Using the Internet to Enhance Teaching at The University of Waikato

A thesis

submitted in partial fulfilment

of the requirements for the degree

of

Master of Education

at

The University of Waikato

By

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The University of Waikato

2006

Abstract

The University of Waikato brought the Internet to New Zealand, was one of the first Universities in New Zealand to graduate students who had completed a bachelor's degree online, and recently won an award for innovative use of video software in an online classroom. The video software was created by a company that had its beginnings within the University. However, the use of the Internet for teaching and learning in the University has reached a plateau in the last few years, as measured by the daily page views of the online platform (Moodie, 2004), the number of courses taught online and staff teaching online remaining fairly constant. This thesis sets out to investigate why the use of online teaching at the University has not increased to a point where a majority of staff are using online teaching to at least supplement their classroom teaching.

Previous research into online teaching and learning focused heavily on technology barriers and lack of access to computers and the Internet. It is the position of the researcher that this lack of access is no longer a valid reason for academics not to use online environments for teaching and learning in a tertiary environment.

This study hypothesized that enhancing their teaching using online technologies may be related to the culture of different subjects, disciplines and Schools of study. Accordingly three groups of lecturers from different Schools within the University were invited to participate in focus group interviews. Questions asked were related to their approach to teaching in their subject areas, the culture of their Schools and the University, as well as their reflections on teaching online.

The study found that there was a strong relationship between the use of online technologies and subject areas as well as the culture that exists within the School of study. The influence of University management on the use of online technologies was also highlighted. But more surprising was the relationship between trained teachers in the University, and their uptake and use of online technologies.

To take advantage of the changing student population, with their greater awareness and use of computing and new technologies, the University of Waikato, and indeed many other similar institutions, are now at a technological and educational crossroad. Decisions need to be made by senior management regarding the importance of the Internet and emerging media technologies in shaping the teaching and learning environment of tomorrow's University.

Preface

To understand a researcher's biases and viewpoint, it is important to be aware of the parts of the journey that have helped to form them. Knowing the background story will inform the reader about where the researcher is coming from and help situate this research.

The story starts at primary and secondary School with mathematics, the subject I had the most success at and hence enjoyed more than other subjects. In my last two years at high School in Auckland, I tutored a number of students in maths and when a teacher suggested that I might apply for secondary teacher's college. As the deadline for submissions was closing in, I jumped at the opportunity as I had realised that teaching was what I wanted to do with my life.

Study, work and travel

I studied at Auckland University where I majored in mathematics and gained a Bachelor of Science degree, then followed this up with a Teaching Diploma from the Auckland College of Education. I started my career as a high school mathematics teacher at a rural high school in Taumarunui, in the King Country area of the North Island of New Zealand. I was a keen skier, which was a motivating factor in choosing the school where the ski fields of Mount Ruapehu were literally on my doorstep. After what I thought was two successful years teaching maths in the school, it was time for a change. I applied and was appointed to a one year relieving position back in Auckland at Aorere College in Mangere. I was moving from a rural to an urban high school in a low socio-economic area in South Auckland. I was unsure just what the school would be like but I was ready for a change with new school, students and teaching colleagues. I found myself on the outer in the

maths Department rather early on so I befriended staff in other Departments. I was interested to hear about their teaching experiences and had my eyes opened to different ways of thinking and teaching which, in turn, made me think about and reflect on my own teaching practice. Reflection has been an important part of teaching for me as I was always striving to improve my teaching from year to year, and then, later in my career, to help others improve their teaching skills. After marrying and then leaving New Zealand to travel, my wife and I spent just over three years around the world, which included over a year teaching in the inner city schools of London. We returned to New Zealand with the desire to try other challenges and gain more marketable skills. Our areas of expertise and experience were rather limiting at this stage in our careers if we wanted to pursue options other than teaching. We realised that gaining more skills would make us available for more employment opportunities in New Zealand and, in fact, anywhere in the world.

The beginnings of computers in New Zealand

Computers were starting to arrive on the business and home markets about this time and I was drawn into this area with the many new and different career opportunities that were starting to appear in the job market. I enrolled in and successfully completed a ten week computer programming course in the mid eighties and entered the computer industry as a programmer, then analyst programmer, and eventually into the role of training staff who used computers in their jobs. I started in the industry when computers were becoming more mainstream in businesses with staff beginning to use them as part of their normal job duties. I worked closely with a new breed of people called computer programmers who talked a different language than the people who had to use the programs they created. That has not changed over the years

and, if anything, their talk is more removed from everyday conversation than ever before. That was where I found my niche, initially, for the next five or so years. I still find myself doing this today, as an intermediary, or translator, between the programmers, often called geeks and the people who use computers, called users.

This position suited me as it combined my teaching expertise and computing skills in the corporate world. My job was a highly satisfying one as I talked to the users about their needs and conveyed this information to the programmers in their language. This resulted in suggestions by staff being implemented by programmers in the way that users wanted. The most important part of my job, then and now, is always satisfying the computer users' needs. To do this I had to understand and interpret their needs to the programmers. I was never a highly technical person but I have enough knowledge to convey to the programmers what the users wanted. I am far better at talking to the users of the computers than the technical staff as I am more attuned to what the users are saying.

I see myself foremost as a teacher who has been somewhat sidetracked over the years after I became involved with the introduction of computers. I enjoyed using computers as a user of computer programs but was never able to understand the logic of writing with any computer languages, except at a basic level. This did not stop me using sophisticated programs as a user though. It's a lot like music to me. I know what songs I like and can appreciate what has gone into the creation of the songs but I cannot play an instrument or sing as I am not a musician or singer. It does not stop me from listening to and appreciating music and learning how to use a computer to create music CD Roms. I am sometimes thought of as a 'techie' or a 'technical person' by users and called upon to fix computer problems. Because I can fix

the rudimentary things that can go wrong with computers I am sometimes labelled incorrectly as being technical and not thought of for my teaching skills. It is something that I have learnt to live with, but also regret at times.

Tertiary Teaching

After mastering my challenges in the computer industry, I looked for the next one. I had the opportunity to go back to formal teaching, but in the Tertiary Education sector this time, in a Polytechnic, and my first year saw me teaching students how to use the basic computer applications programmes that were available at the time. I attended an Apple Developer conference in San Jose, California, where I saw for the first time the power of the new media types of video, graphics, sound and animation used in computers in very exciting ways. I decided that this was a direction I wanted to move towards as it was very stimulating and was about mastering software programs rather than doing any computer programming, and that suited my abilities very well. I started teaching myself how to integrate these relatively new media types into interactive applications so I could teach my students how to do this too. I was a pioneer in the area of Multimedia in the polytechnic sector in New Zealand and created courses that were added to the national framework for computing certificates, diplomas, bachelor and masters degrees. I was pleased to be able to inspire students to create great things and as a result saw them get incredible jobs in the multimedia and Internet industries.

A move to another polytechnic saw me working and teaching in two different cities, over one hundred kilometres apart. I spent two days a week at the institution doing face to face teaching and the other three days working from home attending to preparation, marking and doing

the course administration that was required of me. The main difference between the two institutes was a more ingrained research culture in the new polytechnic as they were in the process of applying for University status. The culture change in polytechnics was brought about by offering bachelor and masters degrees and was not looked upon too fondly by staff who had been teaching in the sector for a while. The emphasis had mainly been on teaching and learning but change was coming and lecturers were beginning to research, present papers at conferences and publish articles, something that I already had experience at in my previous job, thanks to my head of Department.

Online Teaching and Learning

Due to the location difference between work and home, I saw a need to look into ways of making myself available to students when I was not at work. E-mail was available as a means of communication with students and all students and staff had an e-mail account at the institution. Due to the one to one nature of e-mail, it is an efficient way to send out information to a class of students but doesn't work so well as a communication tool with a class of students as e-mail can soon become difficult to manage and keep track of all the messages. As it was the only way to communicate electronically in those early days, an e-mail received from one student was sometimes replied to the whole class to eliminate repeats. My initial attempts at using computers for online teaching and learning was done as an experiment for a course to degree students I was teaching with two other colleagues called "Internet and Web Design". They were all studying for their bachelor of computing so most had computers at home and through a questionnaire we gave to the students we found that the majority had access to the Internet from outside the institution (Young, McSporran and Dewstow, 1999). So on this premise, I decided to look into using more than e-mail and put my

newly found web design skills to the test. I put some content with Internet examples and links onto my own Internet site, gave students the URL, the address to the home page of the site, and told them that they had access from home if they wanted. I also emphasised that it was not a compulsory component of the course but that the site was freely available to them to use as a resource. The response was overwhelming, with students coming to class having downloaded and printed out the notes, but more importantly they had not only attempted the exercises provided but were asking for the next week's work. The response at that time from those students would probably not have worked in other curriculum areas as access to computers and the Internet was in its infancy and most of the students I taught had access to the web site from off campus. Also, only a few staff were developing web pages at the time and most of them were based in Information Technology Departments. I should also point out that no other lecturers in the Department of computing made their lecture notes or any class materials available on the web at that stage and part of the reason was because they were living close by and came to work each day, so students had access to them more readily. With Internet access so pervasive now, access is no longer the barrier for students that it once was and does not stop any lecturer from using it to supplement their teaching.

I also realised that my early rough attempts at web design didn't faze the students, as they managed to navigate the site and find what they needed. I was also making an attempt to demonstrate to them what I was asking them to do. The International students that were taking the course were quite enthusiastic users of the web site as they could revise the material as often as they wanted, re-reading the text to comprehend my notes and thoughts as well as going through the examples to learn how to do things. There was also no noticeable drop off in attendance as

the on campus class was not just a repeat of the online material but more a problem solving and trouble shooting session rather than a content delivery session. We were able to focus more on the areas that students were having difficulty with in their attempts at web page design in the face to face sessions. I also found that there were difficulties with some of the more technical problem solving aspects of the course and things could be more easily solved in five minutes with the student than an hour online using e-mail. Also, the course was not about me solving their mistakes with their web page coding and not being there all the time made them try to find their own errors instead of relying on me.

I decided to add more to the site over time and added content from other computing subjects that I taught as well. Even though it meant more work initially, there were rewards over time for me in relation to preparation of course materials. Students were able to access material when they needed it. The information was there for the next semester when I taught the classes again, so I just needed to refine the site by checking the exercises, rewording areas that needed clarification and updating the web references. Even though I was teaching in the Computing area with a significant number of staff, other than my immediate colleagues who also taught Internet papers, most were not interested in adding any of their content online. One of my colleagues who taught programming said that her subject couldn't be taught online but I didn't investigate this further to find out reasons why she thought that way. Others were under the impression that the Internet was just a fad that would disappear soon, so there was no need for them to put valuable time into rearranging how they were teaching for a temporary technology. It is certainly interesting to note how time has proved them wrong and a great proportion of computing jobs are now closely aligned with the Internet. There was also stern opposition in the Department to

do away with office hours, where staff would be in their offices waiting for students to arrive with questions, and replace the process with e-mail. One staff member who heard about what I was doing asked to look at the site and was surprised that there was no password to access the materials. He thought that only students who were attending the class should have access to the class materials, as indeed most online systems now have this degree of security. My web site was available to anyone who knew the address and contained no information that wasn't already available on the web. The difference was that I had sequenced and presented the information on the site for my students as an aid for their learning within the bounds of the course. Even though students had access to the course materials, there was still a need for that human touch to explain the issues that they were having difficulty with. I certainly was not replacing myself, or anyone else, by putting my material on the Internet.

Even with the implementation of a campus wide Learning Management System called Blackboard and all the support offered to bring the staff up to speed, my colleagues still kept to teaching the same way and initially refused to have anything to do with online technologies. It was only with the introduction of a Masters degree during my last year at the institution, taught in a flexible timeframe one weekend a month, that staff who were teaching on the program reluctantly started using the technology. That was because there was a requirement to have documents online for the students to access as well as having all class announcements through Blackboard. Few staff used the collaborative discussions that were available for communication purposes with students in the weeks between the face to face contact we had in the weekends, whereas I found it a necessary tool due to my locality. I continued teaching my two courses for a further year while working in my next job and found that the use of online meant I could keep contact

with students, see where they were up to, motivate them and by posting announcements and having set tasks to complete online, the distance in kilometres was made up for by the communication in kilobytes.

Why weren't my colleagues teaching online?

I thought about reasons why my computer literate colleagues with vast experience and knowledge in their specialist computing areas were not keen to try out this online technology. From my very small sample size I reached the following conclusions. It didn't seem to be related to age, as there was a mixture of ages using and not using the technology. It wasn't from lack of support from the management team as there was plenty of encouragement from the head of School and programme director to use online technologies. If this was not the case, I doubt if I would have ventured into the online world myself. It also wasn't through fear of technology, lack of confidence or experience with computers, as my colleagues used computers to a great level of sophistication. I wondered whether for this group it was not the technology or their skills with technology but their reluctance to try something different or to develop their repertoire of teaching skills. They were good teachers of their subject material, that is to say, they delivered the content to students, but perhaps their teaching methods had probably remained the same through the years they had been teaching. It is difficult to try something that is new especially when it is quite different to what you are already doing. I was always keen to try different things if it meant that students' learning was improved and my enjoyment in teaching the subject material remained fresh by using a new way of teaching. I found it difficult to understand why my colleagues couldn't see the benefits of using the Internet for their teaching or even thinking about different techniques they could use in their teaching.

I believe that this reluctance to try new ways of teaching was not only related to working online but also applied to their normal classroom teaching as well. As an example, the masters program was heavily based on students working in groups to reflect what they would encounter in the industry that they were soon to enter. In my previous institution, we had great success with students working in groups over a number of years and the staff enjoyed working this way as it reflected what was happening in the industry. My new colleagues were always working individually with students and had no concept of students working together on a group assignment. They saw marking as a really problematic area when students were in groups as it is difficult to know what each student's contribution was. There was a lot of debating and strategies worked on with staff, then training before they felt confident enough to cope with this change. It was reasoned to staff that if the majority of student assignments were done by individuals, then this would not adequately prepare them for a team based industry where they were soon to work. Students need to develop skills to enable them to work in diverse teams in the future and it was part of our job to prepare them for this.

I began to put more and more of my courses online for the students, but also started to teach short courses during weekends and spending more time at the institution than I wanted to. There were two reasons for me to look for another position. One was the driving, often at night after intensive and long hours looking at a computer screen, but the other was because the institution I was working in had no long term policy or vision for online education. They were playing a waiting game, waiting to see the direction online would go without intervention from management.

The University of Waikato and the Innovation Centre for electronic Education

At the start of 2000 I came to the Waikato Innovation Centre for electronic Education (WICeD) at The University of Waikato (UOW) to the new position of Learning Designer. I came not only because the position was in the same city as I was living but also because the University had recognised e-learning as one of the UOW's five key strategies driving the University. This was quite a revelation to me in comparison with my previous institution and I wanted to be part of the journey.

It was WICeD's brief to support e-learning and further the development of the online strategy throughout the University. E-learning began in 1996 in the School of Education (SOE) with the Bachelor of Teaching degree, also called the Mixed Media Program (MMP). Other staff in the SOE were also teaching online in areas outside the MMP program, and within the wider University an increasing numbers of papers were being offered as e-learning gradually started to spread. The Management School, the Faculty of Arts and Social Sciences, the School of Maori and Pacific Development, the School of Law and to some small extent, the School of Science and the School of Computing and Maths were all using the online environment for some part of their courses.

My involvement over the four years I was at the University was in assisting staff in the use of e-learning in their teaching. This meant either supporting their face-to-face students with some online component, or assisting staff who were teaching students in a totally online capacity where no face-to-face delivery of material, tutorials or office hours are carried out. This is always a challenging task because

the needs of staff are so varied amongst the Schools, within Departments and between colleagues. No two lecturers wanted the same thing for their classes but that is what makes the job interesting. I am always challenged to come up with different solutions for teachers.

I didn't realise the significance of the physical location of WICeD at the time nor that other staff in WICeD were originally from different parts of Information Technology Services, the computing people. I came to realise that being in the same building as the institutions computer team made it hard to stamp my mark on the institution as the Learning Designer that I wanted to be known as. The job title came from a relatively widely used title called Instructional Designers, a job title referring to people who assembled learning materials in a coherent way, combined with the skills of a teacher involved in Online Teaching and Learning. My main responsibility was to assist staff to design their online courses using the online environment provided at the University, with a focus more on the pedagogical aspects of online teaching than the content of the courses.

I was to find out later that there was some controversy about my appointment being attached to WICeD as opposed to either the School of Education or the central Teaching and Learning Development Unit. In hindsight, it would have been better to have been attached to either of these latter areas for the simple reason that I would be thought of more as a teacher than a technologist. This aligns with my journey into online teaching, which was from a teaching rather than a technology route.

In my capacity as a learning designer, I noticed that staff throughout the University who have some teaching training or some years of teaching experience outside the University were often keener to take on online teaching than staff who had a lack of teaching experience. This is

not saying that all teachers embrace teaching online but they seemed to be more attuned to what it is all about from a pedagogical view point. Anecdotally, it seemed that trained teachers often saw it as an extension of what they were already doing and picked up on the ways that online could assist their teaching quite quickly. Their questions were not related to pedagogy but to how they could use the online environment to teach in a way that was similar to the way they were already teaching. There were also those who saw it as a way to free up some of their face-to-face sessions by using a more flexible way of teaching. A couple of colleagues who enjoy teaching online said that it freed them up during the day time to pursue their passions of playing golf and flying aeroplanes. Teaching online meant that they could choose the best time of the day or night to work, just like their students. Classes are held at a time when students are ready to learn and teachers are ready to teach, it's just not always at the same time.

I started thinking that there must be reasons why the spread of online usage had not continued from the dramatic rise in the early years or spread throughout other Schools and Departments. I have also talked to other staff development professionals I have met at conferences who are also puzzled by the same issues in their institutions. I have some thoughts on this from talking with staff, but because I generally deal with staff who are either teaching online or are about to, my initial sample group did not represent a cross section of all staff. Most of my initial data was picked up through conversations with staff in a variety of situations. I needed a more rigorous method of data gathering for these ideas to gain any credibility among my colleagues. My aim here is to continue my interest in the adoption of e-learning by adding to the research in the field for the benefit of the University as well as for staff development professionals involved in e-learning implementation and support in other tertiary institutions. The study will hopefully be a useful

addition to the body of knowledge about the general area, and that may be beneficial to any institution considering the introduction of e-learning or looking at increasing its presence, acceptance or uptake in their institution.

Acknowledgements

I would like to thank my supervisor Wendy Drewery for her encouragement and help in getting this completed.

Thanks to my partner, Noeline Wright and daughter, Sophie for being there while I have been doing my thesis.

Lastly, thanks for Ectus and TANDBERG for assisting me while I have been studying these past few years.

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Chapter 1: Adoption of E-learning

E-learning is the broad area of research I am interested in. My specific area of interest for the purposes of this thesis is in researching the uptake of e-learning amongst staff in one tertiary education institution, and looking at ways to assist staff who teach online or those who are interested in finding out more. In a previous paper I researched the technology adoption life cycle, “a model which grew out of social research begun in the late 1950s about how communities respond to discontinuous innovations” (Moore, 1999, p.13), looking at the correlation between the adoption of technology and the uptake of e-learning at the University (Dewstow, 2003). The conclusion of this research was that the uptake of e-learning in the School of Education closely follows the adoption of technology as proposed by Moore, but this is not so throughout the University. Some Schools/Departments of the University have online teaching staff who can be identified as innovators or early adopters of e-learning, but there has been no adoption of online teaching by the majority of staff in their Schools. They have not crossed the chasm between the early adopters and the majority of users, a gap that needs to be crossed before technology becomes more widely accepted within a community. I am interested in finding reasons why the University of Waikato has not followed this cycle for the adoption of e-learning in the wider University.

E-Learning Uptake at The University of Waikato

The uptake of e-learning appears to have reached a plateau at the University, with differing degrees of uptake throughout the Schools of Study. Daily page views of the online platform (Moodie, 2004), the number of courses taught online and staff teaching online are now fairly constant. Graphs of usage each month per year do show increases, but

not as dramatic as in the first couple of years (Appendix 6). During 2004 and 2005 there was a noticeable drop in the number or staff attending online courses, the number of new online initiatives reduced and the calls from staff asking for help also reduced. At the same time, in the online support area called The Online Campus, which has been monitoring by e-learning support staff since it was created, there has been a noticeable increase in postings by students asking if their papers are online, or where they go to access their online course materials. The Online Campus is available to all staff and students in the University, but because it has not been widely publicised, it is accessed by only a small percentage of both staff and students.

A study by Earl (2003) of online access amongst first, second and third year students in the School of Science and Technology at the University of Waikato found that almost all (98%) of third year students had used computers on campus but only 70% of first years had. Looking at Internet access at home, the figures are reversed with 86% of first years having home access, compared with 75% of third years. The third year students also spent more time using computers overall, than first year students, and they used them mainly for assignment work. Their contact with lecturers was more than the first or second year students as well. "The results are consistent with expectations for increased independent study as the student progresses through their degree" (Earl, 2003, p.9). One thing that this study showed the School was the access students have to technology, both at home and University, was very high and not a barrier if staff used online technologies. As mentioned before, this is one barrier that has been reduced when compared with earlier research into e-learning.

