier to the ideal pattern of cross-disciplinary integration, but not an insurmountable one. Difficulties do arise from the pressures of a crowded university curriculum and from the increasing number of sessional staff, who may not feel empowered to influence broader program-planning decisions. In practice, the inclusion of the issue of social and emotional wellbeing (whether in health units or foundation subjects) is often dependent upon the commitment of one or two staff members who value it or have a research interest in the area.

However, the strength of the Response Ability resources is that they are sufficiently flexible to combine a consideration of wellbeing with other traditional content areas, such as bullying or adolescent development. They have been used in diverse unit contexts, including special education, educational psychology and sociology. Some universities are now moving toward a more systematic approach that will allow social and emotional wellbeing to be formally written into emerging program plans. To support this process, members of the project team who have experience as teacher educators could provide information and suggestions for program-planning committees, if desired. Perhaps the key to fostering this movement is to more widely publicise the growing evidence for a link between wellbeing and educational outcomes and to highlight how this is increasingly reflected in schools and policy.

In March 2005, the Response Ability project team launched an occasional papers series entitled Education Connect, designed to stimulate engagement with the issues of social and emotional wellbeing in education. Distributed to universities, it is designed primarily to elucidate the centrality of social and emotional wellbeing and its connections with educational theory and practice, as well as health and social research. It is hoped that the publication will build connections between educators who see this as an important area of practice and inquiry. Contributions will be welcomed from educators who would like to comment on relevant issues.

Although Response Ability began as a health initiative, it has been characterised by increasingly stronger partnerships with educators and a shift from an almost exclusive focus on health outcomes to a mutual focus on the positive development of young people— including educational, health and social outcomes. The concept of social and emotional wellbeing bridges the artificial divisions between these social service domains. The question is no longer whether we should actively address social and emotional wellbeing, but rather how we can best apply these principles in our schools, services and communities. A challenge for the project team is to transfer ownership of this issue more fully to the community of teacher educators in Australia, without conceptualising it as belonging to any particular domain, such as health or sociology or special education.

Much, although not all, of the research in this area comes from overseas, particularly the United States. Furthermore, a great deal of the research is rooted in the domains of psychology or health, rather than educational theory, educational practice or social inquiry. There are opportunities to explore social and emotional wellbeing more fully in the Australian context and consciousness, particularly with a focus on
Indigenous and culturally diverse communities and on Australian school structures. Educators may wish to recommend this as a potential area of inquiry for higher degree students under their supervision. The topic also provides possibilities for partnerships with other faculties and services in universities and beyond, an approach which is now favoured in many tertiary settings.

A further strategy for integrating social and emotional wellbeing more explicitly into teacher education could be advocacy by key stakeholders regarding more formal mechanisms, such as teacher competencies and program accreditation. This is perhaps a timely if controversial proposition, given developments in recent years relating to teacher competencies or standards in various states and territories, and the more recent formation of the National Institute for Quality Teaching and School Leadership (NIQ TSL).

**Concluding comments**

There is a growing weight of evidence that a focus on social and emotional wellbeing in school settings can contribute to improved learning outcomes, behaviour and social development. In recent years, Australia has seen the development of a number of school-based mental health promotion programs and a shift toward a greater focus on whole-school approaches and the acknowledgement of elements of a supportive learning environment.

Given this shifting context in international and Australian schools, early career teachers will benefit from an appreciation of social and emotional wellbeing as a key element of their role. This can be achieved, at least in part, by the explicit inclusion of relevant topics in teacher education programs. Data collected by teacher educators and members of the Response Ability team suggest that pre-service teachers value mental health and related topics as an area of learning in their program. Data also show that the provision of resources and support can be helpful to teacher educators and universities.

To progress the issue further and ensure sustainability of these topics in teacher education, it will be helpful to promote debate and discussion about these issues and to more widely publicise the research that links wellbeing to core educational outcomes. Academics and higher degree students in education, as well as teachers themselves, could also be encouraged to consider social and emotional wellbeing in the Australian context as a useful area of research.

**References**


Exploring The Impact Of Professional Experience
On Retention Within A Teacher Education
Pre-Service Program

Glenice Watson & Greer Cavallaro Johnson
Centre for Applied Language, Literacy & Communication Studies, Griffith University

There has been extensive exploration of retention issues with respect to undergraduate students where it is generally understood that the earliest months at university are the most important. However some researchers have noted that there are differences between faculties with respect to the timing of attrition and that for Education faculties significant attrition may occur later in the program of study and may relate to professional experience (practicum). This paper explores results of a pre-practicum survey with a large cohort of third year primary and secondary pre-service teachers. It finds that students have some expectation that their practicum experience will impact on their decision to complete the study program but that they retain high levels of enthusiasm for becoming teachers that is driven by their belief that they can make a difference in children's lives. The analysis reveals a number of explicit suggestions for university support that would contribute to the success of the practicum. This paper reports on one aspect of a project that has as its aim the retention, satisfaction and achievement of students within an Education faculty and constitutes one of a series of papers from this project.

Introduction

Universities worldwide have been concerned about student retention for a considerable period of time (see for example Yorke, 1998a, on UK retention; Moortgat, 1996, on five European countries; McInnis & James, 1995, and McInnis, James, & Hartley, 2000, on Australian retention; and Johnson, 1996, for numerous references dating back to the 1950s). This concern has been located in costs to the public purse (Yorke, 1998b) and recent changes to funding policies that penalise universities for student attrition, and also out of concern for the students themselves (Pitkethly & Prosser, 2001, p. 185; Yorke, 1998b). While the concern regarding retention is universal, the factors impacting on retention are far less so and as McInnis and James (1995) noted, variations between universities are "sizeable" (p. 17) and "substantial variations" are to be found between courses (p. 23). While it is well understood that the factors impacting on retention are complex and that most models of retention account for only about 40% of variation in rates of retention (Woodward, Mallory, & De Luca, 2001, p. 73), course choice and clearly defined goals are considered to be factors worthy of further study in this field (McInnis, James, & Hartley, 2000, p. xi; Pitkethly & Prosser, 2001, p. 186; Yorke, 1998b, p. 193). Brennan (2001, p. 217) noted the immature state of research into student choice regarding program of study and the complexity of this decision-making process. However, the recent extensive study by Davies and Elias (2003) has gone some way to providing statistical evidence of the importance of "mistaken choice of course" (p. 46) in student withdrawal in the first year of study, particularly for younger students.

While most of the attention on retention has been focussed on the early months in higher education, some faculty comparisons of retention have suggested that for some faculties, critical points in retention may come later in the program of study (Johnson, 1996). Yorke and Longden's (2004) observation concerning questions raised about the impact on student performance and persistence of professionally oriented programs with practical work experience (p. 37) has particular implications for Education faculties where preservice programs often involve lengthy periods of professional experience. Compared with students in many other fields of study, it could be assumed that undergraduate Education students would be less likely to be impacted by the retention factor of poor choice of program of study, as it could be assumed that they have a reasonable understanding of their prospective profession from having experienced 12 years in an education environment. However, Lortie (1975) referred to this phenomenon as an "apprenticeship of observation" that does not necessarily indicate an understanding of the
profession of teaching, from the inside out. One of the times that students are made critically aware of this difference is during their professional experience (or practicum). Ryan, Toohey and Hughes (1994), in a general study of the value of the practicum, noted a disjunction between what preservice teachers practise in the classroom and what they learn on campus (p. 7) while Goldenburg (2002) discussed how her idealistic hopes of making learning inspiring and interesting before starting her practicum were deflated during her time in the classroom. Moore (2003) suggested that while field experiences have the potential to give preservice teachers the opportunity for "real" teaching experiences, too often routine tasks and organisational concerns dominate to the detriment of the experience. Murray-Harvey (2001) observed that the ability to deal with stress during the practicum experience could be an indicator of retention in the profession and advised that specific preparation of preservice teachers to cope with stress should be addressed. The practicum experience has also been connected with successful induction into the profession of teaching (Kelly, 2004).

This paper explores the potential of practicum as a possible critical point for retention. The paper is one facet of an ongoing project that has as its general aim, the enhancement of student retention, satisfaction and achievement in a Faculty of Education. Other aspects of the project have been reported elsewhere, namely: student readiness for university (Watson, Johnson, & Billett, 2002); relatedness to field of study (Watson, Johnson, & Austin, 2004); and the gap between university affordances and student uptake of them (Watson & Johnson, 2003). The analytic approach taken in these papers could be described as "macro" in that general characteristics of the student population were examined through a variety of techniques including statistics, content analysis, and identification of categories of behaviour. Further papers relating to this project apply "micro" analytical techniques to explore the production of first-year identity (Johnson & Watson, 2004), and the formation and functionality of study groups (Watson & Johnson, 2004).

Method

The data reported on in this paper are drawn from a survey that was administered to a cohort (N=230) of third year Bachelor of Education students about to embark on a 4-week practicum experience. The survey was voluntary and anonymous and the students were informed about its purpose. The survey elicited general demographic information on gender, age, program and campus of study, academic achievement so far, and frequency of thoughts about withdrawal; 16 Likert scale (5-point) questions concerned with participants' attitudes; and four open-ended questions requiring written responses. The responses to these questions were entered into a spreadsheet and analysed using a statistical package (SPSS) for quantitative data, and a content analysis method for the qualitative data. Content analysis is described by Silverman (2000) as a method "in which the researchers establish a set of categories and then count the number of instances that fall into each category" (p. 128). While content analysis has been primarily used to quantitatively analyse texts such as schoolbooks, newspaper articles or television advertisements, Robson (2002, p. 351) notes the value of this method in the coding of open-ended questions in surveys. Ulmer and Timothy (2001) employ this technique effectively in their analysis of the effect of teacher reflection on teaching practice. A key issue with content analysis is that the categories derived are "exhaustive" and "mutually exclusive" (Robson, 2002, p. 355). Categories were established using an emergent coding procedure (Stemler, 2001) during a preliminary examination of the data and were later consolidated to form coding categories. These categories were refined through several passes through the data to enhance reliability of coding. Individual participant's responses were regarded as the coding unit and up to three categories were identified for each unit. Weighting for each category was established by calculating the total number of codings for that category as a percent of the total codings for all categories.

The survey that provides the data for this paper is the first stage of an exploration of the practicum as a critical point for student retention. It was supplemented by a small number of in-depth interviews prior to, and following, the practicum experience. Analysis of these interviews will be reported in subsequent papers.

Cohort

The cohort who were the participants in this survey were 80.1% female; 69.9% of them were aged 20-29 years and 20.8% were 30+ years; 77.5% were from programs preparing them to be teachers in Primary schools and 22.5% in Secondary schools. In response to a question asking how frequently the participant had seriously thought about withdrawing from the program, 51.1% reported "never", 39.7% "occasionally", 7.4% "quite often", and 1.3% "all the time".
The practicum experience the cohort was about to undertake was the first extended professional experience and the first that had formal assessment procedures attached to it. This cohort had also participated in earlier retention studies by the authors (see above) during their first year of study, and in particular their relatedness to their chosen field of study, namely teacher education, was explored in Watson, Johnson and Austin (2004). In that paper it was shown that 74% of participants were studying their first choice of program and 94% had a long-term aim of teaching. The responses made by these participants to open-ended questions concerned with what inspired them to choose teaching as a profession, and why they thought they would be good teachers, have informed some of the Likert scale questions in the present survey.

Discussion
Results for the Likert scale questions are shown in Table 1. These questions were analysed to provide a statistical mean as well as Pearson Correlations for gender, age, academic achievement so far, and a comparison of participants in the Primary program compared with the Secondary program. These results show that the participants are still quite excited about university (mean=3.63 on a 5-point scale). This compares with a mean of 4.38 when the cohort was asked this question in Orientation week as incoming students. They also express very high levels of enthusiasm for becoming a teacher (mean= 4.44—compared with 4.51 in the Orientation week survey) and very strong intention to complete the program (mean = 4.72). Female participants were more likely to be in agreement with the statements "My love of children is the reason I want to be a teacher" (0.01 sig.), "I am passionate about education", and "My university studies to date have prepared me well for going to practicum" (0.05 sig.). Older participants were more likely to be in agreement with the statements "I have a good rapport with children", "I am patient, tolerant and compassionate" and "I have the necessary competencies to cope well at practicum" (0.01 sig.). Participants with better academic achievement were more likely to be in agreement with the statements "I am excited about being at university", "I have good organisation skills" and "My university studies to date have prepared me well for going to practicum" (0.01 sig.). Participants preparing to be teachers in Primary classrooms were more likely to be in agreement with most of the questions (10 questions with 0.01 sig.) than were participants heading for Secondary classrooms.

Table 1
Means and correlations to Likert scale questions

<table>
<thead>
<tr>
<th>PEARSON CORRELATIONS</th>
<th>MEAN 5PT SCALE</th>
<th>GENDER</th>
<th>AGE</th>
<th>GRADES</th>
<th>PRIM CF SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am excited about being at university</td>
<td>3.63</td>
<td>-.116</td>
<td>.146*</td>
<td>-.304**</td>
<td>.040</td>
</tr>
<tr>
<td>I am really enthusiastic about becoming a teacher</td>
<td>4.44</td>
<td>-.095</td>
<td>.096</td>
<td>-.058</td>
<td>-.182**</td>
</tr>
<tr>
<td>I intend to complete the Program</td>
<td>4.72</td>
<td>-.020</td>
<td>.072</td>
<td>-.115</td>
<td>-.155*</td>
</tr>
<tr>
<td>My love of children is the reason I want to be a teacher</td>
<td>4.00</td>
<td>-.191**</td>
<td>.099</td>
<td>.123</td>
<td>-.502**</td>
</tr>
<tr>
<td>My belief that I can make a difference in children's lives is the reason I want to be a teacher</td>
<td>4.44</td>
<td>-.106</td>
<td>.119</td>
<td>-.022</td>
<td>-.300**</td>
</tr>
<tr>
<td>My understanding of teaching as a well paid, secure profession is the reason I want to be a teacher</td>
<td>2.98</td>
<td>-.064</td>
<td>-.151*</td>
<td>-.024</td>
<td>.112</td>
</tr>
<tr>
<td>I am passionate about education</td>
<td>4.28</td>
<td>-.176*</td>
<td>.149*</td>
<td>-.077</td>
<td>-.178**</td>
</tr>
<tr>
<td>I have a good rapport with children</td>
<td>4.37</td>
<td>-.062</td>
<td>.213**</td>
<td>.063</td>
<td>-.441**</td>
</tr>
<tr>
<td>I have good communication skills</td>
<td>4.28</td>
<td>-.048</td>
<td>.138*</td>
<td>-.145*</td>
<td>-.176**</td>
</tr>
<tr>
<td>I am patient, tolerant and compassionate</td>
<td>4.16</td>
<td>-.017</td>
<td>.199**</td>
<td>-.054</td>
<td>-.336**</td>
</tr>
<tr>
<td>I have good organisation skills</td>
<td>3.90</td>
<td>-.134</td>
<td>.159*</td>
<td>-.173**</td>
<td>-.172**</td>
</tr>
<tr>
<td>I am excited about going to practicum</td>
<td>4.10</td>
<td>.033</td>
<td>.033</td>
<td>.010</td>
<td>-.172**</td>
</tr>
<tr>
<td>I feel apprehensive about going to practicum</td>
<td>2.85</td>
<td>-.068</td>
<td>-.035</td>
<td>-.008</td>
<td>.111</td>
</tr>
<tr>
<td>I have the necessary competencies to cope well at practicum</td>
<td>3.93</td>
<td>.056</td>
<td>.265**</td>
<td>-.055</td>
<td>-.224**</td>
</tr>
<tr>
<td>My university studies to date have prepared me well for going to practicum</td>
<td>3.42</td>
<td>-.141*</td>
<td>.067</td>
<td>-.196**</td>
<td>-.187**</td>
</tr>
<tr>
<td>My practicum experiences will impact on my decision to complete the program</td>
<td>3.28</td>
<td>-.048</td>
<td>-.113</td>
<td>.092</td>
<td>-.127</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level
* Correlation is significant at the 0.05 level
The survey also included four open-ended questions which were: "What is the most important reason you are still in the program?"; "What have been your most valued experiences in this program?"; "What are you expectations of your upcoming practicum experience?"; and "How can the University best support you while you are at practicum?". Responses to each of these questions will be analysed in the following sections.

