ABSTRACT
This paper describes the rationale for and approach to research that is investigating the context, use and effects of a new teaching and learning online environment on the pedagogical practices of academics in a Faculty of Education in a traditional university setting. The use of online communication software is not new to the university. There is a history of use of a different suite of online communication software, but a new set of ‘tools’ was imposed in a top down model. Associated with this imposition was a requirement that all units in all courses make use of this software at least at a most basic level.

Introduction

Duncan (2003) argues that “Technology does not teach students: effective teachers do”. Even though most educators would agree with this statement, world wide universities are turning to online teaching and learning using arguments such as the need to provide flexible learning opportunities to an ever widening student body. Flexible learning means that students can be educated in their own homes in their own time at their own pace. But it is also argued that popular discourses surrounding the use of computer-based technologies in education promote an input-output approach (Lynch, 2003) within which the user is seen as a passive recipient.

As a result of her research Lynch (2003) argues that many of the initiatives implemented by universities in response to funding cuts and the increasing demand for accountability and quality have been seen by academics as challenges to traditions of collegiality, institutional autonomy and academic freedom. Her subjects ‘perceived a challenge to academic freedom and removal of academics’ control over their teaching work.’ This type of change to the working environment may create challenges for many academics. This perception may be compounded when universities impose new technologies into the mix.

Globalisation and the University

Globalisation is political, technological, cultural and economic. It has been influenced particularly by developments in systems of communication dating back to the 1960s that have enabled a flow of finance and capital and communications that has no earlier parallel (Giddens, 1999). Globalisation also transforms our daily life through its influence on mobility and migration (Cope & M., 1999), family structures and gender roles, communication and entertainment.

Delanty (2001) draws from the current debates in social theory about the changing nature of knowledge. The view of the university as a key institution of modernity and
as the site where knowledge, culture and society interconnect argues against the
notion of the demise of the university. In the knowledge society of today a new
identity for the university is emerging based on communication and new conceptions
of citizenship. He assesses the question of the crisis of the university with respect to
issues such as globalisation, the information age, the nation state, academic
capitalism, cultural politics and changing relationships between research and teaching.

Delanty claims that globalisation has released universities from the constraints of the
nation state but that universities have consequently adopted the corporate culture of
industry. 'Globalisation has pushed universities in the direction of the market'
(Delanty, 2001). Reich says that 'one of the central concerns of government is with
making higher education service the needs of the world’ (in Delanty, 2001). The
pressure on universities to increasingly generate more revenue and increasingly
provide more student places puts them in a situation where they have to serve more
than one master. Current changes to the Higher Education funding model in Australia
are placing universities in a difficult situation. By linking with industry at the same
time as responding to government and community pressures, universities are being
forced into the global economy.

So university administrations are under pressure in the globalised context. What is the
solution? Brabazon (2002) argues that 'For the past five years, money has been
poured into online teaching, as a solution’. Many Australian universities are currently
pursuing this option. It is justified, not in terms of reducing costs, but in terms of the
need for students to be technologically literate in an era of high technology use in
industry and by the community in general. To this end the university requires all
courses to include at least one fully online unit for all on-campus students. Some
describe the experience of online learning as flexible learning. For students who are
living and working in times or places that make face to face on campus teaching
difficult to impossible online learning may be part of the solution but only if the
learning experience is positive, if it meets their needs and/or overcomes other
difficulties.

Universities are attempting to build and use new Information and Communication
Technologies to sit alongside, complement and in some cases, replace established
means of delivering, organizing and managing higher education. Cornford and Pollard
(2003) describe their concerns about the ‘placeless’ institution where online learning
takes place. I would add faceless to this description of the online learning experience.
Augé’s also talks about the concept of non-places (Augé, 1995) when he describes
how the ‘frequentation of non-places today provides an experience – without real
historical precedent – of solitary individuality combined with non-human mediation
(all it takes is a notice or screen) between the individual and the public authority’
(Augé, 1995). This abstraction of places, people and things can cause dislocation of
the identity of the academic and affect their confidence in their role as there is a shift
in the power and the relationships of academics within the faculty and the university.