It seems that the demand from staff is slowing while the demand from students to use an online environment is increasing, so something will have to change.

I am constantly in touch with staff teaching online and privy to comments regarding the stability, reliability and speed of ClassForum, the e-learning system that is used at Waikato University. However I do not know what is said "below the radar", or what the impact of what is thought and said might be, in relation to adopting the technology. As for staff who are not teaching online, we just do not get to talk to them on any formal or informal basis. Events planned for staff, to inform them about what is happening in the e-learning scene at the University, have been few and far between and they are generally not well attended. They have been well received by those who do attend but lecturers are busy people, with complex schedules, and finding a time to gather staff together is not easy. There must be legitimate reasons for staff not teaching online but there is no research to understand this within our University or elsewhere.

Earlier research in the area of e-learning has investigated barriers to staff and students using technology in teaching (Berge, 1998; Bound & Kilpatrick, 2003; Lloyd & Hellwig, 2000), including gender studies of online students (McSporran, Young & Dewstow, 2000) and characteristics of successful online students (Young, McSporran and Dewstow, 1999). Some of the barriers to e-learning are found to be quite general and mainly relate to familiarity with computers (Berge, 1998). Such problems reduce over time due to the natural advances with technology. Also institutions have recognised some of these problems and have put solutions in place over the years to combat them. For example, networks have been upgraded, computers have increased reliability, access to technology for students and staff has

improved as well as specialised e-learning support put in place in some Schools for staff. Having identified such barriers in the University, informal tests of reliability suggest that we have been able to significantly reduce or dismiss the importance of some of them as a factor in hindering the uptake of e-learning.

The University of Waikato is now at a critical time as far as e-learning is concerned because of a number of things. Firstly, the group who have supported ClassForum is due to cease doing this and the responsibility [1]will be handed back to the University. Next, the current e-learning system is going through a review process and could be replaced by something else. Thirdly, new staff will need to be employed to take on the support functions of the system and staff. The most pressing question at this time is the role that online teaching and learning will have in the institution for the next five or ten years. Now is the time to reposition e-learning in the University.

Definition of e-learning or online teaching and learning used in this thesis

A study by Kilpatrick and Bound (2003), focussed on what was happening in relation to online delivery in regional Australia, makes a clear distinction between delivery and learning.

> *"Online delivery refers to a range of delivery modes, where being online (for example, email, using WebCT, Blackboard and so on) is a component of, or all of the processes designed for learning. Online learning is defined as learning processes which use online delivery. In addition, it is important to remember that learning occurs in a social context" (Kilpatrick & Bound, 2003, p.6).*

To me, when the Internet is used for downloading powerpoints, course notes, lecture material, looking at images or watching lectures, it is

[1] As of writing this in early 2006. The support change occurred at the end of May 2006.

about content retrieval, and is what millions of people around the world do every day. When I think about online teaching and learning, in addition to downloading or reading information on the Internet, I also add in discussion, collaboration, critique and analysis between groups of students or between a teacher and students about the content material. Then we start to have online learning. How this is achieved with the vast differences in subjects that are taught is a challenge to be met.

We can make this distinction in the traditional classroom as well, where lectures and course readings can be thought of as the delivery mode for course information but the learning takes place when interaction occurs between the lecturer and students or between the students. This can occur in lecture theatres but when the numbers get too large for that lecturer/subject area, interactive lectures become less effective because only a few students can have their say in the time allocated, otherwise the purpose of the lecture, to cover a certain amount of material in the permitted time, is not met. The main learning usually occurs outside the lecture in tutorials, discussion groups, course readings, research and assignment writing.

For the purposes of this research I will define e-learning or online teaching and learning, both of which terms are used interchangeably in this research, as referring to **students learning with the use of Information and Communications Technology (ICT).**

In the context of this thesis, this definition draws attention to the fact that online learning will be discussed as a complex interaction, and not simply as a delivery mode.

ICT is about using computers that are connected to a network, which in this case is the Internet. Students communicate with each other and

their teachers through this medium. Larger files like video lectures, powerpoints and audio files are sometimes only accessible on the campus Intranet because of the time taken to download them from off campus. As broadband is made more affordable and accessible to students from home, this will no longer be such an issue and the online classroom will be even richer than we ever imagined.

The other part of my definition is about students' learning. The key to the definition is that learning takes place because of the way information communication technologies are used. For learning to happen, I believe that there must be interaction between students and teachers as well as between students, rather than just having information stored on a network somewhere for students to download and read. If the latter is the case and communication is removed from the equation, then this is not e-learning. A subtle distinction made here is that there is active participation between the content material, the teacher and students in the course. Only through this participation does the learning take place.

As an example, I once taught web page creation to community classes during weekends. I packaged material that was readily available in the public Internet that the students had access to and delivered a course to them over a two day period. I asked the students why they paid money to attend the course in the weekends when the information was readily available to them. The response was rather interesting as they told me they had already spent many hours working through the information they could find but couldn't piece the information together in any meaningful way. They needed a person in front of them to assist them to order the information into a logical progression, as that was a skill they did not possess. They wanted someone to assist them when they got in to difficulties, something they could not do on their own.

‘Teaching’ and ‘lecturing’

What is meant by using the term ‘teaching’ at a tertiary institution? This research uses the terms ‘lecturer’ and ‘teaching’ quite liberally in discussions to refer to the distribution of material from the lecturer to students at any tertiary institution. This is done in many different ways by academics.

For the purposes of this thesis, I will problematise the term ‘teaching’. In a restricted sense, the term may refer to the professionally defined activity of staff who have gained a formal qualification to ‘teach’ from a teachers’ college or equivalent higher educational institute. The alternative to teaching, lecturing, is the distribution and transmission of information to students. With such a small proportion of academics having a recognised teaching qualification within the University, we can hardly call everyone teachers. I believe we should use the term lecturing to describe what happens primarily within the University. Of course, this definition does not preclude the possibility that many lecturers also teach, or that some people with teaching qualifications do not in fact teach in the sense recognised by their profession. I will return to these distinctions, in relation to the use of online technologies by staff, when I present the findings of this study.

Differences between teachers and lecturers

Another way I differentiate between lecturers and teachers, apart from the formal teaching qualification, is to say that ‘lecturers’ are focused more on content delivery of their subjects to students whereas ‘teachers’ are focused on the students’ learning in their class. The content, while important, in itself is less important for teachers than the learning and progress by students. Qualifications are the starting point in the measure of the teaching ability of staff, but they don’t tell the

whole story. Having a qualification means you have passed the requirements set out by an accredited body and the qualification gives a person the right to teach, but does not mean that they can teach effectively. The challenge educators now face in teaching is in making students more responsible for their own learning. Teachers need strategies to help this to occur, in general this does not happen without guidance and direction from qualified teaching staff.

I would argue that requirements of lecturers are moving away from being the “sage on the stage” to more of a facilitation role, “the guide on the side”. The facilitation role fits with the online teaching and learning model but is at odds with using online as a delivery mechanism of content material. As well, their fields of expertise are expanding. Teachers can no longer be the expert with all the knowledge to impart to the students. As we shall see, the focus group participants in this study pointed out that they have difficulties just keeping up with their own research areas, without all the other areas they are teaching as well. Through the internet, students can have access to sources of knowledge in the field that previously were the domain of the expert. Lecturers’ roles are changing and students are now being guided through the learning process as they spend more time out of the classroom learning than ever before. The technology changes are happening at a very fast pace and unfortunately tertiary institutions find it difficult to keep up with the demands of these changes.

The study

The “e” in e-learning is fading as e-learning slowly becomes another part of a blend of educational methods we use in our teaching. A colleague now teaching in Hong Kong once said to me that online teaching was just about good teaching (Mike Keppell, personal communication). I think that this statement puts the focus squarely onto teaching rather than on using technology, a place where it must be. Technology is just the vehicle or the enabler that helps us deliver this new form of education, namely, e-learning. Teaching needs to be the first consideration we think about when we use different forms of technology, but teachers should only use them if they fit the teaching purpose. Online teaching could be integrated into teaching just as we use the overhead projector to display information on the screen or a video to highlight a point during a lesson - if they are used with an educational purpose in mind. E-learning will almost certainly eventually become absorbed into education and not treated as a separate entity, but this will not happen overnight, as many things have to change for this to come about.

The study reflects the statement that online teaching is not just about the technology that is used. I want to explore bigger issues that transcend technological talk about hardware, software, the Internet and any problems associated with them. So this study is not investigating technology per se, but the focus will be on people using it, or not using it, for teaching.

At University level, subjects are often highly differentiated, and it is one of the presumptions of this thesis that such disciplinary differentiation may affect the uptake of online learning strategies by teachers of different subjects within the different Schools of study. Further,

lecturers teach their particular subject areas within the bounds of a Departmental structure. The Department is an administrative subset of their School of study, which is a subset of the University. There are almost certainly factors here that influence lecturers in their job that have not been widely researched before. I found no previous studies that researched what staff, with their own aims and philosophies of teaching their subject at university level, have to say about where their use or non user of online technologies fit into the structure or culture of the University. Thus this thesis explores some of the relationships between the subject areas taught at the University and teaching online, to see if there are factors at play between the two. I am also interested in the University culture is an influence on lecturers regarding whether they teach online or not. So this study investigates how staff perceive the pedagogical and educational culture of the University in terms of how this culture relates to the subject area they teach, particularly in relation to online teaching.

Methods of data gathering used in early research in the area of e-learning used questionnaires with staff and students, resulting in numerical data to support or refute their claims (McSporran et al, 2000). In this way there has been maximum coverage of the population for the study, but unfortunately the return rates for questionnaires can invariably be on the low side (Burns, 1998, P.483, Cohen et al, 2000, P.262). Further, the quantitative data gives us numbers, statistical data, for researchers to interpret, rather than offering information about how the staff themselves would interpret the questions and their answers.

The methodology of this research gives volunteer staff participants a forum where they can discuss their perceptions of the culture of their Department and University in relation to the support they receive for teaching their subjects. Because they have agreed to be involved in the

study, and not coerced or forced to be here, there is more chance of the data having greater reliability. It is also of course possible that the data is not representative, for the same reason. However, it is important to start somewhere. Qualitative data, collected through focus group interaction in this case, also allow for a richer storying of the ways staff may be thinking about these issues. The study offers a snapshot in time of the perceptions of some staff teaching at the University. This could assist in understanding staff experiences, and support planning for further implementation of e-learning for the future.

Chapter 2: A Discussion and Critique of Current Research

In thinking and reading around the topic of e-learning, a number of keywords come to mind; these keywords reflect the focus of previous research in the area of online teaching, published in articles and journals and which have been the focus of discussion at many conferences I have attended. Barriers, resistance, institutional change, management, culture, learning, e-learning, online learning are but a few to start with. Significantly, pedagogy does not often appear linked to these keywords. Current research reflects the divide between technology and pedagogy and I will argue that the University of Waikato experience demonstrates that this divide is no longer sustainable. This chapter considers the current research literature on e-learning with a focus on areas concerned with the uptake of online technologies in Tertiary Institutions.

Barriers to Online Teaching

In 1998, Berge researched the barriers to online teaching in post secondary institutions, with an emphasis on implementing policy changes to fix any problems. He reported that:

> *Nineteen of the 69 barriers (27.5%) mentioned by the respondents to this survey indicated inadequacies in the technical area such as: lack of systems reliability, lack of connectivity/access; inadequate hardware/software; setup problems; inadequate infrastructure; and inadequate technical support (Berge, 1998, p.8).*

Some of these technical issues relate to the newness of the technology and as e-learning has matured they have been solved. Berge's points relate to technology, training and a lack of understanding of what online

technologies are about. Berge's study does not talk about how pedagogy is related to online teaching and learning.

Berge also commented that barriers were also related to the position of the person in the organisation, the maturity of the online system and the policies of the educational institution. He found that access to online educational opportunities seemed to be improving, but commented that "Online teaching and learning will fail without strong administrative leadership to support the many changes necessary to fully implement online educational activities and to overcome the barriers expressed by the teachers responding to this survey and by other educators" (Berge, 1998, p. 8).

A study by Lloyd and Hellwig (2000) on barriers to the uptake of new technology in Australia reviewed recent research in the US and UK. They said

> *The US, for example, has shown soaring growth in access to computers and the Internet for people in all demographic groups and locations, but there are still major disparities in use across different groups. High income earners make more use of the Internet than low income earners; Whites and people from Asian/Pacific backgrounds use the Internet more than Blacks and Hispanics; people with higher educational qualifications use the Internet more than people with lower qualifications; married couples with children under 18 use the Internet more than any other household type. One 1998 study found 80% of private college freshmen using email regularly, while only 41% of students attending black public colleges did so. (Lloyd and Hellwig, 2000, p.5)*

They found that "the most important driver of Internet access is educational qualification (higher qualification resulting in higher access), followed by income (higher income results in higher access). Under the most likely scenario almost all adults (95%+) in households with an income of greater than $65,000 are likely to be connected at home compared with only 50 per cent of those with income less than $24,000" (Lloyd and Hellwig, 2000, p. 6). We might expect that these findings

could be generalised to other populations and sub-populations as well. However, in previous research I have undertaken with staff at the University of Waikato (Dewstow, 2003), Lloyd and Hellwig's study does not describe the "resistant" University staff I encountered, as the latter are highly educated and are in the higher income earning bracket. It is also important to note that the findings of Lloyd and Hellwig point to the possibility that styles of social interaction among different groups could be a significant factor in the uptake of technology, though they did not comment on this explicitly. Indeed, besides income and educational levels, there is a broad range of other possible reasons why persons may be reluctant to take up the use of online technologies.

For example, there is a dominating idea among many ordinary people that computers, and indeed any new technologies, are for the young and if a person is a certain age, because they have not been brought up with computers around them, then they will never succeed with using this technology. However, this has been shown to be incorrect, at least for some, by Millward, a researcher for Age Concern in Wigan, U.K. Millward (2003) argues that "for the elderly, Internet usability is based upon more than availability of technology. Instead, a lack of Web skills among the elderly leads to an opinion that information and communication technologies are for the young, leading to long-term damage and lack of interest in using the Internet" (Millward, 2003, p. 1). For older people, being able to use the Internet is thought to be largely about communicating with family and friends, as they become more geographically spread around the world. SeniorNet in New Zealand is a non-threatening way for pensioners and older people generally to gain computer skills, and the uptake has been reasonably good among older people. As a general rule, "the elderly" in Millward's study are people over the age of 55, with many still in the work force. It should also be remarked that the uptake of technology is likely to be

very different in both countries, and this almost certainly ranges across the entire spectrum of age.

A recent study at the University of Waikato (The University of Waikato, 2005) of the profiles of Schools of Study reported that the percentage of staff over 50 years of age from the various Schools ranged from 23% in the School of Law to 56% in the School of Education. Yet the School of Education has the highest uptake of online teachers. With the average age of staff in Universities in the high 40s, some of our most important e-learning teaching staff in the institution are in their sixties, so we must be wary of research that pigeon-holes people because of their age.

Crump and McIlroy (2003) investigated a project where computing facilities were made available to residents in a city council high–rise apartment block in Wellington, New Zealand, at no cost. “After six months of operation it was apparent that many of the residents were not using the free computing facilities.” Also, “many apartment residents eagerly awaited opening day only to find no Internet access, followed by several months of unreliable Internet connection and hardware problems such as faulty disk drives” (Crump & McIllroy, 2003, p.7). Technical issues such as no Internet access or unreliability of equipment would put off most computer users but for people who were new to the experience of the Internet, it would reduce their initial enthusiasm in using the technology. They would not be equipped to deal with problems of this magnitude as they would just expect it to work. The research also noted that there were many other reasons the group gave for not using the computers which are not just about the technology. Some of them are highlighted below.

> *"too shy" and "no friends to go with," cultural and gender preferences, "I would visit with women only/ men only/ own ethnic group," motivation such as "not interested," time factors, "no time,"*

> *"room not open when I'm free," and computer issues, "no computer skills" and "worried about computers." The variable most nominated was simply "not interested." (Crump & McIllroy, 2003, p.7).*

These studies suggest that there are many reasons why groups do not use computer facilities - even when provided free. It is also likely that the residents in the city council building didn't have anyone, at the time, to e-mail. E-mail is useful to people if they have friends, family or colleagues who also have access to e-mail. There is no point in learning to use an e-mail program if you have no-one to send e-mails to. Such reflections suggest that the research on barriers may have been too restricted in its scope and conceptualisation, in particular by ignoring more contextual and social issues.

Crump and McIllroy concluded that "across the spectrum of society there will always be resisters, a small group who do not want or need ICTs" and "interest in accessing computing, even when situated in a convenient social space, and offered at no charge, is unlikely to be seen as a priority for daily living" (Crump and McIllroy, 2003, p. 13). The term "resisters" is widely used by commentators on the uptake of all sorts of technology in society. A resister is a member of the last group in the technology adoption life cycle to adopt a technology. They resist using the technology for all sorts of reasons and we cannot be certain just what those reasons may be (although, as is evident, this is a subject of interest to researchers). Digital cameras are a relatively new technology and were initially only bought by people who owned computers and printers, due to the lack of technology available to print or share photographs in the commercial world. As the technology has matured and become more widely accepted, the commercial photography outlets invested in the technology by providing equipment to print digital photos as well as ways to send digital photos online to be printed. As the advertising would have us believe, the technology is so

easy, even young kids can operate it. The Crump and McIllroy project could have empowered the residents by providing more assistance to them when they required it, instead of alienating them towards the technology. Too often technology is used as the solution to a problem and ends up being a bigger problem because the implementation has not been carefully thought through.

In introducing new technology, there is considerably more that needs to be done by institutions than just installing it. We need to carefully manage and support people who will use this technology so they benefit from using it. If we imagine the research of Crump and McIllroy in an educational environment, when computers started appearing on desks, it did not mean that staff enthusiastically embraced the change and started using them. Good support structures need to be available in both technical and personal areas as well as real incentives for staff to use them. If computers save time, improve communication, make it easier to distribute course materials, enable staff to work from home, then they may be convinced that having a computer is a good thing for them.

The introduction and use of online technologies for teaching at university level is clearly not a simple matter - it requires or calls different aspects of the institution to interact in ways that may be very unfamiliar. Further, the issues are evolving and complex, and there are few examples to follow. Similarly, the issue of “barriers” is more complex than solving some technical problems.

New Technology Issues

When introducing new technologies into teaching, educators need to rethink how their material is presented, restructured and sequenced for their learners. Pegler and Rushworth from the Warwick Business School manage their University's distance learning MBA programme and faced problems when moving to new technologies. One of the questions that they were asked was "Is it worth the hassle? Does the use of the technology add to the teaching or learning?" (Pegler & Rushworth, 1999, p. 3). This is an issue that has been explored and debated for years in all levels of education when a new teaching technology is introduced. Whether it is working in groups, as opposed to students doing individual work, or teaching online as opposed to face to face teaching, the same issues arise. Teaching staff need assistance in the transition process. If the technology advisor or designer is aware of the specific subject needs and how lecturers teach their students, appropriate advice can be given about how teaching staff can best use new technologies. Understanding how each individual academic teaches their students is one of the keys to assisting them to teach online.

Berge (1998) said that for learners, technical skills and independent learning skills were needed, and there was a lack of local library skills. In the institution he studied, there was a huge resistance to change, and issues with the faculty culture, the high cost of materials and the problems of technological failure. There were also a number of themes in his study that focussed more on people than systems that are very relevant. For staff, Berge found complaints about "faceless" teaching, and fear of being replaced by computers.

When looking at e-learning, we need to remember that "not every educator is on the Internet bandwagon" (Rudestam and Schoenholtz-

Read, 2002, p.3). Panitz and Panitz found resistance to online teaching from staff related to “faculty lack of confidence, feelings of loss, and lack of awareness and training of new approaches” (Panitz and Panitz, 1998, p.2). This suggests that faculties could perhaps take a more proactive role if they want staff to teach online. Supporting structures could be managed centrally or separately by each faculty.

Objections to online pedagogy

Noble (1999) is scathing about online education and argues that universities are not simply undergoing a technological transformation but online is being commercialised and that teaching is becoming a commodity. He talks about whole courses being converted into digital courseware so that the lecturers are no longer needed. This is more about content being packaged for learners, not created by teachers for their own classes but for mass distribution so money can be made. Interestingly, until very recently virtual universities were to be the thing of the future, but they have all but disappeared due to lack of enrolments. Huge amounts of money were invested in online courses before people realised that putting content together in a packaged way for students to go through on their own was not what learners want. The Massachusetts Institute of Technology (MIT) recently provided all their course notes for free on the Internet. Their web site, MITOpenCourseWare, has a statement from MIT President Charles M. Vest saying, “We hope that in sharing MIT’s course materials, and our experience thus far with MIT OCW, we will inspire other institutions to openly share their course materials, creating a worldwide web of knowledge that will benefit mankind” (MIT, 2004). They have made available all their course notes online, proving a point that the content of courses was not as important as the added value their staff bring to the content with discussion and interaction. One of the strengths of

online is the interaction between community members about the course content. This is more important than having just content materials available on a web site for students to access.