**Reason for still being in the program**

The most frequently coded categories arising from the content analysis of the open-ended question "What is the most important reason you are still in the program?" are shown in Table 2. As noted in the Method section, each participant's response to this question was coded in up to three categories. Therefore, the percentages shown in the table relate to the total number of codings for that question, thus enabling a weighting according to the number of times this category was identified in the responses to the question. It can be seen that a desire to be a teacher is the most important reason given (38.33% of codings). This was usually expressed fairly simply as "I really want to be a teacher", "Teaching is what I want to do", and "Because this is what I want to do with the rest of my life". The next most important reason was a desire to finish the program (22.00% of codings). For example "It is a life long dream, and I'm not about to give up now", and "I am still dedicated, and haven't come this far to quit". Enjoyment and interest in the study was the next most frequently coded category (15.00%), for example "I've got a lot of personal satisfaction from achieving good marks at uni - I am proud of what I'm doing", followed by wanting a stable career and income (12.67%) expressed as "Huge investment - want the career" and "so I'll have a 'real' job, no-one will buy my paintings, even after 4 years at [an art program]". Responses involving love of children, wanting to work with children, or making a difference in children's lives were the other major category (7.70% of codings). Cochran-Smith (2004) cited this factor as a major contributor to retention in the teaching profession and more important than physical conditions. Only a few students expressed ambivalence in their responses, for example "Good question I'll get back to you".

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>% OF CODINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- wants to be a teacher</td>
<td>38.33</td>
</tr>
<tr>
<td>- wants to finish, has come too far to quit, wants the end result, determination</td>
<td>22.00</td>
</tr>
<tr>
<td>- likes it, enjoys it, finds it interesting, likes learning new things</td>
<td>15.00</td>
</tr>
<tr>
<td>- wants a stable career, income, back-up career, money</td>
<td>12.67</td>
</tr>
<tr>
<td>- loves children, wants to work with children, wants to make a difference in children's lives</td>
<td>7.70</td>
</tr>
<tr>
<td>- other</td>
<td>4.33</td>
</tr>
<tr>
<td><strong>Total number of codings</strong></td>
<td><strong>#300</strong></td>
</tr>
</tbody>
</table>

**Most valued experiences in the program**

The most frequently coded categories arising from the content analysis of the open-ended question "What have been the most valued experiences in this program?" are shown in Table 3. It is very evident from these results that the participants' most valued experience has been practicums (50.35% of codings). This is a surprising result seeing that for most of these participants their only practicum experience at the time the survey was administered were two blocks of 10-day duration in their second year of the program, although it is in keeping with Brownlee, Purdie and Boulton-Lewis's (2003) study of student teachers' knowledge about their learning. However, despite the past tense of the verb in the question, the response may reflect positive anticipation of the impending practicum (as seen Table 1), or simply an awareness that the focus of the survey was practicum. Examples of responses identifying practicums as the most valued experience were: "Practical experiences - although the theory of our classes are very important, pract has been the real eye opener and taught me so much" and "My first prac, where I saw the real possibilities of being an effective teacher".
Table 3
Content analysis of the question "What have been you most valued experiences in this program?"

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>% OF CODINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- practicums</td>
<td>50.35</td>
</tr>
<tr>
<td>- named particular courses or many/all courses</td>
<td>13.12</td>
</tr>
<tr>
<td>- learning new things, learning strategies for teaching</td>
<td>12.77</td>
</tr>
<tr>
<td>- other students, networking, friends, colleagues</td>
<td>11.70</td>
</tr>
<tr>
<td>- personal betterment/improvement, personal gain, career gain</td>
<td>4.96</td>
</tr>
<tr>
<td>- tutors or university teachers (either specific names or more general)</td>
<td>3.90</td>
</tr>
<tr>
<td>- all of it, too much to list, various un-named aspects</td>
<td>1.06</td>
</tr>
<tr>
<td>- other</td>
<td>2.13</td>
</tr>
</tbody>
</table>

Total number of codings #282

The next most frequently coded category was the courses in the program, either particular named ones or in general (13.12% of codings), for example "[course name] made me see the world in a different way" or "The curriculum subject which puts all of the content we have learned into a way that we will teach it". Aligned with the previous category were more general ideas about learning new things and strategies for teaching (12.77% of codings), such as "Many of the courses have provided valued experiences/opportunities to learn new relevant content" and "Continued learning of new and useful information". Relationships made with other students, friends and colleagues was seen as the next most valued experience (11.70%), for example "The support network of peers I am in" and "Getting a good group of friends to work with" with many valuing group work. Some participants indicated personal improvement and gain as their most valued experiences (4.96% codings), for example "New ways of thinking - expand my knowledge base" and some identified teaching staff and teacher mentors in their school practicums (3.90% of codings) such as "Associating with lecturers/tutors who are obsessed with their topic and love to share and encourage" and "Meeting and learning from some really good teachers in schools". A level of overall dissatisfaction was evident in a few responses such as this one, "I'm still waiting for them [valued experiences]".

Expectations of upcoming practicum
The most frequently coded categories arising from the content analysis of the open-ended question "What are your expectations of your upcoming practicum experience?" are shown in Table 4. Of the four open-ended questions in the survey, this question generated the most codings (373).

Table 4
Content analysis of the questions "What are your expectations of your upcoming practicum experience?"

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>% OF CODINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- expects to learn specific things (about assessment, special needs, behaviour management), expects to learn a lot</td>
<td>27.61</td>
</tr>
<tr>
<td>- to gain experience as a teacher, realise teaching is 'for them'</td>
<td>16.62</td>
</tr>
<tr>
<td>- to be successful, to be organised, to do well, to gain confidence</td>
<td>13.14</td>
</tr>
<tr>
<td>- to get a good teacher, to get support from the mentor teacher, to get along with the teacher</td>
<td>12.33</td>
</tr>
<tr>
<td>- is looking forward to it, thinks it will be fun, enjoyable</td>
<td>10.46</td>
</tr>
<tr>
<td>- that it will be difficult, challenging, harder than before (both with positive and negative connotations)</td>
<td>7.24</td>
</tr>
<tr>
<td>- nervous, worried, not looking forward to the practicum at all (various reasons)</td>
<td>6.43</td>
</tr>
<tr>
<td>- build relationships with students, make a difference in students' lives, help students</td>
<td>2.68</td>
</tr>
<tr>
<td>- other</td>
<td>3.49</td>
</tr>
</tbody>
</table>

Total number of codings #373
The most frequently coded category related to expectations about learning either specific things (in particular behaviour management) or generally learning a lot (27.61% of codings), for example “I expect to learn a lot about teaching and behaviour management” and “I expect that I will learn what is effective in the classroom”. Some of these responses incorporated an element of risk taking and saw the practicum experience as an opportunity to learn what worked (or not) as in this response, “To try things I want to do in my own classroom”. Allied with this category of learning was expectation of a real teaching experience (16.62% of codings), for example “To gain more experience as a teacher in the ‘real world’” and “To become a better teacher in the classroom”. For some this included seeing the experience as contributing to a decision about their suitability for the profession, for example “To discover if I am in the right profession” or “To decide if it is worthwhile to go on”. This expectation should be noted with respect to Moore’s (2003) observation of the dominance of routine and organisational concerns rather than real teaching in field experiences. The next most frequently coded category (13.14% of codings) related to personal skill building or success such as “To gain more confidence in teaching” or “I want to receive a good prac report”. The teacher mentor and the school situation in which the practicum occurred featured regularly in the responses (12.33% of codings). Sometimes this was used in a positive way such as “Pretty excited as I have a great supervising teacher who will let me have free rein in teaching lessons”; others were adamantly negative about their teacher mentors as in this response “I am going to fail because my mentor dislikes me personally, I expect to have 4 weeks of living hell and have my mentor set unreasonable and difficult tasks for me to ‘flounder’ at while completing for his own gratification”. The importance of the school-based mentor has been noted by Hobson (2002) as important not only to the practicum experience, but also to the preservice teacher’s induction into, and retention in, the profession. The school grade level the participant had been assigned to also generated contrasting responses such as “Think it will be boring, the grade ones don’t do exciting stuff” compared to “I am keen to learn more about year one”, as did the school environment, for example “Positive, welcoming environment in small well organised school” compared with “It will be very challenging as the students are very disobedient”. Positive anticipation, including having fun and an enjoyable experience, featured in 10.46% of codings, for example “Enjoyable, challenging, motivating, rewarding” and many of the codings that anticipated difficulty and hard work (7.24% of coding) allied that with positive expectations “A heavy load with multiple demands but it will be an excellent experience and huge learning curve”, particularly with respect to providing a challenge such as “I know it will be challenging, but I’m looking forward to it”. Negative expectations featured in 6.43% of codings, often aligned with their mentor teacher, as noted above, or general feelings of inadequacy such as “I expect to be incredibly nervous, nervous about being placed in a ‘challenging’ school, not managing the classroom and so on”, or the peculiar status of being both student and teacher “I expect not to be very comfortable there – you’re a stranger to both teachers and students and don’t fit in with either”. Only a few respondents (2.68% of codings) translated their love of children and a desire to make a difference in their lives, noted in the responses to the first question, to their expectations of practicum.

**University support while on practicum**

The most frequently coded categories arising from the content analysis of the open-ended question “How can the University best support you while you are at practicum?” are shown in Table 5. This table shows that the most frequently coded category was availability of University staff to provide advice, feedback and problem solve (38.84% of codings), for example to provide a generally supportive atmosphere such as “Have supportive staff members to listen if you have any prac concerns” or for very specific concerns such as “Have a tutor that is there to primarily discuss issues like unit planning and lessons, maybe have them in the library for people to access easily”. Aligned with this category were practical issues to do with university organisation such as not having assessment items due during the practicum period, providing resources, and giving earlier notification of practicum placements (28.13% of codings). Examples of responses in this category include “Not expect us to hand in assignments straight after prac so we have time to write them” and “Provide strategies and resources”. Specific responses relating to a practical issue of providing an online forum for student access and communication were recorded in 4.02% of codings. Mayer (2002) noted the value of using online forums to maintain communication with students during practicum. Better preparation for practicum featured in 8.48% of codings, such as “Actual tutorials dealing with practicum would help, giving more advice on certain matters” and “Make sure everyone is clear with what has to be completed (during the practicum)”. Concerns about the practicum placements and mentor teachers were noted in 7.14% of codings, for example “Ensure that the supervising teachers want us
there" and "Understand that many of our prac schools haven't got a clue what we are meant to be doing, the university should take more time to familiarise the school with our prac requirements". This concern for the university and schools working together was specifically mentioned in 2.68% of codings. A few students noted the impact the extended full time practicum had on their ability to earn money and support their families (3.13% of codings) and suggested, probably somewhat facetiously, that the University might provide this, for example "pay me to help feed my children".

Table 5
Content analysis of the questions "How can the University best support you while you are at practicum?"

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>% OF CODINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- be supportive, be available, give advice, help solve problems, visit schools, provide evaluations and feedback</td>
<td>38.84</td>
</tr>
<tr>
<td>- university organisation, not having assessment or classes around prac, give students time to focus on prac, provide resources for prac, earlier notification of school placements</td>
<td>28.13</td>
</tr>
<tr>
<td>- preparation, general (what to expect) and specific (subjects, areas)</td>
<td>8.48</td>
</tr>
<tr>
<td>- make sure mentor teachers really want to do it, make sure schools are organised, perhaps professional development for mentors, place students where they want to be placed</td>
<td>7.14</td>
</tr>
<tr>
<td>- have online forum for students to access info, resources and talk with other students</td>
<td>4.02</td>
</tr>
<tr>
<td>- money, provide financial support</td>
<td>3.13</td>
</tr>
<tr>
<td>- university and schools should work together</td>
<td>2.68</td>
</tr>
<tr>
<td>- other</td>
<td>7.60</td>
</tr>
</tbody>
</table>

Total number of codings #224

Conclusion
Professional experience is an important component of most teacher preparation programs and it could be expected to have a major impact on the new teacher's approach to their profession and, as is posited in this paper, impact on their decision to complete a teacher education program. This paper has explored quantitative and qualitative survey data that constitute the first phase of data collection to explore the practicum as a critical point in decision making regarding teaching as a profession and the completion of a teacher qualification program. A second phase of data collection explores these findings in depth through interviews with a small group of participants and will be reported elsewhere.

Responses to Likert scale questions revealed that while there was some deterioration in excitement about being at university since the cohort was surveyed in the first semester of their program, there were still strong levels of excitement which were driven by the participants' enthusiasm to become teachers and to complete their study program. Statistical analysis indicated that female participants were more likely to acknowledge love of children and being passionate about education as reasons for wanting to be a teacher, while older participants see themselves as having good rapport with children, and having personal attributes and competencies that suited them to teaching. Participants with better academic results were more likely to see their university studies as good preparation for going to practicum, and participants preparing to teach in Primary classrooms were more positive across a range of questions than were those preparing for Secondary classrooms.

Content analysis of qualitative data from the open-ended question concerned with the reason the participant was still in the teacher education program showed that the most frequently cited reasons were a desire to be a teacher, and a determination to finish the program. Other reasons included enjoyment of the program and learning new things, a desire for a stable well paid career, and a love of children associated with wanting to make a difference in children's lives. With respect to the question on the most valued experiences in the program, responses strongly indicated that practicums were the most valued experience. Other valued experiences included particular courses or coursework in general, new learning experiences, and relationships with peers and colleagues. In response to the question on expectations of the upcoming practicum, the most frequently coded category was an expectation of learning specific things or learning in general, followed by an expectation of gaining experience as a teacher that for some participants would contribute to a career decision. Other expectations included expansion of personal skills, and positive or negative experiences often relating to anticipated relations with their teacher mentor or the school environment. The participants indicated that the best way the University could support them
while on practicum was through availability of staff to listen to concerns and solve problems but particularly to visit schools and provide feedback. In practical terms the participants were keen to see that their practicum was clear of other assessment, and made suggestions about provision of resources and early notification of practicum placements.

The generally positive nature of the responses to both the quantitative and qualitative data would suggest that for most participants the practicum will not act as a critical point with respect to retention in their teacher preparation program. However in a small number of instances there were indications of seeing this experience in the third year of their 4-year program as a decision making point with respect to their future profession. The participants were able to provide a number of explicit suggestions about ways the University could provide support for them during their practicum that, if acted on, could minimise the number of negative outcomes from such career decisions. However for some participants a decision to seek other career options may be seen as a positive outcome. It would be expected that the role practicum plays as a critical point in retention will be further illuminated by detailed analysis of the before- and after-practicum interviews that are a part of this research.

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References


Epilepsy: Does Authoritative Discourse Cause Society And Teachers To Fall?

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Epilepsy is the most common serious neurological condition, affecting at least 1 in 200, with claims of 1%-2% population in the Western hemisphere having some form of epilepsy (Jan, Ziegler, & Erba, 1983; Buchanan, 1989; Rusy, 1991). Epilepsy's label as a 'disease' and a 'handicap' is evidence of the reality of stigma and discrimination that some sufferers endure. Epilepsy can be seen as a disease whose primary impact is social, not physiological; the burden of the illness is experienced by the individual and those close by, even when the disease is not severe (Levisohn, 2002).

Introduction
Derived from the Greek word 'epilambanium', epilepsy, the name given to seizure disorders, is the most common serious neurological condition, affecting at least 1 in 200, with claims that 1% - 2% population in the Western hemisphere have some form of epilepsy (Jan, Ziegler, & Erba, 1983; Buchanan, 1989; Rusy, 1991). Epilepsy's label as a 'disease' and a 'handicap' is evidence of the reality of stigma and discrimination that some sufferers endure. Epilepsy can be seen as a disease whose primary impact is social, not physiological; the burden of the illness is experienced by the individual and those close by, even when the disease is not severe (Levisohn, 2002).

