Faculty Transformation: Three Forms of Inquiry to Increase Staff Capability for Teaching with Technologies

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1.   Abstract:

Our paper sets out the actions that we consider necessary to achieve the aim of increasing staff capability for teaching with technologies in an institute of higher education. Since choosing to teach appropriately with technologies follows – or should follow – from the more fundamental fact of inquiring into teaching practice, we suggest that we need to create a culture that supports and rewards three distinct forms pedagogical inquiry: the scholarship of teaching; scholarly teaching; and reflective practice. Creating a culture of inquiry has the potential to overcome three professional development challenges; the first is the lack of formal training for teachers in higher education; the second is staff resistance to the training that is offered; and the third is the difficulty of creating a culture of the scholarship of teaching. We believe that creating a culture of three forms of inquiry has the potential to engage all teaching staff in reflective teaching practice. Furthermore, if pedagogical inquiry occurs in the appropriate manner, then staff will be able to choose to use technologies in a manner commensurate with making teaching and learning 'better'.

Key Words:

Teaching, technology, elearning, scholarship, scholarly, reflection, professional, development, teacher, training, development.

2.   Introduction

This paper is a reflective and research informed piece of writing by the Director of a Learning Technology Unit (LTU) responsible for meeting the flexible and distance learning needs of the Faculty of Medical and Health Sciences (FMHS), the largest faculty at Auckland University. This paper is being written at a time when the LTU Director has been charged by the Associate Dean of Education with increasing staff capability for teaching in a pedagogically principled way with technologies. The purpose of the paper is to set out the actions that we consider necessary to achieve this aim whilst considering the anticipated challenges. Since choosing to teach appropriately with technologies follows – or should follow – from the more fundamental fact of inquiring into teaching practice in order to determine appropriate pedagogical strategies to meet learners' needs (Laurillard, 2008; Salmon, 2005; Torrisi-Steele, 2002), we suggest that we need to create an institutional culture that supports and rewards three forms pedagogical inquiry: the scholarship of teaching; scholarly teaching; and reflective practice. This initiative has the potential to overcome three staff development challenges; the first is the lack of formal training provided for teachers in higher education; the second is staff resistance to the training that is offered; and the third is the difficulty of engaging lecturers in the scholarship of teaching.

3.   Teaching and Learning

Brief History

We have deliberately used the phrase, 'teaching in a pedagogically principled way with technologies'. The reason for this is to make it clear that the use of technologies for teaching does not in and of itself necessarily lead to better teaching (Torrisi-Steele, 2002) as reflection on teaching practice is required in order to employ technologies in an appropriate manner. The history of elearning makes it clear that this reflection has not always occurred. Despite a lot of years and a lot of institutional investment in elearning we are still struggling with engaging the majority of academics and students with technologies for teaching and learning (Joint Information Systems Committee, 2003; Salmon, 2005; Steel, 2007) whilst finding ourselves in a situation in which staff are opting to make use of the Learning Management System (LMS) or Virtual Learning Environment (VLE) as little more than a file repository (Conole, De Laat, Dillon, & Darby, 2006; Edwards, Watson, Farrell, & Nash, 2007; Salmon, 2005; Sheely, 2006; Torrisi-Steele, 2002; Zemsky & Massy, 2004; Zhang & Nunamaker, 2003). This is occurring despite the fact that the LMS has at least a ten year history within our institutes of higher education (Sheridan, Gardner, & White, 2002). One reason for the pedagogically poor use of the LMS/VLE is that the traditional transmission mode of teaching has not changed with the result that the LMS/VLE has been used simply as a means of transmitting information to students (Sheely, 2006). However, there is no inherent reason why the LMS/VLE had to be used in this manner. It is perfectly possible to create innovative and pedagogically sound learning designs to be implemented within these environments (Katz, 2003). We can only conclude that in a significant number of cases the potential of the LMS/VLE has not been realised because teachers did not reflect on their approach to teaching and learning (Torrisi-Steele, 2002). Whilst this situation is currently changing to some degree with an emphasis in the literature on constructivist and student centred approaches to teaching (Blake, 2006; McLoughlin & Lee, 2007; Salmon, 2005; Sun & Williams, 2004; Torrisi-Steele, 2002), we have to note that constructivist and student centred approaches to teaching with technologies have been discussed since at least the early 1990's (Bednar, Cunningham, Duffy, & Perry, 1992; Jonassen, Davidson, Mauri Collins, Campbell, & Haag, 1995; Mergel, 1998). We have known the theory for a long time but teaching practice has not changed.