Noble (1999) also noted that “students want the genuine face to face education they paid for, not a cyber-counterfeit”. This is a little extreme. In this research I am not advocating that teachers are replaced by computers but rather that online can supplement what they already do. Computer based training (CBT) programs were developed as stand alone training solutions as a method of sequencing material, providing simulations, tests and also providing a way to keep track of the learner’s progress. Some programs also stopped the learner from moving to the next level until they had passed the test of the current one. The Internet arrived and added ways to facilitate communication between people, thus enriching the content. Some CBT training packages were good for their purpose but were superseded eventually by new content management systems that do not require the level of sophisticated computer skills needed to put together learning material as the CBT programs required. One of the reasons for enrolling in an online course is the ability to communicate with your peers and your facilitators while learning. By including a person into the environment, the whole learning experience changes from interaction with a computer program to interaction with real people. These facilitation skills have to be taught to teachers as the medium is new to them. An online learning paper where there is no or minimal input from the teacher is close to being like one of the superseded CBT packages of old, and they are generally not courses that succeed over time.

Staff development issues

According to Galusha (1997), for success in distance learning, technical concerns must be made a non-issue. Higher Education Institutes now have more reliable and faster computers but “while there are benefits to online learning, there are also many barriers which must be overcome if this form of delivery is to successfully facilitate quality learning” (Kilpatrick & Bound, 2003, p. 22). One of these barriers that seem to be overlooked often is lifting the skill levels of academics to where they are comfortable using technology in their teaching. This is not simply about familiarity with software.

A recent study by Lynch found that staff were unfamiliar or uncomfortable with using computers, e-mail, or discussion boards. Lynch also found teachers’ fears of “displaying their writing abilities and of going public" (Lynch, 2004). The issue of comfort with technology has been raised previously (Earl, 2003) in relation to the developing gap between the skills and expectations of students and the willingness of teachers to use the technology. Leach and Walker (2000) found that for students, any barriers to distance education are directly related to the level of technology experience of students. However, it should be noted here that, like the staff, the student population is not homogenous in respect of their familiarity with the technology. Although the student population is slowly changing, with greater numbers entering University having more exposure to computers than ever before, there is still a significant number of students, usually mature ones, who have a low level of experience with computers. Use of online technology adds another level of complexity when they are faced with managing the demands of an online course on top of their desire to come back into study. This point must be kept in mind when introducing online technology.

In 1995, Tony Bates, an influential leader in the field from the University of British Columbia (UBC) in Canada, presented at the Minister's Forum on Adult Learning in Edmonton, Alberta, a lecture called “The Future of Learning”. In talking about the use of multimedia in education, he pointed out that

> *faculty need training, not just in how to use the technology, but more importantly, in understanding how learning takes place, and how to design teaching approaches based on that knowledge. Without this fundamental understanding of the teaching and learning process, it is almost impossible to design high quality multimedia learning experiences (Bates, 1995)*

The first part of the quote talks about training faculty, but goes beyond training to focus on designing for different teaching approaches. The implication is that faculty need to learn the skills of designing in multimedia. Clearly, though, this approach is problematic for reasons other than designers needing to understand the teaching-learning process, or teachers needing to understand design. If we look at the last sentence from this quote and substitute multimedia with online or leave out multimedia and online altogether, it would now read: “without this fundamental understanding of the teaching and learning process, it is almost impossible to design high quality learning experiences”. The focus needs to be on learning for all academics using technology with students. So I would argue that first of all we need to understand the pedagogy before we can successfully combine technology into the teaching process.

The role of staff in setting barriers to the development of online learning technologies is discussed in various ways in the research literature. Berge suggests that:

> *many faculty are concerned about losing direct control of the teaching/learning processes because, in most cases, the instructor can no longer develop all the learning materials and activities that can be used in a technology-rich learning environment. It takes a team of people, usually with the instructor, in their role as the subject-matter expert, working closely with them. While frightening in some ways, this is analogous to a model of using technology that is quite old in education. Think of teachers in previous generations. Even though they knew their subject matter and could write and edit, most of them did not develop their own textbooks. They didn't have to. Why should they have to develop their own multimedia teaching materials? (Berge, 1998)*

This statement is a comment in the context of developing multimedia materials, which was, and still is, a complex project. It is a massive task for a single staff member to create the teaching and learning materials and assemble it together by themselves - a team of experts is usually needed. The way some institutions have overcome this dilemma is by having a special unit to do the course development work, with staff taking on the role of content experts. There is a considerable cost involved in creating multimedia development centres, but one of the plus sides is to remove teaching staff from the development process. They then act as content experts, directors and proof readers of their subject material. By doing this, all courses can have the institutional look and feel with a consistency for staff and students who use the system. The downside is that individual lecturers cannot create their own online courses by themselves but have to go through the institutional processes and can feel somewhat removed from the process.

Wilson and Stacey (2004) also ask how online technologies can be integrated into teaching in higher education, as not all staff enthusiastically embrace the change that such new technologies and pedagogies can bring. Online technologies have been categorised as a disruptive innovation as they challenge the ways lecturers do the most fundamental aspects of their jobs (Christensen, Aaron and Clark, 2001).

“A disruptive technology is any new gizmo that puts an end to the good life for technologies that preceded it” (Cringely, 2004, p.1).

Berge points out that

> *given that the survey results were obtained from teachers who have already taught online, the set of barriers they perceive as problematical appear to be quite different from those perceived by persons who are about to begin teaching online (Berge, 1998).*

It is therefore important, when thinking about barriers, to hear the views of staff who are not teaching online as well as those who are. The barriers that have been mentioned previously are different among these two distinct groups of people and also change from year to year due to the changes in technology. Innovators and early adopters don’t look for barriers, they look for ways to overcome any problems that they encounter and are willing to put in the extra time and effort to get things working. A barrier for an innovator or early adopter is seen as a problem to be solved and overcome. They are trailblazers looking at minimising any barriers so the majority of users feel comfortable in using the new technology. One of the biggest problems faced when looking at adopting new technologies into institutions is to create an atmosphere where the transition for the majority of staff is as smooth as possible. One of the keys to introducing any new technology is getting a critical mass to accept the technology. This needs to be managed carefully and in my view will not happen until the technology has a proven track record and people are convinced that it will be a benefit to them personally.

Staff training for online teaching

Bates has identified a link between pedagogy and designing quality learning experiences but also researched the role management has in equipping academics with the training they need for teaching with technology. He said:

> *There are at least three practical steps management can take. The first is to organize regular workshops on teaching practice and the use of technology (which in some institutions will mean creating or strengthening faculty development Departments). The second is to provide rewards, in terms of tenure and promotion criteria, for successful, innovative teaching. Thirdly, while workshops are important, there is a need for more comprehensive and systematic courses or programs aimed at teachers of higher education. These are minimum requirements. An even more radical step would be to require successful completion of a higher education teaching qualification for tenure appointments; unfortunately such courses, if they exist at all, are not available in a manner that makes it practical for most faculty, i.e. part-time and at a distance, even if faculty associations could be persuaded into accepting such a policy. (Bates 1995).*

Bates was aware ten years ago that there was a need for more flexibility in delivering teaching qualifications to staff and he talks about the use of distance education as a possible means to do this. At the University of Waikato academics are taught to teach online by a face to face delivery method. This would be more beneficial if taught in the manner they are to teach in so they can experience what it is like initially from the student's point of view. There are many teachers who have not experienced being taught by distance education or online technologies and their first experience before teaching online is a short introduction to using the software and then they have to teach a class of students. We need to improve staff training if we expect them to confidently teach online. As Bates pointed out, the difficulty is in faculty accepting a compulsory teaching requirement for its staff.

Other researchers in this area are also in agreement with Bates. In their paper on online interaction, Wilson and Stacey (2004) point out that “to be confident and competent online teachers, teachers require effective staff development” (2004, p. 542). While Bates talked about requiring “successful completion of a higher education teaching qualification for tenure appointments” (1995, p. 1), Monash University in Australia made the first unit of a Graduate Certificate “a requirement for all new teachers entering the University, linking completion of the course to a probationary requirement” (Wilson and Stacey, 2004, p. 545). Wollongong University in Australia also have strong staff development in place for online technologies with a special unit, the CEDIR Centre, providing support for staff wanting to use new technologies in their teaching. There is also a requirement for all teaching staff to have completed their teaching certification in their first year so they can progress in the institution. Palloff and Pratt used online training courses to “deliver training to faculty who will be teaching online. This way, the best practices involved in online teaching can be demonstrated” (2002, p. 176). There are a number of successful models at other institutions that could be adapted in some form or another.

Organisational Change

The largest category of barriers in Berge’s research were in the area of

> *reluctance or inability to deal with the cultural changes often engendered by online teaching. Responses placed in this category included: faculty or student resistance to innovation; resistance to online teaching methods; difficulty recruiting faculty or students; lack of understanding of distance education and what works at a distance (Berge, 1998).*

These barriers are quite huge and to overcome them takes a big commitment from any organisation. The route through which tertiary institutions have come into teaching online is generally either from

distance education or from traditional face to face teaching. Both have their own challenges when shifting to an online environment mode of teaching because online is a different way of teaching from what the institution has been doing in the past. They are not insurmountable but have to be managed carefully.

Berge argued that it takes leadership at the highest institutional levels to have a significant, positive impact upon the cultural change and policy development required in institutions. Freedman *(2006)* from Blackboard Inc., cites the example of Bowdoin, a small liberal arts campus of 1,680 students in Eastern United States. Their new Chief Information officer, Mitch Davis, has a stated objective of “working at light speed”. Freedman comments that Bowdoin “is an unlikely college to be working at light speed”. He points out that Davis has “key support coming from the top”, as Bowdoin advances to become “one of the most technically advanced liberal arts colleges in the country." They are moving towards “an academic technology culture that expects a complete system for delivering high-value teaching and learning and consulting support services to the faculty, staff and students.” This change would not happen without the support coming from the President of the institution as well as having the support of the staff for the initiative.

Bates (1995) notes the need for a clear management role when looking at the adoption of new technologies in institutions. The research of Tinzmann, Jones, Fennimore, Bakker, Fine, and Pierce, (1990), into the collaborative classroom, suggests that people do not eagerly give up familiar ways of behaving to attempt something that is unknown to them, and there are many challenges in the implementation of new ways of doing things. People are reluctant to make changes in the way they do things if there is no apparent benefit from doing so. These

statements certainly ring true for online technologies so we need to be careful in introducing a new way of doing things without carefully thinking it through.

New Pedagogies

When an institution uses distance learning supported by electronic technology, not only do materials have to be prepared very thoroughly well ahead of the start of any course, but the whole course content and structure needs to be translated into an electronic form, and checked so it can be packaged for distribution to the students. This is usually printed and bound but also could be on CD Roms or DVDs, depending on the materials. All this has to be factored into the timeline as the timetable is very strictly adhered to so that students get the material delivered to them in time. Once the material has been produced, the effort to change something can be costly and most times hardly worth the effort of going through the process again for a few minor changes.

The benefits of moving to an online environment, from a distance education route, is that the materials are already in a digital format so just have to be transferred to the web. I say just, but there is more to it than that. This can be done by the academics themselves or a team of skilled web designers depending on the amount of material and the skills of the people in the organisation. Once the content material is available online, the academics can review and edit it and correct any errors. If there are further mistakes once the course has started, as the materials are online, editing can be done at any time and will be available to students as soon as the changes have been saved.

The difficult part that needs to be thought through very carefully is how to teach using this new medium. Distance education in the form of

paper materials and workbooks was conducted between a tutor and a student on a very individual basis. The contact between them was written and sometimes aural but there is always a time lag between contacts. With online, the communication can be immediate if synchronous chat is used or within an agreed time frame for asynchronous online discussions so problems can be solved within a shorter time period than before. Students are also able to work in groups so the learning changes from a one on one experience to collaborative group work. This is a major shift not only in the way the subject material is taught but assessments and marking will also need to be rethought and changed to fit this new model of teaching.

When we think of the teaching that happens in a traditional University, we think of lecture theatres, tutorials and laboratory sessions with lecturers and students in close proximity to each other. Creating materials for lectures can be finalised right up to the start of the lecture or a few days before if printed lecture materials are to be available at the start of the lecture. When moving to online teaching and learning, the proximity between lecturers and students changes in terms of physical distance, but the amount of individual contact can increase between the lecturer and student, depending on the lecturer. There is still the same urgency in getting course materials and reading printed and distributed ahead of the course starting but there can be more leniency in the weekly coursework as it can be made accessible to students at the beginning of each week. Lecturers may also have all the course material available at the start so that students can see what they need to do over the whole course. It does depend on the individual lecturer or Department policy on what is done. What is quite different in this case is lecturers having to teach online without having students in front of them to interact with, ask questions about what they are talking

about at the time. Academics in this case are learning many new methods in dealing with students that they cannot see.

The role of the traditional 'lecturer' changes to be more like the role of the distance educator, a coaching role. Salmon (2000) talks about the importance of the coach and used the term "e-moderator" in online learning in referring to the online teacher. In Salmon's five step model for online e-moderators, there are a number of technical skills that need to be mastered but the communication between participants and the e-moderator is the key to the success of online learning. The e-moderator in an online course is the person who interacts with the students online, either the lecturer/teacher or tutors who assist the academic. They promote and guide students in discussions, answer their questions and give feedback on students' work. The e-moderator may also be the person who has constructed the online course and who manages the material as the course progresses, but this role could be taken by a more technical person. With larger student numbers, they may be in charge of a number of other e-moderators who would each be responsible for a group or groups of students to help manage the load. In moving to an online environment, the role of the lecturer changes, as they take a less dominant role, as an e-moderator. This may be a change that is not comfortable for lecturers, especially if they have been in a lecturing role previously.

Lecturers are sometimes asked to teach online with differing amounts of support, and without addressing, and in some cases perhaps not even appreciating, that any resistance to teaching online could be interpreted as a stand for something which they hold dear, and which they may perceive to be under threat. Online can threaten the very existence of a lecturer if by putting their coursework into a University owned environment, they could lose or forfeit their intellectual property. This

has to be managed very carefully indeed for the lecturers who think that their positions and livelihood are threatened by this technology. It is also possible that teachers have some kind of premonition that the new technology may require some kind of unknown change to the way their subject is not only taught, but in how it is perceived. They may even fear the possibility that their subject will be changed by reformulating it in a different teaching mode. There is an urgent need for research into this possibility.

Revising the role of the teacher

Bonk has been a leading researcher into teaching online in the United States and is a voice for pedagogy in online teaching and learning. Some of his research statements are phrased as myths about online teaching and are thought provoking and enlightening to say the least. One of Bonk's myths about teaching online is "college instructors can teach the same way that they teach face-to-face". He qualified this statement with, "In many open ended comments, our respondents noted that their instructional role was changing. Several indicated that they needed to shift to more of a facilitator or moderator role online" (Bonk 2002). Academics need to re-think how they are teaching when using online as the teacher's role and how things are done online are not the same as face-to-face.

E-moderators respond to student conversations, whether it is in an online chat where teachers and students are logged into the system at the same time (synchronously) to 'talk' to each other or as a comment in a discussion where students and teachers do not have to be online at the same time (asynchronously). Facilitation of online communication is necessary to keep the discussion on track, motivate participants and know when it is time to close the discussion and move on. It occurs in

much the same way that interaction occurs in a normal face to face classroom discussion, but the participants are not in the same room together so different rules are needed to keep the discussion on track. The presence of an e-moderator is crucial in discussions but online presence must be balanced between too little and too much, and this also is different for the different year levels as well as between new and experienced online learners. New online learners need more guidance while they get used to the new learning environment in much the same way as new learners in an institution. A balance needs to be worked out for each e-moderator for each different set of circumstances.

Vanessa Dennen's research as a doctoral student of Bonk found that

> *less effective online instructors lack flexibility, do not provide qualitative and quantitative guidelines related to student contributions, maintain didactic approaches of traditional instruction, and do not allow students to share perspectives. She found that more successful instructors fostered student collaboration, interactivity, and engagement online. Additionally, the effective instructor is more of a peer and co-learner than typically found in face-to-face settings (Bonk, 2002).*

I have to agree with the statement about being a peer or co-learner with students, as teachers also take on the role of a learner in this new way of teaching. They cannot hope to know all about their subject areas with the amount of new information appearing each day in publications, books and on the Internet. Students in tertiary institutions offer a wealth of life experience that can be brought into the class to assist teachers and other students in both the face to face and online environments.

Kilpatrick and Bound (2003) also suggest that learners require sets of skills not necessarily found in face-to-face learning situations. They too have to learn a new way of learning just like teachers are learning a new way of teaching.

> *Situated, constructivist pedagogies provide opportunities for the development of critical thinking, problem-posing and problem-solving, collaborative learning processes, strategies for managing peer behaviour online and for navigating and decision-making in an information-rich environment.*
> *Teachers in online environments need to be mindful of these requirements and build in processes to manage interaction and develop skills. Designing in these factors is critical to success and may require a commitment and resource allocation to professional development for all staff involved in online learning development and implementation. (Kilpatrick & Bound, 2003, p.22).*

They have pointed out a crucial factor here: there are huge opportunities when teaching online to develop all the critical thinking skills that University students are expected to be using in their studies. There needs to be adequate support and funding of professional development of staff for them to be able to attempt any form of constructivist teaching, online or face to face, especially if teaching in this way is new to them. If teaching online, there also needs to be some technical training as technical skills also need to be improved.

We are looking at a huge paradigm shift here for tertiary educators, from the content deliverer to the facilitator of student learning. This requires a re-think at all levels of an institution, with staff developers providing courses to up-skill staff for these new roles. It is not just a transition from traditional teaching to online, but a whole new way of communicating and interacting with students.

The research is telling us that more people now have access to the Internet in our educational institutions, the barriers to access are reducing over time but it is still a big challenge for institutions to keep up with such a rapid pace of change. It appears that teachers are not as confident or competent as they need to be to teach in the new online environment which demands a fundamental change in the way teaching is done. Faculty need training on how to teach online. It is not a simple

transition from lecturing to teaching online as many new skills have to be learnt.

According to Bonk, the ‘effective online instructor’ is no longer in the same role as they were when teaching in the classroom. This is a change in the fundamental instructional methods used by lecturers and they have been expected to adopt these new methods without the support structures in place to allow for a smooth transition. Online is more than just using technology to teach students. There is a fundamental change in the way interaction occurs in the new online classroom and all users need instruction on what to do and how to act in this new environment. The newly defined role for teaching staff, the e-moderator, needs more attention in higher education.

Organisations need to consider the role that e-learning has in their institution and put into place systems and structures to make it available more widely to those who want to use it to teach their subject area.

What is missing?

There are a number of questions that have not been asked of teachers and lecturers in the literature, whether they teach online or not. For example, we could ask why have some subject areas taken to online teaching more than others? Why have some lecturers taken to online teaching more than others? What is the educational philosophy of lecturers/teachers, and does it matter? What are their ideas about teaching at a University? What are the needs of their particular curriculum and subject? Does their subject area lend itself to developing it for online learning in the University environment? Are

there factors in a university's (Schools', Departments' and subjects') culture that prevent or deter lecturers from teaching online?

In thinking about these questions, we are no longer looking at surface questions or barriers to online teaching and learning. Many of these latter issues have already been addressed by other researchers. Repeating such research in another institution will not add greatly to the body of research on teaching and learning. In the present study I am looking at the value the institution puts on teaching and learning and at factors related to the subject and Department that might help or hinder the lecturer from taking advantage of online teaching. This research is conducted at one University but there may be issues here that are also relevant to other institutions both in New Zealand and overseas.

With the introduction of any new technology, there is a period of early adoption followed by a wider acceptance by the majority of the population. Staff development professionals in the area of online learning need to know how to move the institution forward by using these new tools, so that academics and students can take full advantage of what they have to offer. The assumption here is that the institution and staff are willing for this to occur.

I do not think that Universities have fully explored or exploited all the opportunities that can be gained from online technologies. Educational institutes who fail to adapt or adopt these changes will not attract students whose lifestyle or other commitments mean that they need to learn from a distance. Because of the circumstances of some students, online learning is the only way they can 'attend' classes to start, continue or complete their studies. Student isolation is no longer the main argument for making classes available online, and the student population can no longer be treated as if the norm is the student

straight from school. Larger cities, complex employment commitments, the development of new lifestyles and the associated demand for "work-life balance", all mean that it is becoming more difficult for both part-time and full-time students to get to all their classes. Students expect to work and have a social life, as well as gain a qualification. With all these demands from and on students, doing some classes online may be the crucial factor between passing and failing. And it may be the difference between educational institutions that fail, and those that survive.

There is a need to get past talk of "barriers" to online education as such discussions in themselves hinder us from moving forward. We at Waikato have learnt many things from other researchers in the area of online barriers as well as from our own experiences from working in online education over the past ten years. We are mindful of the barriers that affect our institution and, over time, have implemented some measures that address some of these areas. There is a need to focus the research on the uniqueness of The University of Waikato to find out things that are specific to the University, the Departments and subject areas taught. The present study, which is necessarily limited, will focus on the following question:

What aspects of the pedagogical and educational culture of the University encourage or discourage staff from exploring online technologies in their teaching?