Background
Historically, it was believed that gods or spirits 'seized' the afflicted person (Jan, Ziegler, & Erba, 1983). Scott (1969) postulates that epilepsy, disputing the descriptor as a sacred disease, may be the oldest-known brain disorder, mentioned in the Hammurabi Laws, well known before Hippocrates, having importance in the medico-social domain. Knowledge of epilepsy may have taken the place of ignorance, including it being common in people with learning disabilities, with the incidence higher in children and elderly people (Brown, 1998), but superstition and stigma remain. Epilepsy, throughout history and in contemporary times, continues to be 'linked with the story of magical beliefs and their refutation by scientific physicians' (Scott 1969, p. 8). The editorial of the British Medical Journal in 1997 summarised the history of epilepsy as '4000 years of ignorance, superstition, and stigma followed by 100 years of knowledge, superstition, and stigma'. Jacoby (2002) also describes the inevitability of informal stigma and formal discrimination for those with epilepsy, stigma continuing to have an impact on well-being and quality of life.

Describing epilepsies as 'socially handicapping disorders' (Aicardi, 1986, p. 319), writers give evidence to their claims. A German survey in 1996 showed about 20% of people interviewed thought that epilepsy was a mental disorder, with similar figures concerning objections to the marriage of their children to a person with epilepsy. Until 1956, 17 states in the USA prohibited people with epilepsy from marrying (the last state repealed this law in 1980), and it was legal to deny them access to public places such as restaurants, recreational centres and theatres. Supernatural causes result in epilepsy, or so 70% people surveyed in Turkey believed in 1996/7 (BMJ, 1997; Epilepsia 2003). Throughout the 1990s studies were conducted concerning epilepsy and comparisons with other illnesses such as asthma, and public attitudes to epilepsy in Thailand, Taiwan, China, Denmark and Tanzania (Hseih & Chiou, 2001). Findings included
more teachers thinking epilepsy is hereditary, over 30% believing seizures are associated with insanity, and the acceptance of these children being lower, with less encouragement by teachers for inclusion in activities. Studies comparing children with epilepsy and asthma specifically, illustrate that those with epilepsy perform with significantly lower achievement scores, with suggestions that this results not only from high condition severity but also from negative attitudes and lower school adaptive functioning scores. Significantly, boys with severe epilepsy were found to be most at risk for under-achievement, and to be more impaired with respect to reading skills (Stores & Hart, 1976; Stedman, Van Heyningen & Lindsey, 1982; Austin, Huberty, Huster, & Dunn, 1998). Understanding of the cognitive and behavioural aspects of epilepsy and its treatment is essential to psychologists, teachers and other school personnel as well as to parents if they are to assist in the assessment and remediation of children with epilepsy. With the level of attainment controlled, children with epilepsy were still perceived by their teachers as being significantly less alert (Cull, 1988). In their 1984 study Bennett-Levy and Stores, through teacher completed questionnaires, found that teachers perceived children with epilepsy as having significantly more problems that their non-epileptic peers with respect to overall achievement, concentration and the mental processing of information. In a later study in Nigeria (Ojinnaka, 2002), despite a fairly high level of education of the teachers, the mean overall score for correct response for knowledge of epilepsy was 59.2%, with the majority of teachers having negative attitudes and beliefs. For the child, their motivation to succeed is greatly damaged. Studies today confirm that up to 30% teachers in some countries still associate epilepsy with insanity, and as a group, the children have a lower rate of acceptance. Rogan (1986) warned that a lack of public understanding of epilepsy would cause fear, and in turn, fear would induce prejudice. Prejudice manifests itself in discrimination. The essence of discrimination is forming opinions about others not based on individual merits but rather on being a member of a group that has certain assumed characteristics (Dantas, Carri, Carri, & Filho, 2001). Teachers who are not well prepared to accept a child with epilepsy can subconsciously show signs of rejection and this transfers into the minds of the other pupils.

As much as 40% of a child’s developing years are spent at school (Bannon, Wilding, & Jones, 1992), consequently the classroom teacher is in an ideal position to educate classmates about epilepsy and to correct any negative misconceptions and prejudices (Martin, Hooper, & Snow, 1986). Attitudes toward people with epilepsy are influenced by the degree of knowledge of the condition (McLin & de Boer, 1995). In 2003, the International League Against Epilepsy (ILAE), advocated the need to raise public awareness of epilepsy and the surrounding issues, citing numerous accounts from people with epilepsy of personal experiences in which their condition was misunderstood, misinterpreted and inappropriately handled. Issues exist that if teachers in particular, and the public in general, were better informed about epilepsy, the incidents would be less frightening, and the medical needs of students with epilepsy would be better understood (Spiegel, Cutler, & Yetter, 1996). Buchanan (1983) alerted us to the reality that epilepsy may be blamed, by both parents and teachers, for any unusual behaviour such as ‘angry outbursts, irritability and restlessness’ (p. 47). This was also common when people spoke about epileptic personalities, specifically mentioned earlier by Scott (1969) speaking of individuals as being ‘sly, aggressive, impulsive, obsequious...’ (p. 86) or by Fenwick as being ‘sticky, suspicious, quarrelsome, aggressive, touchy, pedantic, egocentric, circumstantial and religiose’ (p. 518 cited in Hopkins, 1987). A study by Huberty, Austin, Risinger and McNeils in 1992 found no significant relationship between academic performance and either the type of seizure or the age of onset, and consequently no reason to exclude the student with epilepsy from academic activities because of the condition.

Teachers might also assist with socialisation, encourage confidence and initiative and provide opportunities for the child to earn the respect of peers (Engel, 1989). In 2001 the Epilepsy Foundation (USA) surveyed adolescents in the general population concerning epilepsy. Of 19,441 respondents, those who remembered hearing about epilepsy numbered 52%; and only 31% would date a person with epilepsy. Other responses indicated the social environment for adolescents with epilepsy is characterised by stigma and a lack of familiarity and knowledge about epilepsy (Austin, Schafer, & Dearing, 2002). An important feature for successful socialisation of students with epilepsy is acceptance by their teachers (Shumiolo & Galletti, 1994). Hseih and Chiou (2001) espoused that the attitudes and perceptions of people who deal with students every day e.g. families, school teachers and class mates have a great and direct influence. Yanko (1992), in his role description of a teacher stated it to be more than dealing with the identified child with epilepsy, but also maintains a vital role in helping with diagnosis.

In teacher education programs, issues including the constraints of time with students and resources are impacting on the opportunities presenting themselves for attention. There are courses where epilepsy is
not specifically addressed in lectures but may be included in tutorial topics, where it is unclear whether it is a Special Education issue, or a Physical Education/Health topic. The mantra of 'inclusion' means that the focus is of common learning needs such as learning difficulties, and current trends in schools towards mainstreaming and inclusion. Inclusion does not discriminate by category, but teachers may discriminate as individuals, and the bases of such discrimination (classed under the broad rubric of 'attitude') are crucial (Avramidis, Bayliss, & Burden, 2000). Kuester (2000) maintains that attitude is a key variable in determining the success of inclusive education. Teacher education classes stress methods and theories but little in the way of first aid or emergency procedures. (Spiegel, Cutler, & Yettet, 1996). Topics covering aspects including difficulties with communication, and classroom management are covered for all teachers, not specialists. Epilepsy often becomes a segment of other issues, the subject of one lecture and an associated seminar. The question of whether epilepsy falls into the category of a learning disability may then affect the outcome of whether itself it is included. Some units describe their role as exploring exceptional children with learning, intellectual, physical, emotional or sensory disabilities. In addition, there is the proposition that learning about specific disabilities is inappropriate as the needs of each student should be identified on an individual basis. Does this mean that epilepsy falls under the umbrella of mild disabilities, learning difficulties and behaviour disorders?

Aicardi (1986) speaks of the use of the term 'epileptic', believing it to be an adjective to be deleted from use, citing the frightening effect on families, and its association with the idea of 'a chronic, incurable condition'(p.4). The International Bureau for Epilepsy also decries the use of the dreaded "E" word, describing the abuse of the adjective 'epileptic', into a noun to describe a person with epilepsy. Further, teachers do not have an accurate concept of the capabilities of children with epilepsy, nor are all teachers similar in their beliefs. Children with epilepsy frequently display cognitive sequelae that are overlooked or misunderstood by medical personnel, yet may adversely affect academic performance (Black & Hynd, 1995). Research has been conducted on the consequences of epilepsies in infancy and childhood, under the umbrella of development, cognition and behaviour. As a profession, teachers have been alerted to the adverse impact on academic performance of epilepsy in children. Academic difficulties in the areas of arithmetic, spelling, reading comprehension and word recognition were reported by Gourley in 1990, yet there have been a variety of findings regarding academic achievement of children with epilepsy. Calls have now been made for consistent circumstances of observation, with the intention of leading to a better understanding of academic problems of children with epilepsy (Huberty, Austin, Risinger. & McNelis, 1992). In 2003, Epilepsia warns that the perception that epilepsy always has a major effect on education is as misconceived as the assumption that children's educational performance is never affected by epilepsy. New Zealand's Epilepsy Association maintains it to be a misconception that children with epilepsy do not achieve to the level of their peers. Concern is also expressed that such attitudes may give rise to a student not reaching his/her full potential due to the unrealistic expectations of parents and teacher. According to Lah (2004) factors influencing academic performance are:

- social (family adjustment)
- psychological (for example, low self esteem)
- medical – seizures (medication)
- cognitive – attention and memory - heightened academic vulnerability.

Many of these factors can be deconstructed and reconstructed using the data from contemporary research. The authoritative word can be challenged and a new way of thinking, and a new way of action can be born.

**Methodology / Design**

A video collage entitled 'Epilepsy... through adolescent eyes' (March 2005) by the Epilepsy Association is analysed within this paper using the authoritative discourse. Clark (2003) uses authoritative discourse in the 'learning disabled' labelling of students. This may be described as an 'unlabelling' process, involving a situated understanding of learning. Bakhtin (1981) defines the boundaries of authoritative discourse as

[It] permits no play with the context framing it, no play with its borders, no gradual and flexible transitions, no creative stylising variants on it. It enters our verbal consciousness as a compact and indivisible mass... It is indissoluble fused with its authority (p. 343).

Clark (2003) describes the "compact and indivisible mass" of information comprising of 'institutional and scientific power and authority' (p. 129) This is joined by the social and emotional well-being standing
of the individual, which in turn is shaped by the individual experiences and socio cultural expectations.

In his research concerning children diagnosed with ADHD, Kean (2004) speaks of a process of deconstruction and reconstruction of knowledge and perception. The structured process of interaction with data in order to develop a new understanding of the subject matter under investigation within the context of sociological research involves:

...a constant shuttling backwards and forward between abstract concept and concrete data; between social totalities and particular phenomena; between current structures and historical development; between surface appearance and essence; between reflection and practice (Harvey, 1990, p. 29).

This process is supported by Smyth and Shacklock (1998) who suggest the process of deconstruction and reconstruction should function as follows:

Within a piece of research, some core abstract concepts are located which are considered central; they are used repeatedly to interrogate situations of concrete lived reality in order to develop a new synthesis (p. 3).

Hence, this process becomes one of developing a deep understanding of the subject matter, informed by empirical data and not just abstract analysis. Strategies that assist with this process include examination of the data to determine what has been:

Excluded; made invisible; not allowed to be expressed; and repressed or made trivial (Martin, 1990).

The reconstruction provides an alternative viewpoint that goes beyond the taken-for-granted construct of the phenomenon under investigation.

In 1976, Pazzaglia and Frank-Pazzaglia highlighted the issue that teachers usually did not receive any formal instruction on epilepsy during their training. Then, as now, a high proportion of teachers felt poorly prepared for having children in their class with epilepsy. Further, some teachers feel uncomfortable with their presence in class because of frequent seizures (Dantas, Cariri, Cariri, & Filho 2001). In fact, teachers are often the first people to recognise that a student has epilepsy. Current trends in education towards mainstreaming and inclusion and the reality that teacher education stresses method and theory leave little scope for issues concerning a child’s adaptation to the adversity of epilepsy, first aid or emergency procedures. Teachers and other school personnel should be aware of the possible occurrence of several phenomena including auras, prodromes, and temporary disturbances in consciousness. Despite concerted campaigns designed to inform and change the attitudes of society, many children are not understood and not handled appropriately.

In 1991 a study conducted by Mitchell, Chavez, Lee, and Guzman found that the severity, duration, and treatment of epilepsy appeared to play a minor role in underachievement relative to family setting, parent attitude, and underlying neurological abnormalities. Consideration of experiences at school, both from teachers and peers, is also relevant. Professor Ian Hickie's (2004) statement “co-morbidity is the rule — not the exception” at a public seminar hosted by the Epilepsy Association of Australia, may require deconstruction by the individual teacher, rather than tacit acceptance. A diagnosis of epilepsy does not mean that individuals should be labelled as ‘Learning Disabled’. Within the video, adolescent responses concerning memory and cognition comprised of the following:

"affects my memory; memory problems - change in school work and grades; affects studying; worked out memory techniques - work out the problem"

The complexities of epilepsy indeed are challenging for the individual and for the teacher, but the requirement of all teachers to ‘cater for the individual’ necessitates a teasing out of the areas of need. It has been proposed that learned helplessness exists in the children with epilepsy - could this be the result of teachers who perhaps believe it is synonymous with diminished intellectual capacity, and parents who have been found to reduce expectations for academic achievement in children with epilepsy? (Long & Moore, 1979).

In studies of the profound effect on parents and the child of the diagnosis, descriptors such as ‘a calamity’ (Burden & Schurr, 1976, p. 38), ‘a catastrophe’ (Jan, Ziegler, & Erba, 1983, p. xi) and feelings that ‘the end of the world is at hand’ (Buchanan, 1989, p. 1) reinforce the concept of a popular prejudice, where the general public, although possessing common sense, being supportive of the ‘under-dog’ and helping those in trouble, find themselves in the company of bigots and extremists (Laidlaw & Laidlaw, 1984). Dr Sunny Lah (2004) speaks of stigma as it pertains to her dealings with adolescents. She describes the loss of status or power because of features that have been culturally defined as different or undesirable. In the video, comments concerning socialisation such as:

I thought I was alone ... a blur; then I met others with epilepsy ... opened my mind, feel good and lucky
speaks of the possibility to achieve reconstruction through collegial links and openness to new ideas and perceptions. For those with epilepsy there is a recurrent problem. Typically suffering from low self-esteem and impaired social skills, often depressed and poorly motivated, the resultant social maladjustment can in turn affect academic performance (Sturniolo & Galletti, 1994). In a study of self-perceptions of children with epilepsy compared with those with diabetes or controls, those with epilepsy had significantly poorer self-concepts related to intellectual matters, and were twice as likely to report they became worried or nervous when they had tests or a teacher called on them at school (Matthews, 1983).

Results and discussion

Teachers, through their pedagogy, play a definite role in accepting or interrupting the discourse. It was distressing for the authors to listen to the responses made by the adolescents within the focus group on the video concerning their teachers in schools. Of all respondents, there was only one positive and affirming comment:

Good, accepted, not over-protective, discreet - "friend and teacher all rolled into one".

The experiences of these adolescents were more along the lines of:

They [teachers] treat you like you're stupid.

It is important for teachers not to take the attitude that because the student has epilepsy, he/she will be unable to keep up with the work. Clay (1987) described the ways in which "children are learning to be learning disabled" (p. 171) because of the social interactions they encounter once that label has been conferred. McDermott (1993) states

It is possible to argue that it is the labels that precede any child's entry into the world and that these labels, well-established resting places in adult conversations, stand poised to take their share from each new generation. (p. 272).

Sue Stubbs (1995) describes the incidence of labels taking precedence over acknowledging individual difference and common humanity, and an accompanying fear of speaking or acting due to the pressure of being 'politically correct'.

Responses from adolescents describing their treatment in the classroom situations such as:

[The teachers] fuss over me too much (teacher's pet);
[The teacher] assumes I will miss everything - goes over things eight or ten times

illustrate that where there is talk of 'disability', as opposed to 'illness', there too is often discussion of the 'need to protect', or 'over-protection' where the perception is that the child with epilepsy receives favoured treatment or perhaps is cocooned for safety, with liberty being an unattainable thing. Public attitudes towards disability are often the greatest barrier for people with disabilities - since 1984 the emphasis in the literature on disability has been shifting from a focus on differences and limitation to a focus on abilities and potential. However, in Bakhtin's (1981) terms,

The authoritative word demands that we acknowledge it, that we make it our own; it binds us, quite independent of any power it might have to persuade us internally; we encounter it with its authority already fused. The authoritative word is located in a distanced zone, organically connected with a past that is felt to be hierarchically higher... Its authority was already acknowledged in the past (p. 342).

