

**CHALLENGES FACED BY STAFF AND
STUDENTS AT TERTIARY LEVEL
IN
FLEXIBLE LEARNING ENVIRONMENT**

AN INSTITUTIONAL STUDY

BY

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degree of Master of Computing, Unitec NZ, 2007

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1 ABSTRACT

This research is concerned with identifying the challenges / problems of flexible learning environments in the tertiary education sector. Flexible learning environments usually allow students to choose from a mix of learning opportunities/resources, including “face-to-face” learning, distance learning and e-learning. The term “blended learning” is used when students are expected to participate in both “face-to-face” learning and e-learning.

Research was conducted using mixed qualitative and quantitative method, and the data were collected through interviews and online survey. Ten staff members were interviewed and 145 students participated in the survey. Both sets of data have been summarized and analysed by the researcher to draw meaningful conclusions.

This thesis identifies the challenges and problems faced by students and staff in flexible learning environment, especially the challenges of online learning which is considered as the latest version of the flexible learning environment.

Key findings provided to answers the following questions:

- What are the challenges faced by students, teachers and support staff which can reduce the effectiveness of the learning and teaching process?
- What are the learning/technical difficulties encountered by the students from various ethnic communities of New Zealand?
- How can flexible learning be made more effective if the identified challenges and difficulties are resolved?

DEDICATED TO
MY BELOVED PARENTS AND MY BROTHER

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3 DECLARATION



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This Thesis/Dissertation/Research Project is submitted in partial fulfillment for the requirements for the Unitec degree of **MASTER OF COMPUTING (MCOMP)**.....

CANDIDATE’S DECLARATION

I confirm that:

- This Thesis/Dissertation/Research Project represents my own work;
- The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.
- Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: 2006.720

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1 INTRODUCTION

1.1 OVERVIEW OF FLEXIBLE LEARNING

According to Wikipedia (2007) flexible learning is a learning mode which provides the learners the choices of where, when and how learning occurs. Flexible learning allows the students to access the course materials and follow the course at the pace, place and time convenient to them.

Flexible learning options vary, depending on the educational institutions. Some institutions design the course allowing full flexibility and there is no face-to-face interaction. Other institutions design a blended approach with course materials that can be accessed at a distance and a face-to-face component as well.

Flexible learning concept is not a new approach; according to Clark (1999), the history of flexible learning in England dates back to the early 1840s. The mode of course delivery basically was printed materials travelling through ordinary post. Correspondence education started in United States around 1880s and in New Zealand around 1922. Even today some flexible learning courses use the postal mode of delivery (about us: correspondence school, 2003).

In the last sixty years, information and communication technology (ICT) has progressed greatly, and has influenced the everyday life of people so many have become technologically dependant. Many flexible learning education providers have adopted information and communication technologies for their programmes. So this adoption has led to new modes of education called E learning, online learning, M learning and Network learning (Georgiev, Georgieva, & Smrikarov, 2006)

Because of the new opportunities created by new technology, students are able to follow their course, while meeting their other commitments. Previously students may have believed that they had no chance of studying after they started their full time jobs or took on family responsibilities but ICT affords students the possibility of lifelong learning.

Adoption of electronic tools in association with flexible learning activities creates a lot of opportunities and is convenient for students. Students are able to follow the course from outside normal geographical boundaries and flexible/ distance learning becomes real time learning where students can obtain the course materials and the instructions of the teacher straight away without any delay. Students need not feel lonely because the seamless communication facilities (chat room, discussion board and e mail etc) make them feel like they are learning with a group of people. (Matthews, 1999)

On the other hand, electronic tools may be a challenge for some students and staff because of their lack of familiarity with the technology. As New Zealand is a developed society, problems with technology are less acute than in developing countries. Normally schools and work places are providing basic training to handle the electronic tools, and professional development (PD) programmes for staff can build a good grounding to handle electronic tools without any hesitation. But in developing countries it can be a big challenge for students and staff (Butterfield et al., 2002).

So we are able to summarize the situation of flexible learning environment in developed countries (including New Zealand) as follows:-

- 1) Flexible learning has become more technology-based and the postal delivery method is seen as an old-fashioned delivery mode
- 2) Some education providers are using a mixture of electronic and postal delivery, some of them are solely online and a few use postal delivery only

- 3) Most education providers (including UNITEC) are using the blended mode, combining online and face-to-face delivery
- 4) E learning, online learning, M learning and network learning are being widely used.

According to Wikipedia (2007), there are a host of names used in discussion of flexible learning including:-

- Blended delivery
- Distance learning
- E education
- E learning
- E-enabled learning and web-facilitated learning
- Electronic distance education
- M learning
- Network learning
- Online learning
- Remote learning
- Resource-based learning
- Technology-mediated distance learning
- Web based instruction

The ideology and the philosophy of these learning modes are similar even though a lot of different names are used to identify the mode. There are differences in the use of technology; some of the courses run completely online so students do not need to attend classes and some courses require students to attend class plus online. Regalbuto (2000) suggests that the term “teaching at an Internet distance” can be used to cover all variations.

In summary, flexible learning environments may help students follow courses without disrupting their daily commitments. In the past correspondence delivery was used for this purpose, nowadays ICT has enabled real time interactions.

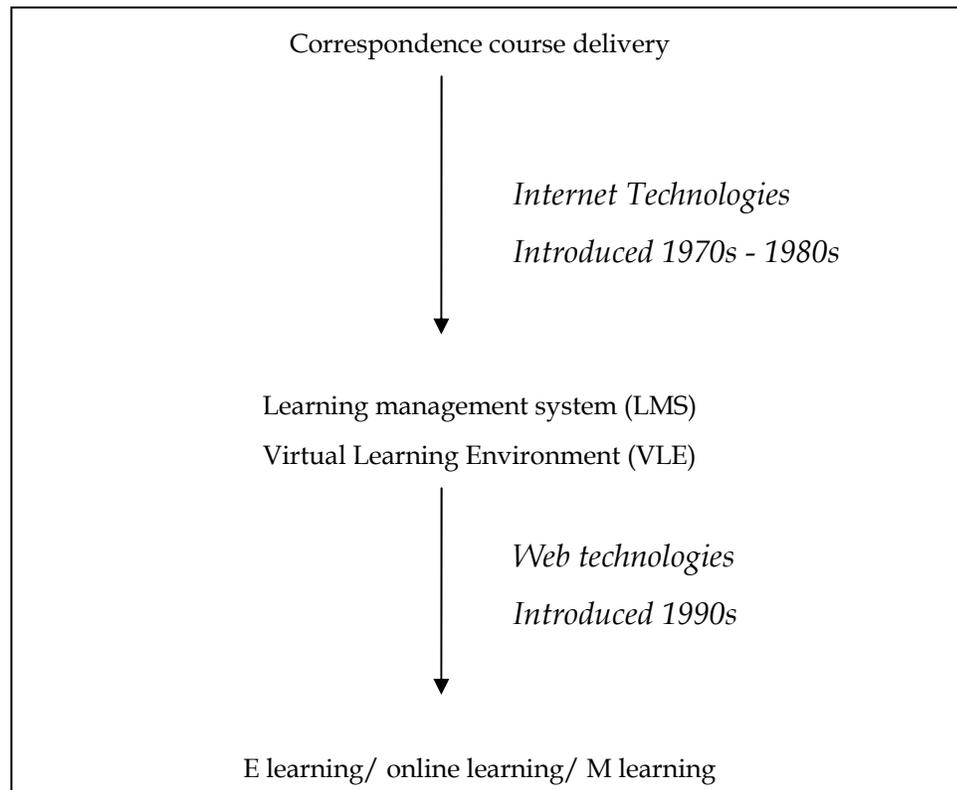


Figure 1: Development of flexible learning

1.2 E - LEARNING

E learning was introduced in the late 1990s with the adoption of web technologies. Richard (2005) categorized flexible learning modes as follows:-

- 1) No online presentation, where electronic tools are not used for teaching and learning activities
- 2) Web-supplemented, where students find useful links about the course and the course outline etc.

- 3) Web-dependent, where students are required to use the internet for course activity such as online quizzes and online assessments, but there is no reduction in classroom sessions.
- 4) Mixed mode, where students are required to engage in online activities, but they need to attend face-to-face sessions. Online activities can only replace part of the face-to-face sessions.
- 5) Fully online, where there are no face-to-face activities. (p.11)

The term “e learning” is usually used to indicate delivery of education through electronic means. Websites play a big part in e learning because all the course materials, activities and the assessments can be uploaded on the websites and the students can access those resources using their username and password; in other words, much of the actual learning takes place through the web.

There are many products available in the market which suit e learning delivery and allow a range of activities like chat room, discussion forum, digital drop box and online resource storage. Many NZ tertiary institutions use a product called “Blackboard” which offers all these activities but has a relatively expensive licence fee. Open source software is also available these days for minimal cost and has the advantage that the institutions can customize it depending on their needs.

Adopting e learning systems in the tertiary educational institutions can save money and the time of staff in the long run but that is not the only reason why they are using the e learning mode. Another purpose is to set up a better environment for students. Institutional license (cost around 50 thousand a year) plus the administration and the servers will cost a lot. It can save money on photocopying (very little) and some of the other cost but saving money is not the key driver.

The challenging issue in adopting e learning mode is to train the teaching staff because some staff has no prior experience in technology and they are not comfortable handling E learning tools. So the expenses to train them as PD will increase the overheads of the institution.

Using freeware is also a challenging task because of the ongoing cost, it is free to download but the institution needs to customize it for their requirements using staff who have programming knowledge and the actual challenge is what will happen if the software breaks down. No one is going to guarantee to maintain the software so it will cost more than the institution expects, and that can be one of the reasons why the institutions stick to the software even if it costs them a huge amount of money.

The way the tertiary institutions handle e learning varies; some of them teach totally online so students do not need to attend classes and they can do all the activities such as exams, quizzes and the assignments online and some other institutions use blended delivery both face-to-face and online where students need to attend classes plus they can do a few activities via the internet, the rest of the institutions use it as a parking space for resources. So they do normal face-to-face teaching in the classroom and students can refer to resources online as an additional backup.

1.3 M-LEARNING

Mobile learning is one of the latest versions of the flexible learning where learning takes place through mobile devices. According to Wikipedia (2007) the term M learning is used for delivery of training by means of mobile devices like PDAs, mobile phones, digital audio players, pen scanners, voice recorders and digital cameras. The latest technology can connect all of these devices to the institution's server through wireless technologies such as WAP, GPRS, UMTS, Bluetooth, WI-Fi, etc.

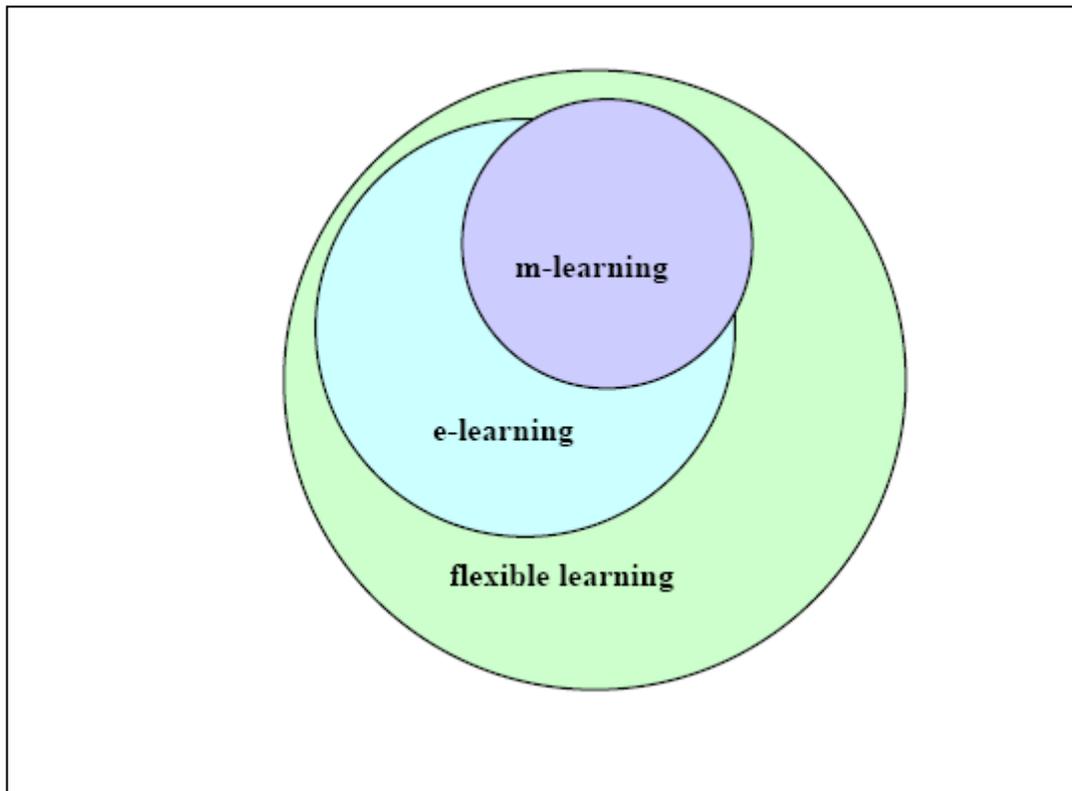


Figure 2: Contrast of mobile learning
(Georgiev et al, 2006),

So M learning is part of flexible learning and part of E learning, in other words e learning is the latest version of the flexible learning and the M learning is the latest version of E learning. M learning can help or be more beneficial to students who cannot access normal learning venue (classroom) or computer.

Both E learning and M learning have the same philosophy and ideas but the technology which connects the server and students is different because E learning uses the online connection and the computer, M learning uses wireless connection and the portable devices.

We can mention that M learning is one of the next generation learning modes because the young generation who have been brought up using the wireless technologies such as wireless games and remote devices, will welcome the mobile mode delivery.

On the other hand there are lots of challenges involved in M learning because the connection is very expensive and mobile devices can get disconnected quite often which will interrupt learning, also most portable devices have relatively small screen and memory such as mobile phones but some devices allow memory extension.

1.4 THEORY OF LEARNING - SOCIAL CONSTRUCTIVISM

Social constructivism is an educational theory developed by psychologist Lev Vygotsky. The whole idea behind this theory is that learning happens when people interact in groups. According to social constructivism, knowledge cannot be absorbed and should be constructed and he argues that students are not empty vessels to fill information in but they need to build knowledge through interaction with their lecturers and colleagues, reading materials and learning activities (Vygotsky, 1978).

Social constructivism developed in the early 20th century. At that time there were few tools to implement his theory but nowadays most of the e learning tools are based on this theory.

Not only e learning but also class room face-to-face environment is setting social constructivism in a new direction. Group discussion, class presentation and group projects are considered as part of social constructivism theory.

Lev Vygotsky explains that each and every function of the child's cultural development happens in two ways, one is at a social level involving interaction between people (inter

psychological) and the second level is individual level which takes place inside the child (intra psychological)

1.5 DEVELOPMENT OF E LEARNING AT UNITEC

UNITEC is one of New Zealand's polytechnics and seeks to attain university status. This institution, once called Carrington polytechnic, has now become UNITEC. At this point an effort is being made to make it UNITEC University of Technology.

In 1992 the Centre for Educational Technology and Open Learning (CETOL) was established. The aim of the centre was to encourage the use of Educational Technology in Teaching and learning Activities.

In 1993, CETOL created its first website for UNITEC and the intranet which became UNINET at a later stage; both of these E resources were maintained by CETOL and transferred to Marketing unit in 1998.

In 1994, Diploma in Educational Technology (Dip Ed Tech) was offered by CETOL which was using "First Class" bulletin board and the following year this course became a fully web based online course. This is the first course which used ICT; and the starting point of e learning at UNITEC.

In 1997, CETOL changed its name to "Learning Technologies" and started to evaluate learning materials and technologies, and at the same time transferred the Diploma in Educational Technology to the School of Education, which was established the same year. "Learning Technologies" started creating online courses using raw code (using programming language) which is more complicated and require the technical and programming knowledge; this system cannot handle a large number of courses.

In the period 1997 and 1998, UNITEC decided to purchase WebCT, after which several courses were produced by the School of Computing and Information Technology using limited facility of WebCT, because UNITEC purchased only a limited licence. WebCT was used as e learning platform until 1998 when the licence of Blackboard (Bb) was purchased.

From 1998 to date, Blackboard has become the main e learning platform for UNITEC; initially, in 1998 there were only four courses; then it increased to over 750 in year 2004. Currently there are 1408 courses available online. But the philosophy of the UNITEC in handling e learning is different from some other institutions because only a very few courses are completely online where students do not need to come to the classes. The rest of the courses involve blended delivery mode. Still all courses have online resources and online communication with peers and teachers. However, delivery of the courses is both online and face-to-face.

In order to train the staff on newly adopted E learning platform (Blackboard), a series of workshops and seminars was conducted by Learning Technologies. These seminars and training sessions help staff handle e learning tools freely without hesitation because UNITEC expects staff to work on their own to switch their course to the Blackboard. At the same time, School of Computing and Information Technology (SCIT) provides special training for its staff as Professional development (PD). In addition to this there were monthly blackboard user group meeting sessions arranged by Learning Technologies.

At the end of 2004, UNITEC purchased the pilot licence of the content management system for Black board which can help extend the resources on e learning site. This pilot licence allows the staff to use multimedia components in the course delivery.

Currently, UNITEC is using Black board (Bb) as e learning platform and there are 6 courses available completely online and 1408 courses have their resources online but being delivered by blended mode with face-to-face and online.

On the technical side (behind the screen of Black board), there are three servers. One of them is real Blackboard server, another one is pre test server and the last one is test server. The two test servers are used for the purpose of testing the material before it goes to the real Black board server so UNITEC expects to run the real Black board server all the time without any interruptions, and one staff member working full time to take care of the Bb servers. Another staff member deals with the daily issues which will involve solving day to day problems of staff using Bb etc.

1.6 FLEXIBLE LEARNING DEVELOPMENT IN NEW ZEALAND

As we mentioned earlier in this chapter, the E learning or online learning is the latest version of flexible learning, so the development of the flexible learning should be marked from the beginning when Sir Isaac Pitman started his correspondence course in 1840 in England (Clark, 1999). But in New Zealand the history of flexible learning started from 1922. The NZ correspondence School began to educate children in rural farm areas, even though they didn't use any technological instruments (tools) until 1931. They used radio broadcast as a tool to educate rural farm area children from 1931 until satellite television replaced it in 1990.

Introduction of e-learning offers a range of tools which can be utilized to make teaching and learning more effective. Many tertiary education providers from various parts of the globe have started to adopt this type of learning method since the 1980s (Roblyer & Edwards, 2000) and some courses are completely online. Tertiary education providers in

New Zealand have also started to use online strategies to run their courses (Northover, 2005).

In 1990 The Open Polytechnic of New Zealand (TOPNZ) started using an online platform to enhance teaching and learning activities. Around 2004, Massey University started to offer courses partly online. Both of these institutions are the pioneers who introduced the flexible learning mode in the tertiary education sector of New Zealand. Very few courses from these institutions are conducted totally online and rests are conducted in a mixed mode of traditional printed materials traveling through ordinary post plus web delivery. As Butterfield et al. (2002) mentioned, Internet-based web technologies complement the traditional distance learning tools by delivering real time learning.

From 1990 onwards NZ tertiary institutions started adopting flexible mode delivery in their curriculum using the mixed mode of printed materials plus online delivery to enhance teaching and learning activities. Most of the tertiary institutions in NZ are using Blackboard (Bb) as their learning management system; however the University of Auckland is using its custom-built system called "CECIL".

1.7 PURPOSE OF THIS RESEARCH PROJECT

Flexible learning concept is not a new approach; according to Clark (1999), the history of flexible learning in England dates back to the early 1840s, but the mode of delivery was different than the current mode, they (education providers) used to print the course materials and send it to the students by ordinary post.