Organisational Change

The introduction of new technologies for teaching and learning involves organisational change and there are multiple factors – missions, strategic aims, markets, competition, academic tradition, lecturer beliefs – that all have a bearing on the success or otherwise of the change process (Asmar, 2002a; Bates, 2000; Katz, 2003; Salmon, 2005; Salmon, Jones, & Armellini, 2008; Steel, 2007). However, at the more fundamental level of what academics do each day, lecturers cite lack of time and lack of incentives as two of the main reasons for not engaging with new technologies for teaching and learning (Bowden, 2007; Joint Information Systems Committee, 2003; Salmon, 2005; Sheridan et al., 2002; Steel, 2007). Additionally, lecturers resist staff development initiatives including workshops (Kreber, 2001; Steel, 2007). It is salutary to note that ten years ago lack of incentives and lack of reward – rather than shortcomings

with the technology platforms – were cited as two of the reasons why the first computer based training or computer assisted learning systems disappeared (Sheridan et al., 2002). This situation has not changed. A staff elearning survey (n=189) conducted at the FMHS in 2008 (Learning Technology Unit, 2008) showed that lack of incentives together with lack of time are the two main reasons for lecturers' failure to engage with technologies for teaching and learning. We have also experienced staff resistance to professional development opportunities. For example, the LTU delivered a series of staff development workshops for three Web 2.0 tools – Blogs, Wikis and Social Bookmarking – in order to provide staff from across the university with an opportunity to learn about a range of freely accessible technologies to enhance their teaching practice. The workshops were delivered by LTU staff at the University's Centre for Academic Development (CAD) which is centrally located and promotes its staff development programme throughout the University. The first workshop was delivered in June 2008, the second in September 2008, and the third in November 2008. The current format of the workshop can be viewed on the workshop wiki at htttp://www.virtuallythere.wikisispaces.com. Numbers enrolling for these workshops were extremely low (n=25 for all three workshops) even though the workshops were advertised throughout the university.

The third issue for reflective teaching practice is the fact that it is not unusual that lecturers in higher education have no formal training (Nunes & McPherson, 2003). Any deviation from the lecture format is considered as an innovation (Kember, 2003) and whilst not all lecturing is bad, there is certainly bad lecturing (UC Berkeley Division of Undergraduate Education, 2008; University Centre for Teaching and Learning, 2008). The situation with respect to formal training for teachers in higher education may be changing in some countries. In the U.K. for example the Dearing Report led to a growth in credit courses for teachers in higher education (Kember, 2003) and in Australia the Department of Education, Science and Training (DEST) report on the provision of professional development opportunities for university teaching in Australia recommended that the minimum standard required for professional practice as a university teacher should be that represented by the Graduate Certificate level (Dearn, Fraser, & Ryan, 2002). However, in New Zealand there is no formal requirement for teachers in higher education to gain a qualification. We therefore find ourselves in a position in which we wish to increase staff capability for teaching with technologies in a pedagogically principled way whilst being aware that lecturers resist professional development programs, lack the time and the incentives to engage with new technologies for teaching and often lack formal training in teaching with there being no requirement to gain an educational qualification. Whilst it has been suggested that we need to find innovative solutions to the problem of lecturer engagement with new technologies in order to overcome these issues – the use of 5 minute YouTube style teaching videos for example (Steel, 2007) – it is our view that reflective teaching practice remains essential for the successful use of technologies for teaching and learning (Morice, 2002; Salmon, 2005; Torrisi-Steele, 2002). Reflective teaching practice is more than a five-minute affair.

