Many undergraduate students come to tertiary study directly from school, an institution with very different aims and pedagogical practices. As a consequence new students often struggle to adapt to a new set of learning skills and expectations. The structure of a core subject for the Charles Sturt University Criminal Justice and Policing degrees was revised to incorporate a module designed to assist students in the acquisition and practising of a number of key research and information literacy skills to assist their transition to tertiary study. The project was the outcome of a process of critical reflection and collaboration by academic, learning skills and library staff. Beginning with the Council of Australian University Libraries (2001) model, specific attention was given to the relevance of Information Literacy skills to new tertiary students with the aim of tailoring the provision of these skills as a pre-requisite for life long learning. The review process embedded information literacy as a central component of the subject curriculum. The learning and library science disciplines were drawn together rather than being treated as discrete specialisations. Topics addressed include referencing of sources, critical thinking, the use of on-line citation and full-text databases and the evaluation of on-line and other sources of information. The subject structure will be subject to a continued process of qualitative and quantitative evaluation by students and teaching staff to maintain relevance in a dynamic learning environment.
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**Key words:** Interdisciplinary, Information literacy, Lifelong learning, Academic skilling, Evaluation, Critique, Embedding
Introduction

The concept of embedding generic skills or contextualising learning is not new, nor does the value of this direction appear to be questioned (Hicks & George, 2001; Jones, Sin & Singh, 2003; Kokkinn, 2000; Skillen, Merton, Trivett & Percy, 1998). The challenge expressed by Smith and McGowan (2004) is ‘how to operationalise what has been accepted in theory’. Issues of interest are thus not only what practices are occurring but also, who is involved and whether such developments can be sustained and are scalable. Of particular interest to Charles Sturt University (CSU) is the applicability across internal and distance education study modes.

Skillen et al. (1998) provide a comprehensive overview of the changes over the last 20 years of the ways in which universities have responded to the learning needs of their ever increasingly diverse student populations and the shift to greater accountability. Such approaches ranged from a time when universities focused on content only, to the remedial model with the focus on 1:1 intervention and then to a more integrated approach emerging in the late 90’s where Learning Skills Advisers (LSAs) for example, would be invited into lecture theatres to speak on topics such as ‘how to write an essay’. This latter approach, while a shift in a positive direction, has also been described as piecemeal, inequitable and still generic in nature (Skillen et al. 1998) and tends to rely on the personalities and energies of individuals. A further shift along the continuum is being promoted as a more equitable and effective model of operation referred to in the literature as the partnership model (Catterall, 2003; Charnock, 1995, in Catterall, 2003; Hine, Gollin, Ozols, Hill & Scoufis, 2002; Young, McCarthy & Hart, 2003) which involves more than interaction between LSA and academics and other university staff, but rather a collaboration between such colleagues into a partnership, leading to a transformation of learning and teaching. It is believed that such partnerships provide for sustainable contextualised practices leading to life long learning within an environment of increasing pressure on limited resources (Skillen et al. 1998).

Complementing this shift in learning skills practices is the concept of information literacy. Information literacy is founded on the belief that a significant characteristic of the 21st century is abundance, if not overabundance, of information. The existence of
this information does not necessarily create more informed citizens unless there is a complementary understanding and capacity to use the information effectively (Australian and New Zealand Institute for Information Literacy [ANZIL], 2004). ANZIL (2004, p.3) has developed a set of standards that describe the characteristics of an information literate person. These characteristics describe the information literate person as one who:

- Recognises the need for information and determines the nature and extent of the information needed
- Finds needed information effectively and efficiently
- Critically evaluates information and the information seeking process
- Manages information collected or generated
- Applies prior and new information to construct new concepts or create new understandings
- Uses information with understanding and acknowledges cultural, ethical, economic, legal and social issues surrounding the use of information.

The standards are therefore grounded in generic skills, information skills and values and beliefs (ANZIL, 2004). It is recognised that information literacy skills enable the students to not only better address the requirements of their tertiary environment, but that they also synchronize with the concept of lifelong learning (Hine et al., 1998) and generic attributes. It is further recognised that the educational setting is an ideal place to acquire these skills. The standards provide a framework where academic expectations and conventions are made explicit, which needs to occur if students, particularly first year students, are to participate in their new discourse communities (Cope & Kalantzis 1993, cited in Kokkinn 2000). Importantly Hine et al. (1998) assert that a collaborative partnership between academics, librarians, and LSA is needed in order to facilitate the implementation of successful information literacy programs.

