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Abstract: This chapter outlines an institutional initiative to promote transformative change within courses (degree programs) in relation to flexible and blended learning. It suggests that cross-disciplinary, immersive development-based research projects provide a key approach to developing responsive universities in the 21st century. A major goal of this chapter is to describe this institutional initiative and the design of the qualitative research project for evaluating the impact of the Teaching Fellowship Scheme for promoting curriculum renewal. This scheme was conceptualized and implemented to focus on the dual goals of development (redesign of courses and subjects) by the academics involved in the Teaching Fellowship Scheme and professional development of the individual academics' knowledge and beliefs about higher education teaching and learning. The transformative learning (Cranton, 2006; King, 2004) of the individual academics was examined through a series of semi-structured interviews undertaken at the beginning of their project, mid-way through their project and at the conclusion of their project. Similar questions were used throughout the 12-month fellowship to determine changes in learning during the immersive Teaching Fellowship Scheme.

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28. REDESIGNING CURRICULA USING BLENDED LEARNING

A Development-based Research Approach

INTRODUCTION

Universities in the 21st century need to be responsive to the changing needs of societies by providing accessible and equitable learning and teaching options. This may mean that Universities need to provide authentic and flexible approaches in order to cater for learners in regional as well as urban environments. Distance education universities, in particular, have traditionally been sensitive to providing equitable options for their diverse range of students spanning the rural, urban and global educational community. To effectively fulfil this mission a university needs to be continually evaluating and transforming teaching and learning and undertaking curriculum renewal on a regular basis in order to provide accessible and equitable learning opportunities. In order to achieve these goals, traditional distance education universities are diversifying the range of teaching and learning options by utilising online teaching and learning and blended learning options in an attempt to extend their educational reach and be responsive to the needs of students. Because “the centrepiece of any organization is the curriculum it offers its students” (Tierney, 1999, p. 41), the design of curricula needs to be carefully considered to embrace the needs of students, and provide equitable teaching and learning options for the university community.

This chapter outlines an institutional initiative to promote transformative change within courses (degree programs) in relation to flexible and blended learning. It suggests that cross-disciplinary, immersive development-based research projects provide a key approach to developing responsive universities in the 21st century. A major goal of this chapter is to describe this institutional initiative and the design of the qualitative research project for evaluating the impact of the Teaching Fellowship Scheme for promoting curriculum renewal. This scheme was conceptualized and implemented to focus on the dual goals of development (redesign of courses and subjects) by the academics involved in the Teaching Fellowship Scheme and professional development of the individual academics’ knowledge and beliefs about higher education teaching and learning. The transformative learning (Cranton, 2006; King, 2004) of the individual academics was examined through a series of semi-structured interviews undertaken at the beginning of their project, mid-way through their project and at the conclusion of their project. Similar questions were used throughout the 12-month fellowship to determine changes in learning during the immersive Teaching Fellowship Scheme.

TRANSFORMATIONAL CHANGE

In this development research (Reeves, 2000) project, academics in the areas of education, environmental science, communications, computing & mathematics, commerce, philosophy and sociology participated in the Teaching Fellowship Scheme. The specific projects involved colleagues in each of their respective schools to assist in the process. It was essential that each fellow remained within their school for the fellowship as organizational transformation as an “organizational learning process extends incrementally across all levels of the organization, from the individual staff member to groups” (Roche, 2001, p. 121).

The development and research project attempted to maximise the positive impact of the teaching and learning initiative for the individual academic, school, faculty and university. Covey’s (1989) principle of ‘Think Win/Win’ or principle of mutual benefit was a powerful concept in the conceptualisation, design and implementation of the Teaching Fellowship Scheme.