The Tension

If we are to succeed in engaging teachers in reflective practice, we need to have some understanding of just why it is that lecturers lack the time and the incentives to engage with technologies for teaching and learning. Whilst we recognise the need for further research into how lecturers' beliefs effect their attitude towards engaging with new technologies (Steel, 2007), five years experience of working with lecturers together with findings elsewhere would suggest that a core issue with respect to lecturers' time and incentives is the fact that subject discipline research takes precedence for lecturers (Asmar, 2002a, 2002b; Bowden, 2007; Nunes & McPherson, 2003; Reeves, 2002; Salmon, 2005). This fact has to be taken seriously when formulating a plan to increase staff capability for teaching and learning with technologies. Subject discipline research is a key driver for lecturers and although lecturers might choose to research in the field if ICT in education (Salmon, 2005) in order to supplement their research portfolio with educational research (Reeves, Herrington, & Oliver, 2005), we see little indication that lecturers within our Faculty wish to do this. We find ourselves in agreement with Richlin who writes that "the sad truth is that many departments and institutions do not count pedagogical scholarship as part of the faculty member's scholarly production" (Richlin, 2001, p. 61) with the result that discipline scholars question why they should also be obliged to publish in the scholarship of teaching (Bowden, 2007, p. 16). Those who do determine to publish in the area of educational research take something of a risk (Bowden, 2007). Our judgment is that this is true for the University of Auckland with the nature of our research assessment exercise militating against supplementing a research portfolio with educational research as the research exercise seems to call for a substantive body of knowledge in a single discipline subject area.

Whilst subject discipline scholars may not wish to engage in educational research, our promotion criteria make it clear that career advancement can occur through teaching that is informed by educational research and that leads to educational research. Lecturers seeking promotion on the basis of their teaching are required to evidence engagement with the scholarship of teaching including but not limited to "the introduction of improved teaching methods, design of experiments or learning programs" together with "regular contribution to journals of standing in teaching and curriculum and/or articles on teaching in journals of standing in the discipline area of the applicant." The reality is, however, that the number of academics seeking to advance their career on the basis of teaching is limited. Discussion between academics in educational research positions within the Faculty led to the conclusion that career advancement through the scholarship of teaching would, for the most part, be an aim for those in educational research positions with, perhaps, a minority of other academics choosing this route. We recognise that the case may differ in other countries. The U.S. for example has a greater number of teaching colleges in which discipline research does not take precedence (Bowden, 2007). However, in our context, "The lack of formal training for faculty on teaching and learning and faculty's resistance to such learning remains an unresolved issue" (Kreber, 2001, p. 79) and, "it remains unclear how to build the scholarship of teaching into graduate education" (Kreber, 2001, p. 79).

4.   Introducing Change

Education at Stake

Thomas Reeves writes that, "Motivating academic staff to engage in the scholarship of teaching won't be easy on most campuses, especially those where the pressure to "publish or perish" in traditional disciplines is great or where teaching loads are so heavy that insufficient time is available for any forms of scholarship, but this is a challenge that we as tertiary staff will ignore at our peril. Nothing less than what it means to have a "higher education" in the 21st Century is at stake" (Reeves, 2002). However, new initiatives have to be considered in the context of particular institutions (Salmon, 2005) and it is our perception that the nature of our institutional context – in particular the emphasis on discipline research – militates against an initiative to improve teaching and learning based solely on engaging staff in the scholarship of teaching. This is not to say that initiatives based on promoting the scholarship of teaching cannot work. Asmar's account of work at the University of Sydney demonstrates how the scholarship of teaching can be promoted within a research intensive university environment (Asmar, 2002a) with positive results (Asmar, 2004). However, this initiative was backed by new senior appointments; a significant amount of funding that rewarded the scholarship of teaching, by changes to the promotion criteria that led to a significant increase in advancement based on teaching performance and by mandatory staff development programs.

We suggest the need for three forms of reflective teaching practice in order that we might over time and with effort engage all staff in reflective practice in order to improve the quality of teaching and learning (Salmon, 2005). Engaging staff in reflective teaching practice will lead some staff to consider the use of technologies for teaching and learning so that we might realize our aim of increasing staff capability for teaching with technologies in a pedagogically principled manner. The three forms of reflective practice are: the scholarship of teaching, scholarly teaching and reflective inquiry. It has been said that the distinction between scholarly teaching and the scholarship of teaching has not been made despite a decade of research (Bowden, 2007) with academics understanding the scholarship of teaching in multiple ways (Kreber, 2001; Richlin, 2001; Trigwell, Martin, Benjamin, & Prosser, 2000). However, having surveyed the literature we believe that a clear distinction between scholarly teaching and the scholarship of teaching can be made. We also believe that the field of reflective inquiry can be clearly distinguished from the scholarship of teaching and from scholarly teaching.