Another field of emergent literature also informs the work of the LSA. This literature refers to the concept of the Generation Y student – today’s student. Krause (2005) asserts that as educators we are still to learn who our current generation of students is. Nonetheless, Krause in her analysis of current research identifies a number of characteristics of the Y Generation. These include: they see themselves as ‘clients’; they are looking towards multiple career paths and expect resources to allow them to
achieve their goals. However she says they are also employed for a significant number of hours per week, spend less time on campus and make considered decisions about the use of their leisure time or their time spent outside lectures and tutorials. Manuel (2002) relates the literature on Generation Y students to learning style preferences. However, she adds the caution that the Generation Y group displays the varying characteristics of any group and that learning preferences will fluctuate across time. Thus the significance of concept of Generation Y to educators is still emerging. However, ‘Marketers that capture Gen Y’s attention do so by bringing their messages to the places these kids congregate’ (Neuborne & Kerwin, 1999, para.11). If this is so, what does it mean to LSA as we develop models of service delivery that involve Generation Y students? Where are our ‘messages’ best placed?

It is within the context of this literature on embedding, information literacy and Generation Y, that this paper is written to share with you the critique and reflections of three professionals from three discipline areas at Charles Sturt University and how these reflections transformed their practices.

**Individual Reflections: Catalyst for Change**

**The Learning Skills Adviser:**

The description of the role of the CSU LSA is well encapsulated in the 2005 Language and Academic Skills conference website which states that ‘we work independently, with academic staff … and other professionals. We provide a range of services … at different levels of the system …’ (Australian National University, 2005, Who are learning skills advisers/lecturers? Para. 1). Such developments are a credit to the staff within the CSU learning Skills Unit as the challenges of addressing the diversity of needs of not only our on-campus student population, across campuses geographically separate from each other, but also a much larger distance education population, are faced. The CSU Office of Planning and Audit (2004) identified 70.8% of CSU students choosing to study by distance.
Over approximately the last 10 years the role of the LSA at CSU has shifted from largely (but not only) a one-on-one consultation process to a role that today encompasses the many approaches described above. However, the shift from the integrated to the partnership model referred to by Skillen et al. (1998) is in its infancy. Upon reflection we remain, as expressed by Hine et al. (2002, p.103), ‘sectors of the university who have traditionally played important yet largely separate supporting roles for students and academics’. The resultant processes are often piecemeal and non-systemic and/or often provided in addition to student course work rather than embedded into student course work.

The concerns expressed by Skillen et al. (1998) and Reid & Parker; Marcello; and Ramsden (in James et al. 2003) when they speak of the issue of inequity within our service is shared. At the end of the day, only a small percentage of students overall are assisted. The provision of support to students also varies between subjects and courses and is inconsistent in its application relying on the energies and personalities of individuals. One response is to make resources available to all students through the online environment. However, making materials available to students and facilitating student engagement are separate issues, with the latter being the more challenging issue.

Thus despite all that CSU does to reach its students, there are still many who do not access learning skills services. There are significant numbers who would benefit from doing so, yet do not. The following comments are not uncommon: ‘I didn’t know you existed’; ‘I heard from another student’; ‘I wish I had known last year’; ‘I didn’t come to your workshops because I didn’t think I needed them’; or ‘I didn’t go to the website’ to name just a few. Such comments also underlie the suggestion that generic skills are seen by many students as quite separate to their university learning.

The CSU Senior Executive Group has ‘signalled high level support for a change in focus of learning skills’ (Smith & McGowan 2004). As a LSA it is felt that there is a need for change; that there has to be a more effective way to reach students and to facilitate their engagement with the generic skills LSAs offer. The challenge is how to achieve this.
The Academic:

As educators we make many assumptions about students and their learning. Students are not an homogenous group and encompass a diversity cross-section of society in terms of age, ethnicity, experience and ability. Part of the innate challenge of adult education is trying to encourage the development of learners at both ends of the bell curve – high achievers and less competent students – as well as accommodating those who view university in a purely instrumental sense – that is, those for whom the object is to get a degree and get out. A large number of students fall somewhere between these extremes.