For many academics and students the experience of online learning may not live up to
expectations. This 'faceless and placeless' form of education alongside the issues of
dealing with technological actors may cause high levels of frustration (Wells, 2003b).
The lack of experience in the use of information and communication technologies in
general, and online teaching in particular, combined with a lack of opportunity to
research methods to combine their knowledge and beliefs about effective teaching and their pedagogical practice in the context of online teaching, means that many academics may be forced to teach in ways that are less effective than they might otherwise be.

When addressing the question ‘What does the recent application of information and communications technologies in higher education, and particularly the emergence of digital, online or virtual universities hold for the future shape of established campus-based universities?’ Cornford and Pollock (2003) argue that the transformative and increasingly popular view is that because of the possibility of new and different ways of producing, distributing and consuming higher education, these new ‘placeless’ institutions have the potential to reshape traditional university geographies as well as their methods, relationships and perhaps even the ‘ethos’. But they also recognize that the significance of these institutions ‘lies not so much in their real-world number or market share, but in the pressure they bring to bear on the mainstream higher education sector to adopt methods, strategies, technologies, and, perhaps the more commercial ethos of these virtual and typically corporate providers’ (Cornford J. & Pollock, 2003).

Universities are increasingly promoting online teaching and as previously mentioned it is justified in many ways including the flexibility it provides for students. Some may argue that the increase in online teaching and learning allows universities to exist in a political environment that provides continuously reducing funding to universities while responding to the unprecedented demand for student places. Bigum and Rowan argue that: The enthusiasm of Vice-Chancellors for flexibility in teaching and learning appears to derive from two sources: a perception that flexible delivery is more effective and efficient in terms of getting teaching resources to students and, secondly, that one form of flexible delivery, online teaching, offers possibilities for generating revenue from overseas fee-paying students’ (Bigum C. & Rowan L., 2003).

The restructuring of higher education has led to a new relationship between government and individual institutions. This changing relationship means that institutions are bound to centrally determined policy and funding guidelines by a variety of accountability mechanisms; at the same time they are given greater autonomy to determine their own priorities, raise money and fight for custom in the deregulated market place (Henry, 1999). In the Australian context the extensive range of government reviews and reports have placed pressure on universities leading to changes and consequent implications for academic work (Lynch, 2003). It is within this context that we can view the introduction of this new online learning environment by the university.

The use of online communication software is not new to the university that is the focus of the research. There is a history of use of a different suite of online communication software as well as the use of web pages to deliver content. A number of academics have been highly energetic and committed to the use of new technologies in their teaching for some years. But the new online learning environment (the platform), which includes communication software as well as content delivery mechanisms has recently been imposed systemically in a top down model. Associated with this imposition was a requirement that all units, in all courses,
make use of this software at least at a most basic level. The introduction of this new suite of software to manage, support and promote the use of online technologies in the teaching and learning process provides an opportunity to identify and analyse staff attitudes and values regarding their pedagogical practices, their generalized experience of teaching, and the way the use of the new online communication technologies impacted on these attitudes, values and matched with or challenged their theories regarding effective teaching and learning.

Online Learning

What is online learning? Many terms are used in the discourses surrounding online learning: new technologies, flexible learning, information and communication technologies (ICTs), computer mediated communications (CCTs), courses for the web; and Internet teaching. It is argued that online learning provides students with more flexible study options, and the opportunity to work and study at the same time (Bell M. Bush D. Nicholson P. O'Brien D. & Tran T., 2002). It is also said that online education is celebrated for its flexibility – students can be educated in their own home, in their own time.

Brabazon explains the position of universities where 'For the last five years, money has been poured into online teaching, as a solution for overcrowded lecture theatres and laboratories. … The simplest solution to all these problems is to employ casual staff to write courses for the web. Students are removed from the campus, easing the strain on library resources and facilities' (Brabazon, 2002).