Three Forms of Inquiry

Scholarly Teaching

Since scholarly teaching is a necessary condition of engaging in the scholarship of teaching (Richlin, 2001; Theall & Centra, 2001) we are going to consider scholarly teaching in the first instance. "Scholarly teaching is teaching that is well grounded in the sources and resources appropriate to the field. It reflects a thoughtful selection and integration of ideas and examples, and well-designed strategies of course design, development, transmission, interaction and assessment" (Shulman, 2000, p. 50). Scholarly teaching focuses on the act of teaching and on student learning. The aim of

scholarly teaching is to improve teaching and learning and the scholarly process involves inquiry into teaching practice, engagement with the relevant literature, reflection on one's teaching practice, the implementation of changes to teaching practice and the public dissemination of the results of one's scholarly approach to teaching amongst one's peers (Richlin, 2001; Shulman, 2000). A public account of scholarly teaching might take many forms: an informal lunchtime seminar; sharing one's findings with selected colleagues; or publishing an electronic portfolio with respect to one's enquiry into one's teaching practice. These are local forms of dissemination (Trigwell et al., 2000).

The research methodology appropriate for scholarly teaching would seem to be action research. Action research is characterised by a narrow focus on a particular course with the relatively minor aim of description or improvement or evaluating its effectiveness (Kember, 2003; Laurillard, 2008; Reeves, 2000). The aim of action research is to measure improvement in the targeted outcome and based on that measurement to come to the reasonable conclusion that the outcome was effective (Kember, 2003, p. 97). Whilst some have questioned whether action research really is research, action research, "can be regarded as a legitimate form of research provided reports of it are shared with wider audiences who may themselves choose to draw inferences from these reports in a sense similar to reports of interpretivist research" (Reeves, 2000, p. 7). As an example of action research, we might reflect on student needs and determine that our students would benefit from greater exposure to the perspective of others. Our strategy might be to introduce a collaborative learning exercise requiring an element of peer critique. On the grounds that students need flexibility with respect to where and when they study the collaborative exercise could be posted on a Wiki. Students would be assessed against a rubric that measured the number of their contributions to the Wiki together with the quality of those postings. Additionally, students could be evaluated at the end of the course to determine their attitudes toward group-based learning and their perception of the value of engaging with others in order to be provided with multiple perspectives on a particular problem. Students might also be evaluated in terms of what they learned from their peers as they progressed through the course. Finally, teachers might be interviewed concerning their perception of the group-based exercises. Using multiple methods of evaluation allows us to form particular conclusions that can be considered to be reasonable (Kember, 2003, p. 97).

Scholarship of Teaching

The scholarship of teaching requires scholarly teaching (Shulman, 2000) but goes beyond the former as it necessarily includes research of the sort that leads to the presentation of peer reviewed conference papers and the publication of research on teaching and learning in peer reviewed journals (Richlin, 2001; Shulman, 2000; Theall & Centra, 2001; Trigwell et al., 2000). We have already noted the lack of consensus with respect to the meaning of the term 'scholarship of teaching' and there will undoubtedly be those who disagree with defining the scholarship of teaching in this way. However, if one looks up the definition of a scholar in a dictionary one finds the following terms associated with the word: erudite; profound; learned; mastery; high literary or scientific attainment. The scholar is a person who has a particular status in the eyes of the

academic community with this status having been earned through sustained research in a particular subject area – in this case, education – with the research leading to "mastery" and "attainment" evidenced by research outputs at conferences and in peer reviewed journals. Thus, Richlin writes that, "the scholarship of teaching results in formal peer-reviewed communication in the appropriate media or venue, which then becomes part of the knowledge base of teaching and learning in higher education" (Richlin, 2001, p. 58). Whether or not there is agreement concerning this definition we can acknowledge that there are two distinct sorts of activities – the informed improvement of teaching practice and the informed improvement of teaching practice together with the publication of educational research – and conceptual clarity is achieved by applying the term 'scholarly teaching to the former' and 'the scholarship of teaching' to the latter. This is a pragmatic and productive choice and considerably more useful – in terms of instituting change – than spending inordinate amounts of time in debate over the meaning of words.