In terms of the academic aims and outcomes of the subject JST104 Foundations in Criminology and the Bachelor of Social Science (Criminal Justice) degree generally, the outcomes desired from students were clear. The intention was to foster and encourage independent study, to facilitate the development of a critical attitude and to enable students to develop the ability to make sense of the information encountered. However, the question of what the students themselves wanted was less clear. The important question of whether the agendas of students and academic coincided had not been raised. The basic operating assumption was that students wanted to do as well as they could, but teaching experience has demonstrated that this assumption is problematic. It is fair to say that academics value learning for the sake of learning; however, it became rapidly apparent that many students saw a university degree only in terms of its instrumental value in the pursuit of employment.

Students were often outspoken in their dissatisfaction with the experience of adapting to tertiary education. There were “no books in the library”, and students regularly complained of “hard marking”. It seemed that the majority of students wanted prescription – many wished only to be given the requisite information to pass the assessments in individual subjects and no more – “tell me what I need to know to pass”. Their frustration was mirrored by that of teaching staff. Often, coaching individual students through to pass level involved lengthy individual consultation, a steady flow of resubmitted essays and, concomitantly, constant remarking. This process was as time consuming as it was frustrating. Many hours providing
feedback resulted in the reappearance of the same mistakes, and often the same students.

At the same time, a widespread problem in terms of academic skilling and academic ethics on the part of students became apparent, particularly in regards to the acknowledgement and evaluation of sources. Of particular concern was the question of plagiarism, which was discovered in work submitted by students at various stages in their university careers, ranging from first year undergraduates through to honours students, Masters students and doctoral candidates.

Over the six years from 1999 to 2004, a wide variety of techniques were trialled in attempting to address and remedy these issues. These included one and half-day workshops, lectures on writing a university essay and research skills, sending students to university LSAs and a database exercise which formed a component of the major essay and which assessed the ability of students to operate citation and full-text databases. However, these attempts seemed unable to produce the desired results, particular in terms of remedying the problem of plagiarism and other academic misconduct. These experiments were all underpinned by the assumptions of the traditional model (noted earlier) and seemed to fail for that very reason.

It became clear that there was a need for adaptation and innovation if there was to be change. In 2004 the decision was made to think far more systematically about teaching practice and subject development. In particular, there was a shift in focus to the fostering of deep or strategic learning rather than just surface learning. Rather than the ability to merely recite learned material by rote, the desired outcome was to develop the capacity of students to understand and to think critically. In the process of working through the practicalities of attempting to foster change within student attitudes and practices, it became apparent that what had been interpreted as active resistance in the past was in fact a lack of suitable tools and techniques. The manner in which students had previously been presented material now appeared counter-intuitive.
The Librarian:

At the same time, the way in which Information Literacy was being implemented was being questioned. The Information Literacy model is a vision for imparting generic and information skills. It aspires to developing these skills within the educational process that will later be transferred to the workplace and all areas of lifelong learning. In an ideal world, the model is embedded as part of the education process, and because it focuses on information it has been embraced by librarians. It informs the 'client service' attitudes of most librarians, particularly in university settings. Information literacy has been embraced by librarians, but the wider university community needs to be committed to it if successful outcomes are to be achieved (ANZIL 2004; Hine et al., 2002; Lupton 2004 & Rockman 2002).

Currently library skills classes or other activities are always associated with an assignment or real information need. This encourages the students to engage with what is being taught. Where possible, to increase effectiveness of classes or tutorials a mark is associated with an activity related to the assignment; for example, students may hand in an activity related to finding academic articles and other information for an essay. The aim is always to help the students engage with the process by making it relevant to their current needs.

Although the information literacy model has been adopted by librarians, the main focus of their teaching is on information retrieval and information seeking. This is because of a lack of time, and as a rule librarians are not qualified to teach areas of the information literacy model such as writing and using the information (Standards 4 and 5 (ANZIIL 2004)). An approach was needed to alleviate this problem and offer students a more complete approach to learning how to be information literate.

A meeting of like minds

Note that these individual reflections were occurring in isolation, in important yet largely separate parts of the university. The following model illustrates this approach.
How did the thinking of three individuals from different parts of the university come together?

One change already introduced into the work of the LSA was to physically position the LSA in the library for part of the working week— the hub of Bathurst CSU campus. From this grew a close working relationship with library staff and a better understanding of the way we worked and wanted to work. We learnt that we had similar beliefs with respect to information literacy and collaborative partnerships. The academic, also recognising a need and wanting to address that need, had contact with the librarian with a view to embedding the information retrieval component of information literacy into JST104. This was the beginning of a three way partnership and the development of a model that united and embedded information literacy and generic skills processes.