Chapter 3: Research Methodology

In order to pursue this investigation into what might encourage or discourage staff from exploring online technologies in their teaching, it was necessary to determine which aspects of the pedagogical and educational culture of the University it might be possible to interrogate within the requirements of this limited study. After reviewing the literature in the field around e-learning, and thinking about the areas that have not been mentioned in the research so far, it became clear that there are some particular areas that may be worth further exploration. The following three questions are the starting point from where the shape and direction of the research will come. The questions are:

- Does the notion of subject have a bearing on teaching online?

- Is there an underling culture within Departments, Schools or the University that has an influence on the online practices of lecturers?

- Do teaching qualifications have a role to play in whether academics venture into the online world with their teaching?

To find answers to these research questions, information was sought by using a qualitative methodology, using focus groups within an educational case study approach.

Educational research is about “seeking to understand and interpret the world in terms of its actors and consequently may be described as interpretive and subjective” (Cohen, Manion & Morrison, 2000, p.181).

In this research, I am attempting to understand the role of online teaching and learning in the lives of the lecturers, and to unravel reasons why online teaching had not progressed past the plateau it has been on for the last few years at The University of Waikato. This study is most suited to case study research. A case study is defined as a "specific instance designed to illustrate a more general principle and it provides a unique example of real people in real situations" (Cohen et al, 2000, p.181). The case study for this research is taken at an instance in time when the platform for e-learning is under review and the support for e-learning in the institution is in a state of change, as has previously been noted. Case studies "lie within the realm of qualitative methodology" (Burns, 1998, p. 365) and case studies can use observation, interviewing and document analysis for data gathering. Because of the information I am seeking, I used focus group interviews with participants as a method of data gathering. This method of interviewing is more suitable for the research as I was not requiring direct answers to any questions for any comparative analysis but a discussion between the participants around the topic of the question. Also included are my observations over the past ten years from working in this field of study.

Focus Groups

"Focus groups are a form of group interview where the reliance is on the interactions within the group who discuss a topic supplied by the researcher" (Cohen et al, 2000, p.288). The most powerful reason for using focus group interviews is for participants to interact with one another rather than directly with the interviewer. This differs from the strict question and answer type of interviews between an interviewer and a participant because the questions are directed at the whole group with the intention of starting a discussion around the question and not

just eliciting individual responses. The questions designed for the focus group interviews are intended as starters to get the groups talking about a particular subject and then participants are able to dictate the flow of the discussion.

Selwyn suggested that

> *the 'messiness' of this type of interview has a distinct advantage as there is often very revealing data collected from initially irrelevant interactions between participants, highlighting factors which would not have been necessarily raised in individual informant interviews (Selwyn, 2002, p. 14).*

I did not fully comprehend Selwyn's notion of 'messiness' at first and thought that it was referring to the focus groups' disorganisation, perhaps due to the facilitator's inexperience in the process. I found however that the 'messiness' will always be the case in focus group interviews when participants are allowed some leniency in the way the discussion progresses, but this is a strength and not a weakness with the process. The facilitator is there to provide the starting questions for the discussion and then the participants follow the thread from there with the facilitator providing input, if needed, to keep the discussion on track.

Using focus groups brought out information that would not have been possible with other data collection methods. If I had used the format structure of individual interviews, they would not have brought out some of these "initially irrelevant" statements referred to by Selwyn, which I did not initially realise how they related to the issues of interest.

Selecting the Participants

The objective of the data gathering was to use a number of different focus groups from different Schools at the University, to get their perspectives from the same set of starter questions. "One group is not sufficient as the researcher will be unable to know whether the outcome is unique to the behaviour of the group" (Cohen et al, 2000, p. 288). For this study, three focus groups will generate enough data for the purpose of analysing. Any more groups are likely only to succeed in creating repetition of ideas and not generate any new information. Cohen states that "it is from the interaction of the group that data emerge" (Cohen et al, 2000, p. 288). I was wanting the different groups to produce a representative and full range of perspectives.

I decided to use three groups with each containing lecturers from the same School of study at the University so I could observe similarities and differences within the Schools and also see what issues were common and different between the three Schools. I wanted to be able to compare the data gathered between Schools to show whether the results are dependent on the teaching subject, related to the culture of their particular School, or both. I also wanted a selection of staff from each School with different ranges of experience: some who experienced online teachers, some new to teaching online and some who did not teach online. That way each group contained a range of different perspectives and experiences of teaching online.

I decided to limit the research to the Schools of Arts & Social Science, Science & Technology, and Management, as this would give me a range of very different disciplinary cultures. These Schools have been using online for a number of years and are also quite diverse in terms of the types of disciplines that are taught within them. They have sufficient

staff teaching online, new to online, as well as some not teaching online, to get a reasonable representation of lecturers for the research.

The literature suggests that group size for focus groups should be between four and twelve. This was interesting as research into online discussion groups or tutorial groups suggests an effective number is about the same. I was also aware that with eleven starter questions (Appendix 4) and one hour and a half for each session, too many people in the groups could result in data giving answers and not discussion.

I proposed to have three different clusters of staff in each of the groups. Clusters were comprised of staff who do not teach online, staff who are new to teaching online (1 – 2 years experience) and staff who are experienced online educators (more than three years teaching online).

The participants were initially approached by telephone. Thus they were all people with whom I had worked with in some capacity previously in my role as a learning designer at the University. If they were interested in participating, I sent them the information sheet and consent form (Appendices 1 & 2) in the internal mail, so they could be somewhat prepared for the discussions. Cohen et al suggest that “focus groups operate more successfully if they are composed of relative strangers than friends” (Cohen et al, 2000, p. 288). In this case acquaintance was unavoidable as the participants in this study work in the same areas, they will certainly know of each other, if not actually work together, as the University Schools are not huge by international standards. They also suggest that “focus groups might be useful to triangulate with more traditional forms of interviewing, questionnaire, observation etc” (Cohen et al, 2000, p. 288). I did not triangulate the research with either

questionnaires or any lecturer observation in this research but for another study this could be done.

I felt that it was important to have a mixture of staff who teach and don't teach online to get diverse viewpoints from a cross section of staff within the University. I used purposive sampling, by selecting the initial staff for experienced and new online teachers from contacts I had with staff over the years. I was seeking people who were vocal in their views and who I knew had different experiences with online teaching. This sampling method doesn't set out to represent the wider University population as it is deliberately selective and biased (Cohen et al, 2000).

Initial invitations sent out to online teaching staff received an 80% favourable response, 10% saying they were unable to attend the meeting and the remaining 10% not answering at all. Of the 80% who responded favourably, all attended their scheduled focus group meeting.

The cluster of non online lecturers didn't identify themselves as easily, as my contact with them over the years had been quite minimal. I mainly deal with staff that teach, or are planning to teach online in the near future, so I relied on my contacts within the Schools I had chosen for the research to forward names and email addresses to me of staff who they thought would be interested in contributing to the research. I was not very successful in recruiting participants that I had not been in contact with previously and found this the most difficult group to recruit. I speculated that this group of lecturers might have thought that the research was about online teaching and as they didn't teach online, what advantage would there be for them in attending a focus group meeting. Also, if they did not teach online, they probably did not want to

take time out discussing an area that does not concern them at this particular point in time.

Of the non-online teachers contacted, the success rate was less than 50% and I didn't ask any others than those recommended to me. I was against having participants just to make up the numbers so I had a balance of online and not online teachers. It was a risk I was not prepared to take as I was only having one focus group meeting with each group and so I wanted them to be as productive as possible. I was also not comfortable having attendees in the same group meetings that I knew alongside a group of staff that I was not familiar with.

Participants

The Faculty of Arts and Social Sciences had six participants. The group consisted of two online lecturers who were very experienced with the University system, one new to the University with one year's experience but an experienced online teacher. There were two new users, both with over one year's experience of teaching online and one reluctant online teacher who didn't teach in the previous year but is going to try online teaching again soon.

One possible attendee from this group could not attend the focus group meeting so I set up the questions in an online discussion forum and asked her to answer them when she had time. This exercise highlighted to me the reason for using focus group discussions in the first place. The online comments were indeed adequate answers to the questions but there would have been a greater benefit if attendance at the focus group discussions had occurred as although I offered the option, there didn't follow any further discussion to what was posted. This was similar to posting out questionnaires and getting replies to the questions but not

having any discussion between the respondents. I also invited the focus group participants to post in the discussion forum if they wanted to add to what was discussed in the group sessions but nothing was added by any of the other participants over the next few months. This reinforced to me the reason for having focus groups in the first place. The discussion and interaction between participants is the most important reason for doing the data gathering this way.

The School of Management had four participants in their group. There was one very experienced online lecturer who tries everything, two who are reasonably new to the University but are keen users of online technologies and one who taught a very successful course online previously and will be returning to online teaching in the near future.

The School of Science and Engineering had eight participants in their group. This was rather surprising to me as I had had the least to do with this School in the past few years. There were three very experienced online teachers who are willing to try things out, two who are new enthusiastic users of online technologies and three who are not using online much at all.

The very nature of grouping people causes dynamics that are different within each group and it is not until people are put together that we find out how they will interact with each other. This depends on the members in each of the groups and it is difficult to predict how they will interact with each other, before the event. There were similarities between the three groups in the way that they interacted with each other because they either worked with each other in the past or were aware of each other's teaching. They listened to each other talk, were courteous in their replies and started to discuss the topics quite early in the discussions.

In a group where one member was quite new to the University, the interaction between him and the other members did not really eventuate. The groups worked because the members knew each other to some degree, and because I knew most of the group members previous to the meetings, there was some trust already built up between the participants and the researcher. This meant that we could get on with the purpose of the focus group meetings quickly. While waiting for everyone to arrive at the venue, tea, coffee and biscuits were available. A fairly low key introduction in a pleasant neutral environment was a great start to the proceedings. Water was also available throughout the focus group sessions to help lubricate the vocal cords.

Being new to facilitating focus group meetings, I was unsure about what to expect from the participants. I was pleased that they would give up their valuable time to be part of the research and their enthusiasm helped make the discussions flow. The literature talks about inviting more than the expected number to account for people who do not turn up (Cohen et al, 2000, p.188). In this case, everyone I had personally invited attended the sessions.

I was pleased with their willingness to talk so openly about the subject that I am so passionate about and pleasantly surprised that many of them were enthusiastic about their jobs, enjoyed teaching and were grateful to be able to talk to others about their experiences.

Managing the group discussion

Ensuring that all participants contribute in an environment where they feel comfortable to do so was something that I felt was important. The seating arrangement in the room was deliberately random but I was keen to accommodate people if they chose to move. The order of participants speaking was initially pre-determined by where they were sitting with the first person to speak nominated by the facilitator and then moving to the next person to their right till each person had their say. Once the group started to interact freely, the order of answering questions was then decided by the group members themselves. They were able to start answering the questions in the order they wanted as the questions were then a starter to a discussion between the participants. My role in managing the discussions was to let them have their say, allow the interaction to occur, keep the focus on the topic and pick the time to move onto the next question when it seemed to be right to do so. I also had to keep an eye on the clock so not too much time was spent on the initial ice breaker questions leaving less or no time for latter questions.

Ethical Considerations

Ethical approval was sought and approved through the School of Education Ethics Committee. Some of the issues that needed clarification are detailed below.

Consent

The details of the research were outlined to the participants when I first asked them to be involved in the research before obtaining their informed consent (Appendix 2). The consent form was sent to the participants, which they signed and returned.

Gathering and Handling information

At each focus group meeting a tape recorder was used to record the proceedings. At the start of each session, each participant identified themselves by name and indicated that they had no problem being taped. As the sessions were to encourage discussion between participants, I didn't want to disturb the flow of the discussion by having each person identify themselves each time they spoke. They had recorded their names at the start of the sessions in case I had difficulty in recognising who was speaking during the transcribing process.

After the three sessions, I transcribed the data identifying who made each statement. The data were not transcribed verbatim as there were comments made that were not relevant to the purpose of the research. I listened to the tapes a further two times while reading the transcriptions to make sure that I had what was said on paper and to make sure that there wasn't something else that I had inadvertently missed in the translation. I didn't want to lose anything I felt was important in translation from the raw data to the written words.

The audio tapes were stored securely by me and no other person had access to them. A copy of the first draft of the findings was sent to the participants (see Appendix 3) for their approval. All documents were accessible by password, only stored on my computer but also copied to

a server, which is backed up on a daily basis. Data will be kept securely indefinitely, as required by University of Waikato conventions.

Confidentiality

The data gathered through the project is confidential to the researcher and individual participants. I originally intended to use personal pseudonyms but as it turned out did not need to use names. After considerable thought, instead I attributed quotes to staff by their category only. I felt there was no need to identify comments made by individuals throughout the research, as would happen if pseudonyms were used. The identities of the Schools could not be kept confidential as the study makes comparisons between the particular subject areas of the Schools of study. Every attempt has been made to ensure that individual staff members with Schools are not identifiable though this is difficult in such a small community. The first draft of the analysis was sent to participants, to read and to give them an opportunity to inform the researcher of any areas of concern in the presentation of the data. No matters were raised concerning the confidentiality of the data.

Potential harm to participants

The greatest potential harm may be for others who know their views identifying the participant in his/her own Department at the University. Information with any reference linking Departments to staff has not been included, for this reason. A second potential for harm rests in what participants revealed about themselves and their Department, especially if it is negative about particular people or situations. Another potential harm is in taking up participants' time that is needed for everything else in their lives; I needed to be sensitive to and respect

their needs because of the busy-ness of their jobs. I will not reveal details about a specific contribution under any circumstances.

Focus group questions

The questions for the Focus groups (Appendix 4) were broken up into three areas. The first section was about the subject areas participants taught and if there was any relationship between the subjects and whether they taught using online technologies. The second section was about how they saw themselves in relation to their Department, School and within the University as a whole. It explored their relationship to their area of teaching and attempted to find out what influences the culture of their Department or University had on their teaching. The third section was about their experiences with online teaching and learning and explored what they did online and how they felt about teaching in this way.

Analysis of the data

After transcribing the group conversations and correcting the transcripts, the process of analysis followed a systematic process, in three phases. In phase one, I read each transcript through and responded to it spontaneously, noting any points that occurred to me in the margins. At the end of this phase I devised some rough categories into which I thought the data might fall. In phase two, I read each transcript through more slowly, trying to determine what were the major and minor themes, and trying to allocate different talk to different themes. At the end of this process, I revised my categories, setting up headings. During the third phase, I allocated quotes to different categories, adjusting these as necessary.

Once this process was completed I was able to see certain aspects of the data relatively clearly. I then wove these insights into a narrative, where quotes are supported by some discussion.

Chapter 4: The Findings

This chapter presents an analysis of the discussion of the focus groups. To recap, the groups were made up from three different Schools, the School of Management, the School of Science and Engineering and the School of Arts and Social Sciences. A number of similarities and differences between the groups were revealed. Some of these were to be expected and would probably have occurred independently of the group/School combination used in the focus group interviews. What was unexpected were some **hidden gems** of comments in the discussions that came to light as the analysis developed. These comments throw new light for me on the focus of this study.

For clarity, the data is presented in this chapter in the same order the questions were answered in the groups. The major headings from the questions were:

1) Teaching your subject area. This area covers what the participants taught, how they teach, what is difficult about their teaching and what special techniques they use to teach their subjects.

2) You, your Department and the University. This area covers ways in which their Departments and the University encouraged or discouraged participants' teaching.

3) Online teaching. This area covers participants' thoughts about online teaching, advantages and disadvantages, subject specific requirements and how online assists their teaching.

Within each major heading from above, I have taken out common threads with a selection of comments made by the focus group participants to highlight any trends from the discussion. They are representative comments from the groups and draw out common threads which will be the focus of further discussion in the following chapter.

1) Teaching your subject area

Range of subjects taught

One of the most startling findings from the groups was the wide range of responsibilities and areas of teaching that lecturers' jobs encompass.

School of Management

"I teach at undergraduate and graduate levels".

"I teach over three courses".

School of Science and Engineering

"Teach 1st year to PhD."

"Teach in about 7 different areas."

"Bit of a generalist. Teach mostly undergrads."

"2nd & 3rd years, Masters and PhD"

School of Arts and Social Sciences

"I teach at Part 2, Part 3 and Graduate level. Taught on Campus and online, same paper just different audiences."

"100 level papers, convene it and involved in its design. At 300 level share teaching and Masters and PhD students in a range of topic areas."

Lecturers teach a wide range of subject areas and levels from first year undergraduates to PhD students. One of the lecturers contrasted her experience teaching in the United States where one lecturer was responsible for teaching a first year class six different times a week. She acknowledged that the small population size in New Zealand prohibited this happening here.

Numbers of students in classes

There was also a wide range in the numbers of students in their classes ranging individual supervision, small classes of under thirty up to large lectures with over three hundred students across the three Schools of Study.

"I enjoyed that even though it had more than 300 students, we ran it interactively and that was just fantastic."

"My class last summer School was 72 graduate students."

"I have small numbers so don't know what it is like with hundreds of students."

"Lectures, tutorials. 200+ in lectures."

In general, Management classes were a lot bigger than the humanities classes across all levels. Also there was a huge increase in numbers of international students over the past few years in the Management School and the falling numbers of students in Humanities. The science subjects have restrictions on the physical size in some classes due to the laboratory sessions. Theory classes can expand to the size of the

lecture theatres, spill over to other lecture theatres by projecting the lecture onto the screen or using video conferencing link up to students in other institutions. Some classes have limitations on the number of students that can be physically accommodated for a teaching or practical session.

Enthusiasm for teaching

There was a genuine enthusiasm for teaching among lecturers across all the groups. They were keen to attend the sessions and talk openly to others in their Schools about their experiences.

> *"Enjoy the topics. Students are very interesting themselves as a lot of them come from Computer Science and they are passionately interested in their subject."*
>
> *"Enjoy conceptual design as it teaches students to do real world things and analyse a system, predict things with numbers, put real numbers onto things and then be creative about implementing and building something."*
>
> *"I like everything I teach."*
>
> *"Like the new students with their first contact with technology and having to use technology for their University studies. Helping them through this task is interesting if not arduous."*
>
> *"Like the new students with their first contact with technology and having to use technology for their university studies. Helping them through this task is interesting if not arduous."*

I didn't expect their enthusiasm for teaching to be quite as high as it was across all the three focus groups with so may changes happening at the University at the time.

Students' learning

The main differences between the groups were that the Scientists were delivering content knowledge whereas Humanities and Management challenged the ways their students think about the world.

"I like to see the light bulb go on when there is a change in some of the conservative ideas that students have."

"I like it when their eyes light up and they understand something."

"There is a huge amount of enjoyment in seeing them click in the lecture."

"The purpose of the course is for them to think, read and discuss".

"Lectures that have particular purposes, not for the students to reproduce what you have said, they are to stimulate, challenge, engage and motivate."

The scientists rely more heavily on students learning content material and being able to apply their knowledge to problem solving rather than any social understanding or commentary on the world.

"Traditionalist – teach with OHP and lecture and laboratory".

"Presenting in a linear way a field of knowledge to the students and giving them my spin on what I think is important and where they should go for some more background reading".

There is a definite link here with the uptake of online learning across different Schools at the University and the online learning system used. ClassForum was initially purchased to fit a discussion learning environment in the School of Education and adapted to suit other Schools as they became interested I using it.

Teaching methods

There was a wide variety of teaching approaches from the participants and it made me wonder if this was particular to these participants in the focus group sessions or whether this was generalisable across the University. Some of them had been trying different ways to engage with students during their University careers, with online teaching and learning just another method they used in their teaching.

School of Management

"2 2hr lecture blocks where interactivity was part of it. Used a teaching team with tutors who would run the buzz groups and report back. Lecture time was a mixture of lecturing, questions, responses, then back again."

School of Science and Engineering

"I lecture but get students to answer questions and feedback so it is somewhat interactive."

"I go through problems on the board and teach and teach with problems."

School of Arts and Social Sciences

"Enjoyable devising creative and innovative components of assessment which give marks reflecting on the extent to which students have achieved the learning goals."

"I want them to think about things, not regurgitate me or the textbook."

"I pick these things up from trial and error and time. You know what works as you get to know your subject better."

"We have teacher centered lectures. It's fairly directive and then we have tutorials where we try to have as much interaction as possible."

"Wonder how many of them have been trained to teach."

There was a big range of teaching methods used by the participants, from face-to-face lectures where the focus was on content delivery up to mostly online courses where interaction was virtual. Most focused on higher order skills like analysis, synthesis and reflection on the course material. Most participants were open to trying different teaching methods to assist the students' learning. It was interesting to note that within the focus groups, the number of trained teachers in the groups was a greater than University average.

The scientists used a problem based approach with many mathematical equations and symbols where they needed white boards to assist in their teaching approach. The current online system did not suit this way of teaching.

> *"Main barriers is the system is not set up very well for mathematical languages. It is still not the same as face to face."*
>
> *"I'm a traditionalist – I teach with OHP and lecture and laboratory".*
>
> *"I go through problems on the board and teach and teach with problems."*
>
> *"Emphasise 1 on 1 as we have small groups. Rely on small groups to communicate the subject. Don't use online much at all".*

Difficulties in teaching their subject areas

There were a number of similar difficulties highlighted across all the groups, but each subject area had its own particular idiosyncrasies as well.