The research method appropriate for the scholarship of teaching would seem to be design research. Whilst championed by a number of scholars, Thomas Reeves is perhaps one of most well known advocates of this form of research (Reeves, 2000; Reeves et al., 2005) with Herrington providing a model of the research methodology put into practice (Herrington, Oliver, & Reeves, 2002). Design research differs from action research in terms of its complexity and its goals. There are six tenets to design research: design research should focus on broad-based, complex problems critical to higher education rather than one off isolated studies of a particular intervention; design research should integrate known and hypothetical design principles with technological affordances to render plausible solutions to the identified complex problem; design research should involve rigorous and reflective inquiry to test and refine innovative learning environments as well as to reveal new design principles; there must be long-term engagement involving continual refinement of protocols and questions (typically three to five years); the fifth principle asks for collaboration among researchers and practitioners, and learning communities (academics working with instructional designers and developers); finally there must be a commitment to theory construction and explanation while solving real-world problems. Those interested in design research can consider this approach to improving teaching through looking at research in the area that is solidly grounded in teaching practice (Blake & Doherty, 2008; Doherty & Blake, 2007).

Reflective Inquiry

Reflective inquiry – like scholarly teaching and the scholarship of teaching – is a term that is used in a variety of ways in the literature; it can, for example, simply mean thinking about something or it can refer to a specific form of practice with associated actions (Loughran, 2002, p. 33). In Dewey's work we read that reflective thinking is constituted by, "turning a subject over in one's mind and giving it serious and consecutive consideration. It enables us to act in a deliberate and intentional fashion" (Dewey, 1933). Reflection can, therefore be understood as "learning through questioning to lead to a development of understanding" (Loughran, 2002, p. 134) or as critical reflection on "passionately held ideas and assumptions about your teaching" (Center for Support of Teaching and Learning, 2008). This questioning is prompted by

something that is common to all reflection; the centrality of a problem in a practice setting (Center for Support of Teaching and Learning, 2008; Loughran, 2002). We would, therefore, distinguish reflective practice from scholarly teaching and the scholarship of teaching in terms reflection in practice and on practice. For example, "reflective practice involves thinking about and learning from your own practice and from the practices of others so as to gain new perspectives on the dilemmas and contradictions inherent in your educational situation, improve judgment, and increase the probability of taking informed action when situations are complex, unique and uncertain. With ongoing reflection, your practice can develop into a systematic inquiry that begins alone with reflection on your own teaching and learning experiences but becomes collective when informed by your interaction with colleagues, students, and theoretical literature" (Center for Support of Teaching and Learning, 2008).

Faculty can engage in reflective practice in a number of ways: through case discussions in which a number of faculty come together to discuss and explore their teaching (Kilpatrick, Hart, Najee-Ullah, & Mitchem, 1997, p. 1226); through creating teaching portfolios in which faculty keep a record of their teaching and reflect on their teaching over time; through dialogue with other faculty (Center for Support of Teaching and Learning, 2008); through peer mentoring in which faculty work in pairs to reflect on their respective teaching practices (Kilpatrick et al., 1997, p. 1226); through writing case anecdotes in which an individual creates a personal account of a fictional teaching situation from his/her perspective "as central figure in a way that creates a sense of understanding of the given situation" (Loughran, 2002, p. 36); through inviting a peer into the classroom to observe one's teaching; through keeping a teaching journal (Loughran, 2002, p. 39); through having student observers – appropriately trained – sitting in on their classes to provide feedback on teaching performance (Hutchings, 2005); through dialogue with one's students (Center for Support of Teaching and Learning, 2008); through dialogue with teacher educators in a post practicum setting; and through direct reflection on teaching experience (Loughran, 2002, pp. 38-39). Finally, we are not devaluing reflective practice as a means of improving teaching practice; reflecting on one's teaching – particularly on the basis of one's own experience – can and does lead to improved teaching performance (Loughran, 2002, p. 36).