There has been a rapid expansion of online teaching and learning - over 10 million students worldwide now study online (Stephenson, 2001). However, in the rush to get online teachers, educators and developers often complain about the lack of solid theory underpinning the practice. There has also been an assumption that new technologies will improve the quality of teaching by achieving higher levels of learning, such as analysis, synthesis, problem solving and decision making. (Bates, 2000) Yet it is not clear how or even why new technologies can achieve something more quickly and at a higher level than that which education has been striving for over the last two centuries.

Bigum & Rowan who use the term ‘flexible learning’ say that ‘The term flexible is also increasingly used to imply an educational good’ (Bigum C. & Rowan L., 2003). This attitude is based in an assumption that students have more and perhaps better opportunities in which to learn. Attention needs to be paid to what these new forms of online (flexible) educational practice mean for teachers or for students. What sorts of pedagogies are best suited to this type of learning environment? This is where this research is focused.

The Research Problem and Methodology

The paper places a case study about online teaching and learning in the wider international context as well as looking at the impact on the immediate academic community. It will attempt to make visible the complex process of change and/or innovation as the new online environment is rolled out, and as we look at the
meanings, processes, actors (human and non-human) and practices involved in this experience and the implications for academics who are required to use it.

This study is placed in the context of invention and improvement of creative approaches to enhance human communication, learning and performance through the use of media and technology as it investigates the roll out of a new online communication system within a university environment. It looks at the response to this by the academic staff within the Faculty of Education within the university. To do this it will interrogate the pedagogical practices of staff and how these pedagogical practices interact with the pressure imposed on them to adopt the new communication technologies challenges their beliefs about effective teaching in a university given that many of the educational program taught by many of the academics are based firmly on a belief in the constructivist approach to teaching and learning. The research will attempt to interrogate how these academics respond to the new online environment and the managerial model that lies behind it. WebCT is the learning management system (LMS) which runs the new online environment sits. Data will be gathered through the use of surveys across the faculty and enriched by the use of interviews with a sample of academics. I will be a participant in this process while also conducting the research.

**The Case Study and Methodology**

The research methodology for this case study involves the collection of data by survey and conducting semi-structured interviews with academics well as diaries in which I will reflect on my role as a participant/researcher. I will use observations, descriptions and analyses of the incorporation of the new software platform and the impact of this experience on the pedagogical practices of the academic staff. I will also use semi-structured interviews that should enable me to gain in-depth and rich evidence about the experience of academics using the online environment.

Gillham (2000) argues that ‘the meticulous description of a case can have an impact greater than almost any other form of research report.’ Institutions’ directions and achievements or failure can be illuminated by a case study of the process of change, of decay or improvement. This research attempts to illuminate this process by using the lenses of Actor Network Theory (ANT), Bourdieus’s theory on cultural capital (Bourdieu, 1990) and the work of Mikhail Bakhtin in the analysis of the discourses associated with the new online environment (Bakhtin, 1986). In this way I intend to be ‘up close and personal’ to the everyday experience of the academics remembering that theories of themselves are never a sufficient guide to action and understanding (Voloshinov in Maclean, 1994).

This research is theorized in the context of globalisation and the information/knowledge society. It looks at theory and experience of ‘change’ and academics’ pedagogical practices and their views on effective teaching. It investigates the dynamics, implications and effects of imposing a set of technological actors on a set of human actors whose pedagogical practices may or may not be compatible with the imposed set of technological actors.
The faculty participants

Being an education faculty, the academics have a stake in, and well developed attitudes and values about, effective teaching and learning. The focus of their work is ‘education’ and ‘pedagogy’. So, do education faculty academics incorporate the new technologies for online learning into their pedagogical practices? Are their pedagogical practices strongly constructivist or social constructivist or are they committed to an alternative pedagogy? How does the use of the new online learning technologies impact on academics’ pedagogical practices? Does this systemically enforced change clash with academics’ pedagogical practices? Does it impact negatively or positively? If the affect is different for different members, why is this so? What aspects of the various actors, (teachers and technologies) lead to variation in response to change?