My role in this project focussed on mentoring but more importantly on ‘looking out’ for and managing the project in the interests of the fellows involved in the project. It could be considered quite risky working on a teaching and learning project as opposed to research for 50% of their appointment over 12 months. I believe that this project should enhance their academic career; the need for each of the fellows to publish and present their work was crucial. I am like a coach trying to get the best out of the people involved in the project while at the same time making sure that each fellow benefits from the fellowship. Too often these schemes focus on the benefits to the university first and foremost. My approach focused on the fellow and benefits to the school and faculty which in turn provides university benefits (Researcher reflection).

The ability to think at the systems level and examine all aspects of the initiative was essential. To be successful in institutional projects, effective strategic leaders in higher education must utilise ‘whole of organization’ approaches and focus on “organization intervention that enables integration and linkage of people, ideals, priorities and goals as a means of achieving sustainable transformative change” (Roche, 2001, p. 125). In addition, Roche (2001) also suggested that strategic leaders can only achieve these changes when they have a political power base in the university environment. In this instance the project was championed by senior management, supported by heads of schools and shepherded by a teaching and learning Institute. Although this project was somewhat unique in the current university environment, a number of other examples provide insight into the historical basis for the conceptualisation, design and implementation of this project.

Previous transformative change projects have demonstrated the need to work on sustained, immersive projects on strategically important areas to achieve organizational goals (Keppell, 2002, 2007). Keppell (2002) described the transformation of a traditional medical curriculum and the organizational structure that was put in place to facilitate these changes. It discussed the management, design, development, evaluation, and training that was implemented in order to

create web-based and computer-facilitated learning (CFL) modules for the curriculum. The approach used systems thinking as a unifying framework for management, instructional design and training. "Systems thinking is a conceptual framework that examines the interrelationships between the often discrete aspects of management, design, development and evaluation of multimedia and online resources. Integral to this systems-based approach are aspects of building shared vision (goals, values and missions that are understood); accounting for mental models (deeply ingrained assumptions of how we understand the world); team learning (thinking together, achieving something that cannot be achieved alone); and personal mastery (continually learning and improving)" (Keppell, 2002, p. 69; Senge, 1996).

In another implementation at the institutional level, Keppell (2007) examined the role of the instructional designer in transformational change in a Hong Kong context. Instructional designers may act as change agents in the university through the process of brokering (Wenger, 1998). By acting as brokers, instructional designers translate between different communities of practice - in a way similar to a language translator - and coordinate multi-disciplinary projects that foster connections across and within communities of practice. The instructional designer has a unique vantage point that may allow new possibilities for innovative design and professional development, and allow for the transformation of practice within the institution. Brokering is defined as "connections provided by people who can introduce elements of one practice into another" (Wenger, 1998, p. 105). Five essential aspects are required of the instructional designer: brokering involves translation; brokering involves alignment between perspectives; brokering requires legitimacy to influence the development of practice; brokering relies on the individual to have diverse identities; and brokering may be best suited to certain individuals (Keppell, 2007, p. 72-73). In this project each of the teaching fellows implemented change using a number of these principles. The work by the fellows appears to be achieving impact in enhancing communication across the school, providing in-depth discussion of the scholarship of teaching and learning and sensitising academic colleagues to innovative ideas that could be used in the teaching of the specific discipline. The research side of the project is examining how they are achieving these goals and how they are transforming their own learning throughout the process.

Parrish, Lefoe, Smigel & Albury (2008) evaluated the development of leadership capacity through the Leadership Capacity Development Framework (LCDF) for teaching and learning in higher education. Four Australian universities were involved in the project, which involved mentoring of academic participants. The evaluation of the project suggested that successful aspects of the LCDF included: professional development activities; authentic learning activities; reflective practice; dialogue and cultivating appropriate professional networks. In a similar way the Teaching Fellowship Scheme focused on professional development, reflective practice, dialogue and networking through authentic learning. It also attempted to create a community of practice to support the work undertaken by the teaching fellows. An important similarity between the leadership program and the Teaching Fellowship Scheme is that they were undertaken for a sustained period of time to allow academics to transform their learning over time

and exposure to a diverse range of activities. A major focus of the LCDF was the development of potential leaders across multiple levels of the university. The scholars in the LCDF (similar to fellows in the Teaching Fellowship Scheme) suggested that broadening their understanding of what leadership can be and how it can be developed was a major benefit of the project. In a similar way the Teaching Fellowship Scheme is attempting to create champions who can initiate change within their local school setting and through the redesign of subjects and courses using flexible and blended learning.