Fear and stigma becomes integrally linked as an authoritative word, drawing from our past, as history has deemed it so. We find students in schools experiencing teachers who are mimicking students by fluttering eyes, where the PE teacher told the 'whole class', where the 'news' spreads everywhere in the school community, and the Year Adviser who said to [the teacher to] tell the class she (me) has seizures - which in turn caused 'worry, with stares, whispers, funny looks, and an occurrence of feeling strange, as in, not normal' Clark (2003) proposes that teachers, who by their very essence, may be considered as the transmitters of or conduits for authoritative discourses, may unintentionally limit students by relying on labels that precede any personal interactions with students.

In our society, concerning relationships, responses include such statements:

"Mum would not know how to control the seizure" (a friend)

echo times past, of the fear, stigma and discrimination where a label becomes a burden, often too great to bear. There are others who perhaps display more resilience, or perhaps already having deconstructed and reconstructed an individual position are able to state:
"if she is not okay that I have epilepsy then she is not the right one"

Bakhtin (1981) may describe this as an internally persuasive discourse, where the authoritative discourse has been reread and rewritten.

The authoritative word for much of our knowledge of epilepsy resides with the short, sharp 'facts' history has endowed upon us such as the beliefs: 'touch the person and catch it'; 'epilepsy = leprosy'; the descriptors: 'brake-dancing buddy'; 'the shaky girl'; the experiences: 'friends ditch you'; expectation that strobe lights will always affect a person with epilepsy; weird (to tell); the statements: 'are you epileptic? – not good!'; and the ultimate cry of desire: 'I want to be normal!'. For adolescents with epilepsy, the Epilepsy Society and this video collage begins the endeavour to give the tools and understandings to enable them to enter the world, recognise the workings of authoritative discourses, and then respond appropriately in productive ways. This will be achieved by deconstructing today's experiences and perceptions and reconstructing tomorrow's acceptance and actions.

Conclusions and implications
Social, psychological and educational problems are a reality – teachers are not immune to the traditions, perceptions and influences of society. However, increasingly the role of a teacher is broadening and the expectation of the teacher as a 'leader' is gaining momentum. Where will the teachers' influence lead society in the future - what will history have to say concerning the 'power' teachers have in guiding their students to knowledge and truth, to deconstructing and reconstructing our reality today, for tomorrow?

If we are to effectively prepare beginning teachers for the intellectual, emotional, social and physical need, as a starting point for duty of care, should the provision of epilepsy education as a part of the syllabus of the teacher-training curriculum be supported? In May 2003 the Scottish Further Education Unit (SFEU) gave teachers an epilepsy warning, stating that some pupils may be underachieving as a result of the lack of understanding about epilepsy, and further, that a quarter of children with epilepsy said they encountered problems with teachers. This contemporary situation is also supported by a study of primary school teachers, investigating the opinions of knowledge about children with epilepsy. Results revealed inaccurate conceptions of the capabilities of children with epilepsy; nearly half the teachers believing that children with epilepsy differ from healthy children in their behaviour; the majority of teachers (60%) receiving information on the child’s disease not from parents but from other sources; and one third of teachers not confident in their work with children with epilepsy. Also, as in previous studies over 30 years, that epilepsy as a disease has a very similar social effect on the affected person with no regard for cultural or social background. The implication is very clear that the stigma of epilepsy is still a very powerful factor in the formation of general opinions about the Teachers’ Attitudes and Children's Achievements of all children in mainstream secondary classrooms, how can we discriminate and then disseminate the necessary information for informed decisions and foundation knowledge?

The balance of time and content in teacher education programs is an ongoing dilemma for teacher educators, and with a growing emphasis on mental health and other issues related to young people, issues such as epilepsy have by necessity been relegated to incidental focus. As promoters of knowledge and leadership in the community through the 'voice of education', a reconsideration of priorities and consideration of issues such as epilepsy are warranted. Those who are affected by epilepsy today, and tomorrow, will not understand that although there is knowledge, the promotion of knowledge and understanding is at risk of 'falling through the cracks'. Inclusion, acceptance and safety are all aspects of duty of care - the moral and ethical implications for those with epilepsy who suffer discrimination, and those who are ‘falling from grace’ by continuing the cycle of fear and stigma reaches far beyond this generation.

Perhaps our reconstruction should be: ‘See the child – not the epilepsy’.

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468


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Social And Emotional Wellbeing In Teacher Education: Reflections By Early Career Teachers

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In recent years the area of mental health has grown in importance in education, and is recognised as a major health issue. Youth suicide, depression and rises in the use of the psychiatric diagnoses have had a significant impact on social and emotional wellbeing in the classrooms and schools. This paper reviews the implementation of a mental health and well-being resource in a teacher education course for all beginning teachers and tracking a sample of graduates into their second year of teaching. In beginning teacher education programs the emphasis to date for dealing with the issues and programs for mental health in the school system has focused within a single curriculum area. Increasingly the focus of teachers is not only on the attainment of curriculum knowledge, but on the individual—their personal development and how it relates to socialisation, learning outcomes and academic achievements. Pre-service teachers believe their profession has a role in mental health promotion and suicide prevention, and it is important to learn during the course of their training, rather than only at post graduation. Social and emotional well-being, and resilience are all also important for our early teachers—the teacher’s responsibility can be daunting and is one that requires support and preparation for the role.

Introduction
In recent years the issue of mental health problems in the school setting, and the broader concept of promoting resilience for all students, has grown in importance in education. Unresolved mental health problems including depression can have devastating effects in adolescence and increase the risk of school failure, violence or suicidal behaviour (Lewinsohn, Rohde, Klein, & Seeley, 1999). Conversely, teaching in ways that promote resilience may help to prevent mental health difficulties and also improve behaviour and learning outcomes (Zins et al., 2004).

Sawyer, Arney, Baghurst, Clark, Graetz et al. (2001) reported in the Child and Adolescent Component of the National Survey of Mental Health and Wellbeing that fourteen percent of children and adolescents (aged 4 to 17) were identified as having mental health problems. This was the first epidemiological study delineating the prevalence of mental health problems in children and adolescents at a national level in Australia. Many of those with mental health problems also had significant difficulties in other areas of living and as a group they were considered to be at increased risk of suicidal behaviour. Only 25% of these children had received any professional intervention in the six months prior to the survey (Sawyer et al., 2001). Other studies also suggest that the majority of young people who have mental health problems do not seek professional help (Donald et al., 2000).

Teachers have an important role in recognising and referring young people at risk of mental health problems. This role may be particularly important in disadvantaged or remote communities where young people have limited access to other sources of support. Sawyer et al. (2001) alert us to correlations between mental health problems and certain socioeconomic characteristics, such as low income, single or step parents, unemployment and children whose parents left school at an early age. Many beginning teachers may find that their first teaching appointment will be in an area where the demographic characteristics indicate a higher risk for mental health problems. There is added complexity in rural areas where Fuller, Edwards, Proctor and Moss (2000) report that GPs’s, community nurses, police, teachers and clergy are providing the frontline intervention in dealing with mental health issues.
Increased sensitivity to and knowledge of mental health and wellbeing, as well as mental health problems, will greatly improve the level and type of support educators are able to offer their students. There is also increasing acceptance of a systematic, whole-school model in which all teachers have a contribution to mental health and wellbeing, as exemplified by school-based programs such as MindMatters and the Gatehouse project. This raises the question of how well teacher education programs prepare teachers for these aspects of their roles. Until recently, any explicit coverage of mental health in teacher education programs was frequently relegated to the health and personal development curriculum area, with the result that many teachers may not have received explicit instruction about these issues.

In recent years, a national government-funded program called Response Ability has provided resources and support for teacher educators and has advocated for the inclusion of relevant topics in units that will be taken by all pre-service teachers, not only those with an interest in health or welfare. This paper reports on feedback obtained from a small number of early career teachers, approximately twelve months after they completed their university training. The majority of the sample is drawn from former students of Southern Cross University (Lismore) where the Response Ability resources and other materials have been used to explicitly address mental health in conjunction with the final year professional experience unit.

The purpose of this study was to examine whether early career teachers could recall having addressed the relevant topics and whether they valued mental health or social and emotional wellbeing as an important part of the teacher's role.

Methodology
A questionnaire was administered to a small group of early career secondary teachers who graduated from Southern Cross University, Lismore, in 2003. Both Graduate Diploma and combined degree students in 2003 covered a considerable amount of mental health related content in their final Professional Experience Unit, through a series of seminars. This material was delivered by the Professional Experience Coordinator (Secondary Programs) who used Response Ability, MindMatters and other relevant material to explore the social and emotional wellbeing, relating the topics specifically to the teacher's role.

In March 2005, the Professional Experience Coordinator contacted a number of former students via e-mail to seek their feedback on aspects of their pre-service training. Eight former Southern Cross University (SCU) students responded. The Coordinator was also able to obtain five responses from early career teachers not trained at SCU. The questionnaire asked about early teachers' recollection of the coverage of social and emotional wellbeing in their training, as well as their perceptions about relevance of this topic to pre-service education. A broad definition of social and emotional wellbeing was offered on the questionnaire, but particular resources were not named. Where respondents did report the inclusion of explicit mental health topics, they were asked to indicate whether this had impacted upon their confidence in dealing with certain issues in a school setting. Feedback was sought about the value of studying social and emotional wellbeing at a pre-service level.

Results
Respondents
All 13 respondents were working as teachers in a secondary school setting, either in permanent full-time, permanent part-time or casual employment. They taught in a range of learning areas, including mathematics, science, personal development, health and physical education (PDHPE), human society and its environment (HSIE), visual arts, design and technology.

Recall
Eleven respondents reported that their teacher education program had specifically addressed some element(s) of social and emotional wellbeing. The two who could not recall explicit content in this area were not trained at Southern Cross University. In response to an open-ended question about the topics covered, respondents nominated the following: resilience, depression, bullying, peer relationships, child abuse, disorders relevant to teaching, mental health, eating disorders, suicide awareness and prevention. Some from SCU recalled details of an assessment item that required them to incorporate relevant issues into lesson planning. Non-SCU graduates recalled such content within broader areas such as child psychology, sociology and inclusive classrooms.

Graduates from SCU, most of whom had little or no contact with the Coordinator of the program since beginning teaching, could recall several resources that had been used in their program; particularly the play 'The Black Dog' within the Response Ability resource, the use of role-plays (some from Response Ability resources) and the Gatehouse project.
Ability) and also MindMatters, Beyond Blue and Kids Help Line. Non-SCU graduates did not nominate any particular resources that they could recall.

**Impact on beliefs and practice**

Respondents were asked whether learning about these issues at university had impacted on their beliefs about the roles of schools and teachers, or on their teaching practice. Several SCU graduates responded:

- Covering issues about social and emotional wellbeing [at uni] made me more aware of what might be happening in students' lives ... and highlighted the need for me to be sensitive to these things as a teacher.
- It was a great help in understanding how to deal with events and what I would expect.
- Highlighted to me the importance of recognising the symptoms of different problems ... and deciding on appropriate responses and appropriate referral.
- Learning about these issues in an academic setting certainly increased my body of knowledge on the subject and in many ways allowed me to make sense of some of my life experiences.

In response to this question, a non-SCU graduate who reported having had little explicit content on these issues at university reported:

... very little focus on the relationship between teacher and student ... I have come to see this is one of the most important parts of teaching ...

**Broad value of learning about social and emotional wellbeing**

Respondents were also invited to indicate their level of agreement or disagreement with several statements, by circling a number on a scale of 1 to 10, with ten indicating very strong agreement. Seven of the SCU graduates and three of the non-SCU graduates completed this question. Unfortunately the small sample size precluded a statistical analysis of any significance in difference between the two groups.

In regard to a statement about the inclusion of relevant topics in their teacher education programs helping them to become 'a better teacher', the SCU graduates ranged in scores from 5 to 9, (mean 6.71). Three seemed neutral (scores of 5 to 6) while four were more positive (scores of 7–9). One non-SCU graduate disagreed with the statement, while the other two showed fairly strong support with a score of 8.

The second statement was that learning about wellbeing at university had helped the early teachers to be more resilient themselves, with a particular focus on the workplace. Three students disagreed (score of 2), two were uncertain (scores of 5–6) while two agreed (scores of 8–9). As the SCU graduates were known to the Coordinator, it was possible to note a pattern in these response: the three who disagreed were considered by the Coordinator to have high levels of resilience and confidence before covering this material, so they may not have noted any change in this regard. Non-SCU respondents had a wide range of responses, from 3 to 9.

**Impact on confidence in specific situations**

A further statement invited respondents to consider whether the inclusion of wellbeing / mental health in their program had helped them to feel more confident about identifying young people in need of support. The responses from SCU graduates ranged from 6 to 9, indicating a moderate to high level of support for this statement (mean 7.43). A related statement about responding to young people in need of support drew more diverse responses, including a score of 3 and a score of 5; the other scores ranged from 6 to 9, suggesting that most but not all respondents were supportive (mean 6.57).

Both of these statements drew a wide range of responses from non-SCU graduates. In general, graduates of SCU evidently felt somewhat confident about identifying young people at risk but slightly less confident about actually responding appropriately. This is in keeping with feedback received from the pre-service teachers shortly after covering relevant material in their programs and may reflect a natural anxiety about actually responding in difficult situations, despite some theoretical discussion of such issues at university.

**Importance of issues in pre-service teacher education**

Respondents were asked whether it is helpful for early teachers to have received some training in their teacher education program about students ‘at risk of depression, suicide, etc’ to which there was a strong positive range of responses, from 7 to 10 (mean 8.71) for the graduates from SCU. Non-SCU graduates also rated this highly, with scores of 8, 9 and 10. This shows broad agreement for the proposition that such topics should be addressed at pre-service level.

The next statement related to whether it is helpful for early teachers to have received training in the more nebulous area of ‘students' resilience and wellbeing.’ Both SCU graduates and others also rated this
highly, with scores ranging from 8 to 10 for most respondents. One SCU graduate returned a score of 6, perhaps indicating some uncertainty about the value of this area in pre-service education.

**Teachers, schools and school success**

Respondents were challenged with the statement that teachers have an important role in creating supportive school environments and building resilience. Both SCU and non-SCU graduates agreed strongly, with all scores ranging from 8 to 10. They were also asked whether resilience and student wellbeing should be recognised as an important priority for schools in terms of their culture, policy and practice. Again, all respondents strongly agreed, with scores of 9 and 10. This indicates strong support from early teachers that their role goes beyond teaching content, and perhaps identifying those at risk, to broader issues of the environment and resilience. The latter principles are consistent with whole-school approaches to wellbeing and are increasingly reflected in departmental policies for schools (Griffiths & Cooper, 2005).

Early career teachers were also asked to indicate their level of agreement with the statement that young people’s social and emotional wellbeing, or resilience, can impact on school performance, behaviour or learning outcomes. There was also strong agreement with this proposition, with all respondents returning scores of 9 or 10. This indicates either an intuitive or an academic understanding of the interactions between wellbeing and more traditional educational outcomes.

**Other needs and comments**

In two final open-ended questions, respondents were invited to add other comments and to reflect on topics they may have liked to cover in greater depth at a pre-service level.

Comments among those who had received some pre-service training revolved around further practical concerns such as: working with parents on these issues; working with students with behavioural problems; exploring the ‘boundaries’ between teachers and students when discussing emotional issues; further training in social and emotional wellbeing after approximately 6 months in the role; and issues around teachers’ own resilience, wellbeing and collegiality.

Non-SCU graduates who had reported little or no explicit content on these issues in their pre-service training indicated that the following topics would have been helpful: identification of symptoms of mental health problems; how to follow up possible mental health problems; dealing with bullying; responding to students at risk; the need to build resilience and wellbeing in schools.