My role as a participant/researcher

The term participant/researcher can be taken to mean much the same as participant/observer but seems to me to be a more useful term that more clearly identifies the relationship between myself, as the researcher, and the other human actors in the research. I am currently an academic involved in similar processes as other participants. Gillham (2000) points out the need in case study research to start by collecting data with as open a mind as possible while remembering that we all carry a lot of conceptual baggage with us and that familiarity can blind us and close our minds. Familiarity is an issue here in terms of familiarity with computer technologies as well as familiarity of the workplace. It is important to acknowledge that I am intrigued by computers, computer ‘toys’, new computer software that allows users to do new things and the challenge of problem solving issues associated with computers. I could be called an 'early adopter' of educational technology although I acknowledge the pitfalls associated with this type of categorisation (Rowan & Bigum, 2003). It is nonetheless useful as a descriptor. I first started using computers in my teaching in 1987. I have been involved in the development and facilitation of online projects for schools since 1994 (Wells, 2003a).

Participant observation (even in the role of participant/researcher) enables an extended period of data collection while allowing the researcher to acknowledge and therefore avoid, at least to some degree, the imposition of the researcher’s frame of reference. While the participant/researcher may have a theoretical interest in the question of what concepts are important; how they are related and what is problematic must remain open and subject to on-going refinement (Jorgenson, 1989). Jorgensen argues that preliminary problem statements be formulated as questions that are reevaluated after a short period of observation. The key questions to be addressed in this research are as stated above.

One problem I may face as a participant/researcher is that while much of the discourse associated with the new online environment will be novel for many of the participants this may not always be the case for me as participant/researcher. It will be necessary to bear in mind the potential imposition of the researcher’s frame of reference in order to have meaningful discussions with colleagues that don’t add to the possible alienation experienced by participants who may be struggling with the new online environment for a variety of reasons.
As an example, for the first support session I provided for faculty academics I sent out an email to inform them of the opportunity to participate in a session about creating a ‘learning module’ in the online environment. I asked a number of those who did not reply in the affirmative why they were not going to attend. Some said they pretty well ignore emails. This was a surprise for me because email is my preferred means of communication. I also realized during the conversations that the language I had used in the emails may not have been easily understood by all since some of the language used was that of the new online environment that I had already taken on.

**Pedagogical practices and the online environment**

Loveless (2001) discusses various interpretations of pedagogy including ‘the science of the art of teaching’ (Gage, 1985) a ‘cultural practice’ (Giroux, 1997). Understandings of pedagogy have more recently been informed by the theoretical works of (Bruner, 1996) and observational approaches to describing classroom practice (Galton, 1999). Mortimer (1999) defines pedagogy as ‘any conscious activity by one person designed to enhance learning in another’. The concept of pedagogy is highly complex construct, influenced by the interaction of a range of factors for teachers and learners such as culture and beliefs, learning environments, subject and pedagogical knowledge, experience, student/teacher interactions. As part of this research academics are invited to discuss theories about effective pedagogical practices and theories about teaching and learning. The literature provides various ways to conceptualise attitudes towards teaching. This research intends to clarify the most appropriate ways to conceptualise teaching in a university environment that may be different to the ways that teaching has been conceptualised in the context of schools. The process of clarification will be informed as the following questions are asked of the data. Do the academics promote a constructivist view of teaching learning? Do they want to create learner centred learning environments (Walmsley, 2003). Are they similar to Brown’s (2000) descriptions of connectionist teachers whose beliefs and practices are based around both valuing students’ methods and teaching effective strategies based on pupils’ understanding, with an emphasis on establishing connections; or transmission teachers whose beliefs and practices are based around the primacy of teaching and a view of teaching as procedures which needed to be explained, taught and practised; or are they closer to discovery teachers whose beliefs and practices are based around the primacy of learning ... as being developed by students when they are ready, especially through the use of practical equipment. Do they want to develop autonomous learners? Do these academics believe their favoured approach works in a tertiary environment? Are their attitudes to pedagogy reflected in their teaching practice? How does the incorporation of the new online environment affect these academics’ articulated pedagogies? Does online teaching encourage a more transmission oriented approach? These are just a few of the questions that can be asked in conversations about pedagogy.