**A New Direction: The partnership model**

An holistic approach was trialled within a core first year, first semester subject JST104 in the Bachelor of Social Science, Criminal Justice which operates from the Bathurst Charles Sturt University Campus. The course is offered to both on-campus (internal) and off campus (distance education) students but was trialled with the on-campus student cohort in this first instance. The aim was to create a systemic partnership model involving a LSA, librarian and academic, in which the students were central and in which generic skills were embedded within an information literacy framework. This is illustrated in the following diagram.
JST104 had two lectures and one tutorial each week. One lecture per week was allocated to the new model.

The first step was to negotiate what generic skills students needed to successfully meet the expectations of the subject and to relate these to what it means to be an information literate person. It was always the belief that such skills went far beyond this one subject but across subjects and beyond university studies.

A summary follows:

<table>
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<tr>
<th>Information Literacy Model</th>
<th>Subject Skills &amp; Knowledge</th>
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<tr>
<td>Recognise when information is needed</td>
<td>Understanding what lecturers expect</td>
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<td>Analysing assignment questions</td>
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<td>Thinking critically*</td>
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<td>Locate information</td>
<td>Finding journal articles *</td>
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<td>Thinking critically</td>
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<td>Evaluate information</td>
<td>Recognising different information forms</td>
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<td>Thinking critically</td>
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A semester program was developed. The program and rationale were discussed with the students and an outline of lectures disseminated. The librarian and LSA delivered the lectures alongside the academic who was present and actively involved in the discussions. Lectures were referred to as workshops.

Assessment included four tasks which were explained in the lecture and posted on the subject forum. The tasks attracted a mark in the subject (5%). These four tasks were to be compiled into a portfolio submitted by the students to the lecturer at two points in time. They were viewed by the lecturer but marked by the librarian and LSA. The first submission date was set at the mid semester break to allow the ‘markers’ to view student progress and comment. It was believed that timely feedback was important. The portfolios were not graded at this submission point.

The portfolios were submitted for marking in week 12. Some tasks were heavily scaffolded as we wanted the students to be successful. Students were also encouraged to seek help with any of the tasks as we wanted to enable student learning.

The fifth task consisted of a series of reflective questions.

**Evaluation Overview**

Evaluation took a number of forms.

- UAlIs for entry into the 2005 course were the same as 2004. Thus a comparison of the performance of students on the major assignment (an essay) across the two years was possible. Although it was acknowledged that there would be many confounding variables, it was thought this might be an interesting indicator to investigate, although not possible at this time.
Students provided qualitative feedback through their own reflections on the workshop process.

A comparison between student attendance at the JST104 workshops (optional) and the generic workshops (optional) offered on campus but in addition to lectures during the same time period was possible.

Informal observations were also possible. Student interest was observed noting where students sat and whether they participated. This is insightful since the lecture was unfortunately timetabled in the largest tiered lecture theatre on Bathurst campus. Students are often seen seated in the top tiers despite many empty seats in the lower tiers.

**What did the students say?**

Following is an overview of student reflection and feedback in which themes could be identified. It was first thought that perhaps students might be selective and guarded in their comments as they would be viewed by the lecturer but an analysis of response allayed this concern.

**Transition to University**

- I found that the majority of topics were useful as I begin my first semester at university and was having difficulty adapting to what the university expected.
- I found the university to be more approachable … this workshop identified people within the university whom I could approach when having problems with my study.
- Allowed me to see the standard of what was required in university papers.
- I appreciated the efforts made by a class to assist new students in getting to grips with essay writing at university, as it is a much different process to essay writing in secondary school.
- They allowed us to ask questions and feel more comfortable with university work. They also aided in the transition to university.
- I was scared about writing essays, but they built up my confidence in my writing skills.
Transfer across other subjects

- They provided information on referencing and plagiarism, and that they had application across all subjects.
- Helped me understand what was expected of me when writing the essay and all university grade assignments.
- I found the workshops helped me in the communication skills area in not just criminology but all the subjects I am currently studying.
- I am able to use the explanations provided by library staff in completing searches … in all my subjects.
- I found the topics on essay writing really helped me to understand what lecturer’s wanted in essays not only for this subject but for all of my subjects.
- I found this [essay writing] helped me a lot, especially in my PSY111 essay.
- The workshops allowed me to adjust the assignments that I have already written so that I could get the best marks I could.