In the last sixty years, distance flexible learning has become technologically dependant. Many flexible learning education providers have adopted ICT for their programmes. So this adoption has led to new modes of education called E learning, online learning, M learning and Network learning (Georgiev et al, 2006)

Hence, flexible learning has become more technology-based and the postal delivery method is seen as an old-fashioned delivery mode. Most education providers (including UNITEC) are using the blended mode, combining online and face-to-face delivery.

To narrow the scope of this research, this researcher will focus on the flexible learning delivery of UNITEC's courses and seek to answer the following questions:

- What are the challenges faced by students, teachers and support staff which can reduce the effectiveness of the learning and teaching process?
- What are the learning/technical difficulties encountered by the students from various ethnic communities of New Zealand?
- How can flexible learning be made more effective if the identified challenges and difficulties are resolved?

1.8 CONCLUSION

This chapter explores the introduction of the thesis; what are the advantages and disadvantages of the flexible mode and especially concentrates on the development of the flexible mode. The main objective of this chapter is to have a clear picture of the delivery mode of the courses conducted by UNITEC.

2 LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reports on an investigation into the literature on the challenges of flexible learning faced by students and staff. Flexible learning is a huge area but this literature review will investigate the challenges in the latest trend of the flexible learning environment called “online learning” or “e learning”.

Harasim (1989) reported that online learning is a new type of learning which combined distance education and the practice of face-to-face instruction with the help of computer mediated communication.

Section 2.2 outlines the background of Distance learning environment. Distance education uses printed materials which travel over the ordinary post, radio signals and cable TV as the communication channels until the internet communication introduced in late 1980s, as Volery (2000) mentioned that online learning is a type of distributed learning enabled by internet. So the distance education brought about a new trend called “online learning” or “e learning” which is using computer mediated communication channel.

Section 2.3 covers opportunities and challenges of the flexible learning environment. In other words, how ICT facilitate teaching and learning and make education accessible by all students worldwide regardless of geographical boundaries, and the effectiveness of the technology in a flexible learning environment. This section also describes the opportunities created by the online learning, as Matthews (1999) notes that e-learning/online learning allows students to work at their own time and pace regardless of their position on the globe, disability, sex and race and that many students like independence rather than being “under” somebody. He mentioned that students should

be self-disciplined to manage their time when they are learning online without any supervision. Also the concept of life long learning is facilitated by online learning, as Duffy and Cunningham (1996) argue that “*education is not preparation for life, it is life itself*” (p.173)

This chapter also addresses the challenges and the barriers of the flexible learning environment which is categorized by two prime stake holders of the study; teachers and learners. Some important questions have been raised by professionals about online learning regarding the new role of the instructors, quality assurance of the learning outcome, effective communication, interaction and the motivation.

Section 2.4 explores the impacts of flexible learning on institutions. As Young (2002) mentioned, if the institution likes to reserve a place for future generation they should adopt online learning activities in their curriculum right now.

Section 2.5 reviews the impact of flexible learning on students who have family, social and routine work commitments, both positive and the negative side of the environment. Even though online learning creates an opportunity for adults (mature students), the learning process will be a challenging part, as McNulty (1992) noted, the necessity of balancing of academic, family, community and routine job responsibilities make it more challenging.

Section 2.6 contains the review of the quality assurance of the outcome of the online learning which is considered as an important part of this environment. The responsibility of the institution is to maintain the quality of the outcome. As McKenzie et al. (2000) stated, administrators need to make sure they hire qualified instructors to ensure (through training, monetary support and promotional activities) the quality of online instruction.

Finally section 2.7 brings the conclusion of the literature review of the challenges faced by students and staff in a flexible learning environment.

The following citation table describes the structure of the literature review

No	Themes	Name of Authors and year
2.1	Introduction	Duffy & Cunningham (1996) Harasim (1989) Matthews (1999) McKenzie et al.(2000) McNulty (1992) Volery (2000) Young (2002)
2.2	Background	Butterfield et al. (2002) Harasim (1989) Imel (1998) Keegan (1986) Moore & Lockee (1998) Ostendorf (1997) Perraton & Holmberg (1988) Richard (2005) Young (2002) Zhang, Zhao, Zhou & Nunamaker (2004)
2.3	Opportunities and Challenges	Ascough (2002) Blake (2000) Butterfield et al. (2002) Cameron (2006) Cooper (2000) Donlevy (2003) Duffy & Cunningham (1996) Furst-Bowe (2002) Galbraith (1990) Gray (2001) Kanuka & Anderson (1998) Laurillard (2002) Palloff & Pratt (1999) Vygotsky (1978) Zhang et al. (2004)
2.4	Impacts on Institutions	Blake (2000) Cameron (2006) Donlevy (2003) Gray (2001) Muirhead (2000)

		Schott et al. (2003) Young (2002)
2.5	Impacts on Teachers	Ascough, 2002) Bower (2001) King & McSporrان (2003) Knowlton (2000) Muirhead (2000) Malcolm (2003) Northover (2005) Palloff & Pratt (2000) Schott et al (2003) Valentine (2002) Volery (2000) Zheng & Smaldino (2003)
2.6	Impacts on Students	Althaus (1997) Butterfield et al. (2002) Clark (2002) Copley & Kahl (1983) Dominquez & Ridley (1999) Farrell (2000) Furst-Bowe (2002) Galbraith (1990) Garrison, Cleveland-Innes & Fung (2004) Hara & Kling (2000) Howland & Moore (2002) Hughes (2004) Koorey (2003) Northover (2005) Palloff & Pratt (2003) Schuemer (1993) Smith, Ferguson & Caris (2001) Suen & Parkes (2001) Wade (1999) Zafeiriou, Baptsita & Ford (2001).
2.7	Quality Issues	Allen& Seaman (2003) Althaus (1997) Ascough (2002) Buck (2001) Deubel (2003) Green & Eves (2001) Koorey (2003) Levy (2003)

		Olt (2002) Palloff & Pratt (2000) Serwatka (1999) Weiger (1998) Wu & Hiltz (2004)
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Table 1: CITATION TABLE

2.2 BACKGROUND

Distance learning has a long history and features separation of teachers and students in time and place; teachers and students may never meet each other, and the medium of the distance learning used to (and sometimes still does) involve printed materials travelling by ordinary post (Perraton & Holmberg, 1988). Keegan (1986) defined it in terms of “Non-contiguous communication between student and teacher, mediated by print or some form of technology”.

Flexible learning allows the students to choose from a mix of learning opportunities which include face-to-face, distance and online learning (see Figure 3)

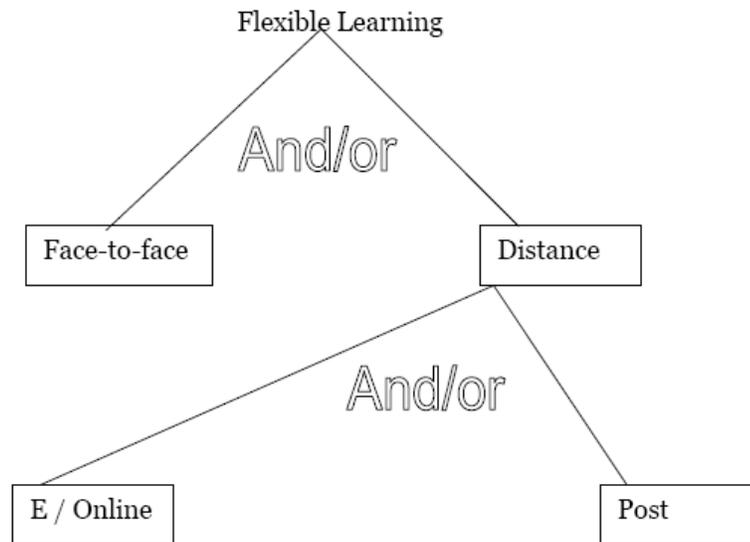


Figure 3: Structure of Flexible learning

The earlier form of the distance learning was correspondence using ordinary post; this was used by the educational institutions (Imel, 1998) until the medium of radio and television was introduced. Institutions used the radio and television in two ways, the first way was to use the video tapes to record the lessons and send it out to the students by ordinary post; the second way was to use the radio signals and the Television to broadcast and telecast live lessons to the students (Moore & Lockee, 1998), but this could be limited by the geographical boundaries.

Richard (2005) categorized the latest growth of the flexible learning environment into 5 sections as follows:-

- *None or trivial online presence*
- *Web supplemented (e.g. Course outline and lecture notes online, use of email, links to external online resources)*

- *Web dependent: students are required to use the internet for key “active” elements of the programme- e.g. online discussions, assessment, online project/collaborative work- but without significant reduction in classroom time.*
- *Mixed mode: students are required to participate in online activities, e.g. online discussions, assessments, online project/collaborative work, as part of the course work, which replace part of the face-to-face teaching/ learning. Significant campus attendance remains*
- *Fully online. (p.11)*

Ostendorf (1997) mentioned that rapid growth of the technology; internet and the compressed video give a new impetus to distance learning which enhanced the distance learning as real time and rapid delivery.

Online learning is a modern form of distance learning, in which teacher and students are in different locations but learning materials are not travelling by ordinary post, rather the materials are available online and the students can access those materials using their allocated username and password. Learner and teacher can have very effective communication with each other, sometimes even more effective than the face-to-face traditional classroom environment. Online discussion board and online chat room facilities are examples of communication channels used in e learning.

So the flexible learning is a combination of face-to-face and distance learning. ICT make the distance learning more effective; easier, real time distribution and quick response (Harasim, 1989). So flexible learning becomes more popular among the students who have other commitments.

Even though some of the institutions use the old methods of printed materials delivery, still most of the universities in the world are using the ICT as a medium of the education delivery (Butterfield et al., 2002).

According to Young (2002) tertiary educational institutions who want to maintain a place for future generations must adopt online delivery mode right now. Spender observed that *“The students of the future will be the “Play station generation”; they will want learning that is “just in time, just for me, just a keystroke, just for now”* (Young, 2002).

E learning is a revolution made by ICT where students can learn at their own pace and time. Today e learning is not only transferring the data and written documents over the internet but the virtual classroom with the concept of virtual mentor (VM) is being trialled in tertiary education sector. This is considered as the latest version of the e learning environment.

Zhang, Zhao, Zhou and Nunamaker (2004) described the virtual classroom environment; virtual mentor (VM) and the learning by asking (LBA) concepts as follows

In order to address some of existing problems and develop interactive and flexible e-learning systems, we have proposed a concept called Virtual Mentor (VM), a multimedia-based e-learning environment that enables well-structured, synchronized, and interactive multimedia instructions. The concept of VM consists of the following principles:

Multimedia – integration: VM captures experts’ knowledge/wisdom on videos in the form of interviews or lectures, and presents them with other associated materials in various media formats such as PowerPoint slides, narratives, and images. (p.77)

Zhang et al. (2004) explained the features of the VM as follows:

- *Just-in-time knowledge acquisition. VM enables learners to access knowledge at any time via the Internet.*

- *Interactivity. Learning is an active knowledge acquisition process via continuous interaction between VM and learners. Learners are also able to direct questions to VM, and receive real-time answers.*
- *Self-directivity. VM is a learner-centered process in which a learner chooses personal learning strategies, taking the initiative and responsibility to determine his or her learning needs.*
- *Flexibility: VM gives learners flexible control over the learning process, style, and content to meet their individual needs.*
- *Intelligence. VM monitors each individual's learning progress and provides personalized tutoring. (p.77)*

Learning by asking (LBA) is another approach which can be utilized for online learning environment. LBA allows students to type questions in conversational English and send them to the web server, so the learning system retrieves the answer and displays on the screen. Not only that LBA also provides follow-up suggestions after each answer (Zhang et al., 2004).

In summary, The flexible learning concept is not a new approach; according to Clark (1999), the history of flexible learning in England dates back to the early 1840s. The mode of course delivery basically was printed materials travelling through ordinary post, rapid growth of the technology; internet and the compressed video give a new impetus to distance learning which enhanced the distance learning as real time and rapid delivery and this mode of delivery named online learning/ E learning (Ostendorf ,1997). Online learning is a modern form of distance learning, in which teacher and students are in different locations but learning materials are not travelling by ordinary post, rather the materials are available online and the students can access those materials using their allocated username and password. Institutions adopting online learning (latest version of

flexible learning) only depend on their needs and facilities available, as Richard (2005) mentioned institutions can use a range of delivery modes ; fully online, Web supplemented, Web dependent, Mixed mode or no/trivial online presence. UNITEC's course delivery involves mixed mode where *“students are required to participate in online activities, e.g. online discussions, assessments, online project/collaborative work, as part of the course work, which replace part of the face-to-face teaching/ learning. Significant campus attendance remains”*

(Richard, 2005)

2.3 OPPORTUNITIES AND CHALLENGES

Online learning is a revolution of this era. Not only has it facilitated seeking of knowledge significantly but also facilitated a new concept of life-long learning as Duffy and Cunningham (1996) argues that education is not preparation of life but it is life itself.

Online learning can overcome the barriers of study created by the demands of a student's day to day life. After the completion of formal tertiary education, it can be difficult to study because of employment and family commitments. It may be impossible to leave the job and go back to the university to undertake further studies. For someone doing routine work and ambitious of career advancement, he/she needs more qualification for advancement in his/her work or to secure his position in his/her work (Galbraith, 1990). According to Gray (2001), students can continue learning while they are earning money for their tuition bills.

Palloff and Pratt (1999) state that online learning can promote non - discriminatory learning and teaching because teachers and students have no chance to meet each other face-to-face , so none of them knows each others race , gender, and the physical characteristics, thus paving the way for a bias- free learning and teaching environment to the students and the teachers. So this type of learning and teaching environment can help

avoid issues of ethnic discrimination between staff and students in places where misunderstanding among ethnic communities exist.

According to Ascough (2002) online education encourages critical thinking skills, collaborative learning and advanced learning because it is providing enough time to think and do their study by themselves and the time suit to them.

Zhang et al. (2004) explained the advantages and disadvantages of online / E learning as shown in table 1 below:

	Traditional Classroom Learning	E-Learning
Advantages	<ul style="list-style-type: none"> • Immediate feedback • Being familiar to both instructors and students • Motivating students • Cultivation of a social community 	<ul style="list-style-type: none"> • Learner-centered and self-paced • Time and location flexibility • Cost-effective for learners • Potentially available to global audience • Unlimited access to knowledge • Archival capability for knowledge reuse and sharing
Disadvantages	<ul style="list-style-type: none"> • Instructor-centered • Time and location constraints • More expensive to deliver 	<ul style="list-style-type: none"> • Lack of Immediate feedback in asynchronous e-learning • Increased preparation time for the instructor • Not comfortable to some people • Potentially more frustration, anxiety, and confusion

Table 2 : FACE-TO-FACE vs. ONLINE
(Zhang et al., 2004)

Online learning presents the opportunity to full time mothers to utilize their time to be more productive while they are occupied with their toddlers because this flexibility allows them to schedule their course work and assessment tasks in order to fulfill their other family commitments. As Furst-Bowe (2002) argues, online learning offers female

students who have family commitments a greater access to the education, increased flexibility allows them to complete their studies from home and they are free from the problems associated with childcare, housing and transport.

Donlevy (2003) notes that online education can help education providers develop their curriculum with very low cost, so this will allow the graduates to gain important technology skills which can promote their marketability, also students can afford to do the course because of the low tuition fee. According to Gray (2001), online learning creates the scope to accommodate huge number of students, plus universities can utilize revenue generated to develop other facilities of the institution. But saving the cost won't affect the teaching and learning process as Blake (2000) suggests that lack of face-to-face discussion can be replaced by online discussion board, video conferencing and chat rooms. Shy students can have active online discussions rather than face-to-face (Cameron, 2006).

Discussion and interaction are considered as important activities for teaching and learning activities. According to Vygotsky (1978), meaningful discussions help students learn, and he argues that students learn from each other not only from the teachers, and the students are not empty vessels to fill the education in but they are the human creations. So interaction between students themselves and between the teacher will help them learn. But how can online tools be used as an effective interaction between students themselves and between students and teacher? Kanuka and Anderson (1998) believe that online discussion tools can be used effectively between learners and teachers and among learners themselves, and they argue that is good group collaboration in technological mediated environment. According to Kanuka and Anderson (1998) and Laurillard (2002), online discussion may not be as effective as face-to-face because of the low participation rates, students' unfamiliarity in online environment and the low performance related to quality

Online learning creates an opportunity of global access to education because the students can do their course from any one of the education providers world wide without leaving their country, even without leaving the house. In early days people utilized flights and ships to travel to different parts of the globe to seek knowledge but today ICT can be used to seek knowledge from a university situated far away from the student's location. Not only will current occupation of the students not allow them to travel to seek knowledge but also the commitments they have with the family and the work place. Flexible learning enhances the learning and teaching process so that the stakeholders of education find more opportunities such as life-long learning regardless of learner's age, location, current occupation and time (Zhang et al., 2004).

Online education has lots of advantages and it creates many opportunities for learners and the teachers. The following section will identify the challenges and barriers of the online education. In other words we are going to look at the negative side of this new learning environment.

The report by Butterfield et al. (2002) stated that problems and challenges may differ from one country to another in terms of development, usage of technology and affordability to invest money on purchasing computers and internet access. New Zealand as a first world country is in a relatively good position to overcome these problems and challenges. We cannot generalize the challenges of online learning for entire world. So those challenges and barriers need to be looked at separately depending on the country's situation.

Cooper (2000) mentioned that:

"Online instruction can offer new challenges and opportunities to both students and instructors. Most students do not view online instruction as a replacement for traditional classroom instruction. However, with the right subject matter, with the right instructor and facilitator, and for the right student, internet or online courses can

provide an effective educational environment that is a viable alternative to traditional classroom instruction” (p.54).

In summary, online learning (the latest version of flexible learning) has lots of advantages and it creates many opportunities for learners and the teachers. Those opportunities are as follows

- Online learning supports a new concept of life-long learning
- Online learning can overcome the barriers of study caused by the demands on a student’s day to day life, after the completion of formal tertiary education it can be difficult to study with employment and family commitments.
- Online learning can promote non – discriminatory learning and teaching
- Online education encourages critical thinking skills, collaborative learning and advanced learning
- Online learning presents the opportunity to full time mothers to utilize their time to be more productive while they are occupied with their toddlers
- Online education can help education providers to develop their curriculum with very low cost
- Online learning creates the scope to accommodate huge number of students
- Online learning creates an opportunity of global access to education because the students can do their course from any one of the education providers world wide without leaving their country, even without leaving the house

These opportunities have lots of challenges and difficulties which can reduce the effectiveness of the flexible delivery. So the next section will discuss the challenges and barriers faced by main stake holders. Identification of the challenges and barriers will help to answer the question of “How can flexible learning be made more effective if the identified challenges and difficulties are resolved?”

2.4 IMPACTS ON INSTITUTIONS

According to Young (2002) tertiary institutions are forced to adopt the latest version of the flexible learning environment. Institutions need to adopt online learning because the next generation of students is the play station generation.

Even though flexible learning is very convenient to the students and staff, nevertheless, it is a challenging part for the educational providers because they are the ones who are responsible to design the course content and delivery method and need to monitor the course delivery to maintain the quality. Also, the teachers were trained to teach face-to-face so the institution needs to re-train the teaching staff for an effective flexible learning delivery (Muirhead, 2000).

Managing students' participation, course evaluation, monitoring the progress of the students and the assessments methods are totally different than face-to-face traditional method and it is a challenging part in online environment (Schott et al., 2003).