Across all Departments, there was agreement that the student population has changed over the past ten years, material is changing at

a faster rate in some areas than ever before and the language of the subjects is most difficult for the international students.

> *"There is a different group of students that are now coming to University to get that entry level piece of paper."*
>
> *"This is a trend across universities in NZ and across the countries as well."*
>
> *"We are getting a more diverse background of students."*
>
> *"Basic skill set is missing. NCEA is diluting science and Mathematics."*

The changing demographic is due to the increasing percentage of international and mature students attending. There is also a change in the skill set School leavers are bringing to University due to the introduction of the National Certificate in Educational Achievement (NCEA) in high Schools. The participants from Science were very vocal when talking about the skill set students are bringing with them and were concerned about standards slipping in their subjects due to what was being studied at secondary school.

Humanities teachers found difficulties in keeping up to date in this rapidly changing world and in areas where changes in national and international affairs are used in the curriculum, this causes concerns and frustrations for staff. In some cases, academics need to know what has happened since the last class to keep the subject current.

> *"Keeping up with the currency of the material. Progressively update material but as we teach over a variety of areas, it is hard to keep up."*
>
> *"In NZ we have to teach across a lot of subjects and so we cannot specialize. The small population base means we cannot specialize so we*

have to be generalists so we cannot keep the same intensity of knowledge as you can if you are a specialist."

The language of the different subject areas is not just a concern for international students but is also a concern for new students straight out of secondary School. For the scientists, the difficulties are directly related to the level of maths skills the students bring to class.

"Students have difficulty with significant figures, estimating the magnitude of things and working with units."

"Maths, changing between units, cannot draw a graph."

"Students have difficulty translating things into mathematical statements."

"I don't have time to teach them the basic maths."

"We are teaching them a whole new language. Before we can teach them critical reasoning skills they have to have some maths. Then they need all the jargon of the subject."

Participants noted that semesterisation of courses reduced teaching hours per course. This meant that there is no time to do any of the remedial work that was once fitted into the beginning of courses. Thus staff do not have a buffer in which to get students' basic skills up to the level that they think is needed for a University education. There is assistance available through the Teaching and Learning Development Unit (TLDU) but it is up to students to get the help they need outside the normal class timetable.

2) You, your Department and the University

Participants were asked about the influences of the Department, School and University on them. Their discussion ranged widely, but centred on the impact of departmental and university expectations on their teaching and research.

Teaching

This part of the discussion caused some huge debate in each group and it was obvious that the lecturers felt that they had not been fairly treated for efforts they put into their teaching by the University and, to a lesser degree, their Department. There was a cynical tone to some of their comments on this topic from these dedicated professionals.

> *"Advancement is not about teaching excellence but mediocre teaching and a good research and publication history."*

> *"It is a trade off above the threshold investment in teaching against what you would put into things that more reliably over the years deliver in those areas– so you have to be pretty passionate about teaching to invest significantly over that threshold."*

> *"Should be more emphasis on teaching now. You could rely on the quality of the student coming to Uni, now that we have a more diverse range of students, the quality of the teaching should be higher to cater to the market."*

> *"One of the problems with what and how we teach is how the students will respond to it because of the teaching evaluations."*

> *"If you have a COD who values teaching there is a difference compared to others who don't care about the teaching as long as you bring in the numbers, but you must do research."*

"If teaching and research were equally valid. We don't have an option to excel in teaching."

"There are things they do to encourage teaching – excellence of teaching awards offered across the campus every year."

"Requires no teaching qualifications to teach. We learn from being students, no training. Expected to learn by doing and be experts the first day we go into the classroom."

"There is no acknowledgement for the effort that people put into their teaching."

Although the participants were generally committed to giving the best quality and service to students, they did not feel that they were being rewarded satisfactorily. The support for teaching in Departments varied but depended some what on the support from the Department chair. If that person valued teaching and learning then there was more support and encouragement for staff to pursue this. More emphasis placed in teaching abilities of staff in promotions would shift the importance of teaching at the University.

There are annual "Excellence in Teaching" awards but they are not seen as very valuable by staff, because they are not clearly linked to the Performance Based Research Funding (PBRF) ratings exercise. Teaching is not seen as being as valuable as securing research funding or publishing research.

Research

"The (PBRF) environment has had the occasional effect (no doubt unintended) of de-prioritising teaching activities and investment in Learning and Teaching."

"New lecturers must have a strong publication record."

"PBRF totally dominating everything, including new appointments. New lecturers must have a strong publication record."

"Over the years, for teaching, you have to reach a default threshold and your career depends on your research, scholarship and publications. Advancement is not about teaching excellence but mediocre teaching and a good research and publication history."

"You need high PBRF ranking to get money into the University and go out to get contracts to boost the PBRF ranking and fund the running costs of the Department. This all takes time from teaching. We spend lots of time teaching but must be super human to research as well."

The consensus in all groups was that greater importance is placed by the University on research, over teaching. The main emphasis for promotion was on research and publications, and the PBRF rating, even though only about 20 percent of overall funding comes from these sources.

There was a strong feeling of desperation from the participants. They saw others putting effort into research and publishing and being rewarded with quicker promotion than those who had put effort into their teaching.

Teaching and Learning Development Unit (TLDU)

The TLDU unit is a group of staff that assist academics with their teaching and also students with their learning. They run courses for staff to assist with their teaching but not many of the focus group

attendees took advantage of their expertise. They also help students on an individual or in groups with many aspects of their studies.

> *"TLDU does run supplementary maths courses. I don't have time to teach them the basic maths. We don't have any specific mathematics requirement."*

> *"Went to the TLDU workshops and now I have introduced as my second slide the objectives of the day's lesson. Students appreciate having objectives because these were the main things that I wanted them to come away with. I steal the first 5 mins of the next lecture to remind them what we did last time. This got the students back into the zone for the lecture. I use lots of analogies to relate to things that they understand."*

> *"Philosophy has its quirks as well. We don't get enough help from TLDU and others who are experts on education as they don't know about philosophy."*

> *"And no-one is using powerpoint much. A lot of it comes back to support, encouragement, things like the PGCERT in Post Graduate Teaching with TLDU providing 1-1 staff development for skills for your particular subject. We need the support to assist in this development."*

The staff in the TLDU unit cannot be expected to be experts in all subject areas that are taught at the University. An issue that was raised in the focus group was that the unit has experts in education but they also need to know about their subjects to help them teach it. This is really not possible to achieve with the limited resources they have and their support of lecturers across the University has to be general and not subject specific. As we move into an age of flexible delivery and blended learning, teaching staff need to know about all options of teaching and learning that a University offers and TLDU are a central unit that is well positioned to take on this role.

3) Online teaching

This last area was devoted to online teaching and learning and produced a very wide range of uses for online technologies in teaching as well as highlighting the strengths and weaknesses for its use. The variation in responses went from one participant who does not like it at all, due to previous bad experiences with students online, to those who are happy to use it for administrative purposes to others who use it to its fullest to suit their teaching needs.

I was probably expecting more positive comments than negative ones due to the attendees in the groups but as always, the comments were constructive and pointed to areas where improvements can be made.

Unfavourable

> *"More trouble than it is worth so far."*
>
> *"The problem is time to put it together."*
>
> *"What we teach has so much hands on component that the online component cannot deliver this."*
>
> *"Main barrier is the system is not set up very well for mathematical languages. It is still not the same as face to face."*
>
> *"Hard to get them back if you have lost them. On the edge of chaos."*
>
> *"It is still not the same as face to face."*

It is interesting that there is still the issue of the time it takes to put courses online. This is a barrier brought up in other literature and will continue to be an issue for many staff unless it is addressed by the University as a whole. There were also technology issues when

staff tried to replicate online what they did successfully in a face to face situation. It does not always work out how we expect when we try to transfer something that works in one situation or environment to another. Sometimes it is just "more trouble than it is worth".

Favourable

> *"Really valuable as I am committed to distance education, reducing barriers. Teaching online has a lot to offer, but, doing it right is very hard."*
>
> *"It's like the Stock Market. There are really good investments of your time and energy that can pay off well and some efforts pay off in frustration and disappointment. In advance it is impossible to know for sure."*
>
> *"I have enjoyed using online, it has helped me keep sane, once I have learnt it. Knowing it is somewhere set up and each year I can tweak it."*
>
> *"If we design the learning processes properly, the students do most of the work. The first time is difficult. It is a huge upfront cost. After that it is easy."*
>
> *"It worked very well as it allowed the interactivity to continue outside the classroom. A sheer joy to respond to their postings."*
>
> *"You need to learn how to work online. The world of business is increasingly online. This is the technology that you must use."*
>
> *"I like the connectivity, the ease of communication and administration, and the resources one can share online. It enhances face to face teaching, if aspects of the Learning and Teaching can be virtualised and made more flexible."*
>
> *"Online is OK for Q&A, providing testing and delivering resources."*

The more favourable comments came from staff who had made a huge commitment to teaching online and for them, they were reaping the benefits of that investment. There were comments from staff who found gains in using the online environment for some areas and not others and these varied greatly across the groups, as I would expect. Comparing online teaching to the stock market or vice versa is an interesting comparison to make. The problem with any investment is that hindsight would be a great thing as we do

not know whether we are doing the right thing at the time. It will be discussed more in the next chapter.

Content

> *"Online is OK for Q&A, providing testing and delivering resources."*
>
> *"Good to put videos online for students to view it over again."*

Even though the strength of the online system is in its discussion forums, staff also need somewhere to place content and resources for students to access. One piece of software does not fit the needs of such a diverse group of academics and students and it was never intended to.

Advantages and disadvantages for staff online

There was a wide range of responses from how online courses are managed by academics, the range of abilities of students in online courses and online is still not accepted by the vast majority of academics at the university. There is also a vast range of subjects, levels and class sizes that academics teach. This means that one strategy for online teaching does not suit everybody but a range of different offerings is needed. Getting the balance right is the difficult part.

Course management

> *"For big classes, online makes the administration valuable, making resources available, keeping things current.*
>
> *"e-learning communities can be built and customised. Ease of management of household matters".*
>
> *"I added FAQs online so I hopefully only have to answer the same question once. It worked. Posting notes etc was good. I taught them to go online first, then come to me."*

There are certainly ways that the online environment assists staff in matters related to the administration and management of their courses. The word has not been well spread to other academics who are still sceptical about online teaching though.

University issues

> *"It does take a while for any technology to become embedded into the course structure."*
>
> *"Takes time to set up; one has to convince too many students and colleagues of its usefulness; customisation requires time and resources."*
>
> *"Another problem is that students have 3 sessions on online instruction in one week. There needs to be some sort of collective approach."*

Even though online teaching has been at the University for a number of years, it is still not accepted as an integral part of teaching and learning. There is not a uniform standard required across each School within the University, and each lecturer does what they feel they need to do.

The biggest diversity related to the lack of consistency in attitudes, expectations, practices, and support across the University towards the use of online in teaching and learning. These results suggest that a more organised approach is needed across the whole University and within each School to cut down on repetition of effort.

There is a huge range of online abilities amongst students in each class. This range goes from students never having logged on to students who are very confident in the online environment and feel very comfortable taking part in online discussions and working in groups. There was no consistent approach to online teaching across the members of the focus

groups and hence there were different expectations from their students as to what their online course would deliver.

> *"Important to have the tutorials to talk about what is happening online as well. Online is not isolated in my subject. Integrated within the whole teaching approach."*
>
> *"Find it useful to have online and face to face. Just online does not work for me at all. I couldn't do just online as I like going into the lecture theatre."*
>
> *"Key problem with online is the visual feedback."*
>
> *"Sums up all of our teaching. All these different little groups and somehow you have to cater for them."*

The lack of visual feedback in online text based discussions has some drawbacks for lecturers who are used to the face to face. The use of photos in online discussions and the greater use of video communication in some Schools goes some way to alleviate this situation.

How does online assist your teaching?

It was interesting that this discussion was intended to be about how online assists teaching, but the participants talked more about how online assisted students in their learning. The focus among the participants was firmly about the students. Subject dependent talk also surfaced along with discussion about working in isolation and not knowing, or having the ability to know, other strategies teachers use when working online with students.

Organising the lecturer

> *"The format of technology makes people formalize their lectures, just a little bit more. It focuses them on the teaching objectives."*
>
> *"If the lecturer has to do something it helps them pull together things a little bit more. Not to completely formalize and replicate it online so the students don't come to lectures but it gets them to put things down on paper a bit more."*

"Structured exercises and things with a distinct purpose worked or can work very well."

"50% International so they filmed the lectures so students could re-run them."

Online assists lecturers to formalize their lessons and think about the objectives of their teaching as they have to commit their thoughts to paper and then onto the screen for students to read. Lecturers still have to prepare for classes whether they are preparing information for online, for a face to face lecture, or a tutorial. Writing things down for students to read online or print out means that there is a little more urgency and teachers have to be more organised than teaching face to face sessions. The participants had no problem with committing their work to the screen for students to read.

Organising the students

"Students have found it useful in organizing themselves as well. Send each other work, organize meetings etc. It has given the students a focus."

With more pressures on students, the online environment means that they are able to communicate with each other well after the class has finished. They can also be more efficient when organising their work using the online environment.

Student learning

"Online provides more learning for a given input of teaching. More learning for their dollar. They have developed more by the end of a course than in a classroom situation."

"Not learning in isolation. They can see other possibilities – other ways to respond to the same topic. Harder to do in a tutorial.
They can do it at their leisure and in their own time. More opportunity for reflection, self learning and self development."

"Have an opportunity to respond to students that they would normally not be talking to."

> *"They remark that they are surprised that they find they change their minds of things that they perceived before they started the class."*
>
> *"Students have the opportunity to replay audio and video, view images again and again as well as read and respond to online discussions in their own time."*

At its best, the learning online is not only from lecturer to student but there is a more co-operative approach between students and the lecturer. Learning does not need to be done in isolation or just between the student and the teacher, it is a shared experience.

There are also more opportunities for students to reflect in their learning when online as they have time to put their thoughts together before committing them online for the group to read. Also by having discussion postings remain for the duration of the course, the information is available for revision. In addition, the progression of each student's learning is plain to see, which is not something that is available in traditional teaching.

Department/School assistance

So what can the wider University community do to assist staff with teaching online?

> *"More conversations like this would be helpful. I found it useful listening to what everyone is saying."*
>
> *"I think that if there was more of this discussion in more of the Departments there would be greater collegiality and the development would be faster and there would be greater student learning."*
>
> *"Departments and Schools could encourage others to do this so that there is a critical mass of staff other than the 4 or 5 lone rangers that are out there working."*
>
> *"There is no-one in my Department that does any online anything"*
>
> *"peer review of online teaching, or some such collegial think-tank in the faculty dedicated to best practice would be a good idea."*

There was no critical mass of online lecturers within participants' Departments, and this gave them a sense of isolation with respect to online teaching. The groups expressed an interest in sessions where staff can get together and discuss what they are doing online as they felt that they had benefited from the focus group discussions. This could help reduce the feeling of isolation in their Department as a critical mass of staff teaching online had not been reached in some areas.

Because the Schools that I chose for the focus group meetings have only small numbers of staff teaching online, the feeling of isolation is to be expected. Being unable to talk to departmental colleagues who are teaching in subject areas that are close to what you are teaching makes it difficult to discuss your online experiences. Some just do not want to know.

Support

> *"Need a little more support in the administration of it. Things that I don't need to do, they are time consuming and can be done by an assistant."*

Academics are specialist teachers in their subject areas and some are willing to use the online environment to assist their teaching. The groups raised the issue of getting help with some of the technical setting up of the online areas. They also need help to do some of the setting up of their courses if they only do this once or twice a year. Their expertise is not with knowing how the software works, but in using the software to teach what and how they want to teach. Some Schools offer great support for academics, but others found it difficult to get help when it was most needed.

Summary of the data chapter

This chapter presented the data from the focus group discussions, analysed into themes and highlighting some of the major findings. There was no discussion about issues or problems with using technology in relation to previously researched barriers, but there was discussion about the limitations of what the technology allowed lecturers to do. This lack of technology barriers was probably due to the participants being fairly sophisticated and experienced in their computer use which also extends into using their computer to teach online. It was also deliberately not mentioned by the researcher as a topic in itself to be discussed.

While the participants thought that there was great support in some areas of computing and technical support around the University, the support for staff using online technologies could certainly be improved.

There is a need to increase the support for staff and students in the area of online teaching and learning so they can all more forward with the technology. The area of pedagogical support was highlighted as not being covered well enough by the online support staff.

There were two areas that came out of the data that were not well represented in the literature. The first was a link between teaching qualifications and staff who teach online. There was some evidence within the focus group attendees to support the notion that teaching qualifications assisted academics to teach online. The main support most academics need to start teaching online is to learn how the online system can be used to teach their subject areas.

Second was a link between the subjects that are taught and whether this has any relationship to whether the subject is taught online or not. There are areas in some subjects that make teaching online difficult because of the asynchronous nature of the technologies. Due to the lack of bandwidth outside of the institution intranet, it is difficult for academics to use online technologies in a way that is similar to how they have been teaching in the past. More research needs to be done into the ways that academics want to use online technologies for their teaching.

The following discussion chapter discusses these points and others that emerged from the data, and develops them further. I will then consider some implications for The University of Waikato and, by implication, for other institutions as well.

Chapter 5: Further reflections on the data

Focus group interviews enable interaction and free discussion between the participants in the groups. This allows for some free flowing, unprompted interviewer discussion in which revealing statements can, and often do, arise. As the participants engaged in discussion, some of the comments made can bring to light a whole new set of thoughts for the researcher, or take us in a direction that we were not expecting at the start of the research.

The “often very revealing data collected from initially irrelevant interactions between participants” (Selwyn, 2002, p.14) in these focus group sessions were hidden and it wasn’t till after listening to the interviews several times that some of these statements came to light. They literally jumped out at me and helped bring a new perspective, not only on the literature about focus groups interviews in relation to what can happen in group sessions, but also to some thoughts that I was harbouring before embarking on the research.

Once these comments were put into the context of the lecturer, their subject and their Department, they started to be very significant indeed. I have chosen here to highlight some selected statements that appear to me to deserve closer consideration. These statements were not saying things that I hadn’t heard before in my work with staff but they start to tie many things together for the research. They can seem to be very innocuous statements but on further investigation they are very revealing about the institution itself. Let me take each of these quotes and discuss them in turn.

Quote 1: “Wonder how many of them have been trained to teach?”

This statement not only made me think about what teaching qualifications academics at Waikato have, but also whether there was any link between the uptake of online teaching and teaching qualifications. For me, being from a high school background where a teaching diploma was mandatory to teach, I was unaware of the small percentage of academics who had teaching qualifications in this and other tertiary institutions I had worked in.

As one of the focus group attendees said on an e-mail after the interviews:

> I do believe that there is a big difference between teaching live and teaching online and I don't believe that enough attention has been given to that. Most of us are not "teacher trained" and I don't think we actually "know" how to teach online. There seems to be an assumption that you can just transfer one type of teaching to the other which I don't think is correct. I think we actually need more training in the pedagogical aspects of online teaching - not just how to work ClassForum.

A fundamental aspect to teaching online is that transferring from a successful face to face format into online is not a recipe for immediate success. There are fundamental differences in these formats of teaching and academics need training to support them when changing or creating an online course for it to be successful. What works for one academic in their particular circumstances may not work for another.

When I started to work with academics in my role as a Learning Designer teaching them how to use the online software, ClassForum, I

found that during the training sessions there was a lack of understanding of fundamental teaching theories and concepts. Thus the courses that should have been about using the software to teach online became much more about online pedagogy. The problem was more than I could manage in the time I was allotted and it was also more time than lecturers could spare to learn how to teach online. The training courses didn't initially include much about pedagogy, but as I became aware of the lack of teaching skills among academics, pedagogy was brought more into the online courses so they became more about teaching online rather than about how to use the software.

In my role as a staff developer at the University, I was initially pleased to be in a position where I could pass on my knowledge and expertise to staff embarking on their journey to teach online. A big mistake that I made was to think that the transition for academics learning to teach online would be similar, if not better, than the journey was for me, as I could help them avoid the mistakes that I had made and show them quick ways of achieving what they wanted. For staff transitioning to online teaching, there needs to be something to transition from and traditional University lecturing, which is generally about content distribution, is not the ideal platform to launch into the collaborative world of online teaching. I have come to think that the missing link is the pedagogical knowledge which enables academics to move successfully to the virtual world of online teaching and learning.

The University of Waikato has published data on "the proportions of academic staff in the Schools and Faculty who have a teaching or education related qualification" (The University of Waikato, 2005, p. 311) in the teaching quality chapter of the May 2005 "Teaching and Learning at The University of Waikato: self-review portfolio."

For the Schools involved in the focus groups, the results from the report for those Schools were:

School or Faculty	% of Academic staff with teaching qualification
Faculty of Arts and Social Sciences	14%
School of Science and Engineering	3%
Waikato Management School	8%

Seeing these figures made me think about the possible link between the uptake of teaching online and the teaching qualifications of staff.