**Discussion**

While this is a preliminary investigation with a small number of early career teachers, it strongly suggests that graduates do recall explicit coverage of social and emotional wellbeing received in their programs, a little more than one year after graduation, and do value this content as being relevant to the roles of teachers. Several were also able to recall specific resources they had used while covering these topics. While recall may have been aided by being approached by the Coordinator who taught this specific element, most of the graduates had little or no contact with the Coordinator in the intervening months.

When asked whether covering such material made them ‘a better teacher’ several respondents were neutral, perhaps indicating uncertainty over interpretation of the phrase. The response to the proposition that it had made them more resilient themselves was mixed, but may reflect baseline levels of resilience and confidence. Anecdotally, several teacher educators have indicated a perception that covering this material does make their pre-service teachers more resilient, but repetition with a larger and more diverse sample would be required to substantiate this.

Most respondents who had covered material explicitly did feel that it had made them more confident in identifying young people in need of support, although there were slightly lower levels of confidence about their ability to respond appropriately in a practical situation. This issue of confidence was also tested with this particular cohort while still at SCU, using a baseline and follow-up survey in association with a four-week focus on mental health and wellbeing (Weatherby-Fell & Keen, 2004). There was a significant increase in self-reported confidence in responding to a troubled young person, immediately after completing this section of the unit. The findings with the early career teachers suggest that such increased confidence may be maintained to at least some degree into the period of practice after graduation. Again, a larger study could confirm this.

There was a strong level of agreement among early career teachers that resilience and student wellbeing — as reflected in school environments, policy and practice— is an important priority for schools and for
teachers. This is highly encouraging, given the developments in education department policy and the provision of whole-school mental health programs, and suggests the development of a very positive culture in schools. Early career teachers see the relevance of this approach, relating it to other issues such as learning outcomes and behaviour management. If, as this data suggests, new graduates can retain their enthusiasm and commitment in this regard, such movements are more likely to be sustained in school culture, with benefits for the wellbeing of all in the school community.

The collection of such data is helpful at a local level for creating strong relationships between schools and universities and also for providing useful feedback on graduates’ impressions of their pre-service training. This can be used to adjust pre-service programs to better equip graduates for the school setting. However, as previously mentioned, this particular inquiry is limited by a small sample size. A useful follow-up study would be to repeat similar questions with early career teachers from a number of schools, likely to have drawn their graduates from a range of universities, and to look for any statistically significant differences between those who could recall explicit content and those who could not. While short-term follow-up data analysed by the Response Ability team strongly suggests the advantages of explicit coverage, a larger study could be used to assess whether increases in knowledge and confidence penetrate into post-graduation practice.

References
Career Change Students In Teacher Education:
The Policy And Research Context

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This paper outlines research being carried out in the Faculty of Education, Monash University, Victoria, into the motivations and experiences of career change students in teacher education. The purpose of the research is to find out how career changers can be attracted to teaching, and how institutions can meet the needs of these students. There are currently several Federal and State government enquiries into teaching and teacher education, and one of the issues raised in these enquiries, and in other literature, is the desirability of attracting people from other professions into teaching. This paper will briefly outline the context of the study, including international and Australian perspectives on teacher shortages, recruitment and concerns about the quality of teaching. Background literature is also reviewed, including the reasons for career change, the motivation to choose teaching as a career, and the experiences of mature age, including career change, students at university.

Introduction
The teaching profession faces many challenges in this first decade of the 21st century. Adverse media coverage, teacher shortages, 'failing' students, and government scrutiny of teaching and teacher education, all combine to focus community attention on teachers and their capacity to meet the challenges confronting them on a daily basis in the nation's classrooms. Concerns about the quality of teaching are often raised in the literature, and there are numerous calls for a 'regeneration' of the teaching profession to help it to meet the challenges of the future. One way of achieving this regeneration that is frequently advocated is through the recruitment of people from other professions into teaching. Career change entrants have the potential to contribute skills and experiences to teaching that may not be brought into the profession by the more traditional school leaver cohort. This paper is based on research being undertaken in the Faculty of Education, Monash University, Victoria. It outlines the context of the study, and provides an overview of previous research that has been undertaken on the motivations and experiences of mature aged students in higher education, including those of career changers in teacher education. Much of the previous research informing the present study was drawn from ERIC and the AEI, and from publications, reports, and policies of the Federal Department of Education, Science and Training (DEST), the Federal Ministerial Committee on Employment, Education, Training and Youth Affairs (MCEETYA), the Victorian Department of Education and Training (DE&T), Organisation for Economic Cooperation and Development (OECD) and United Nations Education, Science and Cultural Organisation (UNESCO). Conference proceedings have also provided a rich source of information, and a useful overview of recent research in education.

Context of the study
The teaching profession is the subject of much debate and research internationally, as the effectiveness of teachers and the level of student achievement in schools are increasingly linked to the economic and social progress of nations. Personal attributes of teachers, qualifications, gender, ethnic diversity, age and commitment to the profession all contribute to some extent to the quality of teaching that students receive, as do the educational infrastructure and conditions in which teachers work. Governments appear to be increasingly concerned that the teaching workforce be well educated, appropriately qualified and that they remain in the education system for the longer term, so that students have the opportunity to achieve the highest possible levels of education, thus contributing to social and economic progress.

International perspectives
The Organisation for Economic Cooperation and Development (OECD) recently undertook an extensive survey of the teaching profession in 35 countries, including Australia, entitled Atracing Developing and
Retaining Effective Teachers. Each country provided a background report on the current situation regarding their teacher workforce, with a pre-publication summary of the project released in April this year (McKenzie, Santiago, Sliwka, & Hase, 2005). The survey revealed that policies regarding teacher supply, recruitment, professional development and so on, are high on the agendas of many countries, and that there were several issues of concern common to many of the participating countries. These concerns included teacher shortages in several curriculum areas, particularly in mathematics, science, information technology and foreign languages; the difficulty of attracting talented new entrants who have the skills to adapt to the increasingly complex world of teaching; the ageing of the workforce and imminent retirement of many teachers, and the need to adequately reward and support teachers in their work so that they are attracted to and retained in the profession for the longer term (McKenzie et al, 2005, p. 5).

The McKenzie report identified several policy implications from the findings, which were targeted at either the profession as a whole, or at particular types of teachers or schools. It found that the effectiveness of teaching is not just about the individual teacher, but is related to the environment in which teachers work. Governments in many countries were found to be facing the challenge of making teaching an attractive profession in which people want to work. It was claimed that policies were needed that address the image and status of teaching, remuneration, infrastructure, employment conditions, professional development and school leadership. It was also suggested that specific policies aimed at the more localised level, including targeted recruitment of teachers in hard to staff areas and subjects, mentoring and induction programs, improved teacher education programs and on-going monitoring of teacher effectiveness, were called for. Although not all findings applied to all participating countries, it is clear from the report that teacher policy is significant for many governments, as they strive to achieve economic and social goals in an increasingly competitive and interconnected global environment.

Australian perspectives

Teacher shortages

Many of the issues raised at the international level are also of concern in Australia. The supply and demand of teachers, recruitment and teaching quality are the subject of many government and media reports, and provide both challenges and opportunities for the teaching profession in the foreseeable future. There are several supply and demand issues facing the profession at the moment. Although accurate statistics are difficult to determine, there appears to be general agreement that by the end of this decade there will be moderate to severe shortages of teachers in particular curriculum and geographic areas. This is particularly evident in the secondary curriculum areas of mathematics, science, information technology and foreign languages, and in some rural and remote, and outer suburban areas (Preston, 2000). One report predicted that there would be a national shortfall of 30 000 teachers within the decade (MCEETYA, 2003). It has also been suggested that the imminent retirement of a significant number of teachers at the end of this decade will exacerbate the supply problem. (Ruse, Lam, & Buggins, 2003)

Teacher quality

Teacher numbers are not the only consideration when assessing the supply of teachers in schools. The quality of teaching is also of concern, and includes situations in which teachers are teaching in a position for which they are not appropriately qualified, or when short-term relief or contract teachers are employed to fill vacancies. These issues have been the subject of several Australian government inquiries into teaching and teacher education. The Commonwealth government's report Teachers for the 21st century: Making the difference (DEST, 2000) claimed that "education of the highest quality requires teachers of the highest quality ... It is education which empowers us to rise to the challenges of social, cultural, economic and technological change that we confront daily (p. 1)." A more recent report, Australia's Teachers: Austraila's Future (DEST, 2003), claimed that "how Australia will fare in the future depends very much on how well it secures quality teachers in the next decade (p. 67)." In Victoria, a recent Parliamentary report (ETC, 2005) noted that the work of teachers is becoming increasingly complex and requires "... an unprecedented range of skills and knowledge... [as the]... competencies required for teaching are becoming increasingly complex and therefore more difficult to achieve and maintain" (p.xvii). The Victorian Institute of Teaching (VIT) is currently conducting the Future Teachers Project that aims to revise guidelines and processes for accreditation of pre-service teacher education courses from 2006 onwards, to help ensure that teachers in the future continue to have the skills and competencies required for the demands of teaching in the years to come.
Recruitment of teachers

In order to meet the staffing needs of schools, governments and other policy makers acknowledge the need to attract and recruit a highly skilled and diverse teaching workforce that is well equipped and suited to meet the needs of students. Much research cites the importance of increasing the attractiveness of teaching as a career, to create a teaching workforce that more closely reflects the diversity of Australian society, and to attract more people from other professions into teaching (see MCEETYA, 2003; Richardson & Watt, 2002; Serow & Forrest, 1994). One recent Federal government report had as one of its terms of reference "... [to] identify strategies which will increase the numbers of talented people who are attracted to teaching as a career; especially in the fields of science, technology and mathematics education" (DEST, 2002 p. 1). In the introduction to a discussion paper on quality schooling, federal Minister for Education Brendan Nelson claimed that "...the experience that a former business person, scientist, landscaper or doctor could bring into the classroom can greatly enrich students' learning. More could be done to simplify the process for such people to become teachers" (DEST, 2004 p. 3). Similarly, in Victoria the parliamentary Education and Training Committee's terms of reference for it's inquiry into the suitability of pre-service teacher education stated the need to determine "the particular training needs and arrangements for mature-age entrants from other professions (ETC, 2005 p. 1)

Several recruitment strategies have been suggested to increase the supply of quality teachers in schools. These include financial incentives, alternative pathways into teaching, improved induction programs for beginning teachers, more student numbers in teacher education programs and better quality professional development (MCEETYA, 2003, p. 32). In Victoria steps have been taken to encourage a greater diversity of people coming into teaching. Media advertisements during the 2003 state election campaign promoted teaching as a career, and the website www.teaching.vic.gov.au contains information on programs such as the Student Teacher Practicum Scheme, the Teaching Scholarship Scheme, the Teacher Graduate Recruitment Program, Recruitment Online and the Career Change Program undertaken in partnership with Victoria University. The success or otherwise of these programs is difficult to determine, as there appears to be little empirical data available.

Understanding career changers in teacher education

When considering the motivations and experiences of career changers in teacher education, it is important to gain an understanding of the factors that contribute to their career change decisions, and their experiences in higher education. Knowledge about why they wanted a career change, why they chose teaching, and what their experiences as university students might be, places their individual stories in a broader context. There is quite extensive research documented in the literature that provides insights into the motivation and experiences of mature aged students, which includes career change students in teacher education.

Reasons for career change

The literature suggests that there are many reasons for people deciding to change careers. These reasons tend to fit into the two broad categories of stages of adult development, and social and economic opportunities. Early research into adult development (Erikson, 1963) identified several stages through which most people pass as they move from childhood to old age. Erikson suggested that during the seventh stage, that of generativity versus stagnation, people start to question earlier career decisions. He found that many people at this stage seek to change the direction of their working lives and to realise unfulfilled desires and goals, including the desire to nurture or mentor the next generation. In later research, Levinson (1979; 1996) expanded on Erikson's ideas of the link between career change and adult development, and he suggested that there were in fact more than seven stages in the adult life cycle, and that there were various times in life when people were likely to change their careers. More recent research into the phenomenon of career change tends to use the term career 'renewal,' and has explored in more depth the complexity of the psychological basis of career change. (see Bejian & Salomone, 1995; Engels, 1995; Lachman & James, 1997; Landau, 1985; Osipow, 1983; Schein, 1978).

While personal developmental factors may lead to the desire for career change, social and economic factors also have a significant influence on people's career decision-making processes. Increased participation of women in the workforce, opening up of education and training opportunities, changing migration patterns, developments in technology, social attitudes to career change, and the incidence of retrenchment and redundancy, all contribute to the likelihood that many adults will change their careers at least once during their working lives (ABS, 2005; Astin, 1984; Engels, 1995; Landau, 1985). The ageing of
the population also affects career patterns, as skill shortages become apparent in some industries and older workers are encouraged to remain in the workforce for longer periods of time before retirement (ABS, 2005). Global migration patterns also create a demand for upgrading of qualifications by people wanting to work in their chosen professions, or who need to retrain in new careers due to local employment conditions. Some factors impact on women in particular, and include continuing developments in reproductive technology, equal opportunity legislation and changes in patterns of marriage and divorce (Astin, 1984; Bierema, 1998; Harmon, 1984; Mott, 1998). It appears from the career change literature that there may be a combination of reasons to explain people's decision to change careers. To fully understand career change students' individual motivations and experiences, it is necessary to be aware of the potentially complex circumstances that may have lead them to their teacher education courses.

Motivation to choose teaching as a career

The motivation to choose teaching as a career has been researched quite extensively (Kyriacou & Coulthard, 2000; Richardson, Gough, & Vitlin, 2001; Serow & Forrest, 1994). There appear to be three broad categories of motivation – intrinsic, extrinsic and altruistic. Most of the research on motivation to teach tends to conclude that the main reasons for choosing to teach are intrinsic or altruistic, that is, to work with children and contribute to their development, and to contribute to the good of society as a whole. In most studies, financial rewards, social status and working conditions were found to be less important (Johnson, McKeown, & McEwen, 1999; Steyn, 1994), although some have suggested that extrinsic rewards are slightly more important for men (Benton & Vogtle, 1997; Montecinos & Nielsen, 1997; Smith, 1995). Some researchers have focussed specifically on the motivations of career changers moving into teaching. Richardson (2001) found that the main motivations to teach were the desire to make a difference to children's lives, the need for a family-friendly career and to a lesser extent, financial rewards and job security. This contrasts somewhat with the categories of career change students in the United Kingdom studied by Priyadharshini & Robinson-Pant (2003). These researchers identified five categories: the parent, wanting a family-friendly career; the successful careerist, who entered a new career after successfully working in a different career for a substantial period of time; the freelancer, who sought the security that teaching offered after working on a series of short-term contracts; the late starter, who entered the workforce straight after leaving school and now wants to enter higher education; the serial careerist, who moved through a series of short, successful careers; and the young career changer, who worked briefly in a variety of jobs after finishing secondary school, and who now feel ready to take on a more stable career.

Again, as is evident in the literature on career change in general, the reasons for choosing teaching as a career may be quite complex, and the result of a combination of factors and circumstances.

Mature aged students in higher education

When career changers enrol in a teacher education course, they also become, by definition, mature aged students. The age limit for this category of student varies between universities. For example, in Victoria, a mature aged student at Monash University is defined as being 21 years or over, while at La Trobe University the age is 23 years and over. It is important, nevertheless, to examine the issues facing mature age students in general, as these will help in the understanding of the experiences of career change students in teacher education. Mature age students form a significant minority on the campuses of many Australian higher education institutions. For example, in Victoria in 1998, students aged 21 years and over made up 23% of total enrolments. By 2004 this proportion had risen to 25.3% of enrolments (VTAC, 2005).