Burnett (2002) puts the case for new pedagogical approaches when he says that ‘Driven by a combination of new and old technologies as well as social and economic change, learning now takes place in so many different ways and venues, that we need a far more integrative and holistic approach to pedagogy’ (Burnett, 2002 p. 144) Will academics have to rethink their pedagogical practices?
The technologies of the online environment

The pedagogy of online teaching is still in its infancy. Many online courses have tried to translate a transmission model of book and lecture into many web pages that ‘deliver’ the materials which students have to then ‘use’ to learn. Not surprisingly many academics are sceptical about the success of such models. Others have used web pages and other similar technologies to supply learning materials and then supported this with online communications, often in the form of threaded conversations, to allow for student interaction. One unit I have taught in has very effectively used online discussions to initially allow introductions and responses to readings followed by project based group work that is facilitated by the students working wholly online.

It is often argued that pedagogy will not change substantially with the introduction of ICT but the role of teachers (and academics) may change as they take on the tasks of a manager, director, facilitator or course designer and even as change agents and state that 'technology doesn't change practice - people do' (Loveless & Ellis, 2001). Some issues in the relationship of pedagogy and the use of ICTs into the learning environment that need to be considered are the large investments in time and support for teachers that are critical to the adoption of constructivist pedagogies which in many cases accompany the incorporation of technology into teachers’ pedagogical repertoire. This is critical given that it is pedagogy that is most influential on learning, not technology (Reeves, 1998). Reeves refers to the need for long term, intensive research focused on the mission of improving teaching and learning through media and technology. He sees this research as being developmental in nature, in that it should be focused on the invention and improvement of creative approaches to enhance human communication, learning and performance through the use of media and technology. (Stephens, 2000) argues that an engagement with processes of communication is the essential foundation for building a positive relationship between technology and learning. New technologies in the form of instruments of communication are an integral ingredient in the new online environment.

Actor Network Theory and the online environment

Actor Network Theory (ANT) can be useful in researching the meeting of the new technologies, in the form of a new online learning environment in this case, and academics pedagogical practices. ANT allows consideration of all of the influences, agents, actors, factors that are at play in the experience of online teaching to more fully understand the complex interaction of these influences.

What this means is that alongside interviews with academics and other human actors, regarding their experiences in the new online environment, the role and effect and influence of inanimate objects can also be interrogated. ANT allows the researcher to constructs a more complex picture of the change process accounting both for the invisible ideology of academics beliefs about effective teaching which are part of their pedagogical practices, and the less visible aspects of this change process. At the heart of ANT lies the metaphor of the heterogeneous network which is made up of diverse, not simply human, materials. In this way the various visible and less visible actors in the change process an be investigated, and following Bruno Latour’s Aramis,
(1996) this can be done ‘creatively by literally giving voice to inanimate objects such as computers’.