The School of Education was the only School at the University where the percentage of academics with a teaching qualification was above 50%. There, 86% of academic staff had a teaching qualification. This is to be expected as the majority of staff in the School of Education (SOE) taught either in early childhood centres, primary or secondary Schools before being employed in the SOE.

I was surprised to see such low numbers of staff with teaching qualifications across the university, but these results are understandable when looking at a quote from the self-review portfolio about appointments of staff.

> The University appoints its academic staff on the basis of their knowledge of and research record in the discipline in which they will be teaching papers and in which they will conduct their research. The University puts greater emphasis on the strength of and commitment to the teaching-research nexus than on the formal qualifications in education. (University of Waikato, 2005, p. 321)

The appointment of staff is based on their knowledge and research record in their teaching area rather than any formal teaching qualifications. This confirms why there are such low percentages of academics with formal teaching qualifications but also equates with the focus group participants' perceptions of the low levels of considerations for teaching within the University. They were unanimous in saying that a good research record is more highly valued for promotion or recruitment of staff than a good teaching record. The main concern that came out of the focus groups was the question of why they should put time and effort into teaching if they were not rewarded for it, as they were with research. It is better for their careers to put time into research and publishing than upgrading their teaching skills.

The self review document also talks about "research-led teaching and learning" (University of Waikato, 2005, p. 324) and contends that "the research capabilities and capacity of the University's academic staff feeds through into teaching at all levels" (University of Waikato, 2005, p. 335). This is referring to content or information derived from research being fed back to students through the normal lecture and tutorial teaching process. The document does not say how this will be achieved.

To improve teaching skills, academics can attend courses run by the Teaching and Learning Development Unit (TLDU), enrol in a Post Graduate Certificate in Tertiary Teaching at the University or attend adult teaching courses run by other institutions to gain a qualification. There is no compulsory requirement at the institution for lecturers to gain a recognised teaching qualification before they can 'teach' at the University. This is backed up from what one participant said in the focus groups.

We learn from being students, no training. We are expected to learn by doing and be experts the first day we go into the classroom.

Research and publishing, just like teaching, are activities that are learnt over a number of years with many hours of work. For lecturers who have doctorates, hence attaining a high standard of research in their chosen area of expertise, it does not also mean that their research expertise makes them a good teacher. There are exceptions to every rule, but it seems to me that staff need to learn both research and teaching skills in order to achieve the desired outcomes that all institutions now demand of them.

The focus group attendees leant more towards the teacher end of the lecturer/teacher continuum with a much greater percentage of them having a teaching qualification than the 8% average across the University. There was also a number who enjoyed using the technology but there was a vast spread of use of technology across all the groups.

The combination of good teachers who are also technology literate can produce the most exciting outcomes in the online arena. There are not many people who have all these skills but with good staff development to improve the skill areas of staff in both teaching and use of technology in teaching imagine what could be accomplished.

As one of the lecturers said,

> *I suspect that I could perhaps have a potential weakness to become a techno at the expense of the teacher component so need to keep an eye on those techno impulses! I do aspire to be a teacher – and do recognise the career costs any real commitment to teaching tends to impose.*

Quote 2: "What are we supposed to do as academics for the student body?"

The whole quote, so as not to take it out of context, was:

> *You know what works as you get to know your subject better. Regardless of the methods you might want to use, you adapt to what students think are their learning needs which isn't the best way to go, e.g. cutting down on reading because they say they don't have the time then they don't even read the minimum. Giving them Powerpoints before the lecture so they can listen in the lecture, then they don't turn up to the lecture. Constant struggle between knowing where you stand, as someone who has to teach, and how you adapt your teaching strategies to your audience.* ***What are we supposed to do as academics for the student body?***

The question is more than how many readings should be given at each year level or whether Powerpoint notes should be given out before a lecture. It is about having some guidelines within the University that academics can follow. There will always be variations due to subject areas and levels, but the focus group attendees were uncertain of their rules of engagement with the students. As noted in the previous chapter, academics are doing what feels right for them for their subject, year and class.

In taking this one step further, we should also be asking what academics are expected to be doing for students with online technologies. For existing qualifications that use online technologies, where the courses are already set up and have had an active online presence, there are already guidelines for the course online for new academics to follow. In areas where there is no online precedent, it is usually up to the academic to instigate how the online component in their course will be taught. There is no overall plan for the University as to how the Schools, Departments and individual subjects should be using online technologies for teaching and learning.

Looking back at the focus groups, one standout difference was between the Humanities and Management Schools, and the Sciences. The Humanities and Management lecturers were interested in students expressing opinions and changing their world view, where the Sciences were interested in students learning content. This puts a different emphasis on not only how students are taught in the different Schools but also on what is expected of lecturers. For the Humanities and Management academics in the focus groups, the subject areas they were teaching required discussion and debate of the issues, backed up by evidence for their arguments. This fits well within the constructivist discussion environment that is ClassForum and suits the type of subject areas where discussion is a prevalent way of teaching students. The keen scientists who have tried to use online technologies over the years have been disappointed that it is not suited to their way of teaching and so perhaps have not been successful in recruiting more of their colleagues into teaching online. Some of the technologies are just not far enough advanced for what some subject areas would like to do, or else the bandwidth is not high enough to make some things a reality just yet. The use of online technologies needs to be driven by pedagogy rather than by the technology for it to work successfully.

This not only highlights a difference between subjects and how they use online to teach but also puts a strain on an online system that tries to do everything for everyone. ClassForum is built around collaborative discussions that suit the humanities more than the science subjects who put content material online for students to have access to. Readings, background work, case studies, pre-lab work, demonstrations etc. are all good resources to assist the teaching and learning process but they need to be carefully built into the structure of the course and not just uploaded into an online repository for students to access.

Quote 3: "A bit of a generalist"

I have often heard the terms 'specialist' or 'area of expertise' in terms of lecturers but 'generalist' is not something that I usually associate with University lecturers. The University Teaching and Learning document states that "academic staff are assigned to the teaching of papers on the basis of their specialist knowledge." They are also appointed on the basis of their specialist knowledge in the papers that they 'teach' and conduct research. I would assume from the point of view of the University that they have highly specialised academic staff who research and teach in their specialist area.

The academics in the focus group meetings highlighted the variety of levels that they are responsible for teaching, from first year up to supervision of doctoral students. They also taught a wide range of subjects around their area of expertise. This does not reflect the appointment of academics in relation to the expertise in their discipline as they are expected to teach in a much wider range than their area of expertise.

It is nicely summed up by one of the lecturers who said:

> *"In NZ we have to teach across a lot of subjects and so we cannot specialize. The small population base means we cannot specialize so we have to be generalists so we cannot keep the same intensity of knowledge as you can if you are a specialist".*

It may be quite common in Universities in New Zealand for specialisation in any area not to occur, due to the relatively small population that students are drawn from. The economies that arise from teaching the same course two or three times in a semester do not happen very often. Some courses may be taught twice a year which helps with the preparation of materials and assessments for that course but time

always needs to be spent on editing course material from the previous time the course was taught. There are classes of two or three hundred students taught in some Schools for core first year courses, but this does not occur very often at Waikato.

One of the lecturers talked about a University that was visited on a trip to the United States. “From what I saw in Tampa, Florida – Huge numbers in classes. Taught six classes of the same subject a week.” There can be huge economies of scale made, whatever the mode of teaching is, with a lecturer teaching repeat classes each week. That means there is less preparation time, but the drawback is in teaching the same material many times a week. This is suited to delivery of basic content material to large numbers of students at the first year level but would not be appropriate as the levels increase and the content is more interpretative or discursive, as greater involvement is needed by the academics in the students’ learning.

Most lecturers in New Zealand universities teach a course once per semester or year, but they also teach a range of subjects areas over different year levels. This creates problems for academics in keeping up to date with the literature and research in their field. As one participant said, “It is an issue as you have to know what happened this morning”, particularly in some of the humanities subjects in order to bring relevant current events into the lecture or tutorial. Teaching across a range of papers has its down sides, but it also has its advantages. It could make for a more versatile lecturer who is able to over a range of areas, rather than one small area of expertise.

Preparation time, or lack of it, is something that has been highlighted by Berge (1998) in relation to barriers to teaching online. With lecturers not teaching the same course more than once per year or semester, there is

added pressure for preparation when teaching courses online. The majority of lecturers from the focus groups taught subjects from year to year, not more than once per year or multiple times per semester, as lecturers often do in countries with larger populations. But it was noted in the discussions that “2nd, 3rd, and 4th iterations of the same kind of teaching provide huge economies of time. The first time is difficult. It is a huge upfront cost. After that it is easy.”

There is also a huge investment in time by lecturers at the beginning or teaching online and the payoff does not come until about the third time the course is taught. But then again, from my own experience, there is a huge investment in time when teaching a new course in the traditional lecture/tutorial format as well. It does get easier over time for teaching online or traditional lecturing and by having teaching material in digital format, the files are easier to edit from year to year and make available for the next group of students.

With such a wide variety of levels and teaching areas to prepare for, teaching online becomes another thing to add to the teaching load. It is not surprising that the uptake of online teaching at the University is not progressing at the early rate of adoption when these factors are taken into account.

Quote 4: “So who are the student body now?”

The draft teaching and learning plan from the School of Science and Engineering says that “The student population is more diverse than ever before. There are more Maori, more women, more mature students, more international students and more students who haven’t followed the ‘traditional’ set of high school subjects.” This is similar across the University but the proportions are different in each School. A focus group attendee said that “There is a different group of students that are now coming to University to get that entry level piece of paper.” The questions that need to be asked here are in regard to what needs to be done to adapt to the change in the student body that has occurred in the last few years.

The more mature students bring with them a commitment to their studies and a wealth of knowledge that students straight out of School do not possess. But they are lacking in some of the basic study and computing skills that school leavers bring with them. This can cause added stress on teaching staff as there are many University skills that have to be learnt before mature students can feel comfortable in their studies.

There were some issues of concern amongst the participants that the changing skill sets and standards of high school leavers due to the new National Curriculum of Educational Achievement (NCEA) recently introduced in the secondary schools throughout New Zealand. The scientists were the most vocal and the major concern here was about the reduction in the basic mathematical skills that students arrived with. That coupled with the semesterisation of courses in the School meant that there is now no time to spend with students in bringing their basic skills up to the level that they need for their specific courses. “NCEA is

diluting science and maths, schools offer different compartments of subjects and basic skills are missing" are the most common concerns. This leads to a much greater diversity in school leavers' abilities than ever before.

Another issue that came from all the groups is the numbers of international students that are at the University. In some course that the attendees taught, up to 50% of students have English as their second language.

The nuances of the language mean that students "need to learn what specific terms mean in the context of the subject, for example, in the science areas, they need to know that strong and tough are not the same". For second language students, this is not easy.

Focus group attendees said that "if the understanding is not there, they rote learn the material and regurgitate the words without knowing what they are saying."

There was also an issue of students coming to University with "lower entry levels" than previously. This equates to "high maintenance students" and academics that do not have the time to bring up their basic skill levels for their subjects. They were talking about the "international students, who cannot write English. They can read the material but cannot do the work."

There was talk amongst the participants about students that "just don't get it". They do not understand the concept of what is being taught so no matter what the students do they will not pass the subject. Doing an extra piece of work, or another reading, will not change the fact that they do not have the basic understanding of the subject. This was an

area that caused the participants a lot of concern and had a negative effect on their workloads as well.

Students that have suited online learning are mature women who find it convenient to study after their children are in bed (McSporran, Young and Dewstow, 2000). They may have little time during the day to attend face to face lectures if they are working, looking after children, or live too far away to travel. Also, due to the high cost of education, students straight from high School are now working during the year to help reduce their student loans. The online environment means that they have an alternative way to study when the lecture schedule just does not fit into their timetable. Universities should be making more use of the online environment for students as their circumstances have changed and what worked successfully in Universities in a time of low fees don't necessarily work with the same success rate now.

Students attending Universities in the next ten years will be even more sophisticated in their use of technology and will demand that everything is in electronic format so they can learn when and where they want to. We need to equip academics with the skills they will need to deal with these changes now instead of waiting for the students to arrive.

Quote 5: “On the edge of chaos.”

To me this is a really powerful statement and I interpreted this with a number of meanings. When I re-read this, it was worth looking at the person who was making this statement. The course that was referred to was a large class of over three hundred students that made use of different Information Communication Technologies and was being taken for the second time by the lecturer. The lecturer was taking a number of risks by introducing new technologies with such a big class, hence, I suspect, the sense of chaos.

To some, being on or near the edge of chaos is not a place they really like to be for very long as there is a high risk that you could fall off. It also gives the impression that the class are almost out of control and it could go horribly wrong at any time. If this was the case, it does not explain the excitement in the voice of the lecturer about teaching this class. Part of this excitement occurs when you try new things out in the classroom for the first time. Teachers try out new teaching techniques and use different and new equipment for lots of reasons.

Getting stale doing the same thing year after year was always a big motivator for me to change things and I am sure there are others who feel the same. As one of the attendees said, “If you are bored marking it, then the students were probably bored writing it.” I believe that there is a lot of truth in this statement and if this happens, it is time to change how things are done. The groups of students we teach are always different and changing, so what has worked with one group in the past might not work with the next group. Teaching different levels also requires different techniques and as we learn more about the subject, grow in confidence with students and the material we are teaching, we can experiment with different ways of doing things. There is also the

challenge of improving on what was done last time to create that perfect lesson with our students. Being satisfied with the effort we put into our teaching is a big reward and sometimes that is the only reward we will receive.

Being “on the edge of chaos” is, I believe, about going beyond where you feel safe when you are teaching a new way or doing something new. You may not feel totally in control of what is happening, and that you are teetering on the edge of disaster. This is a common feeling when we do something new and some of the participants had been in this position before. One lecturer said after his first foray into online teaching that it was “the best experience he had ever encountered in his teaching career but he was never going to do it again as it nearly killed him.” He kept teaching online and his comment in the interview was

> *For me it is the great salvation from the University. It is a way I can maximize student benefits while minimizing my additional inputs. If we design the learning processes properly, the students do most of the work. I allow the students to police themselves. 2nd, 3rd, and 4th iterations of the same kind of teaching provide huge economies of time. The first time is difficult. It is a huge upfront cost. After that, it is easy.*

The academics who feel that they are indeed “on the edge of chaos” are there because they are taking risks in their teaching. For some, making a small change in their method of teaching, assessment or the tools they use in their teaching is a very scary thing to do. They are not in total control of what they are doing the first time and have to have a little faith in the process they are about to embark on, trust the students and have support staff in the wings to assist when things don’t go according to plan.

Academics who try out some new technologies are taking risks with their students and also their professional reputation as a teacher. Their

teaching assessments might also receive a lower score than if they had played it safe and taught as they have always taught the subject. If the risks are well managed, with disaster recovery procedures in place, such as having a back up plan or extra support people around when using new technologies in your teaching, then you are minimizing the risks to both teacher and students.

If no risks were ever taken, we would not be teaching online today. This was a huge step into the unknown initially for the trailblazers of online learning at the University, but they managed the risks and made mistakes as they were learning what to do. There was no manual or textbook for these innovators to follow, they wrote it as they went along. Their doing this means that those who followed did not have to make the same mistakes again. The journey was made a whole lot easier for those that followed.

For some staff, taking a risk might be using PowerPoint in a lecture instead of using overhead transparencies. We need to be aware of the fears of using a different way of teaching and assist them to overcome any concerns they may have with lots of support. That way, once a small risk is taken and success is the result, confidence will be boosted and lecturers might be willing to try other things as well.

Quote 6: “We don’t have online discussions.”

This statement was made by one of the scientists in the focus group meetings. This is not the first time I have heard this as I come from a maths and computing background myself where my initial focus online was in providing content for students to read online, links to extra material on the web and online exercises to assist students in creating their own websites. Initially, I didn’t use online discussions either but my circumstances changed when I started teaching in a Masters programme where I met the students every fourth weekend. Online discussions and some email communication became a necessity as a way of keeping in contact with students, keeping them on task and using the discussion environment as an integral part of the assessment in the course to make sure students made use of it. So when I initially started teaching online, this statement was also true for me because I discussed with students in the tutorials on campus.

The original online environment at the University was a discussion environment that suited the purpose as it was originally intended. I think we are beginning to realise that one online system is not suitable to all academics in an institution as the subjects that are taught have different needs, including the way people like to teach and the abilities academics have in using the available online tools.

The online discussions in the Humanities and Management Schools are based on course readings and real life problem situations where vigorous debate occurs as students argue the merits of the text. Students are also assessed in their contributions to the discussions based on the criteria set out by the academic as discussions are seen as a valuable component of the course. Having an assessment value attached to the online contributions that students make implies that the

lecturer values the discussion and the effort students put into their contributions in the discussions. It is also an incentive for students to participate because they get marks for doing so. Some academics saw a natural progression from the discussion and debate in the classroom to the online environment, especially for students that were studying at a distance, but they also use discussions more and more for students that come on campus as well. When you are teaching subjects that deal with a majority of complex symbols, mathematical equations, graphs etc, there needs to be a transparent mechanism for academics to add these things into the online environment. It should be as easy as writing them onto the whiteboard so they can then use the system in the way that feels comfortable and familiar to them.

Online discussions are text based as compared to spoken face-to-face tutorials. More and more students with English as their second language feel more comfortable discussing online, not just because of their lack of confidence speaking in front of others but online discussions give students time to formulate and check their responses before posting them into the online discussion. This has been a revelation for these students and helps them gain confidence in a new environment.

There was one lecturer in the groups who over the years has:

- Developed a whole course manual for the students
- Written information so students don't come to lectures.
- Then a manual with blanks that students fill out.
- Used a computer aided design system we developed in-house
- Back to writing things on the white-board.

The lecturer found issues with the subject containing mathematical problems and the information can't be just put in front of the students to learn as you "may as well just give them a textbook".

This lecturer was all for using technology and had been one of the early innovators at the University, but some things in different subject areas are just not able to be done in the existing online environment. With the online system not supporting mathematical characters or display complex equations easily, this can be thought of as another reason for not embarking into the online environment and becomes a technological barrier that has to be overcome before lecturers will embark on teaching online for some subject areas.

The instances of trying to teach computing, mathematics and sciences online suggest there is more to discussion groups than simply talking to students in the online environment. Laboratory work is an example of something that is done well in the face to face environment but it is difficult to achieve a similar experience in the online environment. It can be a very expensive endeavour to create a virtual laboratory due to the specialist computing skills needed, but there are some areas where simulations of experiments and field trips may be the next best thing to being there, and the only way some students are able to have the experience.

The new students that are appearing on our campuses are more comfortable being online than the last generation of students. Tertiary institutions need to equip their academics to feel comfortable in this new environment as well.

On the basis of the material presented above, I developed a typology representing a continuum of the relationship of academic staff to teaching. The categories are “lecturer”, “lecturer/teacher”, “teacher”, and “techno”.

The **lecturers** were more likely not to use online, but if they did use the online technologies, it was to put course materials online for students to download. There were a number who ventured into using a question and answer type of asynchronous discussion as long as they were in control of the discussions. They found this a more efficient method of answering student questions, as opposed to using email, but still did not venture into using online discussions in curriculum areas. Hypothesising somewhat on the basis of these admittedly limited observations, some lecturers have small enough class sizes for one on one sessions with students to be possible, but when the numbers start rising and classes get beyond about forty, let alone beyond the one hundred mark, one on one sessions are no longer an option. Members of this group are usually quite sceptical about online teaching, and the concept of facilitation and communication with students is foreign to them. Lecturers are more comfortable being in control of the delivery of the course content. As online learning requires a shift towards facilitation of learning and students working more cooperatively together, it shifts more power to students. The lecturers may tend to keep away from online as it

generally involves more group work and collaborative activities than individual work from students.

The **lecturers/teachers** learnt through trial and error over the years and by sharing teaching ideas with their colleagues, when they could, to improve their teaching. They used the online environment to have interaction with students and were generally open to suggestions and assistance from other people, in using online tools to teach collaboratively. Hypothesising again, these would be the group who come to the more advanced training courses on online teaching and are in contact with the online staff development staff via phone and e-mail when they need assistance. From the staff developer's point of view, they are generally a good group to work with as they are more open to experimentation and taking a few risks in their teaching.

The **teachers** used the technology to teach students their subjects in the way they like to teach. They usually had a good pedagogical foundation so they knew what they wanted to achieve, but just needed some initial help with the online tools to get them on their way. They were trying things to achieve better outcomes for their teaching and the students' learning. They were also very quick to pick up the concepts of teaching online as they had many skills from their face to face teaching experience to draw upon. They generally have no problems with the concepts of online teaching as they know how to teach, but are looking at ways that the online environment can enhance what they now do in a better or different way. This group is great to work with as they usually have a clear idea about what they want to do and the staff developer is looking at ways to use the technology to assist them to reach their particular teaching goals.

The **techos** are an interesting group as they are willing to risk it all for some glory that might result from their endeavours. They will either soar with the eagles or crash and burn, but whatever the outcome, it can be spectacular for all concerned. They use technology for many reasons but it is not always to the betterment of the education of students. This group help push the boundaries of teaching online and are not afraid of trying new things. There is sometimes a fine line between using technology for its own sake and using it to help the teaching and learning process. Sometimes the lines are quite blurred but we need these people to help push the boundaries for the rest to follow.