5.   Teaching ePortfolio

Making Education Better

If we are to be successful in promoting reflective teaching practice then we need to articulate an overall vision of what it is that we are hoping to achieve. This has been perceived as one of the necessary conditions for effecting institutional change (Kotter, 1995). This vision might be conceived of in terms of making education 'better' (Reeves et al., 2005) by innovating in teaching practice and by enhancing the quality of teaching (Torrisi-Steele, 2002). Making education 'better' or 'innovating and enhancing' in education starts with a teaching and learning challenge and is followed by developing a teaching strategy to meet that challenge (Torrisi-Steele, 2002). The focus is not on improving learning outcomes since the change in teaching practice will result in revisions to the desired learning outcomes. The focus is, rather, on improving the educational experience. As an example, in the case of technologies for teaching and

learning, we are not thinking in terms of promoting the use of technologies on the grounds that the introduction of technologies will – even when appropriately introduced – lead to an improvement in learning outcomes. There has been a long history of media comparison research in an attempt to demonstrate improved learning outcomes (Reeves, 2002) despite a very early recognition that such studies were extremely dubious from a methodological point of view (Clark, 1983). Rather we would start with a teaching challenge such as offering greater flexibility concerning where and when students study or graduating students with strong information literacy skills or strong information technology skills. A strategy to meet this challenge might take the form of using the LMS/VLE or a Wiki or a Blog to offer students choice concerning where and when they learn; it might take the form of introducing case based or problem based learning in an online environment in order to provide students with more authentic learning tasks and activities; it may take the form of providing online resources – links to library tutorials, online peer reviewed discussions – to improve students information literacy skills; it might take the form of providing clinical skills simulations in order to reduce the anxiety levels of medical students beginning their internships; or, as a final example, making education better may involve connecting students with practicing professionals in their particular subject discipline in order to provide the students with an authoritative source of knowledge and understanding. In each of these cases technology has only the potential to make learning better; the important point concerns how the particular technology is used (Torrisi-Steele, 2002).

Vehicle for Change

Our current perception is that promoting the three forms of inquiry in order to create a reflective teaching culture will help us to address the issues of lack of formal training for teachers in higher education, staff resistance to workshops and the lack of time and lack of incentives for staff to engage with technologies for teaching and learning. Our optimism rests on a new initiative within the Faculty. At the time of writing we are involved in a Faculty project – with a guiding coalition (Kotter, 1995) that includes the Associate Dean Education, the Director of the Center for Medical and Health Sciences and Education and members of the Faculty Staffing Committee – to institute a teaching ePortfolio that will be directly linked to the processes for staff promotion, staff continuation (formal review of academic position after five years carried out by the staffing committee) and annual performance reviews (annual review of teaching, research and service performance carried out by 'line manager'). The logic of introducing a teaching ePortfolio is very simple. As with other institutions, policy dictates that all teachers are accountable for their teaching practice (Shulman, 2000). The minimum requirement for promotion is that all teachers evidence satisfactory performance in their teaching. This would involve showing at least a degree of reflective practice. Those wishing to gain promotion on the basis of their teaching have to evidence activities of the sort outlined above. This involves both scholarly teaching and the scholarship of teaching. At the moment there is no standard format within the Faculty for submitting evidence related to teaching practice for promotion purposes. We hope that by introducing a standard portfolio format endorsed by the Staffing Committee we will take the first step in the change process by creating a sense of urgency (Kotter, 1995). This urgency will come from a top down approach that creates an understanding

that the Staffing Committee has endorsed the ePortfolio reporting format and that it expects teachers to submit an ePortfolio report for the promotion process. Whether or not we can get this sort of endorsement from the staffing committee remains to be seen.

We are aware that a purely top down approach to instituting an ePortfolio is unlikely to work because we will need to get "buy in" at a grass roots level (Lorenzo & Ittelson, 2005). With this in mind we have re-written the University's guidelines for promotion in order to make the criteria more transparent. In this way we have addressed the issue of changing systems that might undermine the new initiative (Kotter, 1995) whilst also putting in place an initiative that will help staff who are applying for promotion. As we have greatly simplified the criteria we anticipate that this will help us to get the "buy in" that we need from lecturers. Additionally we are working with software developers at the University's Centre for Academic Development (CAD) to create an ePortfolio environment that will allow lecturers to maintain an ongoing teaching record from which they will be able to generate reports for continuation, annual performance reviews and promotion. We have taken this development direction after reviewing examples of portfolios at other universities (The University of British Columbia, 2008; The University of Edinburgh Centre for Teaching and Learning Assessment, 2008; The University of Queensland, 2008; University of New South Wales, 2006) and after looking at the various portfolio formats, both electronic and otherwise (The University of British Columbia, 2007, 2008). It is hoped that a system that allows lecturers to maintain their teaching record whilst also allowing them to quickly and easily produce the reports that they require will encourage "buy in" on the part of lecturers. A key factor here will be the usability of the system and with this in mind we will be engaging in user testing with teachers in the second quarter of 2009 once we have developed a prototype. It is hoped that these users will turn into early adopters in order to create short term wins and to build credibility for what we are doing in the hope that we will eventually institutionalise the new approach (Kotter, 1995).