Mature age students face many challenges at university. Studies have identified several issues that affect mature age students in particular, including the level of family support, self-efficacy, managing academic demands after a period of time away from formal study, relationships with staff and younger students, and the challenges associated with balancing family, work, and study commitments (Cantwell & Mulhearn, 1997; Leder & Forgasz, 2004; Steyn, 1994). Kantanis (2002) found that the most pressing issues for mature age students were inappropriateness of orientation programs, demands for computer literacy, the logistics of part-time attendance, interaction with the university community, and the availability of support networks both at and beyond the university. While it is likely that they will experience any or all of the challenges outlined above, career change students in teacher education also face the challenge of dealing with changes in their professional or vocational identity, as they make the transition from their previous career to that of being a teacher.
Career changers in teacher education

Research has suggested that career change students often face a difficult transition to teaching, and that their learning in teacher education may be directly influenced by experiences in their previous career. In a Victorian study, Mealyea (1989) explored the transition from tradesperson to teacher and found that the students in his courses were very resistant, even hostile, to what they saw as a challenge to their identity as tradespeople. This finding is supported by James (1997) who found that people with a strong occupational identity tended to resist change and often challenged concepts about teaching and learning that were presented in their courses. Such negativity adversely affected group interaction, relationships with lecturers and supervising teachers, and lead to poor opinions of the teacher education process. American researchers have also found that students' previous work experiences had a strong impact on their learning in teacher education (Fetters, 1998; Koeppen & Griffith, 2003; Novak & Knowles, 1992). Some career changers were resistant to new ideas, and felt that they did not need to learn a great deal more in order to become a teacher. They declared that they already had a strong content knowledge in their area of expertise, and were therefore frustrated with the requirements of their courses. The researchers suggested that career change students needed to be helped to identify life and work experiences that were relevant to teaching, and to make links between these experiences and their own classroom environment (Novak & Knowles, 1992). In Britain, Priyadharshini and Robinson-Pant (2003) found that many career changers felt that their previous experiences were not adequately acknowledged by training institutions and schools. These people wanted to be recognised as mature students with needs and aspirations that were different from those of other students. Despite this, however, Priyadharshini and Robinson-Pant found that career changers generally valued the 'self-actualisation' possibilities in teaching, and that they were able to draw on the skills and knowledge acquired from their previous career.

The literature tends to suggest that the process of changing careers into teaching, and of being a student in teacher education can be both challenging and rewarding. The decision-making processes and student teaching experiences can be complex and different for each student, and, while similarities can be found between these students regarding their motivations and experiences, it is also important to acknowledge that individual career changers are likely to experience this phenomenon in a unique and personal way.

The need for further research

As the research in Australia and overseas suggests, there is a trend towards broadening the profile of the teaching profession to include career change professionals. If more people from other professions are to be attracted to teaching, then it is necessary to learn from the experiences of current career change students about what attracted them into teaching, what factors influenced their decisions, what challenges and rewards they have found in teacher education, and how institutions can support these students, and meet their needs. Several reports have suggested general approaches to recruitment, but very few have detailed specific ways in which career changers can be attracted and recruited to teaching, based on knowledge gained from the experience of others. Priyadharshini and Robinson-Pant's (2003) research project is one exception. They studied in some depth the motivations of people changing careers to teaching, and concluded that there was a need to look more critically at why people are coming into teaching, where they are coming from and whether or how institutions can begin to adapt to meet their needs and aspirations. From our interviews with trainees, several issues emerged with direct implications for training and recruitment policy (Priyadharshini & Robinson-Pant, 2003, p. 110).

The British context in which Priyadharshini and Robinson-Pant's research was undertaken was similar to that of Australia. There was a teacher shortage, and frequent media and government reports raising concerns about the quality of teaching and education in Britain. The main focus of the research was to identify career changers' motivations to choose teaching as a career, although the teacher education experiences of the students were also included as the research progressed. The authors claimed that there was a need for further research into career changers in teacher education programs not only to attract them into teaching, but also to retain them in teaching. It was found that several irritants were present in the teacher education experience of many career changers, and that these provided early warning signals of those students who may not continue in the profession. Some of these signals included: the difficulty of undertaking teaching practice, particularly for students who were parents, timetabling of on-campus lectures and workshops that made childcare arrangements difficult; the need to juggle study and family commitments; lack of prior information about the realities of the course; the need to upgrade computer...
skills, and the lack of subjects that were regarded as suitable for older students who have previous work experience, for example, the politics of education, professional issues and career development. The authors also argued that teacher education institutions needed to adjust to accommodate career changers and that there could be more recognition of the responsibilities and experiences that career changers bring into teaching. Many of the participants in their research "...stressed the need for more flexible training structures that took account of their constraints as parents, whilst also giving greater recognition and value to the existing skills and experiences which [they] brought to the courses from their previous careers" (Priyadharshini & Robinson-Pant, 2003, p. 110).

Similar concerns to those identified by Priyadharshini and Robinson-Pant have been raised in Australia. This is already evident in the Victorian parliament's Education and Training Committee report into pre-service teacher education (ETC, 2005), which states that there appears to be increasing interest among career changers to enter secondary teaching in particular, but despite this, "...most Victorian universities have been slow to recognise and respond to the needs and talents of this cohort through modified teacher education programs and flexible delivery options" (p. 71). The report recommended changes in the entry requirements and delivery of teacher education courses to accommodate the needs of career change students. To further support the recruitment and retention of career change professionals, the committee suggested that there was a need for "...greater research into the specific needs of this potential pre-service teacher cohort" (p. 75). There is, however, little mention in the report of the actual day-to-day experiences of career change students, how they cope with the challenges of their situation, and what they see as the rewards of a career change to teaching. Alternative pathways and flexible delivery of courses are important considerations in devising strategies to recruit more career changers into teaching, but it is also important to consider the whole teacher education experience when promoting teaching as a serious career option for other professionals.

In order for Australian policy makers to make informed decisions about attracting, recruiting and retaining career change professionals in teacher education, several questions need to be answered. These questions are the focus of the Monash University study mentioned earlier in the paper, and include:

- What is the demographic and work profile of career change students currently enrolled in teacher education in Australia?
- What were their reasons for wanting to change careers?
- What factors influenced their decision to enrol in teacher education?
- What challenges do they face in teacher education?
- What are the positive aspects of their teacher education experience?
- What are the needs of career change students in teacher education, and how can these needs be met?

If policy makers were to understand the complexity and richness of career changers' experiences, both as individuals and as a group, then they would be better equipped to develop policies to attract and retain these people in teaching. It would enable governments and institutions to devise appropriate recruitment strategies that highlight factors that are important to people when making the decision to change careers. Understanding current career change students' experiences may also assist teacher educators to identify the needs of these students and to deliver programs that meet these needs in the future. Highlighting the positive experiences of current career change students would also be of great value in promoting teaching as a good career option for others considering such a move in the future.

**Conclusion**

Research into the motivations and experiences of career change students in teacher education is an important component in the revitalisation of the teaching profession. People from a diverse range of career backgrounds have the potential to contribute greatly to the quality and dynamism of educational programs in our schools. A broader mix of people entering teaching would also help to create a profession that more accurately reflects the diversity of the Australian population, and would enable teachers to draw on a range of experiences that would enrich the learning of all students. Much is already known about career changers in various contexts, but what appears to be missing is up-to-date Australian research into career changers in the contemporary educational context.
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Community Partnerships In Teacher Education Programs: Volunteering And Student Teacher Identities

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Recent events have raised awareness of the contribution made to communities by volunteers (The United Nations International Year of the Volunteer in 2001 as one example). A component of this increase in profile and rate of volunteering has been the uptake of volunteering and service learning within teacher education programs. In a context of increasing engagement with the practice of volunteering, particularly as part of education and training commitments, it would seem timely to move beyond investigations of demographic and rate statistics and toward an understanding of how volunteering and service partnerships impact on the development of the professional and personal identities of those involved. In this paper we will present findings of an investigation into a community volunteer program in the tutoring of reading, which is now being accessed by teacher education students as part of their practicum placement program. Calling on a broad range of data, including interviews with the teacher education students involved in the program, we unpack the notion of 'being a volunteer'—pushing thinking beyond a quantitative analysis and toward an understanding of the place of such programs in the shifting identities of student teachers in our times.

Introduction
Most undergraduate primary teacher education (TE) programs in Australia are currently required to offer a minimum of three years training to receive accreditation as a provider of teacher education. The majority of programs are now of four years duration. Within these Australian-based programs, the practicum has always been an integral part of teacher education and training. It is this aspect of their professional training that most new teachers will report as having been the most important aspect of their program.

The timing for the introduction of practicum experience varies between universities. Some universities offer an initial practicum in the first year of the teacher education program, while other universities wait until the second year or even third year of the TE program so that the TE student has acquired some theoretical knowledge of teaching and education and can apply this to their engagement within the practicum site. Silverman (1998) among others argues for early practicum experiences. His research into the effect on physical education TE students of an early practicum found that students were in fact able to relate their theory to practice. Further, although students did not reflect on the political, social, moral, and ethical issues of education, an early practicum had a positive role in professional socialization. DeShon Hamlin (2004) reports that the reflective practices of TE students in early practicums can be enhanced if they engage in reflective practices that encompass issues of social justice and ethics. Similarly Vickers, Harris & McCarthy (2004) claim that early practicum experiences can develop an early theory practice nexus, make TE curriculum content more meaningful, help TE students develop a clearer understanding of the diversity of the classroom and help students make more effective career choices (Vickers, Harris & McCarthy, 2004).

More recently, voluntary service and service learning programs have begun to be considered as important components within TE programs. Such programs can add greater flexibility to the TE program by broadening the experiences offered as part of teacher education. The programs can also be a means of linking theory to practice within TE programs and might thus enhance the experiences offered to student teachers as part of their TE programs (LaMaster, 2001).

In this paper we detail a program of 'volunteering' offered to students within a TE program at one Australian university. Students were offered the opportunity to volunteer at a school as part of a community volunteer reading program. After their experience of volunteering, students were asked to comment on aspects of their involvement. We use these responses to frame this volunteering practice within a framework of service learning. By calling on the open responses of students, we have aimed to push thinking beyond a quantitative analysis and toward an understanding of the place of such programs.
What is service learning and how does it differ from volunteering and practicum experience?

Service learning and volunteering are different. Volunteering is an activity that aims to provide benefit to the community, that is conducted as a result of the participant's free will and that does not attract payment for services provided. Service learning is a program where a volunteering experience is enhanced by an element of critical reflection. According to Eley (2002) service learning consists of the pro-social behaviour she refers to as volunteerism. She lists the key characteristics of volunteerism as involving a practice which is long term, planned, non-obligatory and which has an organisational context. Eley argues that the most important goal of service learning is the development of a sense of community and social responsibility in the person. She claims that for service learning to be most beneficial to students within TE programs it requires reflection on the experience to enable these students to assess and make meaning out of their experience. Reflection also assists students to develop a deeper understanding of social issues.

The cycle of a service learning experience requires participants to be involved in partnerships that promote the assessment of community needs and service design based on this assessment, provision of the service and critical reflection of the provision to inform future assessment and provision (Swick & Rowls, 2000). In the case of TE programs, critical reflection allows students to link their experiences of practice with the theoretical components of their TE program. It also allows a space for students to analyse the social and cultural conditions that gave rise to the community and service needs that their volunteering is positioned within. These components should maximise the potential of relationships of transformational practice (Swick & Rowls, 2000).

Research in the area of service learning within TE programs has supported this framing of service learning as a cycle of experience involving more than just volunteering one's services. There has been a particular emphasis on the importance of a critically reflexive element within effective service learning experiences. For example, Vickers, Harris and McCarthy (2004) identify reflection as the critical part of service learning that differentiates it from volunteering. They consider reflection as crucial to linking the student's volunteering experience with theoretical and curriculum content, and conceptualise the reflection process as part of a continuous interdependent loop consisting of reflection, experience and knowledge. For there to be learning and knowledge development as a result of experience, a reflective analysis of the experience is called for and perpetuates this service learning process loop. In addition to the need for critical reflection, Vickers et al suggest the interdependence between the partners within the service learning activity as another layer to an effective service learning process. They argue that when a partnership exists between a university, a community agency and university students, a situation of interdependence and reciprocity is required between all partners. This situation distinguishes service learning from volunteering because when such a relationship exists, all partners are considered equal and they all engage in learning and reflection about the experience. Malone, Jones and Stallings (2002) also distinguish service learning from volunteering. They define the former as an approach that connects course content and learning by actively engaging students in community service. Volunteering is not necessarily integrated with subject matter.

Swick and Rowls (2000) draw a distinction between service learning and the practicum components of teacher education programs. Their investigation of the perceptions of TE students of both service learning and the practicum indicated that TE students believed that the needs they were required to plan for within the practicum context were often contrived or at best identified by a supervisor or mentor. The students in the Swick and Rowls study reported that service learning provided them with a sense of contributing to the community because they were actively involved in the needs assessment and service design, delivery and reflection. Generally students reported that they found that service learning was a context where their ideas were validated, respected and used. As well, TE students reported appreciating being involved with individual children in ways that helped them develop meaningful and helpful relationships. They believed the practicum did not allow for this to occur because it was more often group
oriented. Swick and Rowls concluded that service learning programs, such as mentoring a child, can provide more opportunities for TE students to develop social responsibility and community concern. As well, they suggest the possibility that service learning assists TE students to develop confidence in their interaction skills and to be more open to learning.

Eley (2002) uses Kolb's model of the continuous learning cycle as a framework to unpack the effectiveness of a service learning program. Kolb's learning cycle (cited in Eley, 2002) consists of four interrelated practices. The learning cycle involves experience, reflective observation, abstract conceptualisation where there is a describing of the experience and a linking of the experience to existing knowledge, and finally a process of active experimentation where any new knowledge is tested. The cycle is continuous, with each component reciprocally linked to all others. However, reflection is the key component of any such cycle because it allows students to examine their experiences within the context of their acquired knowledge and to build on these experiences so that an understanding of their links to education and 'becoming a teacher' develops.

**The value of service learning**

Serow (1991) claims that service learning helps develop competence, participation, relationships and understanding. This framing of the value of service learning has continued as foundation of much of the research in this area (see for example Swick & Rowls, 2000). Competence refers to the skills that a person develops while engaging in service learning. This space to develop skills can provide TE students with an opportunity to consider if they have made the correct career choice. Involvement in service learning can also help to develop practices related to participation. Participation relates to the important attributes of reliability, following through on agreements and carrying out quality work as examples. The possibilities of developing different relationships with mentors, supervisors and the community, in a diversity of situations requires that TE students develop and use an understanding of diversity. This enables students to develop a wider view of the world. The development of understanding occurs in two ways. Students gain insight into the diversity of needs within the community and the value of working within this diversity, and they acquire an understanding of particular teaching strategies (Swick & Rowls, 2000). The understanding of diversity and community gained through participation in service learning becomes increasingly crucial with the widening social and cultural gap between teachers and students (Cockrell et al, 1999). Nieto (2000) believes that this awareness and responsibility is a significant aspect of teachers work if they are to eventually teach for equity and diversity. Nieto argues that teachers need to understand their students' realities and the social issues that impact on their lives.

Service learning has been found to be beneficial to students' personal development, their confidence and pro social behaviour. Eley (2002) has suggested that it helps develop knowledge about the community and further develops skills that enable students to be aware of and able to deal with social issues. As well, it helps develop leadership qualities in students and helps promote trust and cohesion in communities (Eley, 2002). Eley's (2002) investigation of 369 young people's perceptions of volunteering within service learning indicated that prior to volunteering within these programs, the young people perceived it as something they could use to their own advantage, that is to help them with their future career by enabling them to learn new skills. They also reported that it was a way of helping others. After completing the volunteering experience, this same cohort of young people reflected that the experience had helped them develop leadership skills, improved communication skills and increased their understanding of social issues and other people's points of view and perspectives. It would seem that the experience changed the young people's understandings of the benefits of being involved in service learning programs.

A large scale study by Eyler and Giles (1999) of over fifteen hundred students conducted before and after a semester of service learning indicated that student learning generally was enhanced by involvement in service learning projects. The data suggested that participation in service learning helped to develop many of the general characteristics that higher education strives for as well as particular student learning characteristics including: critical thinking, leadership, citizenship, social responsibility, appreciation of diversity and difference and the ability to apply theory to practice.

Similarly Fredericksen (2000) notes that the value of service learning to students is that it is an important means of developing civic commitment, social responsibility and leadership skills. In addition it is a useful bridge between the theoretical context of university and the challenges faced by the community. Fredericksen concluded from her study of the effect of service learning on 699 first year students that a positive effect of service learning was to engage students in community issues and enhance their academic performance in course work.
Swick and Rowls (2000) surveyed 240 undergraduates to gain information about their perspectives on their involvement in service learning as a component of their teacher education course. Results indicated that the majority of students believed they had gained increased competence in specific teaching skills such as classroom management, lesson planning and working with the special needs of students; their participation skills were strengthened; they developed a strong sense of caring as well as an increased sensitivity to students with special needs; and they had developed a better understanding of the community and its needs and strengths.