Donlevy (2003) argues that online education can help education providers to develop their curriculum with very low cost, so this will allow the graduate to gain important technology skills which can promote their marketability, also students can afford to do the course because of the low tuition fee. According to Gray (2001), online learning creates the scope to accommodate huge number of students, plus universities can utilize revenue generated to develop other facilities of the institution. But saving the cost won't affect the teaching and learning process as Blake (2000) suggests that lack of face-to-face can be replaced by online discussion board, video conferencing and chat rooms. Shy students can have active discussion through online discussion rather than face-to-face (Cameron, 2006).

In summary, institutions are being forced to adopt the latest versions of flexible learning; online learning. But institutions are facing new challenges. Therefore, to design and

deliver the course in a different way, as we mentioned earlier, teachers need to re train again because they are all trained to deliver the education face-to-face, also responsibility of the institution to maintain student's participation, especially in assessments.

2.5 IMPACTS ON TEACHERS

The role of the instructors has been changed in online learning as the delivery method has changed because the learning and teaching environment changed from teacher - centered to student-centered. So the main concern is how the online instructors can adopt the new roles and responsibilities. Zheng and Smaldino (2003) and Muirhead (2000) noted that challenges and barriers of online learning have been identified by researchers and the primary concern is changing the roles and the responsibilities of the teacher/instructor.

According to Knowlton (2000), teachers and the students are a community of learners in student-centered online learning environment, so the teacher becomes a coach, counselor and mentor and the students become active participants in learning. So the role of the teacher in traditional classroom (teacher-centered) is different from the student-centered online learning because in traditional classroom the teacher lectures while the students take notes and the online environment teacher serves as a facilitator while the students cooperate with each other.

It is a challenging practice for the instructors/ teachers to adopt the new role as a moderator or facilitator due to the low control of the class environment because the teachers have been trained in traditional classroom teacher-centered instruction, so it is not an easy task to shift from a formal delivery method to the new student-centered environment (Ascough, 2002). Volery (2000) explains that the roles of the instructor need to be shifted from intellect-on-stage and mentor to a learning catalyst. Zheng and Smaldino (2003) argue that an online student-centered teacher needs to be a facilitator and instructional designer at the same time.

Muirhead (2000) mentioned three areas need to be considered when courses change from traditional to online delivery, those are as follows:

“(a) The provision of instructional and emotional support to students (b) the expectations associated with authoring online courses while maintaining a full teaching load, and (c) the requirement to provide ongoing technological support to students and parents” (p.322).

Technologies have become the prime medium of the course delivery, so using technology for instructional delivery is another challenging part for the teachers or instructors. Educators should be confident when they work with the multiple versions of the software package and giving instructions to the students, also the reliability of the computer technology is the frustrating part (Muirhead, 2000). Palloff and Pratt (2000) explain the commitment of the teacher as follows *“instructor must be trained not only to use technology, but also to shift the way in which they organize and deliver materials” (p.3)*

According to Valentine (2002), an online instructor should be an expert on technology related to software, hardware and internet security to prevent students from misusing the technology, so the education institution and the instructor should be well informed about the technology, its weaknesses and strengths to use as the situation demands.

Interaction with the students also becomes a challenging part for the teachers because of the learning mode, Muirhead (2000) mentioned that teachers are trained in “hand-to-hand” teaching style and they will face the challenge of how to initiate the interaction with the students and build a relationship when they come to online learning. Lack of interpersonal contact is one of the challenges faced by teaching staff in an online environment because they only have little contact or feed back to clarify the communication (Bower, 2001). In addition, Schott et al. (2003) mentioned that managing

students' participations, electronic course materials, course evaluations and the students' achievements can also be a challenging part.

Honesty and integrity also can be considered as a challenge for online teachers because of lack of evidence on how well the students perform. Teachers cannot rely entirely on assignments which they are getting through the internet, as there is no system in place to verify if they were completed by the students or somebody else, as online assessments have lack of direct supervision by the teacher (Muirhead, 2000).

Malcolm (2003) categorized UNITEC's teachers' opinions into three categories; those are as follows with details

1. Reasons why teachers like to use Black board to deliver the course?
 - Able to provide up to date information to the students
 - Students can catch up even if he/she missed the class session
 - Good way of communication between students and staff and among students
 - Flexibility for students and staff because teachers can facilitate the subjects while they are off campus
 - Saving money and time because there is no need to photocopy extra handouts
 - Materials can be re use with minor changes
2. Motivation to use Black board to deliver the course?
 - Opportunity to be more flexible because teachers can facilitate the subject while they are out of campus
 - Easy to use and very good support by Learning Technologies
 - Policy of the faculty because some courses are available only through online.
3. Barriers in using Black board

- Increased workload
- Difficulties with technologies
- Lack of recognition of online learning compared to face-to-face and organizational issue

Northover (2005) identified the concerns expressed by teaching staff adopting online learning. Those are as follows:

- Increased workload
- Technology issues (IT literacy for both students and staff and IT currency for individual and institution)

In summary, teachers are facing few challenges to adopt the latest version of the flexible learning called online learning because this is the new mode of delivery and the teachers not trained to teach using the new technology. Online teaching is not just uploading the course materials on the website but it is a commitment as King and McSporrán (2003) mentioned *“online teaching is not just a matter of hanging your lecture notes on a website. Instructional methods have to change, online teaching demands hand-on commitment”*. (p.48) and teachers are trained in “hand-to-hand” teaching style and they will face the challenge of how to initiate the interaction with the students and building a relationship when they come to online learning.

Also technologies have become the prime medium of the course delivery and online instructor should be an expert on technology related to software, hardware and internet security to prevent students from misusing the technology. Honesty and integrity also can be considered as a challenge for online teachers because of lack of evidence on how well the students perform.

2.6 IMPACTS ON STUDENTS

The role of the students has been changed in online environment as the other stakeholders’ roles and responsibilities changed. So the adjustment is required in learners’

roles and responsibilities if they want to be successful learners because of the delivery mode shifting from the traditional face-to-face classroom style to active online method. Hughes (2004) explains the situation as follows: *“online learners should ask themselves “Am I ready for University? Am I ready for online learning? What is my preferred learning style? Do I have the skills to be successful in my chosen program?”* (pp.369-370). The students need to be very active to be able handle technology to initiate their learning.

Garrison et al (2004) come up with an idea of “online student’s role adjustment” and they argued that online learners should adjust themselves for new environment, new context, synthesize ideas and stimulate their own curiosity. Palloff and Pratt (2003) explain the adjustment of the learners as follows: *“online learners should be “open” about personal details of his or her life, work and other educational experiences; should be “flexible” and “humor” to create a warm, inviting course environment; should be “honest”; should be willing to take “responsibility” for online community formation; and should be willing to work “collaboratively”* (pp. 17-28)

Motivation and self discipline are the challenging part for students in online environments. According to Clark (2002) the student must be a constructivist learner with self motivation. Howland and Moore (2002) suggest that the most positive students are those who are proactive, more independent and responsible for their learning.

According to Koorey (2003) students should prepare themselves for new mode of delivery; online students should be independent and self-directive

Online learning can lessen students’ interest and cause confusion because some of the online learning provides only the text based materials, which may not provide an environment where students can have clear/good understanding. The course materials should provide a clear understating to the students because they do not have any face-to-

face meeting with the teacher to enable them to further discuss or clarify the topic (Hara & Kling, 2000).

Butterfield et al. (2002) stated that problems and challenges may differ from one country to another in terms of development, usage of technology and ability to invest money on purchasing computers and internet access. New Zealand as a first world country is in a relatively good position to overcome these problems and challenges.

As Furst-Bowe (2002) stated the online learning environment creates an opportunity for the adult learners to continue their efforts to seek knowledge regardless of their other commitments. Online allows the students not only life- long learning but also helps people to update their skills to keep up with advances in technology.

Schuemer (1993) argues that online learning affects adult students as follows:

- Many online students are adult (mature) who have family and job commitments
- Students are interested to gain a degree for a better chance or to secure the current job
- Online education can isolate students, so they lose motivation
- Adults students often have poor computer skills (p.143)

Even though online learning has advantages for adult learners, they need to face the challenges which are only slightly different from the challenges faced by the young learners because adult learners are complicated learners (Galbraith, 1990).

Adult learners can be away from study environment for many years so it is very important to give them a good grasp of basics and allow freedom of choice of the subject to be studied, also added stress of work and family too must be noted. They may be anxious about gaining a qualification because of better work prospectus or to secure their current job. Also it is true that the adult learners are proactive because they feel that they

need to achieve the qualification within a time frame (Galbraith, 1990). According to Copley and Kahl (1983) adult learners have to bear the burden of some other commitments such as household duties and full or part time job unlike face-to-face students with no such commitments.

Adult students are not inclined to engage in social interactions; such as group dynamic and communication and they are not in a good position to browse through large number of articles (Zafeiriou et al, 2001).

Lack of motivation is one of the challenges faced by adult online learners because of the social aspects like they do not have interaction with other peer students, competitiveness, fear of public failure and peer pressure to conform (Copley & Kahl, 1983). Even the interaction with other adults may not be considered to be of great importance but peer learners and the environment can positively impact on learners' motivation towards learning (Suen & Parkes, 2001).

Adult students often need feed-back from the teacher for the reason that they have been away from studies for sometime. They need to have close monitoring and feed back. The role of the teacher is very important and very complex; an experienced classroom teacher is able to access the students' understanding through looking at their eyes. So non-verbal clues help the teacher, to give a good feedback to the students but an online teacher does not have that opportunity to make use of such clues (Farrell, 2000)

Online learning material should be prepared in a way that students understand it without any misunderstanding, in other word it should be arranged in a self- contained way because the adult learners may have poor cognitive skills. On the other hand teachers need to put more time to prepare the course materials in a different way which is easier to understand and avoid the misunderstanding. Teachers' task is also critical because they

need to get quick feed back from students in the first lesson to change the format of the learning as materials depend on the feedback (Smith et al, 2001).

Wade (1999) explains the achievements and the procedure of the success in online learning environment. The procedure is as follows “students should be advised about the requirements of distance environment, being self disciplined and being the self starter” in addition the author argues that even though the students follow the procedure adult students do not have much possibilities to be successful online learners because they may have low self esteem and gain low grades. On the other hand, Dominquez and Ridley (1999) argue that older online students have lots of responsibilities other than studies but they have more professional experience and internal focus to control the learning, also distance students do well as the class room students. There are no significant differences in final performance.

Northover (2005) mentioned AUT students’ opinions about adopting online learning; about 66% of students have positive opinions and around 19% strongly agreed among the students who have positive opinions. Only around 10% of students gave negative answers and remaining 24% are neutral.

In summary, online learning is a new mode of delivery which provides a convenient way for student to seek knowledge and gain qualification but the challenges and barriers faced by students can be a drawback to the success of the new mode of delivery. In an online learning environment, roles of the students changed and they have to be self disciplined, self motivated, self directive and independent.

Adults online learners usually have commitments other than studies and are coming back to study to gain a former qualification for particular reasons, but they are facing lots of difficulties different from the younger students. Some authors argue adult learners may not be in a position to achieve high grades and other authors believe they can achieve higher grade because of their experience in what they are doing.

Online delivery can be the better way of learning if the challenges can be overcome significantly. However Althaus (1997) agrees that online learning alone could not be efficient for effective learning but the blended mode with face-to-face and online will be the best and most effective way, even better than traditional face-to-face environment.

2.7 QUALITY ISSUES

According to Allen & Seaman (2003) online education is growing rapidly and the numbers of the courses offered online have increased; there is considerable concern about the quality of the education which is delivered over the internet. They note that

“(a) Over 1.6 million students took at least one online course during the fall of 2002; (b) over one-third of these students (578,000) took all of their courses online, (c) among all U.S. higher education students in fall 2002, 11 percent took at least one online course, and (d) among those students at institutions where online courses were offered, 13 percent took at least one online course” (p. 1).

So the rapid growth of the new mode of the delivery raises the question of how to impart quality education because the students and the learners never meet each other and the courses are delivered through internet. Even though online education is getting more and more popular and the number of students and the courses have increased, there are lots of criticisms against the new mode of delivery as Buck (2001) mentioned that online courses are low in quality. Weiger (1998) questions the quality of the education when the students are not meeting the teacher face-to-face.

Weiger (1998) observed the recommendation of the council for the Higher Education Accreditation on the quality of online education as follows: *“establish reliable and valid performance measurements, require evidence on contact between faculty and students, mandate evidence of effective instructional techniques, promote systematic efforts to select and train faculty, and assure that students, faculty staff and administrators receive adequate training to use electronic resources”* (p.11)

Quality in online learning can be guaranteed if the instructors and the other stakeholders adjust their roles to new mode of delivery; instructors need to interpret the course content in a way to suit students who have no chance to meet the teacher face-to-face. Also online learning is not uploading the course materials and sending and receiving E mails but it is an environment for interactive, collaborative, multidimensional and deep thinking (Ascough, 2002).

To make sure the qualities of the online delivery, instructors need to develop a learning community which can be an interactive environment; teacher-to-student, student-to-student or student- to- peer colleagues. This is an important part to make online learning a success because online delivery is learner centred method (Palloff & Pratt, 2000). Ascough (2002) mentioned that exploration, reflection and discussion are the key activities for deeper learning. Serwatka (1999) explains about the learning community as follows: the interaction between the teacher and students; sending and receiving E mails about the assignment, questions about the particular subject and the general information about the subject. And the interaction between the learner-to-learner; discussion about the group assignments and the questions posted by the teacher are very important. Green and Eves (2001) explain the procedures of the chat forum in online community as follows: *“it is essential to facilitate not dominate and to maintain a familiar, friendly tone in the forum, avoiding formality at all cost”* (p.42). They suggest that teacher should allocate an official time to respond to the students’ academic needs which can help students to get quick response.

Testing process is a critical issue in online learning because teacher and students have no chance to meet each other face-to-face. It is the responsibility of the educational institution and the teacher to make sure acceptable standards of the assessments are in place; there are lots of suggestions made by academics towards preserving academic integrity of the testing process. Deubel (2003) suggests that the assignments are a means to measure

online students' progress and the assignments should be covering all of the subjects a syllabus comprises. In addition Olt (2002) spells out the procedure to prevent students from cheating in assessments; author argues that a special user name and password should be provided to the students just before the assessments and the duration should be restricted. Questions should be chosen randomly from the pool. Serwatka (1999) suggests that students should be required to sit the exams at a predetermined venue.

Teachers should assist students to achieve learning outcome while achieving quality online delivery, which is not as easy as traditional classroom environment. Wu and Hiltz (2004) expressed their concern about how students can reach their learning outcome in an online learning environment. Althaus (1997) observed that the blended environment with face-to-face and online is better than the traditional face-to-face alone, after examining 142 undergraduate students' learning outcomes. Koorey (2003) reports that University of California conducted a course in two different teaching modes (online and face-to-face) and they noticed that online students performed better than the traditional face-to-face students during the two-year period. Not only the grades can measure the learning outcome but also the higher order thinking, critical thinking, deep learning and problem solving skills considered to measure the learning outcome. Wu and Hiltz (2004) suggest that online discussion can promote the skills of critical, high order thinking and problem solving skills.

In summary, the quality of the learning outcome is an important part of the learning. Especially in an online learning environment, there are a few key factors that need to be taken into consideration to ensure the quality of the outcome. Levy (2003) suggests that the following factors need to be taken into consideration when institutions plan an online course delivery. Those are as follows (1) Vision and plan (2) Curriculum (3) Staff training and support (4) Student training and support (5) copyright and intellectual property. So the obligation of the educational institutions is to ensure delivery of quality learning,

Levy suggests that administrator should evaluate the programs which can ensure the quality assurance.

2.8 CONCLUSION

The chapter summarized the published work on flexible learning, as we observed flexible learning creates more opportunities to the students, and the latest ICT enhanced flexible learning and changed the delivery mode, so online learning/ E learning become the latest version of the flexible learning.

The literature review investigates opportunities and challenges of flexible learning environment, the challenges have been categorized by the stakeholders as students and staff. Identifying the challenges will help to answer the question of “How can flexible learning be made more effective if the identified challenges and difficulties are resolved?” and identify the ways to maintain quality of these particular delivery mode which will increase the effectiveness.

The following chapter will describe the methodology which was used for the thesis and explain the reason to chose this methodology for data collection, analyzing and reporting.

3 RESEARCH METHODOLOGY

3.1 AN OVERVIEW

This chapter explains the research methods which were used to research the particular topic, why the particular methods were chosen and how data were collected and analyzed to draw meaningful conclusions.

Section 3.2 focuses as the background and the aim of the research, and section 3.3 justifies the choices of particular methodologies to research the topic. Section 3.4 explains the ethical considerations.

Sections 3.5 and 3.6 focus on the methodologies used to research this topic. Section 3.5 details the quantitative method including how the survey was conducted and how the survey results were analyzed. Section 3.6 concentrates on the qualitative method including details of the participants and how the interview data were analyzed.

The last section 3.7 explains the quality assurance and the validity of the data gathered from the survey and interviews.

3.2 BACKGROUND OF THE THESIS

This research is concerned with identifying the challenges / problems of flexible learning environments in the tertiary education sector. Flexible learning environments usually allow students to choose from a mix of learning opportunities/resources, including “face-to-face” learning, distance learning and e-learning.

The following research questions were formulated to explore the chosen topic:

What are the challenges faced by students, teachers and support staff that can reduce the effectiveness of the learning and teaching process?

What are the learning/technical difficulties encountered by the students from various ethnic communities of New Zealand?

How can flexible learning be made more effective if the identified challenges and difficulties are resolved?

The research used mixed methodologies (qualitative and quantitative) to ensure that rich data were obtained.

3.3 JUSTIFICATION OF THE METHODOLOGIES CHOSEN

The aim of this research is to identify the challenges faced by staff and students in flexible learning environment. Interviews, online survey and the relevant literature have been utilized to achieve the target.

Combinations of qualitative and quantitative methods are used to draw meaningful conclusions from this research project because of the nature of the thesis. Flexible learning environment is a broad field and it involves both hard and soft sciences, so that is why author decided to use the methodologies which will bring more data. Qualitative method is an ideal method to get more data from the participant which will involve asking questions regarding “Who, Why, What and When” (Bouma, 2000). Using qualitative method, it is difficult to include the students as participants in this research. So that is why quantitative method has been utilized to gather data from students, with some of the survey questions required reasons to be given.

Thus qualitative method is used to gather data from teaching and support staff through interview and quantitative method is used to collect data from students through online survey.

3.4 ETHICS CONSIDERATION

An ethics form has been submitted to the UNITEC research ethics committee (UREC) before starting to do the research. UNITEC’s ethic guidelines were taken into account in interviewing administration and teaching staff and surveying students through online.

Both participant students and staff were kept well informed about the consent before the survey and interview. Participants were approached by the thesis supervisor through e mail and the researcher sent the outline of the research. Just before the interview participants were asked to sign the consent form. At the time of the interview participants were given time to read it and the interviewer also read it out in front of the participant. Consent form contains the brief information about the research and the contact details of the supervisor. Interview transcripts were sent to the participants for verification. Some of them replied some did not. I took their silence as consent that the transcript is accurate.

The survey was conducted online, with the web link being forwarded through the supervisor to the teaching staff directly through e mail. Online survey links were introduced to the students by teaching staff and the survey acknowledge the participant about the ethics and the contact details of UNITEC research ethics committee (UREC) visible to all participants. The participants are not asked to mention their name, class or contact details so their privacy is guaranteed.

3.5 QUANTITATIVE RESEARCH METHOD

It is difficult to interview students face-to-face, therefore online survey has been utilized to gather data from students.

3.5.1 STUDENT SURVEYS

Students have a very tight time table; they are very busy with their classes, assignments and exams. Hence it was not possible to meet them for a face-to-face interview to gather data, so an online survey was used to gather data from students. The purpose of online survey is to maximize the rate of participation. The estimated time per student to complete the survey is 15 minutes.