The combination of good teachers who are also technology literate can produce the most exciting outcomes in the online arena. There are not many people who have all these skills but with good staff development to improve the skill areas of staff in both teaching and use of technology in teaching, imagine what could be accomplished.

As one of the lecturers said when I put this typology online after the group interactions had been analysed,

> *The categories you developed made me think, which is always a Good Thing. I suspect that I could perhaps have a potential weakness to become a techno at the expense of the teacher component so need to keep an eye on those techno impulses! I do aspire to be a teacher – and do recognise the career costs any real commitment to teaching tends to impose.*

From the focus group discussions, there appears to be a direct link between staff successfully teaching online and the amount of teacher training they have received through either a recognised teaching qualification or attending in-house teacher training courses. It has been

my experience during years of online staff development with academics, that those who understand the teaching process don't find the shift to teaching online a very difficult transition process. They do need to up-skill themselves in using the new online technologies, so they can begin thinking about how the programs can be used for online teaching and learning, more than how to use the software program itself. During the initial phases of getting started with the technology, the support needed is more about the technical nature of how to use the software. But as academics become more confident in using the technology and start experimenting with using the technology, the pedagogical questions start to come.

For academics with no formal teaching qualification, the shift to teaching online is often not an easy one. They initially do not have the pedagogical knowledge regarding how they teach their subject material, to transfer this with any confidence into the online system. If they have been using a lecture style with students, they have great difficulty in conceptualising how they teach in a similar way in an online environment. Online staff developers are not only having to teach staff how to use the online system but also 'how to teach', and this is outside what they currently can do in the time allocated to the task - and it may well be outside their abilities, job description or qualifications to do so. This is probably due to the technology being perceived as the driving force behind online teaching and learning. However, I would argue that educational institutions should be approaching online teaching and learning from a pedagogical direction, using the technology to assist academics to teach online in the best way for their subject.

What makes things difficult at times is that academics need help in teaching their subject online from people who have no knowledge about

their subject. This is always a difficult task for anyone in staff development as no-one can have knowledge about the vast array of subjects taught throughout a University. Academics can feel frustrated when they do not receive the training that they thought they were going to get. Academics have to take ownership for their subject area and use staff within their Departments to discuss the best ways to go about teaching their subject material. Staff Development in teaching and online is about generic methods across the whole of the University and cannot generally be subject specific.

There is a distinct initial lack of knowledge by academics as to what their role for their students is. There was confusion from the participants about how things were done at the University within different Schools and sometimes within Departments within Schools. This confusion concerned what was expected from academics in their role of teacher or lecturer but they were still expected to be experts from day one on the job. There is not an adequate induction system campus wide that fulfils the role that is needed for such a diverse University institution. Some of the induction is left to the Departments within the Schools and not within a University wide framework.

Many staff can be defined as generalists in their teaching as they are unable to specialise in their particular area due to the lack of student numbers learning in their specialist area. This creates a different dynamic than in overseas Universities where it is more common for academics to specialise within their research field instead of over a number of areas. Using a campus wide workload model, calculated according to research, levels, frequency and difficulty of courses taught, as well as the number of students in the course, may help make teaching loads more equitable across the institution. Workload models

have been proposed in different schools but implementation of an equitable system is not an easy task.

There is currently no specific allowance made with teaching workloads between teaching in the traditional face to face mode as opposed to teaching online. The perception from academics is that teaching online requires more time than traditional teaching and it is not seen to be supported very well across the University. There is also a distinct lack of willingness to try out features that may actually save time in some of the more administrative and mundane task that teachers have to do.

The student body has been changing over the past ten years but the University has not changed fast enough to accommodate the new students. Some staff in the Focus Groups did recognise the need to change their teaching style or methods to fit the students they are teaching. There was much talk about students where English was their second language and how they had taken to the online environment to help them with their studies. If lecture material was in an electronic form, e.g. notes, Powerpoints, audio or video, then students could review the content as many times as they needed to understand it. The online environment also means that students can interact with each other without the barrier of the language being spoken. Once students gain more confidence with the language, they are able to interact in a face to face situation.

The technology teaching culture at the University is not about innovation and experimentation but is about fitting within existing computing structures and procedures that have been defined. The University was at the cutting edge of online learning and teaching just a few years ago but has lost that position during the past few years as other tertiary institutions move forward with their online strategies and courses. Part

of this downward trend in using technology is due to the way computers are managed within the University. Staff computers are set up so they can be maintained by the computer technicians but they are also so secure that it is almost impossible for staff to do any experimentation with their own computers. This is both a good and bad thing. Good in that everyone wants the equipment to work all the time but bad because it stops some of the innovation occurring.

There is a constant battle between teaching staff who use the computers to do their jobs and the I.T. staff who have to maintain the computers in the best way possible. In the end, if it is too hard for academics to do, they will revert back to what has always worked for them in the past instead of experimenting with new things to help student learning. There is a lack of encouragement to be innovative in teaching and only a few take on the challenge if they have support in their School.

There is a definite link between the uptake of online teaching and subject areas that academics teach. The online learning and teaching system was created for use in the School of Education primarily as a discussion environment. It was not intended as a document storage facility but there are subject areas where that is what staff want to use it for. Because the online system was not intended for storing documents like lecture notes, powerpoints, readings etc, some Schools have created their own portals for storage of course related materials. Documents can be added, within the online environment, as attachments to discussions or referenced from any server that staff have access to, if the academic has the knowledge to be able to program this into their course. The process can be a little difficult for academics who do not know how to do any programming or have no intention of knowing how it works. For most staff it is not a simple thing to do, so they find another way or don't do it at all. The latest version of

the online learning software that is being used has a mechanism for uploading documents directly into a course but on the request of computer services, this was not turned on for staff to use. The online learning system's performance could be significantly reduced if this happened but on the plus side, more staff would probably use it if uploading of course materials was a less complex process. This is also an example of the impact of what is centrally supported and what is supported within different schools. The more money an individual school has the more it can support its own staff.

We have also learnt from other research and failed online universities that adding documents online does not make an online course as it is the interaction, whether it is between students, students and the academics or students and the course materials, that makes the course successful.

The participants in the focus groups have talked about areas they feel can be improved and the next chapter looks at the implications for the institution of this study.

Chapter 6: Conclusions

From the focus group discussions, there appears to be a direct link between staff successfully teaching online and the amount of teacher training they have received with either a recognised teaching qualification or from attending in-house teacher training courses. It has been my experience during years of online staff development for academics that those who understand the teaching process don't find the shift to teaching online a very difficult transition process. They do need to up-skill themselves in using the new online technologies so they can begin thinking about how the programs can be used for online teaching and learning more than how to use the software program itself. During the initial phases of getting started with the technology, the support needed is more about the technical nature of how to use the software. But as academics become more confident in using the technology and start experimenting with using the technology the pedagogical questions start to come.

For academics with no formal teaching qualification, the shift to teaching online is not an easy one. They initially do not have the pedagogical knowledge regarding how they teach their subject material to transfer this with any confidence into the online system. If they have been using a lecture style with students, they have great difficulty in conceptualising how they teach in a similar way in an online environment. Online staff developers are not only having to teach staff how to use the online system but also 'how to teach' and this is outside what they currently can do in the time allocated to the task. This is probably due to the technology being perceived as the driving force behind online teaching and learning where educational institutions

should be approaching online teaching and learning from a pedagogical direction and using the technology to assist academics to teach online in the best way for their subject.

What makes things difficult at times are academics asking for help in teaching their subject online from people who have no knowledge about their subject. This is always a difficult task for anyone in staff development as no-one can have knowledge about the vast array of subjects taught throughout a University and academics can feel frustrated when they do not receive the training that they thought they were going to get. Academics have to take ownership for their subject area and use staff within their Departments to discuss the best ways to go about teaching their subject material. Staff Development in teaching and online is about generic methods across the whole of the University and cannot generally be subject specific.

There is a distinct initial lack of knowledge by academics as to what their role for their students is. There was a lot of confusion as to what was expected from academics in their role of teacher or lecturer but they are still expected to be experts from day one on the job. There is not an adequate induction system campus wide that fulfils the role that is needed for such a diverse University institution. Some of the induction is left to the Departments within the Schools and not within a University wide framework so a consistent message can be told to staff. There was confusion from Focus Group attendees about how things were done at the University within different Schools and sometimes within Departments within Schools.

The staff can be defined as generalists in their teaching as they are unable to specialise in their particular area due to the lack of student numbers learning in their specialist area. This creates a different

dynamic than in overseas Universities where it is more common for academics to specialise within their research field instead of over a number of areas. Using a campus wide workload model, calculated according to research, levels, frequency and difficulty of courses taught, as well as the number of students in the course may help make teaching loads more equitable across the institution. Workload models have been proposed in different schools but implementation of an equitable system is not an easy task.

There is currently no specific allowance made with teaching workloads between teaching in the traditional face to face mode as apposed to teaching online. The perception from academics is that teaching online requires more time than traditional teaching and it is not seen to be supported very well across the University. There is also a distinct lack of willingness to try out features that may actually save time in some of the more administrative and mundane task that teachers have to do.

The student body has been changing over the past ten years but the University has not changed fast enough to accommodate the new students. Some staff in the Focus Groups did recognise the need to change their teaching style or methods to fit the students they are teaching. There was much talk about students where English was their second language and how they had taken to the online environment to help them with their studies. If lecture material was in an electronic form, e.g. notes, powerpoints, audio or video, then students could review the content as many times as they needed to understand it. The online environment also means that students can interact with each other without the barrier of the language being spoken. Once students gain more confidence with the language, they are able to interact in a face to face situation.

The technology teaching culture at the University is not about innovation and experimentation but one of fitting within existing computing structures and procedures that have been defined. The University has lost its position of innovator during the past few years as other tertiary institutions have moved forward with their online strategies and courses. Part of this downward trend in using technology is due to the nature of the way computers are managed within the University. Staff computers are set up so they can be maintained by the computer technicians but they are also so secure that it is almost impossible for staff to do any experimentation with their own computers. This is both a good and bad thing. Good in that everyone wants the equipment to work all the time but bad because it stops some of the good innovation occurring.

There is a constant battle between teaching staff who use the computers to do their jobs and the I.T. staff who have to maintain the computers in the best way possible. In the end, if it is too hard for academics to do, they will revert back to what has always worked for them in the past instead of experimenting with new things to help student learning. There is a lack of encouragement to be innovative in teaching and only a few take on the challenge if they have support in their School.

There is a definite link between the uptake of online teaching and subject areas that academics teach. The online learning and teaching system was created for use in the School of Education primarily as a discussion environment. It was not intended as a document storage facility but there are subject areas where that is what they want to use it for. Because the online system was not intended for storing documents like lecture notes, powerpoints, readings etc, some Schools have created their own portals for storage of course related materials. Documents can be added, within the online environment, as

attachments to discussions or referenced from any server that staff have access to, if the academic has the knowledge to be able to program this into their course. The process can be a little difficult for academics who do not know how to do any programming or have no intention of knowing how it works. For most staff it is not a simple thing to do, so they find another way or don't do it at all. The latest version of the online learning software that is being used has a mechanism for uploading documents directly into a course but on the request of computer services, this was not turned on for staff to use. The online learning system's performance could be significantly reduced if this happened but on the plus side, more staff would probably use it if uploading of course materials was a less complex process. This is also an example of what is centrally supported and what is supported within different schools. The more money an individual school has the more it can support its own staff.

We have also learnt from other research and failed online universities that adding documents online does not make an online course as it is the interaction, whether it is between students, students and the academics or students and the course materials, that makes the course successful.

The participants in the focus groups have talked about areas where they feel can be improved and the next chapter looks at the implications for the institution from the research.

Chapter 7: Implications

Today's Universities do not have a choice as to whether they teach online or not. Computers and the Internet have become ubiquitous both within and outside of Universities and are also increasingly involved in more employment opportunities than ever before. Students are increasingly familiar with these technologies, and demand increasingly diverse forms of delivery to meet their lifestyle needs. However, Universities do have a choice in how teaching and learning is managed within each institution. The role of online teaching and learning within their teaching framework must be deliberately determined.

The rationale for this study was to investigate why online teaching at the University had reached a plateau over the past few years and not continued to develop at its previous pace and direction. As with most new technologies, once a critical mass has been reached, the momentum carries the technology on to the point where it becomes something that everyone uses and wonders how we managed before without it. A good example of this in a University situation is the use of computer projection in lecture theatres. However, this does not seem to have happened in the case of online. This thesis set out to answer the question, "What aspects of the pedagogical and educational culture of the University encourage or discourage staff from exploring online technologies in their teaching?"

The group discussions highlighted areas that give us a better understanding of the state of online teaching and learning at the University and where selected staff thought improvements could be made, to enable them to continue using this technology in their

teaching. This final chapter will discuss selected issues that emerged from the focus groups as having a specific bearing on the uptake of online teaching at this University. However, these findings cannot be generalised beyond this case study as each institution needs to analyse their own situation for themselves for their particular circumstances.

Teaching and Learning at the University

The low percentage of staff at the University who have a formal teaching qualification tells us just how important it has been in the past for academics to be qualified to teach students at a tertiary level. On the whole, the focus group attendees did not feel that their teaching efforts were well recognised or rewarded by the University, certainly not on an equal with research. This did not deter them from putting in a huge effort for their students as teaching was certainly a pleasurable part of their jobs. There was a feeling that being a good teacher, which the majority of the attendees seemed to believe they are, did not offer or reward them in their career opportunities to the same extent that being good researchers would do. Also, online teaching and learning was even less appreciated within the culture of the University and some individual Schools of study.

For the benefit of staff and students, the commitment to Teaching and Learning at the University needs to be addressed. This includes all forms of instruction of students within the framework of the University, including lecturing, online teaching and distance education. Teaching needs to be recognised as being as valuable as research to any University so that academics have a valid option to pursue teaching as a career option in much the same way as research. They need to know

that their efforts will be rewarded, not just in monetary terms but also in status and promotion within the University. How this is achieved must, in my view, include a commitment to increase the teaching skills and qualifications of all academics and a plan to make this happen.

Commitment for online teaching and learning

It is also worth pointing out again that we talk about teaching online and not lecturing online. I would argue that academics who have no formal teaching education find it a difficult task to embark into teaching online with the confidence needed to make it successful, for them and their students. Although we cannot generalise from this study, there is sufficient indication here to suggest that the linkage between knowledge of teaching and teaching online is worth further study.

There needs to be a formal commitment to online teaching and learning from the institution if they are to become an integral part of teaching and learning at the University. The magical critical mass (which might carry it forward) in the Schools of Study that were represented in the focus groups has not been reached, but there were small pockets within Schools that had a large number of staff using online technologies for some of their teaching. It helped if the chairperson of the department thought that online teaching was worth the effort, as they could encourage staff and get extra assistance for them as well. There is still a feeling of isolation among the participants and they expressed a real interest in the focus group discussions and felt that there needed to be more of these activities so they could discuss issues of online teaching that would benefit them.

There is no evidence from the participants of a culture within the University or their Schools of study that actively encourages them to

teach online. It is generally up to the individual staff members or the makeup of their department as to the commitment to online teaching and learning. There is a lack of opportunities for staff to discuss and debate the merits and problems with teaching their subjects in an online format within the University as a whole or between colleagues in the same departments. It is possible that different subjects lend themselves more and less readily to the technology, but there does need to be a critical mass of implementers and experimenters in each area to enable meaningful discussion of such issues to take place.

Online teaching skills of academics

There is a need to increase the skills of academics in the area of online teaching so they are better equipped to teach with these new technologies. With the changing demographic of students as well as the struggle to stem falling enrolments, online technologies are another way to halt or at least slow down this trend. Helping students to learn online in their undergraduate years also enables them to continue studying at the University for post graduate studies, from anywhere in the world as long as they have an internet connection.

There was also debate in the focus groups regarding the subject areas they teach and the difficulties some of them had to teach their subjects online. I have already discussed the issue that the online system, ClassForum, is built around collaborative discussions and not as a repository for course materials, Powerpoints, documents etc. But more importantly it is a text based system on the whole and does not work well with symbols and equations as used in the science subjects. The current review of the online learning needs at the University will

hopefully address these and other issues with online teaching and learning.

Computing skills of staff and students

Computing skills are one of the many attributes that remains high on the list of what many employers want from graduates (The University of Waikato, 2006). Students also need to up-skill themselves with technology while they study at Tertiary Institutions so they can successfully take part in the research that is required of them. Not only do both staff and students need a range of library and Internet skills for their research and study but they also need to be proficient in using a number of complex programs. Both academics and students at the institution need to continually up-skill themselves with aspects of technology that are necessary for the subjects they teach and learn. This is not optional.

As the student body is always in a state of change, more research needs to be done to identify who our current students are, but more importantly to identify what the intake will be in future years so we can be more equipped for their arrival. Academics need the skills to teach the new students in advance of them being in their courses.

Innovative Environment

The University needs to create a more innovative environment where staff are encouraged to think outside the square and try new things. The pioneering spirit of a few years ago, when CD Rom and Internet projects were happening all around the institution, has all but gone as staff attend to their daily business.

Innovation happens in a “can do” environment where people are looking for solutions to problems and not putting barriers in the way to stop things from succeeding.

It is to be hoped that the current review of the online software will take such considerations into account. Using online technology in one’s teaching is not something that can be left to chance, or self selection. With change comes opportunity and I feel that it is also a good time to refocus efforts in all areas of teaching and learning, especially to the commitment to online learning for the future of the University.

Postscript

During 2005-2006, under the leadership of the new Vice Chancellor, the University of Waikato has developed a new Strategic Plan. Goal 1 reads

> ***To provide a world-class, distinctive, relevant and sustainable programme of teaching and learning.***

Part of the discussion beneath the Goal reads:

> Encouraging academic excellence, fostering innovative teaching methods and enhancing the learning experience and thinking skills of students will be key objectives. Delivering highly motivated and competent graduates, with the attributes and competencies to be future leaders in bi- and multi-cultural settings, will be central to our planning and investment decisions.

And Action 1.5 reads:

> Develop innovative teaching and learning methods that, for example, normalise e-learning as an integrated dimension of teaching to enhance student learning.

E-Learning does not appear anywhere else in the document. However there is considerable attention paid to the physical environment of the institution. On the basis of this study and its broader implications, I would argue that the University and its management cannot afford to ignore cyberspace as part of that environment.

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Appendices

Appendix 1 Introductory Letter

Date: _____

Dear _____,

Following up on the phone conversation that we had recently, I would like to invite you to be part of a study I am conducting this year for my 4 paper Masters of Education Thesis. The title of my research is "*What aspects of the pedagogical and educational culture of a university encourage or discourage staff from exploring online technologies in their teaching?*

This letter explains the study, what it involves and what you may need to consider before agreeing to participate. It includes a consent form and questions for the focus groups (the interview schedule).

Researcher Background

My name is Ross Dewstow. I am a professional educator with teaching experience in mathematics, multimedia and the Internet and research interests in online education from a pedagogical perspective. My most current role at the University was as a Learning Designer in WICeD (Waikato Innovation Center for electronic Education) encouraging and assisting staff teaching or wanting to teach online. I now work for ECTUS Ltd and a major part of my position is to continue supporting the development of e-learning at the university.

The Study

I am interested in researching university staffs' thoughts about aspects of the pedagogical and educational culture of the university by investigating whether staff are encouraged or discouraged from exploring online technologies in their teaching.

To gather data, I would like you to be part of a focus group for 60 - 90 minutes to discuss this topic. I have included a number of questions for the discussion for you to read and prepare yourself for the meeting.

The focus group meeting will be taped and transcribed. The first draft of the findings will be returned to all participants of the focus group for comments and amendments. All information will be kept securely and no-one else has access to it.

All participants will have pseudonyms. This will also help protect confidentiality and reduces potential harm to you.

I may seek a second meeting for clarification of the transcript. This will be an informal follow-up discussion to clarify any comments/remarks that you have made in the meeting.

Aspects to consider

I appreciate that the research will take up your valuable time for the focus group meeting, subsequent communication and the reading and responding to the first draft analysis of the findings. I will attempt to minimise this disruption of your time.

Please note that University of Waikato Human Ethics Regulations require that all data used for published research will be archived indefinitely.

Withdrawal from the research

You will not be able to withdraw after you have consented to the draft analysis. You will be able to discuss and have changed content from the first draft of the findings if there are areas that you think could be harmful to you.

Benefits to participants

Most of the benefits will be intangible, consisting of aspects like: opportunities to reflect on your role in the institution with regard to online learning and teaching; sharing experiences; contribution to the researched knowledge about online learning in New Zealand tertiary institutions; assisting in the further development of e-learning at the institution.

What to do next

(a) If you would like to know more, or meet with me to discuss the project before making any kind of decision, please feel free to contact me. I will be happy to address your concerns. I can be contacted in the following ways:

By phone: (home) xxxxxxxxx (it is also an answer phone);
(ECTUS) xxxxxxxx (it is also voicemail);
cell phone 021 190 152

by email: rdewstow@ectus.net

(b) if you would like to participate and feel that you are happy with this information, please: sign the enclosed *consent form*, and return all documents as soon as possible in the self-addressed envelope.
Please feel free to photocopy the consent form and biographical information sheet before you return them so that you have a copy.