DEVELOPMENT-BASED RESEARCH

The rationale for choosing the research methodology of design-based research/development research (the terms refer to very similar approaches and will be used interchangeably in this chapter) is that it provides a methodology for progressing both pragmatic and theoretical aims of practice (Wang & Hannafin, 2005). Development research (van den Akker, 1999) aligns with the concept of 'use-inspired research' (Stokes, 1997) which considers how our developments benefit the user, group or society and how our developments provide design principles for the academic community. Design-based research advances design, research and practice concurrently (Wang & Hannafin, 2005). It has five characteristics: pragmatic; grounded; interactive, iterative, flexible; integrative and contextual (Wang & Hannafin, 2005). Wang and Hannafin (2005) define design-based research as:

“A systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories” (p. 7).

Development research is defined as research “focused on the dual objectives of developing creative approaches to solving human teaching, learning, and performance problems while at the same time constructing a body of design principles that can guide future development efforts” (Reeves, 2000, p. 7, see Figure 1). It is ideal in the context of the Teaching Fellowship Scheme which has parallel aims of the development of innovative teaching and learning and the investigation of theory in relation to transformative change at an institutional level and transformative learning of the individual academics. The research will develop design principles suitable for the next iteration of the project and add to the body of literature on innovation in flexible and blended learning.

The research goals are interpretivist in nature and “focus on portraying how education works by describing and interpreting phenomena related to teaching, learning, performance, assessment, social interaction and innovation (Reeves, 2000, p. 6). A number of key principles will also be generated to foster further development in relation to flexible and blended learning within the university. These principles will guide future iterations of the project and are essentially development goals. The strength of this approach for investigating the Teaching Fellowship Scheme is that the researcher collaborates with the participants

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(Teaching Fellows) in the design and implementation of the project. Feedback from all colleagues is being used to refine the scheme for the second and third iteration in 2009 and 2010. The whole process will impact pragmatic and theoretical aims in relation to the practice.

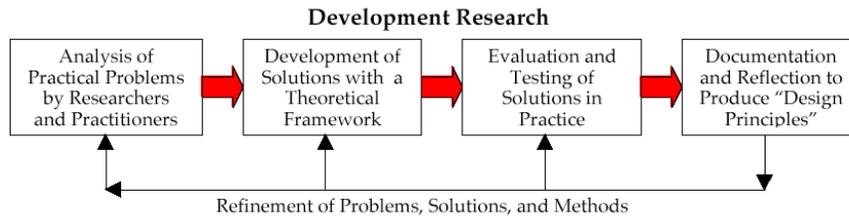


Figure 1: Development research process as outlined by Reeves (2000), p. 9.

Furthermore the Teaching Fellowship Scheme used anthropologically driven design-based research. Bell (2004) suggests that “anthropologically driven design-based research seeks to understand the nature of the introduced changes and their consequences from the perspective of the participants, and often it provides them with a voice and a source of influence on shaping changes to their settings” (p. 245). The Teaching Fellowship Scheme applies this principle of understanding how flexible and blended learning is introduced in the redesign of subjects and courses and the consequences of this introduction from the perspective of the Teaching Fellows. In this project the Teaching Fellows were active agents in shaping the landscape of their discipline using flexible & blended learning. The project focused on an intervention that impacted the “localized nature of the practices and norms of the social groups investigated as they actually occur in their specific settings. Such a focus allows for detailed study of how new designs are appropriated, resisted, or even repurposed by groups that are assumed to already have significant cultural momentum before any intervention begins” (Bell, 2004, p. 249).