The survey was created using an online survey tool called “survey monkey” and students receive the links from their teachers through student e mail with a brief introduction from the teachers. This electronic survey tool has advantages over manual paper-based survey because electronic online survey can help the researcher avoid data error and reduce the workload.

Survey questions were both closed (multiple choice) and open-ended (short answer) and the purpose of questions varied. The 19 questions can be categorized in the following order.

- opinion on an online learning as an additional help on top of face-to-face classroom
- opinion on totally online learning environment
- opinion on the advantages of online learning over face-to-face learning
- opinion on the medium of online delivery (Internet technology)

Also there are a few questions regarding the details of participants, such as their country of birth, age group, number of years living in New Zealand and status of the student (international or Domestic) to enhance the research with meaningful analysis.

3.5.2 SURVEY PARTICIPANTS

The online survey has been introduced to the teaching staff by the supervisor through e mail and he asked them to introduce it to their students. Postgraduate and undergraduate students from the School of Business, School of Nursing and School of Computing and Information Technology were targeted to take part.

3.5.3 SURVEY DATA ANALYSIS

Statistical Package for social sciences (SPSS) was used to analyze the results and the data from multiple choice questions has been used to identify differences between the various groups of students. The answers to open-ended questions were categorized into 4, 5 or 6 categories. More detail is provided in the following chapters (Data summary and discussion).

3.6 QUALITATIVE RESEARCH METHOD

Interview is the ideal method with which to gather rich data using who, why, what and when questions (Bouma, 2000) and interviews can bring unexpected responses from the participants (Cohen & Manion, 1994).

Even though this is the best method to collect rich data, yet it has lots of practical problems. Normally interviews took around half an hour with teaching staff and around an hour with support staff.

Cohen and Manion (1994) categorized the interviews into four categories, those are as follows: focused, structured, non structured and non directive. All of the questions can be described as the category of focused, and designed to gather data around the theme of the thesis. Some participants did not answer some of the questions for some reasons as Singh and Richards (2003) argue *“data are always missing because there are questions that the respondents do not want to answer”* (p.6).

Cohen and Manion (1994) explain the four types of the interview questions, those are as follows: open, scale, fixed alternative and funnel. The questions used in this research project form a combination of all, because of the subject of the thesis. Most of the questions are open which can raise unexpected opinions and discussions. The rest of the questions are a mix of funnel and scale types.

3.6.1 INTERVIEW PARTICIPANTS

Interviews were conducted to collect data from the teaching and support staff from UNITEC, as follows:

Participant’s category	Roles and responsibility at UNITEC
Teaching staff	School of Business
Teaching Staff	School of Business
Teaching staff	Information Technology – Post graduate level
Teaching Staff	School of Nursing
Teaching Staff	School of Nursing
Teaching Staff	Information Technology
Teaching Staff	Postgraduate research
Support staff	Centre for Teaching and Learning and Innovation
Support staff	Centre for Teaching and Learning and Innovation

Table 3 : INTERVIEW PARTICIPANTS

A total of ten participants were interviewed and the interview questions have been sent to the participants one or two days prior to the interview to allow them to read and get an idea about answering the questions. Researcher records all the interviews for transcribing.

3.6.2 INTERVIEW DATA ANALYSIS

Nine of the interviews have been recorded onto audio tapes and transcribed by the researcher. The researcher identified some common themes in the answers from the interviews and wrote a summary for each question. The researcher also followed the interview analysis technique steps mentioned by Cohen and Manion (1994) (pp. 293-296). Those steps are as follows:-

- 1) *Transcription*
- 3) *Listening to the interview for a sense of the whole*
- 4) *Delineating units of general meaning*
- 5) *Delineating units of meaning relevant to the research question*
- 8) *Clustering units of relevant meaning*
- 10) *Writing a summary of each individual interview*
- 14) *Contextualization of themes*

3.7 DATA VALIDITY ASSURANCE

According to Fielden (2003) "*Whilst bias of any kind is rigorously guarded against in scientific research, it is inevitable in qualitative research*" (P128). The researcher tried to avoid or minimize the bias in this research when structuring interviews and preparing questionnaires.

Qualitative data has been collected by face-to-face interview except in one interview over the e mail. All the conversations were recorded using a tape recorder and the researcher transcribed them very carefully. The researcher sent the transcripts to the interviewee to check them to avoid any bias. Some of the interviewees agreed with the transcript and some of them made minor changes. So the researcher presumes that all the qualitative data have minimal bias.

Data validity assurance is an important part to the researcher; Guba and Lincoln (1989) list the steps to make sure the validity of data gathered from interviews. Those steps are as follows

Confirmability

Dependability

Credibility

Transferability

The first two steps were done by repeating the analyzing process by another researcher (the thesis supervisor) and the last two steps can be performed by repeating the same research by a different researcher (not done in this case).

3.8 CONCLUSION

This chapter explains the research methods which were used to research the particular topic, why the particular methods were chosen and how data were collected and analyzed to draw meaningful conclusions.

Combinations of qualitative and quantitative methods were used to draw a fruitful conclusion from this research project because of the nature of the thesis. Flexible learning environment is a broad field and it involves both hard and soft sciences, so that is why author decided to use the methodologies which will bring more data. Qualitative method is an ideal method to get more data from the participant which will involve asking questions regarding "Who, Why, What and When" (Bouma, 2000). Using qualitative method, it is difficult to include the students as participants in this research. So that is why quantitative method has been utilized to gather data from students.

The next chapter will explore students' perspectives about the flexible learning environments; data for that analysis has been collected through an online survey.

4 STUDENTS' PERSPECTIVES

4.1 SURVEY DATA SUMMARY AND ANALYSIS

An online survey was conducted and data has been collected from 145 students, who responded the survey. The following sections summarize the data.

4.2 DO YOU FIND E LEARNING HELPFUL?

Do you think adopting e-learning (learning materials and activities available on the internet) in your course will be helpful?

	Very helpful	Helpful	Not sure	Total
All students	69 (48%)	62 (42%)	14 (10%)	145
English as an additional language (EAL)	33 (46%)	29 (41%)	9 (13%)	71
English as first language (EFL)	36 (49%)	33 (45%)	5 (7%)	74
Domestic	56(51%)	43(39%)	10(9%)	109
International	13(36%)	19(53%)	4(11%)	36
1-4 years in NZ	22(50%)	17(39%)	5(11%)	44
5-9 years in NZ	16(53%)	12(40%)	2(7%)	30
10-14 years in NZ	2(40%)	3(60%)	0(0%)	5
15-19 years in NZ	7(44%)	7(44%)	2(12%)	16
20 or more years in NZ	22(44%)	23(46%)	5(10%)	50
Age 16-21	12(39%)	17(55%)	2(6%)	31
Age 22-27	21(51%)	18(44%)	2(5%)	41
Age 28-33	13(57%)	7(30%)	3(13%)	23
Age 34-39	11(46%)	7(29%)	6(25%)	24
Age 40-45	4(31%)	9(69%)	0(0%)	13
Age 46 or more	8(61%)	4(31%)	1(8%)	13

Table 4: E LEARNING HELPFUL

Overall results

The great majority of students (more than 90%) had positive opinions, none had negative opinions and the rest were not sure. Nearly half chose “very helpful”.

Reasons

80 students gave reasons; the most common related to:

Resources (24 responses, including “The internet is the biggest library in the world”)

Access (17 responses, including “Accessible anywhere, anytime”)

Convenience (10 responses, including “Saves dealing with the traffic, parking and the like”)

Learning (9 responses, including “I learn better when I am exposed to ideas in a variety of ways”)

Time saving (7 responses).

Reservations expressed included:

Depends on the person and how competent they are with the process and equipment

If you don't have one [a computer] you spend many hours at Unitec if you can get on a computer which makes it hard for your learning

[Helpful] to an extent, however, I prefer the classroom interaction

[It] is very important to meet your teachers face-to-face.

English as an additional language (EAL) Vs English as first language (EFL)

EFL students were more positive than EAL students (94% v 87%).

There is a big difference between the proportions of EAL students and EFL students who were not sure, but the actual numbers of students are quite small.

More EFL students (46) than EAL students (34) gave reasons.

EFL students were more likely than EAL students to cite resources (15 responses), access (14 responses), learning (6 responses), and time saving (5 responses).

EAL students were more likely than EFL students to cite convenience (5 responses).

Domestic students Vs International students

International students were slightly more positive than Domestic students (90v 89%).

Nearly half of the domestic students choose “Very helpful”

There is not much difference between the proportions of International students and Domestic students who were not sure and the actual numbers are quite small.

More Domestic students (57%) than International students (50%) gave reasons.

International students were more likely than Domestic students to cite resources (17% of responses) and Convenience (8% of responses)

Domestic students were more likely than International students to cite learning (4% of responses), Time saving (7% of responses) and Access (12% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small
There is a significant difference between the proportions of students with different year groups who were not sure, but the actual numbers of students are quite small.

More 15-19 years students (69%) than other groups of students gave reasons but the numbers are not that great, in other hand 20 years or more students (68%) gave reasons but the numbers are big (50 students)

1-4 Years students were more likely than other groups to cite convenience (40%of responses)

5-9 Years students were more likely than other groups to cite Access (36%of responses)

10-14 years students were more likely than other groups to cite Time saving (33%of responses)

15-19 years students were more likely than other groups to cite learning (40% of responses)

20 years or more students were more likely other groups to cite resources (31% of responses)

Age groups

Students aged 40-45 were more positive than other students but the numbers are very small
There is a significant difference between the proportions of students with different age groups who were not sure, but the actual numbers are quite small

Students aged 34-39 were less positive than other students

More Students aged 16-21 (23%) than other groups of students gave reasons Students aged 16-21 Years old were more likely than other groups to cite convenience (33% of responses)

Students aged 22-27 Years old were more likely than other groups to cite convenience (54% of responses)

Students aged 28-33 and 34-39 Years old were more likely than other groups to cite Access (31% of responses in both groups)

Students aged 40-45 Years old were more likely than other groups to cite convenience (43% of responses)

Students aged 40 or more Years old were more likely than other groups to cite learning (40% of responses)

4.3 FACE-TO-FACE INTERACTION

Do you think face-to-face interaction between students and teaching staff is important?

	Very important	Important	Not sure	Not very Important	Not at all important	Total
All students	82(57%)	53(36%)	7(5%)	2(1%)	1(1%)	145
EAL	41(58%)	27(38%)	2(3%)	1(1%)	0(0%)	71
EFL	41(55%)	26(35%)	5(7%)	1(1%)	1(1%)	74
Domestic	64(59%)	37(34%)	6(5%)	1(1%)	1(1%)	109
International	18(50%)	16(44%)	1(3%)	1(3%)	0(0%)	36
1-4 years in NZ	24(55%)	17(39%)	2(4%)	1(2%)	0(0%)	44
5-9 years in NZ	18(60%)	10(33%)	2(7%)	0	0	30
10-14 years in NZ	5(100%)	0	0	0	0	5
15-19 years in NZ	12(75%)	3(19%)	0	0	1(6%)	16
20 or more years in NZ	23(46%)	23(46%)	3(6%)	1(2%)	0	50
Age 16-21	21(68%)	9(29%)	1(3%)	0	0	31
Age 22-27	22(54%)	18(44%)	1(2%)	0	0	41
Age 28-33	13(57%)	7(30%)	2(9%)	1(4%)	0	23
Age 34-39	14(58%)	6(25%)	3(13%)	1(4%)	0	24
Age 40-45	4(31%)	9(69%)	0	0	0	13
Age 46 or more	8(61%)	4(31%)	0	0	1(8%)	13

Table 5 :FACE-TO-FACE INTERACTION

Overall results

The great majority of students (more than 90%) had positive opinions, around 2% had negative opinions and the rest (5%) were not sure. More than half choose “Very important”

Reasons

81 students gave reasons; the most common related to:

Motivation (6 responses, including “periodic class sessions help to maintain motivation”)

Interaction Important (24 responses, including “Better interaction Better understanding”)

Feedback (16 responses, including “Staff can explain and student can get a feedback better”)

Learning (10 responses, including “There are some subjects that cannot be learnt just by reading the course material”)

Clarification (18 responses, including “Quick, detailed exchange and clarification”).

Communication (4 responses, including “Improves communication skills”)

Reservations expressed included:

Important to increase knowledge, through explanation and lectures, increase motivation and inspiration, opportunity to ask questions, and ensuring social environment for students makes the tutor more real rather than just a name

Actually talking to a teacher, it can enhance your understanding of topics. Also teachers at times will go out of there way to help students understand topics of the course

[It] is very important to meet your teachers face-to-face.

EAL Vs EFL

EAL students were more positive than EFL students (96% v 90%).

There is not much difference between the proportions of EAL students and EFL students who were not sure or negative; also the actual numbers of students are quite small.

More EFL students (64%) than EAL students (36%) gave reasons.

EFL students were more likely than EAL students to cite Interaction Important (32% of responses), Learning (14% of responses) and Feedback (22% of responses).

EAL students were more likely than EFL students to cite Motivation (11% of responses) Clarification (25% of responses) and Communication (7% of responses)

Domestic students Vs International students

International students were slightly more positive than Domestic students (94% v 93%).

There is not much difference between the proportions of International students and Domestic students who were not sure or negative and the actual numbers also quite small.

More Domestic students (81%) than International students (19%) gave reasons.

International students were more likely than Domestic students to cite learning (20% of responses) and Communication (7% of responses)

Domestic students were more likely than International students to cite interaction Important (32% of responses), Motivation (8% of responses), Feedback (21% of responses) and clarification (24% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small

There is not a big difference between the proportions of students with different year groups who were not sure or negative also the actual numbers of students are quite small.

15-19 years students were less positive but the numbers are very small

More 20 years or more students (38%) than other groups of students gave reasons and the numbers are significant

5-9 Years students were more likely than other groups to cite Communication (13% responses)

10-14 years students were more likely than other groups to cite feedback (33% of responses) and Clarification (33% of responses)

15-19 years students were more likely than other groups to cite Interaction Important (33% of responses), Motivation (17% of responses), and Learning (17% of responses)

Age groups

Students aged 40-45 were more positive than other students

Students aged 34-39 were less positive than other students

There is a significant difference between the proportions of students with different age groups who were not sure, but the actual numbers are quite small

More Students aged 16-21 (23%) than other groups of students gave reasons. Students aged 16-21 Years old were more likely than other groups to cite learning (28% of responses)

Students aged 22-27 Years old were more likely than other groups to cite Interaction Important (50% of responses) and Motivation (21% of responses)

Students aged 28-33 Years old were more likely than other groups to cite Feedback (29% of responses) and clarification (36% of responses)

Students aged 34-39 Years old were more likely than other groups to cite Communication (15% of responses)

4.4 AVAILABILITY OF COURSE DOCUMENTS ON WEBSITE

Do you think availability of course documents on the e-learning site at all times will be useful for learning?

	Very Useful	Useful	Not sure	Total
All students	83(57%)	36(37%)	9(6%)	145
EAL	39(55%)	28(39%)	4(6%)	71
EFL	44(59%)	25(34%)	5(7%)	74
Domestic	65(60%)	36(33%)	8(7%)	109
International	18(50%)	17(47%)	1(3%)	36
1-4 years in NZ	25(57%)	18(41%)	1(2%)	44
5-9 years in NZ	19(63%)	10(34%)	1(3%)	30
10-14 years in NZ	4(80%)	1(20%)	0(0%)	5
15-19 years in NZ	11(69%)	4(25%)	1(6%)	16
20 or more years in NZ	24(48%)	20(40%)	6(12%)	50
Age 16-21	18(58%)	12(39%)	1(3%)	31
Age 22-27	26(63%)	14(34%)	1(3%)	41
Age 28-33	11(48%)	11(48%)	1(4%)	23
Age 34-39	13(54%)	10(42%)	1(4%)	24
Age 40-45	6(46%)	4(31%)	3(23%)	13
Age 46 or more	9(69%)	2(16%)	2(15%)	13

Table 6: AVAILABILITY OF COURSE DOCUMENTS

Overall results

The great majority of students (more than 90%) had positive opinions, none had negative opinions and the rest were not sure. More than half chose “very useful”.

Reasons

71 students gave reasons; the most common related to:

Helpful (11 responses, including “Yes it will be very helpful to assist us”)

Access (21 responses, including “On hand availability”)

Convenience (16 responses, including “So I do not need to make lots of notes for the lecture”)

Learning (7 responses, including “It is always good to be able to double check and revise these documents”)

Time saving (3 responses, including “yep! When we don't attend the lectures”).

Get Prepared (13 responses, including “ Able to prepare before lectures”)

Reservations expressed included:

Be less time consuming taking notes, students can prepare for classes before hand, making lecturers more a chance to build on work covered as it would have been studied in advance yes definitely because there you have the notes at all times if ever you loose any, and sometimes it great when there are links for extra information if required by the student during their study Yes so you can see what you are trying to learn and not have to spend the whole lecture writing rather than concentrating on what you are learning.

EAL Vs EFL

EAL students were slightly more positive than EFL students (94% v 93%).

There is not much difference between the proportions of EAL students and EFL students who were not sure; also the actual numbers of students are quite small.

More EFL students (62%) than EAL students (38%) gave reasons.

EFL students were more likely than EAL students to cite helpful (16% of responses), get prepared (20% of responses) Convenience (25% of responses) and Learning (11% of responses).

EAL students were more likely than EFL students to cite Access (37% of responses) and saving time (7% of responses)

Domestic students Vs International students

International students were more positive than Domestic students (97% v 93%).

There is not much difference between the proportions of International students and Domestic students who were not sure and the actual numbers also quite small.

More Domestic students (80%) than International students (20%) gave reasons.

International students were more likely than Domestic students to cite Helpful (21% of responses), learning (14% of responses) and saving time (7% of responses)

Domestic students were more likely than International students to cite Access (30% of responses), Get prepared (21% of responses) and Convenience (23% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small
There is a significant difference between the proportions of students within different year groups who were not sure, but the actual numbers of students are quite small.

20 or more years Students were less positive

More 20 years or more year students (44%) than other groups of students gave reasons also the numbers are quite large.

1-4 Years students were more likely than other groups to cite Helpful (29% of responses) and saving time (12% of response)

5-9 Years students were more likely than other groups to cite Access (40% of responses)

10-14 years students were more likely than other groups to cite get prepared (50% of responses) and learning (25% of responses)

20 years or more students were more likely other groups to cite Convenience (29% responses)

Age groups

Students aged 39 or less were more positive and 40 or more less positive also the numbers are significant

There is a significant difference between the proportions of students with different age groups who were not sure, but the actual numbers are quite small

Students aged 40 or more were less positive

More Students aged 16-21 (23%) than other groups of students gave reasons. Students aged 16-21 Years old were more likely than other groups to cite get prepared (38% of responses)

Students aged 22-27 Years old were more likely than other groups to cite Saving Time (23% of responses)

Students aged 28-33 Years old were more likely than other groups to cite Convenience (43% of responses)

Students aged 34-39 Years old were more likely than other groups to cite Helpful (33% of responses)

Students aged 40-45 Years old were more likely than other groups to cite Access (50% of responses)

4.5 ADVANTAGES OF E-LEARNING

There are advantages for e-learning over the traditional classroom learning

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total
All students	17(12%)	58(40%)	43(29%)	20(14%)	7(5%)	145
EAL	10(14%)	30(42%)	17(24%)	8(11%)	6(9%)	71
EFL	7(10%)	28(38%)	26(35%)	12(16%)	1(1%)	74
Domestic	11(10%)	45(41%)	33(30%)	17(16%)	3(3%)	109
International	6(17%)	13(36%)	10(28%)	3(8%)	4(11%)	36
1-4 years in NZ	5(11%)	17(39%)	13(30%)	5(11%)	4(9%)	44
5-9 years in NZ	5(17%)	15(50%)	6(20%)	3(10%)	1(3%)	30
10-14 years in NZ	0(0%)	4(80%)	0	1(20%)	0	5
15-19 years in NZ	1(6%)	5(31%)	7(44%)	1(6%)	2(13%)	16
20 or more years in NZ	6(12%)	17(34%)	17(34%)	10(20%)	0	50
Age 16-21	3(10%)	9(29%)	11(35%)	5(16%)	3(10%)	31
Age 22-27	5(12%)	16(39%)	13(32%)	5(12%)	2(5%)	41
Age 28-33	5(22%)	11(48%)	4(17%)	2(9%)	1(4%)	23
Age 34-39	2(8%)	9(38%)	9(38%)	3(12%)	1(4%)	24
Age 40-45	1(8%)	7(54%)	4(31%)	1(7%)	0	13
Age 46 or more	1(8%)	6(46%)	2(15%)	4(31%)	0	13

Table 7: ADVANTAGES OF E LEARNING

Overall results

The majority of students (more than 50%) had positive opinions, about 20% had negative opinions and the rest (about 30%) were not sure.