Malone, Jones, and Stallings (2002) also examined the effects of a service learning tutoring course on undergraduate TE students. They concluded that participants appeared to develop new attitudes in areas such as social awareness and responsibility, as well as developing in areas of personal development and teaching and learning skills. Importantly their study found that this type of service learning provided TE students with insights into the needs of children from diverse backgrounds and helped the students understand that their world frequently differed from the world that many of the students that they would teach came from. In short they developed skills that helped them become more effective teachers.

Research in the area of service learning suggests that there are benefits for students and the profession of teaching in providing the opportunity for TE students to be involved in service learning as part of their TE programs. These benefits involve improvements in the skills of teaching, communication and leadership and the opportunity to develop understandings of the theory practice nexus for TE students. Benefits in relation to the profession of teaching include the development of TE graduates with an increased sense of community, civic awareness and understanding of diversity and difference to take up the profession. However there is one further element of value related to service learning within TE programs, this being the fact that service learning programs have the potential to contribute toward partnerships between universities and their communities. Hatcher (2002) claims that the emphasis on community involvement and the emergence of service learning provides the opportunity for university community partnerships to develop. Such partnerships can be based on interpersonal relationships between academics, university students, community organisations and those that are employed and volunteer within them. Hatcher describes service learning as an activity that embraces the central mission of a university, involves university staff and students in scholarly activities that deal with community issues, and requires communication among all partners to ensure success. Here, Hatcher considers success to be reciprocal in nature. That is the outcome of the activities contributes meaningfully to the community, to the university and to all those involved in the service learning programs.

Service learning as part of the 'Community Links Volunteer Program'

The data presented in this paper is part of the data to be collected for a much larger study of the place of service learning and volunteering in the shifting identities of TE students throughout their TE programs. This paper marks the preliminary analysis of data collected as part of a pilot study and has aimed to allow us to consider the value of using a framework of service learning as a lens to investigate the partnership between our university and the Community Links Volunteer Program. In the sections that follow we will detail the context of the program and discuss the positioning of the volunteering opportunity as part of the broader TE program.

The Community Links Volunteer Program

The Community Links Volunteer Program is based at Moonee Valley State School within the Gold Coast region of Queensland. The school is a medium sized primary school consisting of 16 primary classes, two preschool units, a special education unit, a special education developmental unit and an inclusion class linked to a neighbouring special school. Students come from a number of local suburbs and while there is a wide socio-cultural diversity, the backgrounds of many of the students are impacted by the effects of poverty. The student population is transient with up to 40% of those students attending the school at any time having begun their schooling elsewhere. Many of these students have migrated from other Australian states and from New Zealand. Some interesting statistics which highlight diversity within the school community include:

- Aboriginal and Torres Strait Islander students make up 6% of the school population,
- 12% of students speak a language other than English at home,
- 11% of the school population is appraised as dealing with learning difficulties,
There is a Special Education Developmental Unit (50 students) as well as a Special Education Unit operate within the school. Many of these students participate in mainstream classrooms for at least part of their educational day.

In 2003, a new initiative was introduced to Moonee Valley State School by the Literacy Co-ordinator, who saw the value and potential for involvement of volunteers from outside the immediate school community in supporting individual students with literacy development. The program came to be known as the Community Links Volunteer Program. To ensure the success and sustainability of the program and to cater for the varied backgrounds, skills and experiences of potential volunteers, a number of components were identified as being essential foundations to the program:

- Clear Rationale
- Established Aims
- Documented School Responsibilities
- Documented Volunteer Responsibilities (including a clear role description)
- Appointing a program Coordinator
- Developing a training program
- Locating physical space.

The rational informing the program was based in the knowledge that children's success at school is directly related to the quality of the relationships which exist within the school community. The relationships in a school community can be enhanced through the significant contributions made by volunteer workers. Volunteers within the Moonee Valley school community are seen as a valuable resource, providing meaningful learning experiences, friendship, support, advice and significant skills and knowledge. A volunteer program that is co-ordinated and founded on thorough training, along with recognition of existing skills was considered as an effective way to assist the school in meeting students' individual needs and to assist all school community members in their work. Interactions between volunteers and the school community enhance the role that Moonee Valley State School plays in the wider community.

The program had clearly established aims which impacted on all individuals involved. These were:

1. to feel rewarded and valued for the contributions they make to the school community To establish and maintain a Volunteer Program for the long-term benefit of the school community
2. To provide individual support for students to improve their literacy skills and self esteem using trained volunteers
3. To train volunteers who will:
   - Encourage and motivate students
   - Be non-demanding of student performance
   - Be prepared to actively listen
   - Visit assigned students regularly
   - Become skilled in implementing structured literacy/numeracy tasks
4. To provide opportunities for volunteers.

Creating a program that was sustainable required a coordinator to oversee the training, organisation and to manage the ongoing assessment of needs, provision and reflection that frames the learning cycle of the program. The training cycle involves an initial training session of 2.5 hrs which includes the following components:

- Moonee Valley School Community Policies & Procedures
- 5 Step Reading Tutor training
- Confidentiality
- Getting Started.

The aim of the initial training is to allow volunteers - some of whom have not been in a school community for many years - the chance to experience the school environment, along with developing initial skills to enable them to provide structured support for individual students when reading. Training
allows volunteers to develop skills and confidence, along with a common language – which in turn assists with building relationships with all school community stakeholders.

Once the volunteers are involved in the school as Reading Tutors they are supported in the learning cycle through the opportunity to consult and reflect with each other in their designated ‘volunteer room’, as well as with the Co-ordinator of the program. There are also regular ongoing training sessions that are designed in consultation with the volunteer group and cover areas such as: reading activities; writing development; developing numeracy skills; oral language; and communication skills.

Creating a partnership: Opportunities for TE students

The Community Links Volunteer Program was originally designed to encourage community members into the school, to forge new relationships, and to provide opportunities that would be reciprocal for all those involved. Moonee Valley State School had developed a strong relationship with a neighbouring university over many years, and so approximately 1 year after the introduction of the Community Links Volunteer Program, a partnership was established between the school and this university to allow TE students the opportunity to work as volunteers. This is one of several service learning programs offered to TE students by the University. The mutual benefits of the partnership seemed obvious to those involved in the planning.

<table>
<thead>
<tr>
<th>Benefits to university students</th>
<th>Benefits to the school community</th>
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<tr>
<td>• Regular participation in a school community while completing study</td>
<td>• Volunteers with a vested interest in working with students and teachers long term</td>
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<tr>
<td>• Development and practice of skills/strategies for working with students</td>
<td>• Development of stronger links between pre-service teacher education and school operations</td>
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<td>• Opportunity for focussed observation of individual students</td>
<td>• Creation of a common language on child learning and development</td>
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<td>• Opportunity to develop ‘Teacher Presence’</td>
<td>• Provision of individualised tutoring based not only on school training, but also current university study</td>
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<td>• Opportunity to put theory into practice</td>
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<td>• Opportunity to network within schools</td>
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These responses demonstrate an understanding that the partnerships being formed were reciprocal and that all those involved should be perceived as equal partners. What was missing in these considerations was the place of the University and its staff in the partnership. The University was of course a strong partner in this program, however the benefits to the University and the responsibilities of the University were, in the initial phases at least, framed as relating to the provision of TE students. For this program to be framed as service learning a widening of this emphasis was required.

In 2004, a group of voluntary TE students in their first year of a Bachelor of Education program was trained and subsequently timetabled for at least two hours / week to volunteer as Reading Tutors to support students from across a range of classrooms. In total, these students provided approximately 140 hours of volunteer work and supported 26 students in individual reading sessions. At the completion of the program, the teachers and volunteers were asked to evaluate the program. Support from the classroom teachers at the school was high. Their feedback highlighted the value of one to one time for students since additional adult support from parents/caregivers is perceived to be reducing each year. Teachers also valued the opportunity for children to read to an adult who had a vested interest in developing skills for working with students, and that had some understanding of child development and learning. Teachers suggested that the Reading Tutor time provided students, particularly those who might not have the opportunity to carry out regular reading at home, with a boost in confidence which impacted on their classroom literacy practices. The teachers involved also expressed interest in involving these TE volunteers in small group activities in classrooms as a possibility for future cohorts. The partnership is continuing in 2005. However for our purposes in this preliminary analysis we have chosen to focus on the participants of this first cohort. What follows is an analysis of the TE students post volunteering experience responses to focus prompts. We have used a framework of service learning to frame this analysis and to inform the continuous development of the program.

The pilot study

All participants in the 2004 training group were contacted via email by one of the researchers. Participants were asked if they would consider discussing their participation in the Community Links Volunteering Program. This discussion would be conducted via email in the first instance, with the researcher providing
prompts to direct the responses provided. At the time of writing this paper more than 50% of this cohort had replied and it is from this data pool that the data presented below has been taken.

Building on the research in the area of service learning, we have analysed the data according to popular definitions of service learning and subsequently use the values framework presented by researchers such as Serow (1991) and Swick & Rowls (2000) to suggest ways forward for this volunteering program. Our aim is to strengthen the partnerships around such programs and promote critical learning across a broad range of elements in the TE students' development through participation in service learning.

**What is service learning? A reflection on the program to date**

Service learning is taken to involve a learning cycle that allows participants to assess community needs and design service based on this assessment, to provide the service and finally to critically reflect on the service provision as a way to inform future experiences (Swick & Rowls, 2000). The Community Links Volunteer Program engaged the TE student volunteers in a learning cycle which fore grounded reflection and participation of the volunteers at each phase of the service learning experience. In the case of service learning as a component of a professional program such as TE, critical reflection beyond that required for service provision might allow students to link their experiences of practice with the theoretical components of their academic program more readily.

The initial trial of this volunteering program did not have a component of critical reflection as part of the University component of the students' TE program beyond what might occur as part of other course work generally. Despite this, when the TE students who participated were asked to reflect on the benefits of being involved their responses demonstrated that they had engaged in such critical reflection without direct intervention from the University based staff. At least some students commented on how their experience related to their development as teachers through their TE program.

**TE Student:** The knowledge that I gained while participating in the program was particularly useful in relation to my English Education subject that I was taking at the time. Much of the information that I was required to learn for university was incorporated in the reading program for the students at the school. I was able to see the theory that I was learning as university actually being put to use in an everyday classroom situation.

This response demonstrates a process of critical reflection that allowed this student to link the service learning experience with the learning that they were engaged in as part of their university TE program. However, it is evident even from this response that the links were not necessarily made to other areas of university study. What investigating this initial cohort has explicated for us as researchers is that some component of critical reflection as part of the university based TE program for the students involved might facilitate the links that students are able to make between their service learning experience and their university based study. This has been built into the experience of the students involved in subsequent training groups so that we might consider the effectiveness of this critically reflective component on the TE students' experience of service learning.

**The value of service learning: What did the participants think?**

Like other researchers (see for example Serow, 1991 or Swick & Rowls, 2000) we found that when students were asked to comment on the value of a service learning experience, their responses provided details of learning that enhanced development of competence, participation, relationships and understanding. In the case of this pilot study these responses were elicited without a critical framing being provided to the students prior to their responding, and yet responses of the participants covered issues related to all four elements of service learning.

Students reported that one of the valued components of the service learning experience for them was the development of competence in the skills of teaching. The skills listed varied and ranged from specific techniques such as ways of teaching reading strategies, to behaviour management skills, planning and skills involved in recording and assessing progress. One example of how students expressed this development of competence and the importance that they placed on this development is evident in the response below.

**TE Student:** There were a lot of things I learnt... I learnt about strategies to use when students encounter difficulty with their reading, and then I learnt how to teach the students about these strategies and how they can use them... I also practised very simple behaviour management techniques.

Several students commented on the fact that they had become involved in the program to provide an opportunity to consider if they have made the correct career choice as they developed their competence in the teaching profession.
Involvement in service learning has been reported to help to develop practices related to participation, and the respondents in this pilot also recognised this as an element of their engagement with the program. Participation relates to the important attributes of reliability, following through on agreements and carrying out quality work as examples. The respondents in this study commented on how their involvement had helped them to develop organisational skills because of the responsibilities that they carried as volunteers.

TE Student: The responsibility of having to arrange reading materials, as well as the materials to complete activities about reading, allowed me to further develop my organisational skills.

The relationships built with children, staff at the school, staff involved in the program, and other volunteers, both TE students and community volunteers was discussed by all the respondents. The TE volunteers commented on the benefits that these relationships provided to them in terms of understanding, access to resources, experience and knowledge for example and as demonstrated in the response below.

TE Student: One of the highlights of the program is developing relationships with teachers and students. You make connections with people who can offer you advice and knowledge that allows you to develop yourself professionally and personally.

However the TE students also seemed to be aware that the relationships that they were building provided reciprocal benefits to other individuals involved in the Community Links Program. They were able to discuss that their participation provided benefits to the children they worked with for example.

TE Student: ... very useful as I get the experience I need, the child gets some one-on-one time to help with their reading

and

TE Student: I think it is a very useful program not only for the tutors but the students seemed to really enjoy it as well

This opportunity to develop different relationships with mentors, supervisors, students and the community in a diversity of situations required that TE students develop and use an understanding of diversity. The responses provided by this group of TE students suggest that they had come to some new understandings of the diversity of students that they would eventually teach, but also to the importance of understanding the students that they would teach as being diverse. This is exemplified in the following comment by one TE student who reported that gaining confidence in a non-threatening environment had been the impetus of their initial involvement in the program.

TE Student: It enabled me to appreciate the special qualities and differences between the students.

The development of understanding also figured in the TE students' responses as prominent in the value of being involved in the Community Links Volunteering Program. Students reported that they developed understandings of content, schools, education and people. Several comments also suggested that the TE students had had the opportunity to develop an understanding of diversity and community through participation in this program. Such an understanding has become increasingly important with the widening social and cultural gap between teachers and students (Cockrell et al, 1999) and the increasing diversity within student populations.

**Moving forward toward service learning**

The pilot study reported within this paper was conducted to inform future developments of service learning as a component of the TE programs offered by one university. We aimed to provide a review of the literature of the shape and value of service learning, and to use this service learning lens to interrogate some existing programs which offered TE students the opportunity to volunteer in the community as part of their TE program. The data has been drawn from a small sample of students who had been involved in volunteering as Reading Tutors as part of an established community links program. The results reported here are preliminary and are presented as a way to shape our understandings of such programs with TE programs, rather than to generalise as findings to other research.

When a service learning framework was used to understand the shape and structure of an existing program providing opportunities for TE students within the university's programs to volunteer we found that the real strengths of the program related to the model of service learning and volunteering of the
Community Links Volunteer Program itself. The learning cycle was facilitated within the school context as part of the training, co-ordination and positioning of the program within the school. What was missing in the program at the partnership level was an element of critical reflection facilitated as part of the broader TE program. The TE students who responded via email to the opportunity to discuss their experiences as volunteers within the program were able to discuss how their participation in the program had impacted upon their development as teachers and upon their university-based experiences. However the extension of this critical reflection into the responsibilities taken on by the university staff might well clarify the theory practice nexus for at least some of the TE students involved. As the program continues with new cohorts of participants this element of service learning within TE programs will be further investigated.

Despite the fact that there was no critical reflection formally facilitated within the university based content of the TE program as part of this opportunity to volunteer, the data presented within this paper would suggest that the TE students saw an opportunity to volunteer within a service learning program as beneficial to all the individuals involved in the program. This highlights the developing sense of community and awareness of diversity that has been detailed by others to result from service learning programs. Additionally students involved in this program were able to frame value across a broad scope of elements. When asked to discuss the value of the program, the TE students framed their responses in relation to developing competence, participation, relationships and understandings. This pilot study has suggested that this framework of value, taken first from Serow (1991), might be an effective framing for critical reflection of the theory practice nexus of service learning within teacher education. The value framework will inform future reflective practice that is to be promoted with the program in subsequent phases.