(c) I may, as a reminder, telephone you one week after this letter is sent.

Once I have received consent, I will be in e-mail or phone contact to arrange a time for the focus group meeting. You also have a copy of the questions for the interview to think about.

I look forward to hearing from you,

Regards

Ross Dewstow

Appendix 2 **Informed Consent**

I _____ consent to becoming a participant in the research being conducted by Ross Dewstow titled: "*What aspects of the pedagogical and educational culture of a university encourage or discourage staff from exploring online technologies in their teaching?"*

I understand that the research will involve:

- one taped focus group discussion that will be transcribed and the transcript kept secure;
- possible follow-up discussions to clarify the transcribed focus group discussion;
- reading and responding to the first draft analysis of the findings.

I consent to the focus group data being used for the research once there is agreement to any changes I suggest to the draft analysis document. I understand that the research will use pseudonyms and will avoid disclosing the names or identities of staff. Pseudonyms will be assigned in conjunction with the participants, and other changes may be made where descriptions would make it easy to identify a staff member.

I consent to the data being part of this study and to be used for subsequent conference papers and articles.

Supervisor Contact Details: Dr Wendy Drewery
e-mail: educ1004 @waikato.ac.nz phone ext: 8465

Signed_____ Date: _____

Full name: _____ phone: _____

Email: _____

Preferred method(s) of contact: phone / letter / email (circle as many as are preferred)

Preferred place of contact: home / school (delete one)

The pseudonym I wish to be known by is

_____.
If I do not suggest one here, I permit Ross Dewstow to choose a one to be used instead of my real name.

Please complete this page and return it
To Ross Dewstow. Thanks.

Appendix 3 Return of First Draft

(a) letter to accompany return of First Draft Analysis

2A Riro Street,
Hamilton

Phone at work: 857 0666
Mobile: 021 990 152
Fax: 07 847 0651
Email: rdewstow@ectus.net

Dear _____,

Enclosed is the first draft analysis of my research. No one else has seen this draft other than my supervisor. The text is on my computer and has a password for access purposes, so it is secure.

I would appreciate you reading the first draft analysis and adding, deleting or altering parts of the document that concern you. Please make comments on the transcription itself using “Track Changes” in Word, and return it by mail with the accompanying form releasing the draft for use in my thesis.

If you have no alterations to make, please keep the draft copy and simply return the enclosed form. You may fax it back if it is more convenient.

If you would like to discuss the draft before returning it, please feel free to contact me.

I look forward to receiving your responses and the accompanying form. If I have not received this release after three weeks, I will telephone you.

Regards,

Ross Dewstow

(b) Release of First Draft Analysis form

Release of First Draft Analysis *for use*

Name of participant: _____

Pseudonym: _____

I have received the First Draft Analysis of the research and have read it. The following applies:

θ The draft is acceptable as the conditions agreed to on the original consent form are met. I have kept the draft because I have made no alterations.

θ I have corrected the text of the draft. The annotations accompany the return of the draft. Once the alterations are made, the text is OK provided that the conditions agreed to on the original consent form are met.

Signed: _____ Date: _____

Fax to: Ross Dewstow (07) 857 0651
(if you keep the draft and there are no changes; or if you wish to withdraw)

Or send by snail mail to: Ross Dewstow
2A Riro Street
HAMILTON

NOTE: don't forget to post the draft and annotations

Appendix 4 **Focus Group Questions**

Teaching your subject area:

1) Tell the group about the subject you teach with specific reference to areas that you enjoy teaching. Explain why you get enjoyment from teaching these particular areas?

2) What are the methods you use to teach your subject?

3) What are the difficult parts about teaching your subject?

4) Does your subject require any special pedagogy (ways/skills of teaching)

You, your department and the university

5) What are things in the culture of your department/school that encourage or discourage your teaching?

6) How does the university encourage or discourage you in your teaching?

Online teaching

7) What are your thoughts about teaching online?

8) What are your perceived and actual advantages and disadvantages of teaching online?

9) Do you have any reasons why your subject, or parts of your subject, cannot be taught well online?

10) Are there ways in which online assists your teaching or could assist your teaching?

11) Are there ways in which your department/school could assist you further with teaching online?

Appendix 5 **Ethics Application**

THE UNIVERSITY OF WAIKATO
SCHOOL OF EDUCATION ETHICS COMMITTEE

APPLICATION FOR ETHICAL APPROVAL OF
SUPERVISED GRADUATE/POSTGRADUATE RESEARCH PROJECTS

Name of applicant: Ross Dewstow

Contact address: 2A Riro Street, Hamilton

Contact phone number: Home: 07 853 3758 Work: 07 857 0666
& Mobile: 021 990 152

Degree: MEd – 4 paper thesis

Principal supervisor: Wendy Drewery

Department: Professional Studies

Paper code: DSOE594-04C (HAM) - Education Thesis

Title of project: What aspects of the pedagogical and educational culture of a university encourage or discourage staff from exploring online technologies in their teaching?

Interest in topic:
In 2003 I enrolled in a Directed Study where the topic was "Investigation into the uptake of e-learning in a Tertiary Institution".

My basic premise was that "the University of Waikato has reached a plateau in the uptake of e-learning throughout the institution. There are a number of initiatives being used to increase the number of staff using the online environment to teach but still the numbers are remaining static."
The paper investigated the "the Technology Adoption Life Cycle as a comparative model to e-learning uptake at the university and see how closely the model fits."

The study concluded that there was a good fit in the School of Education but also raised some questions about why the model seemed to be different when looking at other schools at the University.

I felt that there was a need to follow up this study but I wanted to look at reasons why staff were not teaching online but taking the question beyond research that focuses on barriers and reasons and look more into pedagogical and cultural reasons why staff were not taking up the challenge of teaching online.

1. Details of the Project

a) **Objectives:** To research aspects of the pedagogy and educational culture of the University of Waikato that encourage or discourage staff from exploring online technologies in their teaching.

Justification: In my directed research paper for my MEd, I looked at the uptake of e-learning at the University of Waikato. I concluded that the technology adoption life cycle curve offers a good fit when comparing the uptake of technology products with the uptake of e-learning at the University. Staff fitted into each of the categories as per the model (figure 1) developed by Geoffrey A. Moore in his book Inside the Tornado (1999).

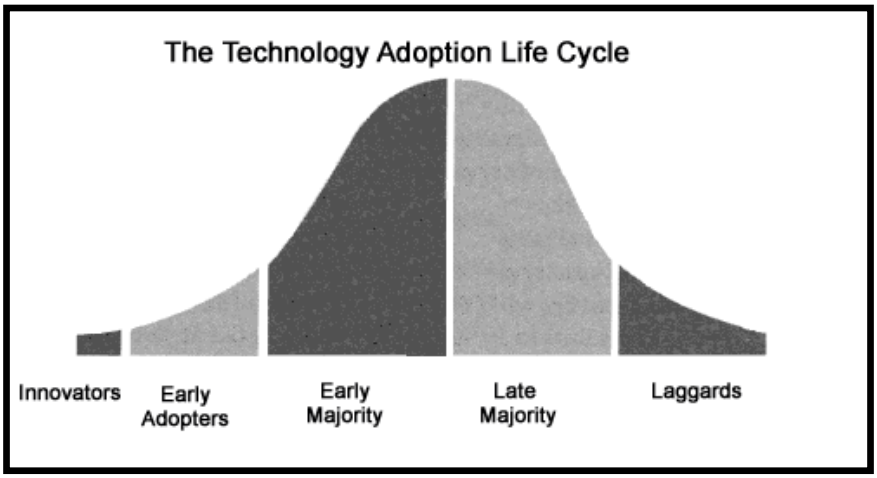


Figure 1: The Technology Adoption Life Cycle (Moore, 1999 p 14)

My research was mainly concerned with the School of Education at the university and found that they have teaching staff who can be identified as fitting into one of the areas of the above graph. The spread of staff loosely fits the curve but other areas of the university have only innovators and early adopters in the area of online teaching. My research will be looking into reasons for this.

There has been much research in the area of e-learning with some researchers looking into barriers to online education.

Impediments to online teaching and learning have been well documented by researchers and include:

· faculty culture
· lack of an adequate time-frame to implement online courses
· lack of formalized agreements to sustain program commitment though difficulties and problems
· increased time required for both online contacts and preparation of materials/activities
· the more technologically advanced the learning system, the more to go wrong
· resistance to change
· lack of technological assistance – to name a few.

Researching barriers is one way to go about this research but as soon as some of these barriers are overcome, new ones are found to replace them. Barriers are put up by staff for all sorts of reasons and by taking a different tack altogether we may have a more positive approach to the research question instead of asking why they are not teaching online. By looking into staff ideas about appropriate ways of teaching their subject compared with what is possible using online teaching methods, I am attempting to understand the culture and pedagogy of how staff teach their subjects as a way of understanding their point of view. To then analyse how they see their subject area and compare this with what online teaching has to offer, we can see where the overlaps are.

c) Procedure for recruiting participants and obtaining informed consent:
The methods are:

Firstly, from the seven schools at the university, I have chosen three schools for this research. They are: Arts & Social Science, Science & Technology and Management. The reasons for choosing these schools are:

- They are relatively new to using online technologies but have sufficient staff teaching online and not teaching online to get a good representation of lecturers for the research.
- There are quite different academic disciplines in these schools.
- Other schools have either been over researched – e.g. The School of Education - or in the case of The Law School and the School of Maori and Pacific Development, are too small to be able to get sufficient representation and both have been in the process of appointing new heads of schools over the past year.

There will be a total of three focus groups, one per school with each group made up of staff with the following characteristics:
2 who do not teach online
2 who are new to teaching online (1 – 2 years experience)
2 who are experienced online educators (more than 3 years teaching online)

I will identify staff in the last two group categories from the staff I have worked with over the past few years. I will also talk to these staff members in the Schools, asking them to suggest staff for the first category and upon their recommendations, invite all staff by e-mail or phone initially, with a follow-up personal meeting if required. The objective is to have a group of staff from each school who can speak openly and freely to the focus group questions. By using purposeful, or targeted, sampling in the Schools I will get the best mix in the focus group meetings so we can have frank and open discussions.

Note: The details of the research will be outlined to the participants before obtaining their informed consent (Appendix 1). This will be done when I first ask participants to be involved in the research. I will then send the consent form to participants to sign and return.

d) Procedures in which research participants will be involved:

The procedures for recruiting participants are outlined in (c) above. The key procedures in which research participants will be involved include:

- *focus group*: semi-structured, audio-taped, with questions sent to participants at the same time as their consent is sought (*Appendix 1 & 2)*
- *Follow-ups*:
  - subsequent discussions, conversations and non-formal interviews may occur with individuals to clarify the focus group transcript. These will focus on specific ideas raised in the focus group, for clarification purposes only.
  - first draft of findings will be sent to participants for their approval.

e) Procedures for handling information and materials produced in the course of the research:

The interviews will be audio-taped; these tapes will be stored securely by me indefinitely and no other person will have access to them. A copy of the first draft of the findings will also be sent to the participants (see *Appendix 4*). All documents (accessible by password only) will be stored on my computer and also copied to our server, which is backed up on a daily basis. Any other data will also be kept securely indefinitely.

2. <u>Ethical Issues</u>

Discuss possible ethical concerns under the following headings. Describe procedures adopted to ensure ethical conduct of the research in sufficient detail for them to be evaluated. Acknowledge potential problems which cannot be entirely eliminated, and describe procedures for minimising the risk.

a) Access to participants:

Formal procedures have been carefully thought through. See 3(c) & 3(d).

In terms of access for conducting focus groups, the need for a quiet space with no distractions will be found; it is likely to be conducted in the Boardroom at ECTUS or a suitable location in the group's school at the University, one in which the participants feel comfortable. Interviews will take place during the working day and will require the researcher to ensure that distractions are kept to a bare minimum.

Email, ordinary post and telephone will be mechanisms to continue communications to make it easy for participants to contribute ideas and information. These can help minimise the researcher's intrusion into participants' lives.

b) Informed consent: *Appendix 2* outlines the informed consent. These forms will be stored indefinitely in a secure place.

c) Confidentiality: The data gathered through the project will be confidential to the researcher and individual participants. Personal pseudonyms will be used but the identities of the Schools and departments, within Schools, will very likely need to be identified. Every attempt will be made not to identify individual staff members with Schools or departments. If it turns out that there is some sensitive commentary from a staff member whose position and department can readily be identified by readers, this will be discussed with supervisors and with the person concerned. If it is not possible to disguise the point sufficiently, such matters will have to be omitted.

d) Potential harm to participants:

(i) The greatest potential harm will be the visibility of the participant in his/her own department at the University. Information with any reference linking departments to staff will not be included as confidentiality of participants is paramount. Participants have the right to refuse any information that they think could be harmful to them.

(ii) A second potential for harm rests in what participants reveal about themselves and their department, especially if it is negative about particular people or situations. On such occasions, I will need to decide whether inclusion of this information in any part of the thesis will be detrimental to either individuals or a School. I will refer such concerns to my supervisors for advice before any decisions are made. Participants will have the opportunity to check how their contributions have been used when the draft of the findings is sent to them.

(iii) Another potential harm is in taking up participants' time that is needed for everything else in their lives; I will need to be sensitive to and respect their needs because of the busy-ness of their jobs. I will

not reveal details about a specific individual's contributions under any circumstance.

(iv) Other harm may ensue if they reveal information during focus groups that they may regret saying and may wish for removal of all reference to it in any transcript or other text. That will be honoured.

e) Participants' right to decline: Participants will be told about arrangements in both the initial consent form (Appendix 2) and in the form that accompanies the return of transcripts (Appendix 3). Participants have the right to withdraw from the process up until they have signed their consent to the draft analysis. Up to that time they have the right to have comments withdrawn or changed from the findings.

f) Arrangements for participants to receive information: Participants will receive information in the following ways: by letter, email, telephone and in face-to-face meetings, depending on their preference. Participants will be able to comment on the draft findings report. Conversations will be used to establish times/dates/venues for interviews, as well as for brief follow-up meetings, if needed. Email and post will be the prime ways of more substantial reviews/development of data.

g) Use of the information: Data will be used for the purposes of this thesis and subsequent papers and conference presentations. At all times, participants' anonymity will be assured through the use of pseudonyms.

h) Conflicts of interest: I do not see any conflicts of interest between this research and the positions the participants or I have. I have a role outside the university supporting the e-learning contract between the university and our company. I do see it as of beneficial to the university as it contributes to the research in the area of e-learning.

i) Other ethical concerns relevant to the research: None

3. Legal Issues

Outline legal issues which may arise in the course of this research under the following headings:

a) Copyright: Any works I cite from appropriate literature will be duly acknowledged. I will own copyright of the report and related papers.

b) Ownership of data or materials produced: The participants have ownership of the raw data from interviews while the researcher has ownership of the thesis and resulting papers and journal articles.

c) Any other legal issue relevant to the research: None. Should any arise, they will be discussed with the research supervisors before any action is taken.

4. Research Timetable

a) Proposed date of commencement of data collection:
November 2004: Interview participants

b) Expected date of completion of data collection:
February 2005: Further interviews (if needed) plus Transcript of interviews

I agree

a) to ensure that the above-mentioned procedures concerning the ethical conduct of this project will be followed by all those involved in the collection and handling of data;

b) to submit for approval any amendments made to the research procedures outlined in this application which affect the ethical appraisal of the project.

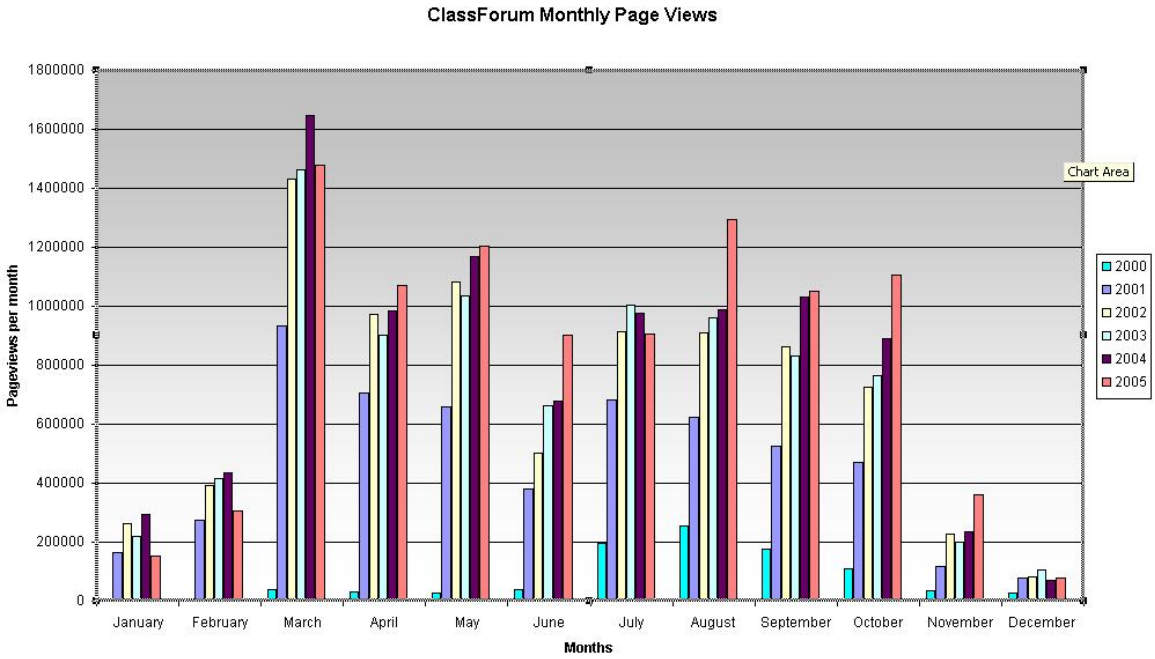
Signature of applicant: ..... Date: .....

Signature of supervisor: ..... Date: .....

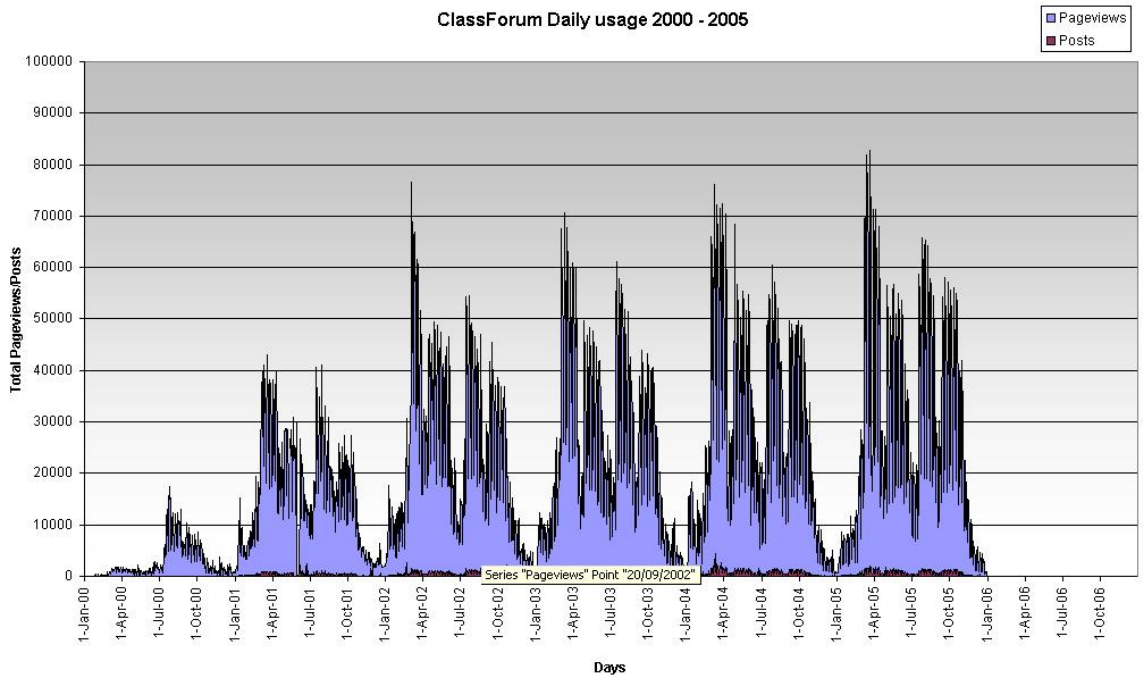
Please return your completed application (plus 9 copies), along with two copies of your research proposal to
Helen Findlay at the School of Education by the following dates in 2004:
4 February, 3 March, 7 April, 5 May, 2 June, 7 July, 4 August,
1 September, 6 October, 3 November, 1 December

Appendix 6 ClassForum Graphs

Graph showing the monthly ClassForum Page views from 2000 - 2005



Graph showing the Daily ClassForum Page views from 2000 – 2005 showing the rapid rise from 200 to 2002 and then a gradual rise of about 10% per year from 2003 to 2005.



Peter Moodie, WICeD