Reasons

67 students gave reasons; the most common related to:

Combination of Both (9 responses, including "I believe they compliment each other")

Access (4 responses, including "Availability convenience and accessible at any time")

Convenience (24 responses, including "useful if you live out of area or transport, other commitments")

Learning (5 responses, including "time to absorb the notes")

Pros & Cons (4 responses, including "Both have the good and bad sides").

Interaction Important (21 responses, including "contact with a tutor is still very important")

Reservations expressed included:

Some students have children and with the use of e-learning they don't have to be in 2 places at the same time

Its easier to have a set time to come to class whereas e learning,[but] you don't have the same motivation

Sometimes students like me having English as a second language have problems understanding and therefore needs more explanation by the lecturer

Some courses need face-to-face and some idea can not explain by email.

EAL Vs EFL

EAL students were more positive than EFL students (56% v 48%).

There is a significant difference between the proportions of EAL students and EFL students who were not sure; also the actual numbers of students are significant

More EFL students (70%) than EAL students (30%) gave reasons.

EAL students were more likely than EFL students to cite Access (15% of responses), Combination of both (15% of responses) and Learning (10% of responses).

EFL students were more likely than EAL students to cite Interaction Important (32% of responses) Convenience (43%of responses) and Pros & cons (6%of response)

Domestic students V International students

International students were slightly more positive than Domestic students (53% Vs 51%).

There is not much difference between the proportions of International students and Domestic students who were not sure and the actual numbers are significant.

More Domestic students (85%) than International students (15%) gave reasons.

International students were more likely than Domestic students to cite Access (30% responses), Interaction Important (40% of responses) and Learning (10% of responses)

Domestic students were more likely than International students to cite Combination of both (14% of responses), Convenience (42% of responses) and Pros & Cons (7% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small

There is a significant difference between the proportions of students within different year groups who were not sure, but the actual numbers of students are quite small.

15 years or more students were less positive than other students

More 20 years or more year students (51%) than other groups of students gave reasons also the numbers are quite large.

1-4 Years students were more likely than other groups to cite Access (14% of responses)

5-9 Years and 20 years or more year students were more likely than other groups to cite Convenience (44% of responses in both groups)

10-14 years students were more likely than other groups to cite Interaction Important (100% responses)

15-19 years students were more likely than other groups to cite Combination of both (25% of responses), pros & Cons (25% of responses) and learning (13% of responses)

Age groups

Students aged 28-33 were more positive than other students

There are significant differences between the proportions of students with different age groups who were not sure and who had positive opinions but the actual numbers are quite small

Younger students (16-21 Years old) less positive than other students

More Students aged 16-21 (22%) than other groups of students gave reasons. Students aged 16-21 Years old were more likely than other groups to cite Interaction Important (40% responses)

Students aged 22-27 Years old were more likely than other groups to cite Combination of both (23% of responses) and Pros & Cons (15% of responses)

Students aged 34-39 Years old were more likely than other groups to cite Access (10% of responses)

Students aged 40-45 Years old were more likely than other groups to cite Convenience (60% of responses)

Students aged 45 or more Years old were more likely than other groups to cite learning (20% of responses)

4.6 TOTAL ONLINE LEARNING

Suppose your course has no face-to-face interaction and has totally become online learning. What is your opinion about it?

	Very Useful	Useful	Not sure	Not very useful	Not at all useful	Total
All students	6(4%)	16(11%)	44(30%)	48(33%)	31(22%)	145
EAL	3(4%)	10(14%)	25(35%)	20(28%)	13(19%)	71
EFL	3(4%)	6(8%)	19(26%)	28(38%)	18(24%)	74
Domestic	5(5%)	8(7%)	33(30%)	39(36%)	24(22%)	109
International	1(3%)	8(22%)	11(31%)	9(25%)	7(19%)	36
1-4 years in NZ	0	8(18%)	15(34%)	13(30%)	8(18%)	44
5-9 years in NZ	2(7%)	4(13%)	9(30%)	11(37%)	4(13%)	30
10-14 years in NZ	1(20%)	0(0%)	3(60%)	1(20%)	0	5
15-19 years in NZ	1(6%)	1(6%)	2(13%)	7(44%)	5(31%)	16
20 or more years in NZ	2(4%)	3(6%)	15(30%)	16(32%)	14(28%)	50
Age 16-21	0(0%)	1(3%)	7(23%)	10(32%)	13(42%)	31
Age 22-27	3(7%)	6(15%)	12(29%)	10(24%)	10(25%)	41
Age 28-33	0(0%)	4(17%)	8(35%)	6(26%)	5(22%)	23
Age 34-39	1(4%)	4(17%)	5(21%)	13(54%)	1(4%)	24
Age 40-45	0(0%)	0(0%)	6(46%)	5(39%)	2(15%)	13
Age 46 or more	2(15%)	1(8%)	6(46%)	4(31%)	0	13

Table 8 : TOTAL ONLINE LEARNING

Overall results

The majority of students (more than 50%) had Negative opinions, about 15% had positive opinions and the rest (30%) were not sure.

Reasons

67 students gave reasons; the most common related to:

Combination of Both (2 responses, including “combination of both helps a lot”)

Interaction Important (49 responses, including “there needs to be some face to face interaction to ensure understanding”)

Flexible (8 responses, including “no time away from work”)

Learning (3 responses, including “students needs to clarify what's been mentioned in the notes”)

Saving Time (1 responses, including “Will save time going to the school to meet the teacher”).

Great (4 responses, including “email can replace face-to-face”)

Reservations expressed included:

I think some face-to-face interaction is important. Learning also happens in a class situation through interaction with peers, and the questions they ask. This is more likely f2f

Really, it depends on the course and the level of interaction supported by the e learning tools. I have seen real classroom interaction with video and live polls and live questions (lecturer needed)

If the course was online only, I as an international student might as well sit at home in my country of origin and follow the course, through an agreement with Unitec

Only from the point of view of getting time off work and organizing family, I would miss it though; it does help to put you on track

EAL Vs EFL

EFL students were more negative than EAL students (62% v 47%).

There is a significant difference between the proportions of EAL students and EFL students who were not sure; also the actual numbers of students are significant

More EFL students (67%) than EAL students (33%) gave reasons.

EAL students were more likely than EFL students to cite Combination of both (5% of responses), Flexible (14% of responses), Learning (5% of responses) and Great (14% of responses).

EFL students were more likely than EAL students to cite Interaction Important (78% of responses) and saving time (2% of responses)

Domestic students Vs International students

Domestic students were more negative than International students (58% v 44%).

There is not much difference between the proportions of International students and Domestic students who were not sure but the actual numbers are significantly different.

More Domestic students (82%) than International students (18%) gave reasons.

International students were more likely than Domestic students to cite Combination of both (8% of responses), Flexible (17% of responses) and great (17% of responses)

Domestic students were more likely than International students to cite Interaction Important (78% of responses), Learning (5% of responses) and saving time (2% of responses)

Time living in New Zealand

15-19 years Students were more negative than other students

There are significant differences between the proportions of students within different year groups who were not sure, and the actual numbers of students are significant

More 20 years or more year students (46%) than other groups of students gave reasons also the numbers are quite large.

1-4 Years students were more likely than other groups to cite Combination of both (6% of responses), Learning (13% of responses) and great (13% of responses)

5-9 Years students were more likely than other groups to cite Flexible (33% of responses)

10-14 years students were more likely than other groups to cite Interaction Important (100% of responses)

15-19 years students were more likely than other groups to cite saving time (10% of responses),

Age groups

Students aged 16-21 were more negative than other students, only one has a positive opinion.

There is not much difference between the proportions of students with different age groups who were not sure and who had positive opinions and the actual numbers are quite small

No students aged 40-45 have positive opinions, nearly half not sure

More Students aged 16-21 (24%) than other groups of students gave reasons. Students aged 16-21 Years old were more likely than other groups to cite Interaction Important (94% of responses)

Students aged 28-33 Years old were more likely than other groups to cite Great (20% of responses) and flexible (20% of responses)

Students aged 40-45 Years old were more likely than other groups to cite Combination of both (17% of responses)

Students aged 45 or more Years old were more likely than other groups to cite learning (20% of responses) and saving time (20% of responses)

4.7 WORK AND STUDY IN SAME TIME

To what extent would e-learning help you to continue your work and study in same time?

	Very Helpful	Helpful	No difference	Not very helpful	Not at all helpful	Total
All students	34(23%)	67(46%)	37(26%)	4(3%)	3(2%)	145
EAL	15(21%)	38(54%)	15(21%)	3(4%)	0(0%)	71
EFL	19(26%)	29(39%)	22(30%)	1(1%)	3(4%)	74
Domestic	27(25%)	48(44%)	28(25%)	3(3%)	3(3%)	109
International	7(19%)	19(53%)	9(25%)	1(3%)	0(0%)	36
1-4 years in NZ	9(21%)	22(50%)	12(27%)	1(2%)	0(0%)	44
5-9 years in NZ	10(33%)	14(47%)	5(17%)	1(3%)	0(0%)	30
10-14 years in NZ	2(40%)	3(60%)	0(0%)	0(0%)	0(0%)	5
15-19 years in NZ	2(13%)	8(50%)	4(25%)	1(6%)	1(6%)	16
20 or more years in NZ	11(22%)	20(40%)	16(32%)	1(2%)	2(4%)	50
Age 16-21	2(7%)	17(55%)	10(32%)	1(3%)	1(3%)	31
Age 22-27	11(27%)	18(44%)	12(29%)	0(0%)	0(0%)	41
Age 28-33	6(26%)	11(48%)	3(13%)	1(4%)	2(9%)	23
Age 34-39	5(21%)	12(50%)	6(25%)	1(4%)	0(0%)	24
Age 40-45	4(31%)	5(38%)	4(31%)	0(0%)	0(0%)	13
Age 46 or more	6(46%)	4(31%)	2(15%)	1(8%)	0	13

Table 9 : WORK AND STUDY IN SAME TIME

Overall results

The majority of students (69%) had positive opinions, about 5% had negative opinions and the rest (26%) were mentioned as “No Difference”

Reasons

62 students gave reasons; the most common related to:

Saving Time (3 responses, including “There is less need to be on site, and it's a 2.5 hour commute (each way) from home to Unitec”)

Interaction Important (3 responses, including “I need the classroom interaction”)

Access (8 responses, including “I can access the information after work”)

Convenience (33 responses, including “I could work during the day as I wouldn't have to attend classes”)

No difference (13 responses, including “whether it is e-learning or classroom we have to spend time on it”).

Get prepared (2 responses, including “Be more skilful in organizing”)

Reservations expressed included:

can assess BB @ wk

if I am at work; if I live across town; if I am at a shopping mall and I forget to look or do something, I can just easily get online at the mall or internet services available

extra qualifications, keeping up-to-date-

we can earn while you learn

It would help [cos] I could work more hours and it wouldn't help because I would tend to just say I'll do class later but not.

EAL Vs EFL

EAL students were more positive than EFL students (75% v 65%).

There is a significant difference between the proportions of EAL students and EFL students who were not sure; also the actual numbers of students are significant

More EFL students (65%) than EAL students (35%) gave reasons.

EAL students were more likely than EFL students to cite Access (23% responses), get prepared (5% of responses), and no difference (27% of responses).

EFL students were more likely than EAL students to cite saving time (8% of responses), interaction important (8% of responses) and convenience (58% of responses)

Domestic students Vs International students

International students were more positive than Domestic students (72% v 69%).

There is no difference between the proportions of International students and Domestic students who were not sure but the actual numbers are significantly different.

More Domestic students (85%) than International students (15%) gave reasons.

International students were more likely than Domestic students to cite No Difference (56% of responses), and get prepared (11% of responses)

Domestic students were more likely than International students to cite saving time (6% of responses), Access (13% of responses), interaction Important (6% of responses) and convenience (58% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small

There is a significant difference between the proportions of students within different year groups who were not sure, and the actual numbers of students are significant

15-19 years students were more negative than others.

More 20 years or more year students (42%) than other groups of students gave reasons also the numbers are quite large.

5-9 Years students were more likely than other groups to cite Access (33% of responses) and no difference (50% of response)

10-14 years students were more likely than other groups to cite convenience (86%of responses)

15-19 years students were more likely than other groups to cite saving time (11% of responses), interaction important (11% of response) and get prepared (11% of response)

Age groups

Students aged 46 or more were more positive than other students

Students aged 28-33 were less positive than other

There is a significant difference between the proportions of students with different age groups who were not sure, and the actual numbers are significant

Students aged 28-33 more negative

More students aged 16-21 (23%) than other groups of students gave reasons. Students aged 22-27 Years old were more likely than other groups to cite get prepared (9% of responses)

Students aged 28-33 Years old were more likely than other groups to cite no difference (33% of responses)

Students aged 34-39 Years old were more likely than other groups to cite no Access (25% of responses)

Students aged 40-45 Years old were more likely than other groups to cite convenience (67% of responses)

Students aged 45 or more Years old were more likely than other groups to cite saving time (29% of responses) and interaction important (14% of responses)

4.8 DELIVERING COURSE MATERIALS VIA INTERNET

There are better ways by which we can get course materials other than through computer and internet

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total
All students	5(3%)	35(24%)	61(42%)	31(22%)	13(9%)	145
EAL	4(6%)	17(24%)	30(42%)	11(15%)	9(13%)	71
EFL	1(1%)	18(24%)	31(42%)	20(27%)	4(6%)	74
Domestic	2(2%)	28(26%)	44(40%)	26(24%)	9(8%)	109
International	3(8%)	7(20%)	17(47%)	5(14%)	4(11%)	36
1-4 years in NZ	1(2%)	7(16%)	22(50%)	8(18%)	6(14%)	44
5-9 years in NZ	2(7%)	7(23%)	11(37%)	6(20%)	4(13%)	30
10-14 years in NZ	0(0%)	3(60%)	2(40%)	0(0%)	0(0%)	5
15-19 years in NZ	1(6%)	3(19%)	6(38%)	5(31%)	1(6%)	16
20 or more years in NZ	1(2%)	15(30%)	20(40%)	12(24%)	2(4%)	50
Age 16-21	1(3%)	5(16%)	16(52%)	7(23%)	2(6%)	31
Age 22-27	2(5%)	11(27%)	15(37%)	7(17%)	6(14%)	41
Age 28-33	1(4%)	6(26%)	8(35%)	6(26%)	2(9%)	23
Age 34-39	1(4%)	3(13%)	14(58%)	5(21%)	1(4%)	24
Age 40-45	0(0%)	8(62%)	3(23%)	2(15%)	0(0%)	13
Age 46 or more	2(15%)	5(39%)	4(31%)	2(15%)	0	13

Table 10 : DELIVERING COURSE DOCUMENT VIA INTERNET

Around 40% were not sure, around 30% had positive opinions, and rest (around 30%) had negative opinions

Reasons

59 students gave reasons; the most common related to:

Via Internet (30 responses, including “computer and internet are the fast way to delivery materials”)

Expensive (3 responses, including “The problem with downloading data is that we inevitably have to print it out which is very expensive, especially if all the course material for all courses is online”)

Economical (1 responses, including “I am not sure that other ways are better or not, such like hardcopy of the course materials, but it may cost more than the internet. so sometimes by internet is better and quite cheap”)

Not sure (7 responses, including “again, it depends on the type of course and the materials required”)

Printed Materials (17 responses, including “course manuals and text books are still easier to navigate than online resources”).

Not reliable (1 responses, including “the internet is useful, but not always reliable”)

Reservations expressed included:

Most students have computers these days and broadband connections are becoming the norm

I use books 24x7 on the e-journals via the library and use library catalogue to see if relevant books for my studies are available. These are just as effective

its better to use the PC and internet as it is the only medium I know off that gives out fast and instant info Unless the education provider can think of a better 'tool' to give out info

It is always easier reading from paper, compared to a screen. If you get all materials from internet, there will be a lot of printing, which is expensive on our end

EAL Vs EFL

EAL students were more positive than EFL students (30% v 25%).

There is no difference between the proportions of EAL students and EFL students who were not sure; also the actual numbers are almost the same

More EFL students (66%) than EAL students (34%) gave reasons.

EAL students were more likely than EFL students to cite not sure (15% of responses), and economical (5% of responses).

EFL students were more likely than EAL students to cite via internet (51% of responses), printed material (31% of responses) and not reliable (3% of responses)

EAL and EFL are same proportion citing expensive (5% of responses)

Domestic students Vs International students

Domestic students were more negative than International students (32% v 25%).

There is a small difference between the proportions of International students and Domestic students who were not sure but the actual numbers are significantly different.

More Domestic students (81%) than International students (19%) gave reasons.

International students were more likely than Domestic students to cite Not sure (18% of responses), Expensive (9% of responses) and economical (9% of responses)

Domestic students were more likely than International students to cite via internet (52% of responses), printed materials (31% of responses), and not reliable (2% of responses)

Time living in New Zealand

10-14 years Students were more positive than other students but the numbers are very small
There is a significant difference between the proportions of students within different year groups who were not sure; also the actual numbers of students are significant as well

15-19 years more negative than other students

More 20 years or more year students (49%) than other groups of students gave reasons also the numbers are quite large.

1-4 Years students were more likely than other groups to cite via internet (54% responses) and economical (8% response)

5-9 Years students were more likely than other groups to cite expensive (13% responses)

10-14 years students were more likely than other groups to cite printed materials (50% responses)

20 years or more students were more likely than other groups to cite not sure (17% responses), and not reliable (3% responses)

Age groups

Students aged 40 or more were more positive than other students

There is a significant difference between the proportions of students with different age groups who were not sure; also the actual numbers are significant

28-33 more negative than others

More students aged 16-21 (22%) than other groups of students gave reasons. Students aged 16-21 Years old were more likely than other groups to cite expensive (15% responses)

Students aged 28-33 Years old were more likely than other groups to cite not reliable (9% of responses) and economical (9% of responses)

Students aged 40-45 Years old were more likely than other groups to cite not sure (20% of responses) and printed materials (80% of responses)

Students aged 45 or more Years old were more likely than other groups to cite via internet (89% of responses)

4.9 STUDENT'S WORKING HOURS

Do you work during your studies?