Concept of embedding

- It allowed us to gain a practical understanding of referencing, something I previously didn’t understand and probably still wouldn’t if not for the workshops.
- I learnt skills I would have otherwise found difficult as I wouldn’t have gone to a library workshop.
- We were told all through our first week of Uni that plagiarism is a serious offence, yet no other subject offered much support in TEACHING us how to reference properly.
- I liked it when they made the workshops relevant to our course, especially when we learnt how to write essays.

Thinking Skills

- I have always taken things at face value. Now I ask why …
- It made me think about the wider picture and not just accept whatever I read as the only truth.
- I think the workshops were very helpful in assisting me with my critical thinking, as although it’s not something new to me it is somewhat different than it was in high school.
- I have started to understand my subjects more and am starting to look at things in a different context now.
- I didn’t have clue what it [critical thinking] was until I attended the workshop.
- They forced me to think about my assignment earlier than I usually would have.
- I enjoyed the information it [the workshop] gave me about finding journal articles; without this information I wouldn’t have been able to find the articles I wanted.

Other comments
- I found the workshops to be repetitive of the stuff I learnt at school and learnt in other subjects … but then again I have been to a good school and been to university previously.
- Things we learnt in workshops had been covered by other teachers and classes, but that is not a bad thing.
- … the workshops seemed to go on a little long and seemed that many things just keep getting repeated.

How did attendance compare with optional generic workshops?

Attendance at the optional generic workshops held in addition to subject lectures varied. Possible maximum numbers were 30. Initial workshops attracted close to anticipated numbers with attendance waning significantly and quickly as the session progressed, with numbers dropping to 50 % and lower. It was also noted that a core group of students attended the full range of topics.

Attendance at the JST lectures (n=65) was consistently high in all sessions at approximately 85-90%. It was also observed that the students sat at the front of this very large theatre, and there was participation even though the venue made this very difficult.
Further Reflection:

It was recognised at the outset that this was a trial which would require modification if continued. Initial thinking was that this process was different and new for CSU, but wasn’t necessarily different and new for other universities. This model is used within ‘Writing across the Curriculum’ in various universities in the United States (Elmborg, 2003; Jacobson & MacKay, 2004; Samson & McGranath 2004) and within some scaffolded academic tasks in Australia (Hine et al. 2002). However, it seemed that often the collaboration in existing models tended to be between academics and the library under the banner of information literacy (which was really information retrieval), or academics and LSAs under the banner of embedding generic skills, rather than collaboration between the academic, library and LSA within the true intent of the information literacy model.

Upon reflection what was significant?

☐ The decision to document the process proved to be critical to what has resulted from this trial. The documentation process forced a deep reflection and critique on our part, which also involved listening to student feedback.

☐ A real partnership bringing together three important sectors in the university has been forged and as a result the teaching and learning in JST104 is being transformed.

☐ A new model is being developed which will be expanded to include both on campus and distance JST104 students. This has involved redesigning the initial model to become sustainable and in doing this has facilitated the development of a model that can be transferred to other disciplines.

☐ The issue of scalability is being addressed. The development team is mindful of the need for flexibility within the new model to allow for embedding within other disciplines and has to date generated interest across the CSU campuses. A product that is sustainable and scalable is now possible to offer
academics when they respond to the question, ‘Are you happy with the quality or your students’ work?’

- Very importantly student engagement is central to the ideology behind the model.
- Promotion of the model within the university has begun.
- Finally, within this new model generic skills are now placed within an information literacy framework enhancing the relevance of generic skills to students by placing such learning into the context of an information rich world into which graduates will soon enter.

**What do students want?**

Students wanted

- A workshop booklet for future reference
- More in depth exercises
- More interaction
- More weekly exercises
- A different venue
- A condensed period
- More hands on
- More topics
- More coordinate with other subjects –writing different assignments
- Timing – Weekly? Block?? Earlier
- More library.

**Where to from here**

Many CSU academics share the views expressed in this paper and recognise the need for an integrated approach to generic and information skills. The time appears ripe for such a model.
Presenting at this conference provides a valuable opportunity to share with like-minded people with considerable expertise in this field; to through discussion further inform the work presented in this paper. It is hoped the reflections, critique and developments which emanated may help others when reflecting on the direction of their practices.