“The use of design-based/development research has been a major aspect of my work over the last 10 years. I found it difficult to complete research that had purely a theoretical focus or purely a practical focus. My research attempts to maximise the positive impact on the educational context (in this case the university) while at the same time impacting the educational technology theory. This approach allows me to do both and is an integral part of the work” (Researcher reflection).

TEACHING FELLOWSHIP SCHEME

The Teaching Fellows Scheme recognizes the unique academic identity of each discipline within the University community and the need to collaborate with key flexible learning and teaching educators in each Faculty/School. The project is focused on enhancing the strengths of the teaching and learning of each

Faculty/School by focusing on high-priority courses/subjects identified by the Faculty/School (e.g. large student numbers, the teaching of subject/courses across campuses, niche courses) that have the potential to transform teaching and learning for the benefit of our diverse student needs. The project involved major stakeholders across the University including the DVC (Academic), Deans, Faculty Sub-Deans Teaching and Learning, Heads of Schools, Centre Directors, academics across CSU, educational designers and learning material centre specialists.

The Teaching Fellows Scheme funded through the Office of the DVC (Academic) commenced in 2008. Through this scheme staff were released from regular duties to engage in strategic learning and teaching development projects involving the scholarship of teaching and leadership of change. The goals of the scheme are to:

- enhance education at CSU across a broad spectrum from curricula and teaching strategies to learning and teaching sessions
- promote scholarship of teaching and learning, improvement of teaching and learning at school, Faculty or University level and staff development in priority areas associated with the goals of CSU's two Education Institutes

In the first year eight fellows from eight schools participated in the Flexible Learning Institute teaching fellowship scheme. Each Fellow engaged in a strategic learning and development project involving the scholarship of teaching and leadership of change. It is anticipated that a teaching fellow from each of the 24 schools at Charles Sturt University will be involved in the development project over the next three to five years.

A key aspect of the scheme is that each fellow will be seconded to work with The Flexible Learning Institute (FLI). Fellows will have 50% time release from their normal roles during the one or two semester terms of their fellowships. Fellows are engaged in projects such as curriculum/learning program review and development, course and subject redesign, development and evaluation of learning tools/strategies/management programs, and scholarship in educational priority areas linked to the Institutes' goals. The specific focus of the scheme was 're-designing courses/subjects through blended learning and teaching'. The Teaching Fellow was mentored by the FLI and in turn acted as a mentor to academic staff within their School. School/Course-based blended learning designs strengthen the impact of the academic in teaching and learning and also develop exemplars suitable for other staff within the school/course to adopt. In addition, Teaching Fellows have also had the opportunity to disseminate their ideas through presentations (within school, CSU, national, international conferences) and publish on their work over the 12 month period. The FLI worked with the school-based Teaching Fellows to maximize the personal benefits in terms of their career development in scholarship of teaching and learning and research-based teaching outputs.

The focus of this initiative was the implementation of blended learning as an institute-wide initiative and that "the essence of building a high performance college or university revolves around the co-creation of ideas" (Tierney, 1999, p. 23).

BLENDED LEARNING

Blended learning is traditionally defined as the combination of face-to-face teaching and learning with online teaching and learning. “It is a design approach whereby both face-to-face and online learning are made better by the presence of each other” (Garrison & Vaughan, 2008, p. 5). Within Charles Sturt University (CSU), blended learning also includes a further dimension of blending which would allow predominantly print-based distance education subjects/courses to be combined with online learning and teaching strategies (through CSU Interact, the university’s Learning Management System) and face-to-face teaching and learning strategies. These face-to-face strategies could include a face-to-face residential school at the university campus or strategies that approximate interpersonal interaction using technology e.g. video-conferencing, tele-conferencing, etc. The blended learning approach replaces rather than supplements aspects of the existing teaching and learning approach.