The actors in this research may include the academics, the students, the WebCT platform, the hardware, the software that runs the systems, University IT support services personnel (various levels of expertise even within this group), Learning Services support staff, the computers the students use, all the various components that make up the huge range of computers the students use, the university network, the Internet Service Providers used by the students, the telephone network or broadband access used to connect to the university network from remote locations, the print based materials and the Education faculty administrative staff. The research will look at the ways these various actors interact and affect each other. Bourdieu’s Cultural Capital and the online environment

Lawley (1994) provides us with an example of how Bourdieu's theoretical framework can be used to analyse Computer Mediated Communications (CMCs – another term used in much the same way as ICTs). She uses the work of Poston et al. (1993) who describe Bourdieu's program as a study of the conditions of production of academic knowledge, technical expertise, and bureaucratic power in contemporary France. She then substitutes "cyberspace" for contemporary France in Bourdieu's theoretical model. The particular aspect of Bourdieu's work that can be used to interrogate academics and the new technologies is that of 'cultural capital'. This unique aspect of Bourdieu's theoretical model can also be described as cultural competence. Like economic capital, it conveys legitimacy, and a legitimacy regulated by institutions within the society. In the case of cultural capital, that legitimacy is regulated but by educational and artistic institutions.

Academics working in universities are accustomed to being 'experts' (at least to some degree) in their particular discipline; especially those who are highly qualified and have many years of experience. But when they are attempting to integrate new technologies they may find themselves in a much less powerful position. The 'cultural capital' they have developed as part of their knowledge, experience and qualifications may be threatened by their lack of skill, knowledge and expertise with new technologies. They are also hampered by a lack of comfort with the discourse associated with the new technologies.

As Henry points out ‘new technologies and new knowledge forms are both the bearers and result of globalization. Together, they have broken down some of the boundaries between teachers and students. Recognition within these knowledge forms of the power/knowledge relationship also potentially destabilizes some of the assumptions built into school curricula and pedagogy’ (Henry, 1999 p. 95). Henry is talking about these issues in relation to schools but it can be argued that these are equally valid points in relation to teaching in the context of a university.

According to Webb (2002), Bourdieu’s theoretical notions of habitus or cultural capital are technologies which are transformed, and need to be rethought, as they are applied. Bourdieu’s theories can be used as temporary constructs to provide evidence for, and demonstrate the specific properties of, social groups and practices. For Bourdieu, the extent to which agents can attain knowledge of, and negotiate, various fields is dependent on, and can be explained in terms of a ‘practical sense’ or a logic
of practice’ and ‘reflexive’ relation to cultural fields and one’s own practices within those fields (Webb et al., 2002). In this case study the academics ‘practical sense’ of their field is disrupted by the introduction of new technologies in the form of the new online environment and the associated discourse. Bourdieu uses the analogy of the sports person who has a ‘feel for the game. Having the feel for the game is .. to master in a practical way the future of the game, is to have a sense of the history of the game. While the bad player is off tempo, always too early or too late, the good player is the one who anticipates, who is ahead of the game (Bourdieu, in Webb et al., 2002). In this case many of the academics are playing in a new game in which they do not necessarily know the rules and are not always able to use the practical sense they are normally able to draw on in their work of being academic.

The Discourse of the online environment

It is expected that 'discourse' may be a major actor in academics' experience of the new online environment. To some degree they will have to come to terms with, and use the discourse that is associated with the new technologies and is used by the 'support' staff from the information technology and learning services sections of the university. I use 'support' in a very liberal manner here since academics sometimes find that the support provided is not always helpful. Discussions between academic and technical staff are often hampered by a lack of a shared language.

Maclean (1994) explains how, when people combine the elements of two discourses (academic/education and ICT in this case) in their speech, it is possible for them to look at events through the eyes of another. In this way a shared (although not necessarily harmonious) language gradually emerges enriched by the perspectives and ways of making meaning that the members of the group bring with them. For academics to develop skills and understandings in the new technologies associated with the new online environment and to be able to incorporate them successfully with their pedagogical practices they need in the first place to be able to develop command of the language to participate in conversations about the new technologies.

Conclusion

This research will interrogate the issues associated with academics’ pedagogical practices and their response to the new online learning environment. It will look at the experience of these phenomena globally to place the research in the wider international context as well as the current state of the immediate academic community in order to make visible the complex process of change and/or innovation as it takes place including the development and shaping of not simply artifacts but also of meanings, boundaries, processes, actors and practices.
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