	Full Time more than 40 hours	Full time about 40 hours	Part time	On call	Not working	Total
All students	18(12%)	17(12%)	57(39%)	5(4%)	48(33%)	145
EAL	2(2.8%)	8(11.3%)	30(42.3%)	2(2.8%)	29(40.8%)	71
EFL	15(20.3%)	10(13.5%)	27(36.5%)	3(4.1%)	19(25.7%)	74
Domestic	17(15.6%)	16(14.7%)	40(36.7%)	3(2.8%)	33(30.3%)	109
International	0	2(5.6%)	17(47.2%)	2(5.6%)	15(41.7%)	36
1-4 years in NZ	2 (4.5 %)	4 (9.1 %)	19(43.2%)	2(4.5%)	17(38.6%)	44
5-9 years in NZ	4(13.3%)	3(10%)	11(36.7%)	0	12(40%)	30
10-14 years in NZ	1(20%)	1(20%)	2(40%)	0	1(20%)	5
15-19 years in NZ	2(12.5%)	1(6.3%)	6(37.5%)	0	7(43.8%)	16
20 or more years in NZ	8(16%)	9(18%)	19(38%)	3(6%)	11(22%)	50
Age 16-21	0	2(6.5%)	15(48.4%)	1(3.2%)	13(41.9%)	31
Age 22-27	3(7.3%)	2(4.9%)	20(48.8)	2(4.9%)	14(34.1%)	41
Age 28-33	3(13%)	3(13%)	8(34.8%)	0	9(39.1%)	23
Age 34-39	5(20.8%)	6(25%)	5(28.8)	1(4.2)	7(29.2%)	24
Age 40-45	3(23.1%)	1(7.7%)	5(38.5%)	1(7.7%)	3(23.1%)	13
Age 46 or more	3(23.1%)	4(30.8%)	4(30.8%)	0	2(15.4%)	13

Table 11: STUDENTS' WORKING HOURS

Overall results

Around 33% were not working, around 24% working 40 hours or more 39% working part time and 4% working on call.

EAL v EFL

More EFL students (34%) than EAL students (14%) are working full time.

More EAL students (42%) than EFL students (36%) are working part time.

More EAL students (41%) than EFL students (26%) are not working.

Domestic students Vs International students

More Domestic students (30%) than International students (6%) are working full time.

More International students (47%) than Domestic students (37%) are working part time.

More International students (41%) than Domestic students (30%) are not working.

Time living in New Zealand

More 10-14 years students (40%) than other groups are working full time.

More 1-4 years students (43%) than other groups are working part time.

More 15-19 years students (44%) than other groups are not working.

Age groups

More 40 or more years old students (54%) than other groups are working full time.

More 22-27 years old students (49%) than other groups are working part time.

More 16-22 years old students (42%) than other groups are not working.

4.10 ASKING QUESTIONS FACE-TO-FACE

How many questions do you normally ask the teaching staff each week face-to-face?

	None	1-3	4-7	8-11	12 or more	Total
All students	28(20%)	65(45%)	31(21%)	6(4%)	15(10%)	145
EAL	13(18.3%)	37(52.1%)	13(18.3%)	2(2.8%)	6(8.5%)	71
EFL	15(20.3%)	28(37.8%)	18(24.3%)	4(5.4%)	9(12.2%)	74
Domestic	18(16.5%)	49(45%)	26(23.9%)	4(3.7%)	12(11%)	109
International	10(27.8%)	16(44.4%)	5(13.9%)	2(5.6%)	3(8.3%)	36
1-4 years in NZ	12(27.3%)	19(43.2%)	7(15.9%)	2(4.5%)	4(9.1%)	44
5-9 years in NZ	4(13.3%)	17(56.7%)	6(20%)	1(3.3%)	2(6.7%)	30
10-14 years in NZ	1(20%)	3(60%)	1(20%)	0	0	5
15-19 years in NZ	0	8(50%)	5(31.3%)	1(6.3%)	2(12.5%)	16
20 or more years in NZ	11(22%)	18(36%)	12(24%)	2(4%)	7(14%)	50
Age 16-21	4(12.9%)	14(45.2%)	8(25.8%)	2(6.5%)	3(9.7%)	31
Age 22-27	8(19.5%)	23(56.1%)	4(9.8%)	2(4.9%)	4(9.8%)	41
Age 28-33	5(21.7%)	7(30.4%)	8(34.8%)	0	3(13%)	23
Age 34-39	6(25%)	7(29.2%)	8(33.3%)	2(8.3%)	1(4.2%)	24
Age 40-45	3(23.1%)	8(61.5%)	2(15.4%)	0	0	13
Age 46 or more	2(15.4%)	6(46.2%)	1(7.7%)	0	4(30.8%)	13

Table 12: ASKING QUESTIONS FACE-TO-FACE

Overall results

Around 20% were not asking any questions, around 45% were asking 1-3 questions, around 21% were asking 4-7 Questions, around 4% were asking 8-11 questions and around 10% were asking 12 or more questions.

EAL Vs EFL

More EFL students (20%) than EAL students (18%) were asking no questions
More EAL students (52%) than EFL students (38%) were asking 1-3 questions.
More EFL students (24%) than EAL students (18%) were asking 4-7 questions.
More EFL students (5%) than EAL students (3%) were asking 8-11 questions.
More EFL students (12%) than EAL students (8%) were asking 12 or more questions.

Domestic students Vs International students

More International students (28%) than Domestic students (16%) were asking no questions
More Domestic students (45%) than International students (44%) were asking 1-3 questions.
More Domestic students (24%) than International students (14%) were asking 4-7 questions.
More International students (6%) than Domestic students (4%) were asking 8-11 questions.
More Domestic students (11%) than International students (8%) were asking 12 or more questions.

Time living in New Zealand

More 1-4 years students (27%) than other groups were asking no questions
More 5-9 years students (57%) than other groups were asking 1-3 questions.
More 15-19 years students (31%) than other groups were asking 4-7 questions.
More 15-19 years students (6%) than other groups were asking 8-11 questions.
More 20 or more years students (14%) than other groups were asking 12 or more questions.

Age groups

More 34-39 years old students (25%) than other groups were asking no questions
More 40-45 years old students (61%) than other groups were asking 1-3 questions.
More 28-33 years old students (35%) than other groups were asking 4-7 questions.
More 34-39 years old students (8%) than other groups were asking 8-11 questions.
More 46 or more years old students (31%) than other groups were asking 12 or more questions.

4.11 ASKING QUESTIONS VIA E MAIL

How many questions do you normally ask the teaching staff each week via e mail?

	None	1-3	4-7	8-11	12or more	Total
All students	72(50%)	65(45%)	6(4%)	2(1%)	0	145
EAL	32(45.1%)	32(45.1%)	5(7%)	2(2.8%)	0	71
EFL	40(54.1%)	33(44.6%)	1(1.4%)	0	0	74
Domestic	52(47.7%)	52(47.7%)	3(2.8%)	2(1.8%)	0	109
International	20(55.6%)	13(36.1%)	3(8.3%)	0	0	36
1-4 years in NZ	23(52.3%)	19(43.2%)	2(4.5%)	0	0	44
5-9 years in NZ	11(36.7%)	14(46.7%)	3(10%)	2(6.7%)	0	30
10-14 years in NZ	2(40%)	3(60%)	0	0	0	5
15-19 years in NZ	9(56.3%)	7(43.8%)	0	0	0	16
20 or more years in NZ	27(54%)	22(44%)	1(2%)	0	0	50
Age 16-21	21(67.7%)	9(29%)	1(3.2%)	0	0	31
Age 22-27	23(56.1%)	14(34.1%)	3(7.3%)	1(2.4%)	0	41
Age 28-33	11(47.8%)	11(47.8%)	0	1(4.3%)	0	23
Age 34-39	7(29.2%)	15(62.5%)	2(8.3%)	0	0	24
Age 40-45	7(53.8%)	6(46.2%)	0	0	0	13
Age 46 or more	3(23.1%)	10(76.9%)	0	0	0	13

Table 13 : ASKING QUESTION VIA E MAIL

Overall results

Around 50% were not asking any questions, around 45% were asking 1-3 questions, around 4% were asking 4-7 Questions, around 1% were asking 8-11 questions and none of them were asking 12 or more questions.

EAL Vs EFL

More EFL students (54%) than EAL students (45%) were asking no questions
 More EAL students (45%) than EFL students (44%) were asking 1-3 questions.
 More EAL students (7%) than EFL students (1%) were asking 4-7 questions.
 More EAL students (3%) than EFL students (0%) were asking 8-11 questions.
 None of them were asking 12 or more questions.

Domestic students Vs International students

More International students (56%) than Domestic students (48%) were asking no questions

More Domestic students (48%) than International students (36%) were asking 1-3 questions.
More International students (8%) than Domestic students (3%) were asking 4-7 questions.
More Domestic students (2%) than International students (0%) were asking 8-11 questions.
None of them were asking 12 or more.

Time living in New Zealand

More 15-19 years students (56%) than other groups were asking no questions
More 10-14 years students (60%) than other groups were asking 1-3 questions.
More 5-9 years students (10%) than other groups were asking 4-7 questions.
More 5-9 years students (7%) than other groups were asking 8-11 questions.
None of them were asking 12 or more questions.

Age groups

More 16-21 years old students (68%) than other groups were asking no questions
More 40-45 years old students (77%) than other groups were asking 1-3 questions.
More 34-39 years old students (8%) than other groups were asking 4-7 questions.
More 28-33 years old students (4%) than other groups were asking 8-11 questions.
None of them were asking 12 or more questions.

4.12 INTERNET TYPE

What sort of internet connection do you have at home?

	Dial Up	Broadband	No Internet	Total
All students	36(25%)	98(68%)	11(7%)	145
EAL	14(19.7%)	52(73.2%)	5(7%)	71
EFL	22(29.7%)	46(62.2%)	6(8.1%)	74
Domestic	31(28.4%)	70(64.2%)	8(7.3%)	109
International	5(13.9%)	28(77.8%)	3(8.3%)	36
1-4 years in NZ	7(15.9%)	34(77.3%)	3(6.8%)	44
5-9 years in NZ	6(20%)	23(76.7%)	1(3.3%)	30
10-14 years in NZ	3(60%)	2(40%)	0	5
15-19 years in NZ	3(18.8%)	10(62.5%)	3(18.8%)	16
20 or more years in NZ	17(34%)	29(58%)	4(8%)	50
Age 16-21	9(29%)	19(61.3%)	3(9.7%)	31
Age 22-27	6(14.6%)	33(80.5%)	2(4.9%)	41
Age 28-33	9(39.1%)	10(43.5%)	4(17.4%)	23
Age 34-39	5(20.8%)	17(70.8%)	2(8.3%)	24
Age 40-45	5(38.5%)	8(61.5%)	0	13
Age 46 or more	2(15.4%)	11(84.6%)	0	13

Table 14: INTERNET TYPE

Overall results

Around 68% have broadband internet connection, around 25% have Dial up connection and 7% have no internet connection.

EAL Vs EFL

More EFL students (30%) than EAL students (20%) were using dial up internet connection.

More EAL students (73%) than EFL students (62%) were using broad band internet connection.

More EFL students (8%) than EAL students (7%) have no internet connection home.

Domestic students Vs International students

More Domestic students (28%) than International students (14%) were using dial up internet connection.

More International students (78%) than Domestic students (64%) were using broad band internet connection.

More International students (8%) than Domestic students (7%) have no internet connection home.

Time living in New Zealand

More 10-14 years students (60%) than other groups were using dial up internet connection.

More 1-4 years students (77%) than other groups were using broad band internet connection.

More 15-19 years students (19%) than other groups have no internet connection home.

Age groups

More 28-33 years old students (39%) than other groups were using dial up internet connection.

More 46 or more years old students (85%) than other groups were using broad band internet connection.

More 28-33 years old students (17%) than other groups have no internet connection home.

4.13 SPEED OF THE INTERNET

How is fast your internet connection?

	Very Slow	Slow	Medium	Fast	Very Fast	Total
All students	12(8%)	16(11%)	51(35%)	49(34%)	17(12%)	145
EAL	5(7%)	7(9.9%)	27(38%)	20(28.2%)	12(16.9%)	71
EFL	7(9.5%)	9(12.2%)	24(32.4%)	29(39.2%)	5(6.8%)	74
Domestic	10(9.2%)	13(11.9%)	39(35.8%)	36(33%)	11(10.1%)	109
International	2(5.6%)	3(8.3%)	12(33.3%)	13(36.1%)	6(16.7%)	36
1-4 years in NZ	3(6.8%)	3(6.8%)	16(36.4%)	13(29.5%)	9(20.5%)	44
5-9 years in NZ	2(6.7%)	4(13.3%)	11(36.7%)	9(30%)	4(13.3%)	30
10-14 years in NZ	1(20%)	0	2(40%)	2(40%)	0	5
15-19 years in NZ	2(12.5%)	0	5(31.3%)	6(37.5%)	3(18.8%)	16
20 or more years in NZ	4(8%)	9(18%)	17(34%)	19(38%)	1(2%)	50
Age 16-21	5(16.1%)	4(12.9%)	9(29%)	9(29%)	4(12.9%)	31
Age 22-27	3(7.3%)	1(2.4%)	14(34.1%)	18(43.9%)	5(12.2%)	41
Age 28-33	2(8.7%)	6(26.1%)	11(47.8%)	2(8.7%)	2(8.7%)	23
Age 34-39	0	4(16.7%)	8(33.3%)	7(29.2%)	5(20.8%)	24
Age 40-45	2(15.4%)	0	7(53.8%)	4(30.8%)	0	13
Age 46 or more	0	1(7.7%)	2(15.4%)	9(69.2%)	1(7.7%)	13

Table 15: SPEED OF THE INTERNET

Overall results

Around 8% were having very slow internet connection, around 11% were having slow internet connection, around 35% were having medium internet connection, around 34% were having fast internet connection and around 12% were having very fast internet connection.

EAL v EFL

More EFL students (9%) than EAL students (7%) were having very slow internet connection

More EFL students (12%) than EAL students (10%) were having slow internet connection

More EAL students (38%) than EFL students (32%) were having medium internet connection

More EFL students (39%) than EAL students (28%) were having fast internet connection

More EAL students (17%) than EFL students (7%) were having very fast internet connection

Domestic students V International students

More Domestic students (9%) than International students (6%) were having very slow internet connection

More Domestic students (12%) than International students (8%) were having slow internet connection

More Domestic students (36%) than International students (33%) were having medium internet connection.

More International students (36%) than Domestic students (33%) were having fast internet connection

More International students (17%) than Domestic students (10%) were having very fast internet connection

Time living in New Zealand

More 10-14 years students (20%) than other groups were having very slow internet connection

More 20 or more years students (18%) than other groups were having slow internet connection

More 10-14 years students (40%) than other groups were having medium internet connection

More 10-14 years students (40%) than other groups were having fast internet connection

More 1-4 years students (20%) than other groups were having very fast internet connection

Age groups

More 16-22 years old students (16%) than other groups were having very slow internet connection

More 28-33 years old students (26%) than other groups were having slow internet connection

More 40-45 years old students (54%) than other groups were having medium internet connection

More 46 years old or more students (69%) than other groups were having fast internet connection

More 34-39 years old students (21%) than other groups were having very fast internet connection

4.14 HOURS SPENT ON THE INTERNET

How many hours per week do you normally spent on the internet?

	Less than 5	5-9 Hrs	10-14 Hrs	15-19 Hrs	20 or more	total
All students	21(15%)	41(28%)	31(21%)	16(11%)	36(25%)	145
EAL	6(8.5%)	16(22.5%)	14(19.7%)	9(12.7%)	26(36.6%)	71
EFL	15(20.3%)	25(33.8%)	17(23%)	7(9.5%)	10(13.5%)	74
Domestic	20(18.3%)	33(30.3%)	26(23.9%)	12(11%)	18(16.5%)	109
International	1(2.8%)	8(22.2%)	5(13.9%)	4(11.1%)	18(50%)	36
1-4 years in NZ	2(4.5%)	7(15.9%)	8(18.2%)	6(13.6%)	21(47.7%)	44
5-9 years in NZ	5(16.7%)	6(20%)	7(23.3%)	4(13.3%)	8(26.7%)	30
10-14 years in NZ	1(20%)	0	2(40%)	2(40%)	0	5
15-19 years in NZ	1(6.3%)	11(68.8%)	2(12.5%)	0	2(12.5%)	16
20 or more years in NZ	12(24%)	17(34%)	12(24%)	4(8%)	5(10%)	50
Age 16-21	2(6.5%)	16(51.6%)	4(12.9%)	2(6.5%)	7(22.6%)	31
Age 22-27	3(7.3%)	9(22%)	12(29.3%)	5(12.2%)	12(29.3%)	41
Age 28-33	4(17.4%)	6(26.1%)	4(17.4%)	3(13%)	6(26.1%)	23
Age 34-39	5(20.8%)	7(29.2%)	4(16.7%)	0	8(33.3%)	24
Age 40-45	6(46.2%)	2(15.4%)	4(30.8%)	1(7.7%)	0	13
Age 46 or more	1(7.7%)	1(7.7%)	3(23.1%)	5(38.5%)	3(23.1%)	13

Table 16 : HOURS SPENT ON THE INTERNET

Overall results

Around 15% were spending on the internet less than 5 hours per week, around 28% were spending on the internet 5-9 hours per week, around 21% were spending on the internet 10-14 hours per week, around 11% were spending on the internet 15-19 hours per week and around 25% were spending on the internet 20 or more hours per week.

EAL v EFL

More EFL students (20%) than EAL students (8%) were spending on the internet less than 5 hours per week

More EFL students (34%) than EAL students (22%) were spending on the internet 5-9 hours per week

More EFL students (23%) than EAL students (20%) were spending on the internet 10-14 hours per week

More EAL students (19%) than EFL students (9%) were spending on the internet 15-19 hours per week

More EAL students (37%) than EFL students (13%) were spending on the internet 20 or more hours per week.

Domestic students V International students

More Domestic students (18%) than International students (3%) were spending on the internet less than 5 hours per week

More Domestic students (30%) than International students (22%) were spending on the internet 5-9 hours per week

More Domestic students (24%) than International students (14%) were spending on the internet 10-14 hours per week

The same proportion of international and domestic students (11%) were spending on the internet 15-19 hours per week

More International students (50%) than Domestic students (16%) were spending on the internet 20 or more hours per week.

Time living in New Zealand

More 10-14 years students (20%) than other groups were spending on the internet less than 5 hours per week

More 15-19 years students (69%) than other groups were spending on the internet 5-9 hours per week

More 10-14 years students (40%) than other groups were spending on the internet 10-14 hours per week

More 10-14 years students (40%) than other groups were spending on the internet 15-19 hours per week

More 1-4 years students (48%) than other groups were spending on the internet 20 or more hours per week.

Age groups

More 40-45 years old students (46%) than other groups were spending on the internet less than 5 hours per week

More 16-21 years old students (52%) than other groups were spending on the internet 5-9 hours per week

More 40-45 years old students (31%) than other groups were spending on the internet 10-14 hours per week

More 46 years old or more students (38%) than other groups were spending on the internet 15-19 hours per week

More 34-39 years old students (33%) than other groups were spending on the internet 20 or more hours per week.

4.15 USING ANTI VIRUS SOFTWARE

Do you normally use antivirus software?

	Yes	No	Total
All students	124(86%)	21(14%)	145
EAL	59(83.1%)	12(16.9%)	71
EFL	65(87.8%)	9(12.2%)	74
Domestic	92(84.4%)	17(15.6%)	109
International	32(88.9%)	4(11.1%)	36
1-4 years in NZ	39(88.6%)	5(11.4%)	44
5-9 years in NZ	24(80%)	6(20%)	30
10-14 years in NZ	4(80%)	1(20%)	5
15-19 years in NZ	13(81.3%)	3(18.8%)	16
20 or more years in NZ	44(88%)	6(12%)	50
Age 16-21	26(83.9%)	5(16.1%)	31
Age 22-27	34(82.9%)	7(17.1%)	41
Age 28-33	18(78.3%)	5(21.7%)	23
Age 34-39	22(91.7%)	2(8.3%)	24
Age 40-45	12(92.3%)	1(7.7%)	13
Age 46 or more	12(92.3%)	1(7.7%)	13

Table 17 : USING ANTIVIRUS SOFTWARE

Overall results

Around 86% were using antivirus software; around 14% were not using antivirus software.