Blended learning and teaching can occur at four levels of granularity. Firstly, activity-level blending might include both face-to-face and online components for an activity (e.g. online debate and a face-to-face debate; off-line reading and online discussion of the reading). Secondly, a subject-level blending would design distinct face-to-face and online activities throughout an entire subject. This is the most common form of blending (e.g. 50/50 blend of face-to-face and online learning and teaching activities). Thirdly, course-level blending would focus on the course or degree program. All subjects within a course may be redesigned or selected subjects judged to be best suited to blending may be the focus of the blended design. Fourthly, Institutional-level blending would focus on using blended learning and teaching as an integral part of all courses and most subjects (Graham, 2006).

The impact of the blended learning design was also considered within this project. A blended learning design may be enabling, incremental or transformative (Graham, 2006). Enabling blends address issues of access and equity to provide equitable opportunities in face-to-face, print-based, blended and fully online learning environments. These blends would focus on providing a diverse range of teaching and learning options for the same subject or course (e.g. print, CD-ROM/DVD, online, blended, face-to-face). Enhancing blends focus on incremental changes to the existing teaching and learning environment. Transformative blends focus on a major redesign of the teaching and learning environment (e.g. online problem-based learning). Other strategies may focus on specific learning designs such as peer learning, independent learning, inquiry-based learning (problem and project-based learning), learning-oriented assessment, global learning and the use of digital repositories. This project is focused on the transformative role of blended learning to improve teaching and learning in subjects and courses throughout the university.

METHODOLOGY

The research project used a multi-case study approach and used a variety of methods to examine blended learning with each teaching fellow. Input was also

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sought from the educational designers assisting the fellows. Eight fellows were involved in the research project. Educational Designers were also invited to contribute their perceptions on the work of the fellow within their school and the design of the Teaching Fellowship Scheme.

Research questions for academic staff

The following research questions were utilised throughout the 12-month project. Similar questions were used in the pre-project, mid-project and post-project interviews. Educational Designers were also asked to respond to a selection of these questions relevant to their work.

- 1) Could you please give a brief synopsis or overview of your project?
- 2) Could you describe your current understanding of blended learning?
- 3) Have you incorporated blended learning previously in your teaching/design?
- 4) What blended learning activities do you intend to incorporate in this project?
- 5) Have you incorporated peer learning previously in your teaching/design?
- 6) Will you incorporate peer learning in your program/unit transformation?
- 7) Do you think blended learning will foster improved communication between: Students and students and students and teachers?
- 8) How do you intend to include other Faculty/School members in this project?
- 9) What transformation in your own teaching and learning do you expect from your project?

Reflective Journals

Throughout the 12-month fellowship the Teaching Fellows were required to complete reflective journals at regular intervals. The written reflective journals provided a means of examining their thoughts and perceptions in addition to the verbal interviews. The following represent questions that were addressed in the journals.

- What is happening at the moment with your project?
- Have you adjusted your original implementation of “blended learning”?
- What benefits have you noticed for your practice, peers, students, faculty and school?
- What problems have surfaced so far? (for your practice, peers, students, faculty, school)
- What further support (if any) do you need: technological, peer, design, administrative, other?

Initial Perceptions

The following comments represent some initial perceptions of the teaching fellows during the project through their reflective journals. In general all fellows have mentioned the extra thinking space that they are now able to devote to one specific aspect of their teaching and learning within the fellowship.

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Joy is strategic in her approach to the fellowship and believes there are three areas to which she will devote her attention. This fellow is highly focused on immersing herself in the literature to inform the design of the subject.

There are three parallel streams happening in the project: negotiation of the subject rewrite with colleagues; reading and development of the actual content/theoretical framework of the subject; and developing my understanding of the theoretical understanding/scholarship of teaching literature to develop general principles that will drive the design.

Jeremy is being exposed to different ways of reflecting on practice and is finding the process foreign to his previous experience. In particular Jeremy may find different ways of knowing through the process of blogging.

As part of the Teaching Fellowship we are being asked to work in the guise of reflective journals which is not something that I have done before - my thinking is mainly 'internal dialogue' and I sort things that way. Committing to print requires that the internal dialogue has momentum and is 'sorted' and that is problematic for me as I tend to try to see big pictures/mosaic/the whole jig saw and so I think my efforts in the blogging department are likely to be ordinary at best.