The initiatives outlined in the previous two paragraphs are concerned with change management and the "mechanics" of the ePortfolio. However, the fundamental aim of instituting an ePortfolio is to improve the quality of teaching and learning through instituting a culture of reflective practice. It is our perception that two necessary steps that need to be taken if we are to achieve this. The first is to provide a set of guidelines concerning what constitutes good teaching. The University of New South Wales provides an excellent example of a set of teaching and learning guidelines that are linked with a "toolkit" to allow lectures to maintain a record of their reflective teaching practice (University of New South Wales, 2006). The sixteen guidelines – developed after an extensive review of the literature in teaching and learning – are very straightforward and include, for example, "Effective learning is supported when students are actively engaged in the learning process" and "Effective learning is supported by a climate of inquiry where students feel appropriately challenged and activities are linked to research and scholarship" (University of New South Wales, 2004). Another set of potential guidelines is to be found in Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987). These are similarly based in an extensive review of the teaching and learning literature and have been widely implemented in the U.S. (Gamson, 1995) and elsewhere (Torrisi-Steele,

2002). Guidelines such as these provide an understanding of what is expected and a vision of what might be.

In order to institute the guidelines staff must be provided with the resources to help them realise the principles for good teaching practice provided in the guidelines. At the time of writing we are developing an online professional development program for teachers. Teachers will be provided with a range of online resources together with the opportunity to take part in face-to-face workshop sessions thereby removing another obstacle to change (Kotter, 1995) through providing flexible access to staff development opportunities. This is particularly important in a medical and health science's environment in which teachers often have clinical responsibilities that make it difficult for them to commit to workshops delivered at a proscribed time. The professional development program includes modules that will focus on topics such as curriculum planning, course planning, teaching with technologies and assessment methods. Teachers who reflect on the teaching practice – as a result of considering the reporting requirements – and find that they have a particular professional development need will be able to access the online resources and/or attend a face-to-face workshop. The work that they do – either through online resources or at the workshop – will be entered into their teaching portfolio as evidence of engagement in reflective teaching practice in order to improve their teaching.

6.   Considerations

There may be a perception that we are taking the sledgehammer of reflective teaching practice in order to crack the nut of increasing staff capability for teaching with technologies in a pedagogically principled manner. However, five years of practical experience as Director of the Learning Technology Unit together with a history of research has made it abundantly clear that reflective teaching practice is a necessary condition of employing technologies appropriately in teaching. The academics that have worked with us have done so because they were looking for a solution to a teaching challenge. If we can encourage a culture of reflective practice then we have – potentially at least – the means for engaging far more staff in the use of technologies for teaching and learning. In this way we might increase capacity within the Faculty for teaching with technologies (Horton, 2002; Ogiogio, 2005). It may be that in some cases we advise academics that they do not need technologies in order to realise their aims (Torrisi-Steele, 2002). We can be certain, however, that in a lot of cases technologies will help the academics to realise their teaching goals.

There is a need for research to determine whether we are successful in our aims with the ePortfolio project and in order to share our experiences with others so that they might learn from what we have done (Salmon, 2005). There is a certain irony here. Universities promote academics on the basis of the traditional triad of teaching, research and service. Effective practices in management do not seem to have found a place in the university promotion system for academics. Our annual academic performance review, for example, requires that we fill in a form with pre-defined fields for teaching, research and service. Whilst we might complete an additional review process for management activities it is far from evident that this review has any place in the promotion processes. With respect to research, we might write peer reviewed

conference papers or peer reviewed journal articles on the initiatives outlined in this paper but such research does not fall easily into our defined subject area of educational research. Whilst self-interest would militate against spending the time writing up formal research in this area, the fact is that thinking through projects such as these is an essential part of the planning and management process and of potential value for others in similar situations.

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