EAL v EFL

More EFL students (88%) than EAL students (83%) were using antivirus software

More EAL students (17%) were more than EFL students (12%) were not using antivirus software

Domestic students V International students

More International students (89%) than Domestic students (84%) were using antivirus software.

More Domestic students (16%) than International students (11%) were not using antivirus software.

Time living in New Zealand

More 1-4 years students (89%) than other groups were using antivirus software.

More 5-9 and 10-14 years students (20%) than other groups were not using antivirus software

Age groups

More 40-45 and 46 or more years old students (92.3%) than other groups were using antivirus software.

More 28-33 years old students (22%) than other groups were not using antivirus software.

4.16 ACCESS TO THE COMPUTER

Do you have access to a computer at home?

	Yes for my sole use	Yes but sharing with others	No	Total
All students	95(66%)	45(31%)	5(3%)	145
EAL	47(66.2%)	21(29.6%)	3(4.2%)	71
EFL	48(64.9%)	24(32.4%)	2(2.7%)	74
Domestic	67(61.5%)	39(35.8%)	3(2.8%)	109
International	28(77.8%)	6(16.7%)	2(5.6%)	36
1-4 years in NZ	28(63.6%)	14(31.8%)	2(4.5%)	44
5-9 years in NZ	22(73.3%)	8(26.7%)	0	30
10-14 years in NZ	4(80%)	1(20%)	0	5
15-19 years in NZ	8(50%)	6(37.5%)	2(12.5%)	16
20 or more years in NZ	33(66%)	16(32%)	1(2%)	50
Age 16-21	18(58.1%)	12(38.7%)	1(3.2%)	31
Age 22-27	34(82.9%)	6(14.6%)	1(2.4%)	41
Age 28-33	14(60.9%)	7(30.4%)	2(8.7%)	23
Age 34-39	12(50%)	11(45.8%)	1(4.2%)	24
Age 40-45	8(61.5%)	5(38.5%)	0	13
Age 46 or more	9(69.2%)	4(30.8%)	0	13

Table 18 : ACCESS TO THE COMPUTER

Overall results

Around 66% were having computer at home for their sole use, around 31% were having computer at home but sharing with others and 3% were not having computer at home.

EAL v EFL

More EAL students (66%) than EFL students (65%) were having computer at home for their sole use

More EFL students (32%) than EAL students (30%) were having computer at home but sharing with others

More EAL students (4%) than EFL students (3%) were not having computer at home.

Domestic students V International students

More International students (78%) than Domestic students (61%) were having computer at home for their sole use

More Domestic students (36%) than International students (17%) were having computer at home but sharing with others

More International students (3%) than Domestic students (6%) were not having computer at home.

Time living in New Zealand

More 10-14 years students (80%) than other groups were having computer at home for their sole use

More 15-19 and 10-14 years students (37%) than other groups were having computer at home but sharing with others

More 15-19 years students (12%) than other groups were not having computer at home.

Age groups

More 22-27 years old students (83%) than other groups were having computer at home for their sole use

More 34-39 years old students (46%) than other groups were having computer at home but sharing with others

More 28-33 years old students (9%) than other groups were not having computer at home.

4.17 REACTION ABOUT THE INTERNET SPEED

How you feel if the computer gets slow while you downloading the course materials?

	I get frustrated and cannot tolerate waiting	I wait and do some other things until the download is completed	I always use UNITEC labs to download because those are faster	Total
All students	41(28%)	85(59%)	19(13%)	145
EAL	20(28.2%)	39(54.9%)	12(16.9%)	71
EFL	21(28.4%)	46(62.2%)	7(9.5%)	74
Domestic	32(29.4%)	62(56.9%)	15(13.8%)	109
International	9(25%)	23(63.9%)	4(11.1%)	36
1-4 years in NZ	11(25%)	26(59.1%)	7(15.9%)	44
5-9 years in NZ	7(23.3%)	17(56.7%)	6(20%)	30
10-14 years in NZ	3(60%)	2(40%)	0	5
15-19 years in NZ	7(43.8%)	7(43.8%)	2(12.5%)	16
20 or more years in NZ	13(26%)	33(66%)	4(8%)	50
Age 16-21	14(45.2%)	13(41.9%)	4(12.9%)	31
Age 22-27	11(26.8%)	25(61%)	5(12.2%)	41
Age 28-33	3(13%)	11(47.8%)	9(39.1%)	23
Age 34-39	6(25%)	18(75%)	0	24
Age 40-45	5(38.5%)	7(53.8%)	1(7.7%)	13
Age 46 or more	2(15.4%)	11(84.6%)	0	13

Table 19 : REACTION ABOUT THE INTERNET SPEED

Overall results

Around 28% were getting frustrated and cannot tolerate waiting, around 59% were waiting and doing some other things until the download is completed and around 13% were always using UNITEC labs to download because those are faster.

EAL v EFL

The same proportion of EAL and EFL students (28) were getting frustrated and cannot tolerate waiting

More EFL students (62%) than EAL students (55%) were waiting and doing some other things until the download is completed

More EAL students (17%) than EFL students (9%) were always using UNITEC labs to download because those are faster

Domestic students V International students

More Domestic students (29%) than International students (25%) were getting frustrated and cannot tolerate waiting

More International students (64%) than Domestic students (57%) were waiting and doing some other things until the download is completed

More Domestic students (14%) than International students (11%) were always using UNITEC labs to download because those are faster

Time living in New Zealand

More 10-14 years students (60%) than other groups were getting frustrated and cannot tolerate waiting

More 20 or more years students (66%) than other groups were waiting and doing some other things until the download is completed

More 5-9 years students (20%) than other groups were always using UNITEC labs to download because those are faster

Age groups

More 16-21 years old students (45%) than other groups were getting frustrated and cannot tolerate waiting

More 46 or more years old students (85%) than other groups were waiting and doing some other things until the download is completed

More 28-33 years old students (39%) than other groups were always using UNITEC labs to download because those are faster

4.18 CONCLUSION

This chapter summarized and analyzed the data collected from students to find out their perspectives about the opportunities and challenges of the particular mode. Results of the analysis have been categorized by students' various characteristics. (their first language, country of origin, students' status as international or domestic, age group and years living in New Zealand).

Students perspectives vary, but in general they all welcome the idea of migrating to new technology in the teaching and learning environment but when they come to the questions about

the pure online learning they all have negative opinions. Students agreed on the advantages of online learning over the face-to-face mode, even it is very helpful to update their skills while they continue their routine work.

Students like face-to-face interaction and they all have negative opinions about putting whole course online without face-to-face interactions, and they accept that internet technology as an effective medium of the course.

Students realize the advantages of online learning because it provides the flexible learning environment and students can up skill themselves while they continue their routine work.

The next chapter will analyze staff's perspectives about the challenges and opportunities in flexible learning environment.

5 STAFF PERSPECTIVES

5.1 INTERVIEW DATA SUMMARY AND ANALYSIS

Ten staff were interviewed: three support staff from the Centre for Teaching and Learning (identified as S1, S2 and S3) and seven teaching staff (B1 and B2 teaching business courses, C1 and C2 teaching computing courses, and H1, H2 and H3 teaching health courses). Their responses are summarised in the next two sections.

5.2 TEACHING STAFF

The seven teaching staff were asked 14 questions and their responses can be summarised as follows.

1) *Does your course have any compulsory online activities for students?*

C1 and C2 said “no” and H2 responded “yes indirectly, we don't state as compulsory but if the students don't use it they can't complete the course”. The other four staff members (H1, H3, B1 and B2) answered “yes”. H3 and B2 did not specify what activities are compulsory; H1 talked about a discussion board (worth 5%) and B1 mentioned “mini tests” (worth around 5%).

2) *What percentage of the course materials is online?*

The percentages ranged widely: C2 and H3 said “100%”, H2 answered “nearly all ... more than 80%”, C1 responded “80% or more”, B2 said “between 60% and 80%” and H1 stated “some of my courses are totally online, some are supported 50% and some just have class notes and backups”. B1's response related to assessments rather than materials.

3) *What were your expectations in using Blackboard to deliver a course?*

H1 said “to produce same kind of learning as classroom learning ... in a different way” and H3 answered “a flexible learning environment, particularly for people who work full time and have family commitments ... my expectation is to engage them in the course

every week”. The other five indicated that they used Blackboard to provide easy access to course materials (B1, B2 and H2 specifically mentioned “materials”, C1 mentioned “resources” and C2 mentioned “documents” and “files”).

4) *What are the tools/activities in Blackboard that you use during the delivery of your course?*
H1 and B2 each named eight tools/activities, whereas the other five each identified only two tools/activities. In all 14 tools/activities were mentioned by teaching staff, as follows.

Tools/activities	Staff who mentioned
Announcements	B2, C2
Assignments	H1
Chat	C1
Communication	H2
Course documents	B1, B2, H1, C2
Course information	B2
Course statistics	B2, H1
Digital drop box	B2, H1
Discussion board	H1, H2
E mail	B2
Groups	H1
Library	H3
Links	B2, C1, H1, H3
Quizzes	B1, B2
Staff profile	H1

Course documents and links were mentioned most often (by four staff each).

4) *What Blackboard activities do you feel are most beneficial to your students?*
Four teaching staff indicated that course documents are most beneficial (B2 and C2 specifically mentioned “documents”, H2 mentioned “resources” and C1 mentioned “materials”). B1 emphasized the benefits of students “doing a little bit on each topic week by week” and getting feedback. Five other activities were mentioned by teaching staff, as follows.

Activities	Staff who mentioned
Chat	C1
Digital drop box	H1
Discussion board	H1, H3
Links	C1, H1
Quizzes	B2

6) *What was your motivation to start using Blackboard first time?*

The motivation for B2, C1 and H3 was making learning resources available at times that suited the students. H2 and H3 mentioned students being able to learn without attending classes on campus. H1 answered “my motivation was ‘this is the new way of the teaching’ and I just have to find out about it” and B1 talked about “policy and our senior admin person ... I do have background in IT [and am] very keen to get maximum use”. C2 had started using Web CT and switched to Blackboard when Unitec stopped supporting Web CT.

7) *Do you experience pressure to use Blackboard from anyone? If yes who are they?*

C1, H1 and H2 had not experienced pressure, whereas B1 said “I guess we did but that wasn’t a problem for me”, C2 stated “our school encouraged all of us”, B2 answered “Blackboard is an expected part of all our courses” and H3 mentioned “a requirement from within our management”.

8) *What is your opinion about continuing to use Blackboard to deliver the Course?*

All the staff intended to continue using Blackboard. B1 noted that “ you don’t have to spend much time in class for administration things because it’s all there on Blackboard”, B2 said “I am very happy with Black board and will continue to use it extensively”, C1 stated “it is a great way”, C2 observed that “students are expecting the resources to be available 24/7”, H1 responded “I think it is fine ... some people don’t do it well ... staff need support to learn”, H2 answered “it is probably a good vehicle for reaching the

students who can't get on campus" and H3 mentioned "I am getting new resources and want to develop my expertise".

9) *Did you get any feedback from your students regarding online delivery of their study? If so, how do they feel?*

All teaching staff reported positive feedback from students, although in some cases there were qualifications. B1 answered "generally they are always asking for things to be put on ... I don't get people saying 'waste of time' or anything like that" and B2 stated that "many students appreciate having access to files and information". C1 noted that "statistics on the site show that the students are accessing the materials and most have found the resources useful" and C2 stated "they are satisfied". H1 observed that "some of them don't like it because they want face-to-face learning, and the rest of them like it", H2 said "extremely positive, I hardly ever get any negative comments" and H3 responded "feedback has been very positive".

10) *What are the challenges in using Blackboard as a tool to deliver the course content?*

Two staff had not experienced any challenges: B2 answered "I can't really think of any" and C1 said "none, it is very easy to use". The other five staff did identify challenges: B1 and H3 mentioned that Blackboard could be slow, C2 answered "very limited ... won't allow to do HTML very well", H1 commented "you have to be creative to write in a way that is conversational ... you also need to engage the students", and H2 observed "[you] have to have expertise to ... make modifications to the documents and add links".

11) *Did you find using Blackboard is more flexible because you can access it from anywhere you like?*

C2 responded "I always access here [on campus] I only have dial up at home". The other six staff appreciated the flexibility of being able to access Blackboard anywhere. B1 noted that "students can access library data base and materials from their own homes", H1 said

“when I was in Norway [I could] continue my teaching”, and H2 answered “it must be useful [for] students who can't come to Auckland”.

12) *Which Blackboard features have helped make your workload either less or more efficient?*

Four staff identified features that have reduced their workloads: B2 named “quizzes and assignment submission”, C1 mentioned “ability to make resource material available to students, access 24x7, chat sessions on a weekly basis and the convenience of the e-mail setup”, C2 noted that “it reduces my load carrying stuff to class”, and H3 said “digital drop box and Turnitin ... reduces plagiarism”. The other three staff commented on increases in their workloads: B1 answered “time consuming”, H1 noted “the need to prepare the notes in a different way ... to make sure audience understands”, and H2 mentioned monitoring the discussion board, and checking and updating links.

13) *Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?*

B2 answered “no” and H2 and H3 indicated that they did not know enough about the facilities offered by Blackboard. B1 said “the more important thing is to make the main ones fast and efficient ... if the features get bigger, the process will be slower”. C1 mentioned “video conference”, C2 stated “at the moment you can load single things and you can delete single thing but they are working on a document management system to overcome this” and H1 said “there are services on Bb that we not usingI always promise my students every year to put up 30 seconds video clips but I haven't got around to doing that”.

14) *Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?*

Four staff had not had any formal training: B2 said “Blackboard was a very simple tool to learn by my self”, C1 commented “I do not find Blackboard hard to use”, H1 observed “I attended some of the user group sessions, but most of what I know I learned from more

experienced colleagues or worked out myself”, and H3 answered “I mostly ask other colleagues how to use it”. The other three staff had attended Unitec training sessions: B1 had “one or two earlier on [and] used to go to the user groups” but observed “I will forget the more advanced stuff] if I am not using them ... I am sufficiently experienced in Black board, people in our school still come to me for help”, C2 had found a training session outside Unitec more useful, and H2 commented “not particularly useful ... I wanted more practical tuition ... I learned a lot by just using it myself and asking people to help me”.

It is interesting to note that the staff teaching health courses often expressed different views, whereas the staff teaching business courses responded similarly to questions 1, 3, 7 and 9, and the staff teaching computing courses gave similar answers to questions 1, 3, 9 and 12. We also note that B2 and H3 (one teaching business and the other teaching health) expressed similar views in response to questions 1, 5, 6, 8, 12 and 14.

5.3 SUPPORT STAFF

The three support staff were asked 19 questions and their responses can be summarised as follows.

1) What is the goal or target of the institution in implementing online learning?

All three staff members talked about benefits for student learning. S2 mentioned a high demand for "flexibility to allow students to access learning resources in their own time", S3 noted that delivery at Unitec was normally blended, and S1 said that the goal was to have lecturers "aware of the tools" and "less scared of those technologies".

2) Can you explain the infrastructure required to set up an online learning course?

All three support staff mentioned Blackboard. S1 and S3 talked about servers hosted and maintained by IT services, and S1 mentioned a “staff member basically full time taking

care of the servers” and “another staff member dealing with daily issues” who “answers queries” and “helps lecturers with practical things”.

3) *Did your organization require any restructuring to adopt flexible learning?*

All three spoke about possible future developments rather than past restructuring. S1 and S3 talked about open source systems and S2 mentioned “planning to increase the number of wireless systems” and having “a flexible learning person/advisor within schools.”

4) *Why is your institution using Blackboard rather than other systems (Eg Moodle)?*

All three talked about looking at open source systems like Moodle. S1 described Moodle as “a pedagogically sound tool compared to Blackboard ... based on social constructivism theory [which] “really encourages lots of group work and collaborations” and S3 mentioned its “potential benefits”. Only one (S2) spoke about UNITEC’s reasons for using Blackboard rather than other systems: “one of the early stable supported learning management systems ... guarantees of ongoing support and service updates/upgrades ... lots of integration between systems ... staff training and course development have been done using Blackboard for so long ... it will be quite an expensive job to make changes.”

5) *Which instructional design theories should be considered when setting up a flexible learning environment and why?*

S3 did not answer this question, S1 said “we are all believers in social Constructionism, the idea that learning happens when people interact in groups” and S2 mentioned “Merrill's people on the pond approach, this approach basically is problem based learning.”

6) *What is your opinion about the cost of setting up online learning per course?*

S2 did not know, S1 said “US\$ 55000, beside all the maintenance work, servers, and

system updates” and S3 said “US\$57000 ... which includes support and we need to pay separately for IT Technician, teaching and learning support, training staff, and admin from all the schools.”

7) *Do you think the institution can save money through online learning?*
All three staff members said online learning does not save any money, although S1 and S3 observed that it is possible to save printing costs. S1 noted that “UNITEC uses a blended learning approach ... Still have to have people coming down to the classroom”, S2 stated that “it costs too much money to set it up, it costs money to maintain and you need staff to maintain it”, and S3 commented that it set up “a better environment for students”.

8) *What support staff are involved in setting up and maintenance of online learning?*
All three support staff mentioned staff from the Centre for Teaching and Learning Innovation (S1 listed these as “a kind of programmer”, one “dealing with day-to-day problems” and two “working on ... teaching- related things”). S2 and S3 talked about staff from the Information Technology Support Centre (helpdesk, support staff for Blackboard and technicians for software and hardware).

9) *Please indicate the approximate percentage of teaching staff involved in online learning*
All three staff members said that some teaching staff using Blackboard only upload course materials and information. None of them mentioned numbers but S3 did say “relatively high [but] some departments are very low ... lots of updates [and] small percentages using online discussion board and other tools” and S1 noted that “there are other lecturers really engaging the students.”

10) *Which schools are conducting online learning courses in your institution?*
S1 suggested asking S2 who answered “captive wild animals.... a couple of educational

papers ... a couple of business courses ... 1408 courses using Blackboard." S3 responded "natural sciences and business schools ... most schools are using Blackboard."

11) *Is your institution encouraging staff and students towards online learning? If yes, how?*

S1 and S3 noted that Unitec offers "training courses" or "workshops" for teaching staff. S2 mentioned an "e-learning strategy which has milestones and goals" and stated that "different courses have made it compulsory for instructors to have an online component."

12) *Are there any rewards for teachers for developing online coursework? If yes, what?*

S3 answered "no", S1 said "not really" and S2 mentioned that "there are awards for innovation and excellence ... not specifically for online learning."

13) *Do you think your institution is succeeding in online learning? If yes, what is your evidence?*

S3 noted that "we are offering over a thousand courses on Blackboard currently, so this is a good indicator and around 40 to 50 courses are interactive", S2 said "UNITEC has to go quite a long way to claim success in online learning" and S1 commented that "we don't have many distance courses."

14) *Do you think online courses are popular among students in your institution and why?*

S1 said "I can't really say that we have many online courses ... more technology enhanced", S2 responded "yes, students are more expecting now to have online courses", and S3 answered "yes" without offering any reasons.

15) *Is there a difference between the drop off rates between class room learning and online learning? What do you think about the reason? Have you got any data?*

None of the staff had any data, but S1 said "I think it is not directly related to technology, usually engaged with the tutor."

16) *Do you think the online learning system has changed or will change the way students use the institution resources?*

S2 and S3 both said “yes” and mentioned laptops and mobile devices. S1 noted that “youngsters today ... are doing much more advanced things outside of school ... lots of informal learning using technologies ... through a network of people who are browsing the web” and concluded “this is an actual challenge to the teachers.”