References
Meta-evaluation is not only the evaluation of specific studies but also the evaluation of the evaluation itself, its functions and applications. The aim of meta-evaluation is to reach a judgement regarding to the quality of evaluation via a series of standards. The main purpose of this study is to evaluate the program evaluation studies on primary teacher training programs between 1997 and 2004 in Turkey. For this reason, eight program evaluation studies regarding primary teacher training have been evaluated based on the following meta-evaluation standards such as "utility", "feasibility", "propriety" and "accuracy" determined by the Joint Committee in 1994 in the USA. For this purpose, the five researchers mentioned in the study evaluated these eight program evaluation studies independently by taking the determined standard list into account. The results obtained have been analyzed as "sufficient", "partly sufficient" and "insufficient". As a result of the study, the program evaluation studies mentioned have been found to be "sufficient" in terms of the "feasibility" standards and "partly sufficient" in terms of the other standards.

Introduction

All teacher education institutions in Turkey were formed under the body of universities based on the Higher Education law numbered 2547 in 1982. Therefore, all teacher education institutions previously under the authority of the Ministry of National Education were reorganized under the body of universities. According to this law, all teachers from pre-school to higher education have been trained in universities in Turkey (Ozer, 1990). Since 1989, all teachers have been required to have at least bachelor's degree, no matter which level they teach in.

Education faculties providing pre-service education since 1982 were reorganized in 1997. This reorganization lead to some changes in the teacher training programs of education faculties. Reorganized programs which were prepared in light of the changes were put into practice in 1998-1999 academic year. The department organization in education faculties based on the reorganization were paralleled with the school structure of national educational system and the duty of teacher training for primary education was given to primary education departments of education faculties. Based on this reorganization, branch teachers as well as classroom teachers have been started to train for primary education.

An education system should always evaluate its programs to check if the programs meet the expectations of the society and to be sure its success and the results of these evaluations should be reflected to program development studies (Gozutok, 2003). However, primary teacher training programs have not been evaluated sufficiently since they were reorganized in 1997.

Program evaluation is the last cycle of program development studies and the process in determining the realization degree of educational purposes. By evaluation, it is possible to see if there are any insufficient or non-working elements in application, if there is any, to determine which elements of the program cause(s) these deficiencies and to do the necessary corrections. Of course, planning of evaluation process, the application and evaluation of it as planned increases the objectivity of program evaluation and trust towards the program. For this reason, the evaluation process should be based on scientific studies and criteria and education programs should be evaluated by means of scientific methods.

The fact that program evaluation studies are carried out in accordance with a systematical process helps both evaluations be based on sound basics and be in depth. From planning to the end of the evaluation, there are a lot of interrelated procedures. Some of these procedures reflect the decisions which should be taken during evaluation. Therefore, these decisions form the foundation of program evaluation.
Program evaluation consists of a three-phased process as planning, application and evaluation. In the planning phase of the evaluation process, some questions like why evaluation is carried out, when to carry out, which aspects to be studied, which approach and model to be chosen, what kind of measurement instruments to be used, how validity and reliability studies of these instruments are done, what the expense of the evaluation will be and who will attend to the evaluation are tried to answer. The application phase contains the procedures like data collection, data organization, the analysis and synthesis of data and reporting the evaluation findings. The evaluation, which is the last phase, means the evaluation of all activities carried out.

Meta-evaluation is called as the evaluation of evaluation. Meta evaluation can be stated as the evaluation of procedures carried out in the phases of planning and application. In this case, meta-evaluation is a scientific process in which evaluators are evaluated indirectly.

The concept of meta-evaluation was first put forward by Scriven in 1969. Leon Lessinger (1970), Malcolm Provas (1973), Ricard Seligman and others (1973) classified the concept of meta-evaluation in terms of educational supervising (Stufflebeam 1974).

Meta-evaluation leads the program evaluation studies to provide more contribution to the education process and increase the quality. Meta-evaluation studies are not only used in analysis of the results of evaluation but also they provide a detailed review of program evaluation studies carried out in a specific time period.

Meta-evaluation helps to decide about the value of the research. Moreover, meta-evaluation provides feedback to the researchers about the quality of their studies (Tingle, DeSimonne, & Covington, 2003). As Nilsson & Hogben (1983) point out, meta-evaluation refers not only to the evaluation of particular studies but also to the evaluation of the function and practice of evaluation itself (Fitzpatrick, Sanders, & Worthen, 2004).

In meta-evaluation, it is focused on how the evaluation is carried out, not the findings of the evaluation. Therefore, decision is reached regarding the quality of evaluation process and it is aimed to provide a better understanding to the function of evaluation. In other words, meta-evaluation can be stated as the control of the evaluator errors.

The Joint Committee determined thirty program evaluation standards in four areas in 1994. The four areas chosen are utility, feasibility, propriety and accuracy (Fitzpatrick, Sanders, & Worthen, 2004). Besides these standards, American Evaluation Association has also determined a variety of evaluation standards. These standards are classified as systematic inquiry, competence, integrity/honesty and respect for people and responsibilities for general and public welfare (Grasso, 1999). These standards are consistent with the other standards in terms of content.

The following procedures are taken after in a full and correct evaluation (Fitzpatrick, Sanders, & Worthen, 2004):

- Reviewing the proposed design to ensure it is feasible and sound;
- Monitoring the design to see that tasks are completed as planned and within budget;
- Checking the quality of instruments, procedures and products such as data and reports;
- Reviewing the design for possible midstream revisions (especially in light of the utility the evaluation has shown so far for important audiences or of problems the evaluation was running into);
- Checking the effects of meta-evaluation on the evaluation.

Meta-evaluation is quite useful in providing a detailed revision of evaluation studies carried out in a specific time period, helping to decide about the value of research, giving feedback about the quality of researchers’ studies and making the evaluation of evaluators possible. A new era began in 1997 in Turkey together with the reorganization of education faculties in teacher education. The teacher education programs which were put into practice after the reorganization need to be developed seriously. Therefore, the quality of evaluation studies regarding the evaluation of primary teacher training programs formed under the body of education faculties are of great importance. This meta-evaluation study has come forward to bring out the quality of evaluative studies in primary teacher training programs in Turkey.

**Purpose of the study**

The main purpose of this study is to evaluate the program evaluation studies carried out in primary teacher training area between 1997 and 2004 academic years in Turkey. Based on this general purpose,
following questions have been tried to answer:

- To what extent do program evaluation studies meet utility, feasibility, propriety and accuracy standards?
- Which deficiencies are available in program evaluation studies in terms of utility, feasibility, propriety and accuracy standards?

**Method**

In this study, program evaluation studies carried out in primary teacher training area in Turkey between 1997 and 2004 have been evaluated based on the determined meta-evaluation standards. The evaluation study has been realized by following these steps:

- First of all, all program evaluation studies on primary teacher training area in Turkey between 1997 and 2004 have been scanned. By examining the related studies, those which are not suitable to the purpose and limitation of the study, have not been taken into account. In the end, eight of these studies have been considered to be suitable to the purpose of this study and these have been taken into account.
- Secondly, meta-evaluation standards have been obtained by reviewing the related literature regarding meta-evaluation. The obtained standards have been examined and it has been decided that thirty program evaluation standards under four areas by the Joint Committee are compatible for this study. The thirty standards under the areas of utility, feasibility, propriety and accuracy have been examined in terms of convenience to the eight program evaluation studies. As a result of the examination, 18 out of 30 standards have been concluded to be functional in terms of program evaluation studies in Turkey.
- Each standard in the list has been graded as "sufficient", "partly sufficient" and "insufficient".
- The validity of standard list with 18 items has been determined by taking the opinions of field experts.
- In the last step, the program evaluation studies in the context of the research have been evaluated in terms of the determined standards. For this purpose, the five researchers mentioned in this study have independently evaluated eight program evaluation studies based on the obtained standard list. Later, the results of evaluation have been joined and a general evaluation of program evaluation studies has been done.
- The evaluation results obtained have been interpreted based on the intervals 1.00-1.66 "insufficient", 1.67-2.33 "partly sufficient" and 2.34-3.00 "sufficient".

**Findings and interpretations**

The presentation of findings and interpretations are explained in two steps. In the first step, the program evaluation studies examined in this study are briefly introduced; in the second step, evaluation findings found in accordance with the determined standards are given.

**Program evaluation studies examined in the study**

The main purpose of the research called "Second Grade Students' Evaluation of Physical Education and Game Course in terms of Handling at Pamukkale University Education Faculty (PUEF)" by Simsek and Erdem (1997) was to present how second grade students at education faculty primary teacher training program evaluate the handling of physical education and game course. Survey method was used in the study. The population of the study is of PUEF Primary Teacher Training Program's regular and evening-class second grade students. The whole population of the study was reached in the study. Totally 414 students participated in the study. A questionnaire was used as the measurement instrument. In the analysis of data, percentage, frequency, arithmetic mean and t test were used. According to the results, the students approve the handling of the "physical education and game course" but they state that they feel exhausted after the course.

In a study by Yayla (2003) called "The Attitudes of Music Education Students towards Pedagogy Program" was tried to determine the attitudes of music education students towards pedagogy. The population of the study is of 2000-2001 academic year students of music education programs. In Turkey, there are totally 3211 students in twenty different universities' music education programs. Among the population, the students of six universities that are competent to open graduate programs form the
sampling of the study. An attitude scale was used in the study. In the analysis of data, frequency, percentage, arithmetic mean, standard deviation, t test, variance analysis and scheffe test were used. According to the results of the research, it was shown that the music education students had negative attitudes towards pedagogical formation courses, methods used in these courses, course books, teaching practices held in the program, exams and instructors.

The sampling of research called "The Evaluation of Science Teaching Program" by Ergul (1999) is of 131 students who took science teaching I and II courses and who were studying at Uludag University Education Faculty Primary Education Department in 1998-1999 academic year. Survey model was used in the study. As a measurement instrument a questionnaire consisting 27 questions was used. According to the results of the research, it can be expressed that the activities in teaching-learning process are adopted by the students.

A study by Tas (2001) called "The Comparison of Primary School Teacher Training Programs of Abant Izzet Baysal University and Ankara University Faculty of Educational Sciences" aimed to evaluate the first two years of these programs based on student opinions. "Goal-Free Evaluation Model" was used in the study. First and second grade students of the both programs composed the sampling of the study. A likert- type scale was used in data collection. The questionnaire was applied to the first and second grade students of these programs in the second term of 1999-2000 academic year. The frequency and percentage of the answers were obtained and chi square test was used to determine if there was a significant difference among the answers of the same questions. According to the results of the study, it was found that some lecturers were not found competent both in their subject matter and teaching. Some of the lecturers were found competent in their subject matters but not successful in teaching. The remaining part of the lecturers was found competent both in their subject matter and teaching.

The main purpose of the study called "Necessity and Applicability Levels of the Courses that are Offered in the Department of Computer Education and Instructional Technologies (CEIT)" by Acat, Kilic, Girmen and Anagun (2004) was to put forth the opinions of both teachers and students regarding the applicability level of learned in the courses and the necessity level of CEIT courses for the branch. Descriptive model was used in the study. The sampling of the study was formed from randomly chosen fourth grade CEIT students in education faculties of universities and those who work as teachers graduated from these programs. A questionnaire was used in data collection. In analyzing data, arithmetic mean and standard deviation were calculated and t test was used to test if there was a significant difference among variables. According to the results of the study, pedagogical formation courses, informatics and informatics education application courses were found as the most necessary courses for the branch. The least necessary courses, on the other hand, were science and mathematics courses.

The purpose of the study by Seferoglu (2003) called "A Research on Alternative English Teacher Training Applications" was to search the points of view of lecturers working for education faculty English teacher training programs on alternative English teacher training program applications in Turkey. Twenty lecturers working and teaching at a foreign language education department of an education faculty in Ankara participated in the study. A questionnaire developed by the researcher was applied to the participants. The qualitative data obtained were analyzed via descriptive analysis method. According to the results of the study, it was put forth that alternative English teacher training applications affect that the image of teachers in the society negatively.

The main purpose of the study by Toprakci (2003) called "The Theory and Practice of School Experience-II Course" was to develop new information on the theory and practice of School Experience II course and therefore to contribute to both theory and practice. Survey model was used in the study. The population and sampling of the study was formed from 52 students studying at the fourth grade of Cumhuriyet University Education Faculty, Department of Primary Education, Classroom Teaching Program in 2000-2001 academic year. The results of the study showed that while the students had had more positive attitudes towards School Experience II Course before going to practice, they developed negative attitudes after studying the course at schools.

The purpose of the study called "Reorganization of Education Faculties" by Argon and Kanbur (2001) was to determine the opinions of administrators on the process of reorganization of education faculties at Abant Izzet Baysal University Education Faculty. A qualitative research method was used in the study. As data collection instrument, a semi-structured interview technique was used. The data of the study were analyzed by content analysis technique. As a result, courses and their contents were not found suitable. The program was seen to be positive in terms of forming a connection between theory and practice.
When the program evaluation studies are reviewed, it is stated that the studies on primary teacher training programs are very few. Especially when it is taken into consideration that primary teacher training programs were reorganized in 1997, it can be expressed that the number of the studies is insufficient. On the other hand, it is understood that these studies generally focused on one component of the program and they were limited in terms of scope. It is also obvious that the program evaluation studies were mainly carried out via quantitative method and by using questionnaires. Besides, it is understood that these studies did not fully reflect the program evaluation process.

The analysis of program evaluation studies

The analysis results regarding program evaluation studies in the study are shown in Table 1. When the data in Table 1 are examined carefully, the following can be stated under the scope of meta-evaluation in terms of utility, feasibility, propriety and accuracy.

- When standards on the scope of utility are taken into account, it is seen that the value identification standard is "insufficient", the standards of stakeholder identification, report timeliness and dissemination, and report clarity are "partly sufficient". The arithmetic mean of standards regarding utility is 2.16. This also shows that the utility standards of program are partly sufficient.

- When standards on the scope of feasibility are taken into account, it is seen that the cost effectiveness and practical procedures standards are "sufficient". The arithmetic mean of standards regarding feasibility is 2.48. This also shows that the feasibility standards of program are sufficient.

- When standards on the scope of propriety are taken into account, it is seen that the service orientation, complete and fair assessment and disclosure of findings standards are "partly sufficient" and the human interactions standard is "sufficient". The arithmetic mean of standards regarding propriety is 2.27. This also shows that the propriety standards of program are partly sufficient.

- When standards on the scope of accuracy are taken into consideration, it is seen that the reliable information and program documentation standards are "insufficient" and the context analysis and systematic information standards are "partly sufficient", described purposes and procedures, defensible information and analysis of quantitative and qualitative information standards are "sufficient". The arithmetic mean of standards regarding accuracy is 2.01. This also shows that the accuracy standards of program are partly sufficient.

- When standards on the scope of utility, feasibility, propriety and accuracy are generally taken into consideration, it is seen that the standards of utility is "sufficient" and the other standards are "partly sufficient".

- When all standards are taken into consideration, it is seen that six of the program evaluation studies examined are "partly sufficient" and two of them are "sufficient". Based on this information, it can be stated that the sufficiency level of these evaluation studies is not high.
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The analysis of program evaluation studies

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Conclusions and recommendations

Conclusions

- The number of studies on Primary Teacher Training Programs in Turkey is very limited.
- Program evaluation studies generally focus on one component of the program and show a limited perspective in terms of scope.
- Most of the program evaluation studies were carried out via qualitative method and by using questionnaires.
- Program evaluation studies do not reflect the program evaluation process wholly.
- Program evaluation studies in Turkey are generally carried out with academic purposes and as graduate thesis.
- The findings of program evaluation studies are limited because only one or a few component(s) of the program evaluation process is/ are studied.
- When meta-evaluation is taken into account, the program evaluation studies examined in this study are "sufficient" in terms of feasibility standards and "partly sufficient" in terms of other standards.
- The sufficiency level of program evaluation studies is not generally high.

Recommendations

- More studies regarding the evaluation of primary teacher training programs in Turkey should be carried out.
• Beside quantitative methods, qualitative methods should be employed in program evaluation studies.

• In program evaluation studies, not one or a few components of the program, but all components should be taken into account.

• All the stakeholders of the program should be involved in the evaluation process.

• More meta-evaluation studies should be carried out regarding the primary teacher training programs.

References


# List of Authors

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