Bob is intent on focusing attention on the experiences of the internal and the distance education students and their similarity and differences for blended learning. As can be seen the fellowship scheme appears to be motivating Bob to reflect on his previous teaching experience using flexible and blended learning. By identifying areas that have not been successful Bob is focusing attention on important questions related to teaching and learning.

Part of my project will be the development of an online journalism training tool that can be used by both internal and DE students. We trialed a prototype of the scenario delivery software with a first year news writing class on Friday, and it was quite successful from a technical point of view. The students seemed to enjoy it as well. More on that shortly...I have submitted an abstract for the CSUED conference (internal university conference), along the lines of "10 dumb mistakes I have made with blended learning". I figure I'll introduce my current FLI project via a rundown of misguided things I have tried in the past.

Melissa is implementing e-portfolios throughout a course and is concerned at the slow pace at which the tools are being made available at the university level. A sense of frustration is occurring with the stakeholders involved in a project for e-portfolios. The technical side often overpowers the educational side in the adoption and implementation of new technology.

I attended the University ePortfolio working group and they are still confusing 'tools' with 'process' in the ePortfolio. My wish would be that they provide a simple, flexible tool that could be synced or linked to My

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Workspace in Interact (internal name for learning management system); give more space and flexibility to My Workspace - and let us use it!!!!

James is being confronted by the resistance to his ideas in adopting e-portfolios for environmental science. He mentions that he is presenting to an audience of peers in his school who are somewhat skeptical to his approach. Change agents examining innovative work in traditional disciplines often need to be resilient and follow through to demonstrate a proof of concept.

One thing I am trying to do in the presentation is to do a cross-comparison of practicum arrangements across the university. I know it's been done before, but I am having trouble finding the resources..... The next thing to mention I guess was the response by participants. I failed in one goal - that is getting teachers to think about flexible delivery. However, I was successful in planting the seed about e-portfolios. So I guess the outcome was all one-way traffic about what "I might do" rather than "what we can do" or "how might I do something". I guess that doesn't matter at this stage because a) I have nothing to show them yet, and b) it not an immediate priority. It will be something I will return to...

On another occasion James mentioned about meeting the educational designers and obtaining insight and support for his proposal. James is developing some insightful approaches to his teaching which may prove highly innovative for his discipline.

I have met the educational designers. they were all very willing and eager to help. The curious thing is that they told me that this is all easy - if it is so easy why hasn't it been done before? However the outcome of the meeting was excellent in that: 1) they are informed and are willing to help; 2) learnt a bit about flexible learning and need to be clearer to the students if you increase diversity of information; 3) I think I have a structure for my e-portfolios.

BENEFITS

Overall, the Teaching Fellowship Scheme has the potential to impact and transform higher education teaching and learning within our university. It focused on redesigning subjects and courses and has a range of benefits at different levels. These included benefits to the teaching fellows; benefits to schools and faculties and benefits to the university community.

Fellows have engaged in innovative and relevant research to enhance their own professional development and pedagogical scholarship. They have also been involved in a community of practice that focused on peer learning and building collaborative partnerships with academic colleagues. At the conclusion of the fellowship scheme the fellows have developed a number of outputs including presentations, publications and professional development in the scholarship of teaching and learning.

Schools and faculties have also enhanced their understanding of blended learning through the Fellowship project. Teaching fellows have widened the awareness of

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flexible and blended learning strategies through discussion, presentations, and informal and formal dialogue. Schools and faculties have benefited from innovative teaching and learning using blended learning, which should benefit student learning.

The academic community of the university has benefited from enhanced collaboration between the Flexible Learning Institute and the schools and faculties at the university. The university should benefit from the development of design principles which will guide future developments in the provision of innovative and sustainable practice in flexible learning and teaching through this project.

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