17) *Do you think online learning systems will attract the students in New Zealand and overseas? Why?*

S1 said it will be attractive “if it is wisely planned, nicely designed and interesting activities ... but if it is content and some kind of parking space it doesn’t make any difference”. S2 answered that “most students are employed ... so the option for students to study and work will be online” and S3 noted that “students are expecting to use electronic devices since they are at school”.

18) *What are the risks and challenges you identify in implementing online learning?*

All three spoke about challenges for teaching staff, including investing time (S1), upskilling (S1 and S3), developing new strategies (S1), encountering new technologies (S1), integrating the tools in teaching and learning (S2), and training students who have no prior technical knowledge (S2). S1 concluded “I think what we are mostly dealing with is convincing lecturers that [it is] not scary and difficult” and S2 said “the challenge is to get staff to be confident on the tools”.

19) *Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?*

S2 and S3 both said “no” and expressed a preference for blended learning. S1 said “not in 20 or 30 years but in the future it can happen we don't need to go to the institution to

study, maybe it will be enough to learn in a group of people and involving with an expert in the field, getting somehow certified by some authorized body.”

It is interesting to note that the support staff often expressed different views but S1 and S3 gave similar answers to questions 2, 3, 4, 6, 7, 9, 11 and 12, and S2 and S3 gave similar answers to questions 8, 14, 16 and 19.

5.4 Comparisons between teaching and support staff

5.4.1 Expectations and Goals

Teaching staff were asked *“What were your expectations in using Blackboard to deliver a course?”* and support staffs were asked *“What is the goal or target of the institution in implementing online learning?”*

Six of the ten respondents (five teaching staff and one support staff) indicated that providing easy access to learning resources was a high priority.

5.4.2 Encouragements and motivations

Teaching staff were asked *“What was your motivation to start using Blackboard first time?”* and *“Do you experience pressure to use Blackboard from anyone? If yes who are they?”*

Support staffs were asked *“Is your institution encouraging staff and students towards online learning? If yes, how?”* and *“Are there any rewards for teachers for developing online coursework? If yes, what?”*

Four teaching staff talked about meeting students’ learning needs. The responses of four teaching staff and one support staff indicated that motivation could take a variety of terms including encouragement, expectation, policy, requirement and compulsion. The

support staff noted that training courses and awards may serve to encourage teaching staff.

5.4.3 How Blackboard is used

Teaching staffs were asked *“What are the tools/activities in Blackboard that you use during the delivery of your course?”* and Support staffs were asked *“Please indicate the approximate percentage of teaching staff involved in online learning”*

The most widely reported activity (mentioned by four teaching staff and all three support staff) was uploading course materials and related information.

5.4.4 Challenges and risks

Teaching staff were asked *“What are the challenges in using Blackboard as a tool to deliver the course content?”* and Support staffs were asked *“What are the risks and challenges you identify in implementing online learning?”*

Three teaching staff identified limitations of blackboard (two mentioned speed and one HTML). Two teaching staff and all three support staff talked about the need for expertise (pedagogical and or technical)

5.4.5 Future learning systems

Teaching staff were asked *“What is your opinion about continuing to use Blackboard to deliver the Course?”* and Support staff were asked *“Why is your institution using Blackboard rather than other systems (Eg Moodle)?”*

All the teaching staff intended to continue using Blackboard where the support staffs were interested in looking at alternatives like Moodle

5.4.6 Feedback and the future

Teaching staffs were asked *“Did you get any feedback from your students regarding online delivery of their study? If so, how do they feel?”* and Support staffs were asked *“Do you think your institution is succeeding in online learning? If yes, what is your evidence?”*, *“Do you think online courses are popular among students in your institution and why?”*, *“Do you think online learning systems will attract the students in New Zealand and overseas? Why?”* and *“Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?”*

All seven teaching staff and two support staff indicated that feed back from students was positive; however none of the support staff expected online learning to replace face-to-face learning in the near future.

5.5 CONCLUSION

This chapter summarized and analyzed the interview data from UNITEC staff to find out their perspectives about the opportunities and challenges of the particular delivery mode.

Teaching staff are expressing their opinions about migrating to the new technology in flexible learning environment. From the interview we able to come to the common conclusion that all of the teaching staff expect the Bb should be the base to provide the course materials and they believe that it can provide the same environment as classroom but in a different way.

Most teaching staff are not confident using electronic tool (Bb) and they expressed that they need more formal training, but in general, they are all happy to use Bb as a tool for flexible learning because of more convenience, easy access and live update.

Support staff also expressed their opinions about the flexible learning environment. They argue that pure flexible learning using electronic tools cannot replace the face-to-face environment but it can give an additional help to the students.

All staff have strongly agreed on adopting electronic devices in flexible learning environment and their reasons were as follows:

- Students are expecting to use electronic devices in their studies because they started using electronic devices when they were in primary school so they like to use the same style on their tertiary education as well.
- Students like the online mode because this will allow them to do their courses while they continue their daily routine work
- The course should be attractive, if Black board is used as parking space there is no attraction for student.

The next chapter will discuss the data collected from students and staff in relation to the relevant literature.

6 DISCUSSIONS

6.1 AN OVERVIEW

This chapter explores the ideas of the prime stakeholders of online learning. The common themes from the opinions of the stakeholders and the relevant literature are discussed.

Section 6.2 reviews ideas about online learning which is the latest version of the flexible learning environment. In the early days, flexible learning relied upon correspondence courses where students and teachers sent and received course resources through ordinary post, but today ICT has enhanced the mode of delivery.

Section 6.3 discusses the opinions of the stakeholders about the opportunities created by online learning where students do not need to leave their work, they do not need to ask for special leave from the employer and they do not need to make major adjustments in their budget. Online learning enables students to update skills while continuing with their routine work. Furthermore teachers also can up-skill themselves while they continue teaching.

Section 6.4 explores the challenges and barriers of the online learning environment faced by students and staff. The purpose of this section is to identify the challenges to make meaningful suggestions to enhance the online learning environment.

Section 6.5 deals with what teachers say about online learning and how it impacts on them. Discussions have been designed to review the results in general and by student characteristics (first language, country of origin, status as international or domestic students, age group and years living in New Zealand)

Section 6.6 compares the data collected and analyzed by the author in 2007 and other researchers in 2003 and 2005.

which is covering the research questions one and two , those are as follows:-

- What are the challenges faced by students, teachers and support staff which can reduce the effectiveness of the learning and teaching process?

- What are the learning/technical difficulties encountered by the students from various ethnic communities of New Zealand?

Section 6.7 discusses the opportunities available if the challenges identified in sections 6.4 and 6.5 are resolved. The flexible learning environment will be more effective if the identified challenges are resolved in a proper way, which is covering the research question three, as follows:-

- How can flexible learning be made more effective if the identified challenges and difficulties are resolved

6.2 THE FLEXIBLE LEARNING ENVIRONMENT

As explained in previous chapters, online learning is the latest version of the flexible learning environment; where students and teachers can carry on their duties in a place and time of their choice, students and teachers are more comfortable in this particular mode of delivery.

The author conducted a survey of 145 students and found that students welcomed the idea of adopting online learning (latest version of flexible learning) in tertiary education for various reasons. None of the students have negative opinions although around 10% are not sure about it. The following chart provides the summary.

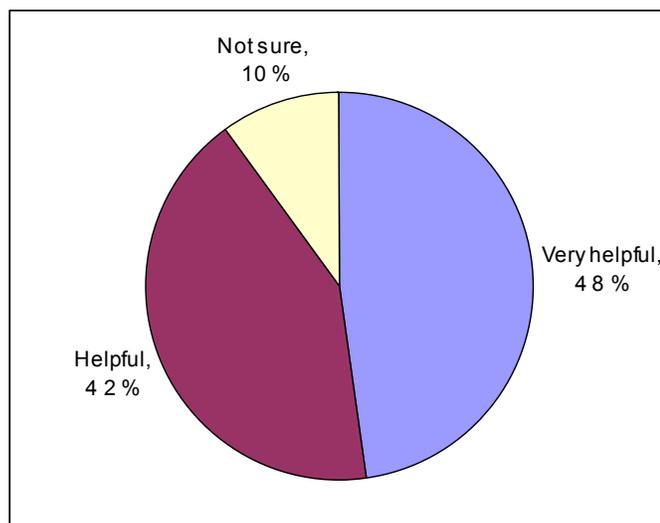


Chart 1: Adopting E learning

Students like online learning rather than the old fashioned correspondence course because online learning gives students advantages of more convenience, saving time, providing more resources, accessible from anywhere and affording them different ways to learn.

About 80 students stated their reasons as to why they chose online learning and a majority of them responded that online learning can provide resources which students can access at any time they want. The arguments of the students include“... internet is the biggest library in the world. Libraries at the local institutes such as UNITEC library, community library are very outdated at times. I find e-learning more efficient too”

“Gives different stuff to text books, interactive input and immediate access to any topic your heart desires. Library is good go get a book, but you need additional topics when you want them right now”

About 17 students replied that online learning provides an opportunity of easy accessibility from anywhere and at anytime without any barriers. This is a valuable opportunity of online learning compared to the correspondence course delivery mode because of the postal delay and missing post. Students gave the following reasons

“Material is accessible at home”

“I can study at home, access resources anywhere”

“Access is available no matter where you are”

“Accessible anywhere, anytime”

Ten students found online learning is more convenient because of the efficiency of the particular delivery mode. It provides the opportunity to the students to organize their other commitments and do their studies with minimum disruption. They mentioned a variety of reasons including

“Saves dealing with the traffic, parking and the like.....”

“Saves time, good for part timers, good means of continuing education”

“Convenient and rapid”

“Being able to work at flexible times from home”

“As allows work to occur when it is a suitable time for the candidate”

Seven students out of 80, who stated their reasons for adopting online learning, argued that online learning provides an opportunity where they can save time compared to the other delivery mode of the flexible learning. They expressed their ideas and opinions based on the real time distribution.

Nine students stated their reasons for favoring online learning are based on the argument that the particular delivery mode helps them learn better than the other delivery mode. They found that online delivery allows them to learn at a time that suits them because learning times are different from student to student and they can chose their own time to learn in an online learning environment. Their comments included:

“I learn better when I am exposed to ideas in a variety of ways”

“All people have their own learning abilities some slower than others. However we do get there in the end therefore any help with our learning abilities is a great offer and will have a positive impact”

“Provides another media for gaining knowledge and is useful if you are unable to attend a class”

“Get to know what I will learn in the coming lesson before I attend it”

According to the survey results, students with English as first language are more positive than students with English as an additional language. The percentages of the students with English as an additional language are greater than the students with English as first language in the not sure category. The following graph shows the differences in opinion between these groups.

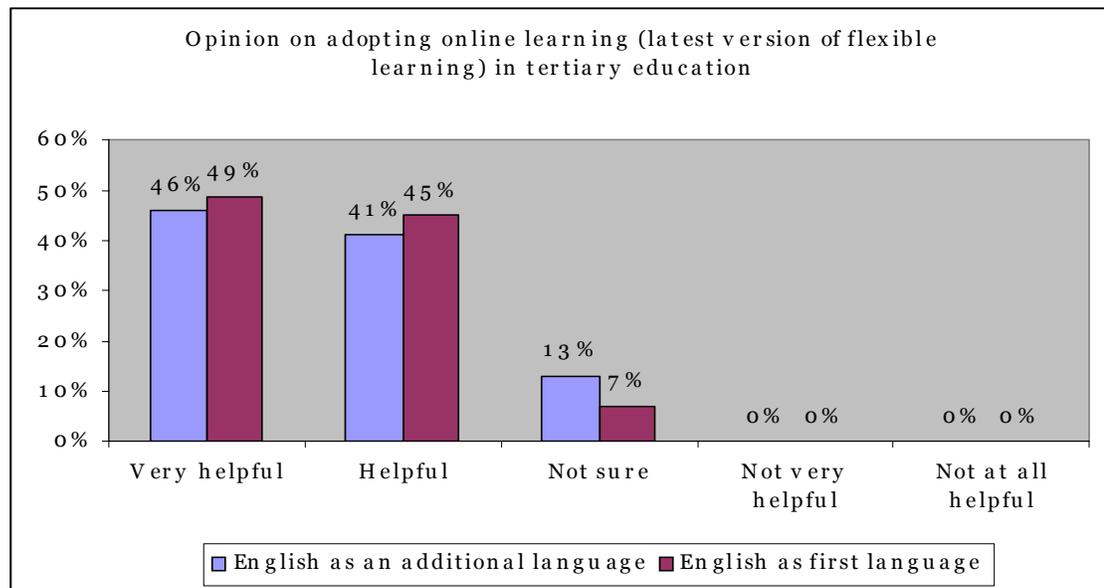


Chart 2 : Adopting E learning EAL VS EFL

Among the great majority of the students who have positive opinions, about 90% of the domestic students like the particular delivery and 89% of the international students have the same positive opinions. 9% of domestic students and 11% of international students are not sure in their response

to the particular delivery. Overall results prove that students prefer the particular mode of delivery.

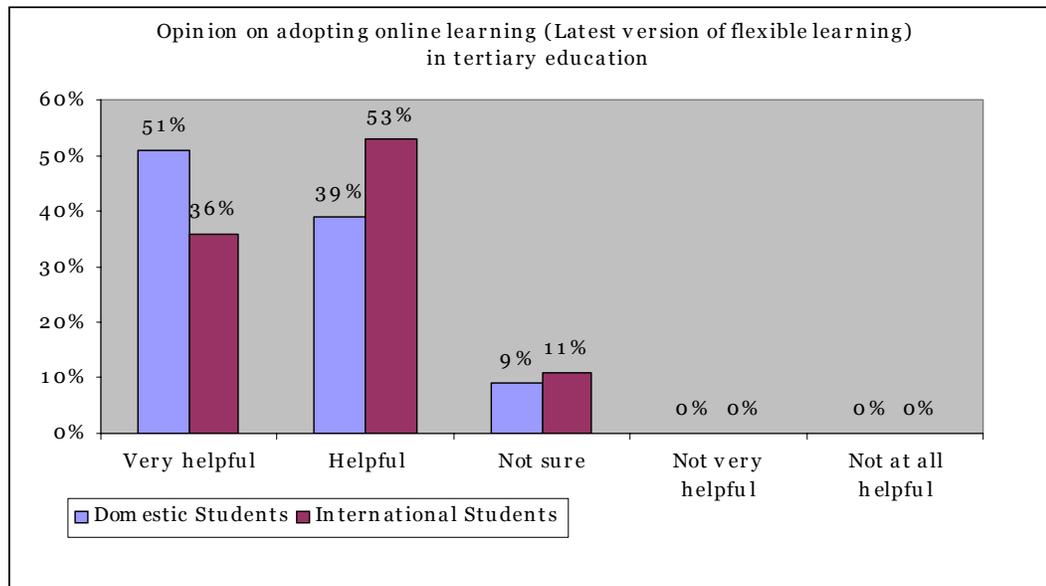


Chart 3: Adopting E learning Domestic VS international students

In summary, the results from survey indicate that students prefer the online delivery mode to other flexible learning modes. No negative opinions were recorded; however 10% of the students are not sure. Almost all the short answers for the questions indicate that students like the particular mode because of the various benefits related to the better learning.

So, the ICT changed the direction of the flexible learning delivery and make it real time with rapid distribution (Ostendorf, 1997), also the education providers who want to maintain their position for future generation, may be forced to implement online learning because of the future students who will be the play station generation (Young, 2002).

6.3 OPPORTUNITIES

AVAILABILITY OF COURSE RESOURCES ON THE INTERNET AT ALL TIMES

Online learning brought about a revolution in the education sector; it introduces new concepts which allow students to continue their education regardless of where they are and what they do because they have opportunity to access the course resources and the other necessary facilities

from their own place and in their own time. As Duffy and Cunningham (1996) stated, online learning allows students to engage in life-long learning.

The survey shows that students like the idea of the availability of the course resources in the website all the time in an online learning environment. There are no negative opinions found in the survey among 145 students in total, although 6% were not sure. The following chart displays the survey results.

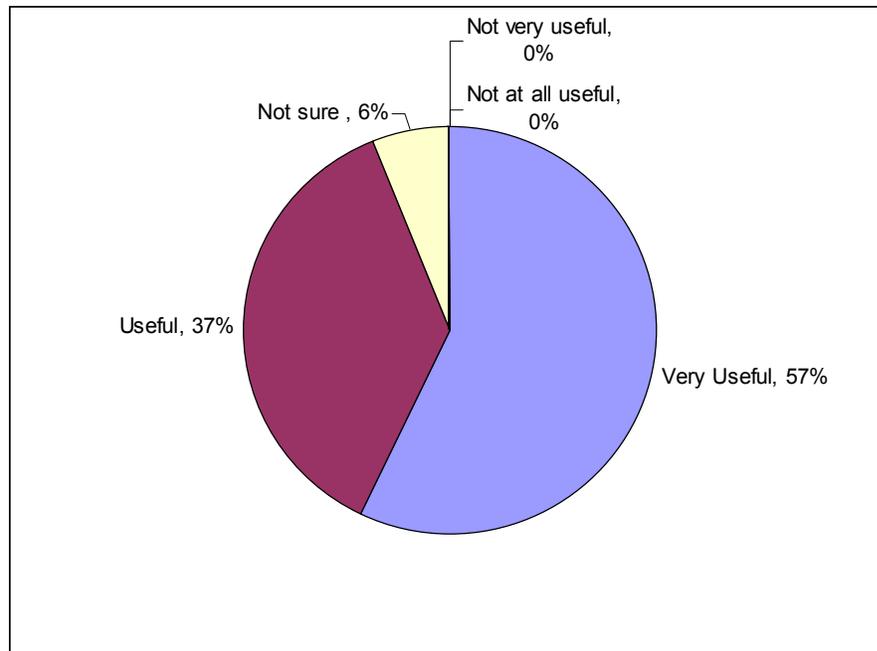


Chart 4: Availability of course resources

Students like the facility created by online learning to make the course resources available on the website all the time, plus students can access the latest resources as soon as it is loaded into the system by the teacher. So students have no reasons to disrupt the studies even after they get into the routine work.

Seventy one students stated their reasons as to why this particular activity in online mode is more beneficial for students. They argued that availability of the resources in online learning website at all times will create the opportunities which can save time, more convenience, easy access, chance to get prepared and help to learn in a better way.

Eleven students stated that availability of the course documents in the website all the time is very useful because it is more convenient for the students with their day-to-day busy schedules. They considered this an extra facility to enhance the learning process and they argued that *"the availability of the course documents is always useful for learning, doesn't matter in which form"*. Availability of the course resources online creates an opportunity of accessing the resources any time from anywhere, 21 students give their reasons according to this argument, some of their reasons are as follows:-

"Handed, I can read it at any time if I want"

"Access resource off-campus"

"Extra access to resources is always good"

"Like to print hard copy, then go back to look at computer anytime"

16 students citing their reasons indicate that this opportunity enables them to access learning conveniently because they can concentrate on the presentation from the lecturer and it obviates the need to take notes in the class, as all the notes and other supporting resources are available on the websites. One of the students noted *"So I do not need to make lots of notes for the lecture"*. Seven students stated that availability of the resources on the website can enhance the learning process and they argued that students can refer to course notes at anytime they want, as one of the students mentioned *"It is always good to be able to double check and revise these documents"*.

Moreover students who have identified this facility can have the chance to get ready for the class session in advance. This preparation is one of the activities that can improve the student's learning capacity because they have at least a small background around the topic of what they are going to learn in the class, as one of the students noted that *"Able to prepare before lectures"*. Three students observed that they can save time because of the availability of the course resources.

According to the survey results, students don't have any negative opinion although 10% of them are not sure about it. It is very hard to differentiate the opinions between the domestic students and international students because of the very slight difference in percentage. The great majority like the way online learning makes the resources available on the internet all the time.

International students are more positive than domestic students (by 4 %), as shown in the graph below.

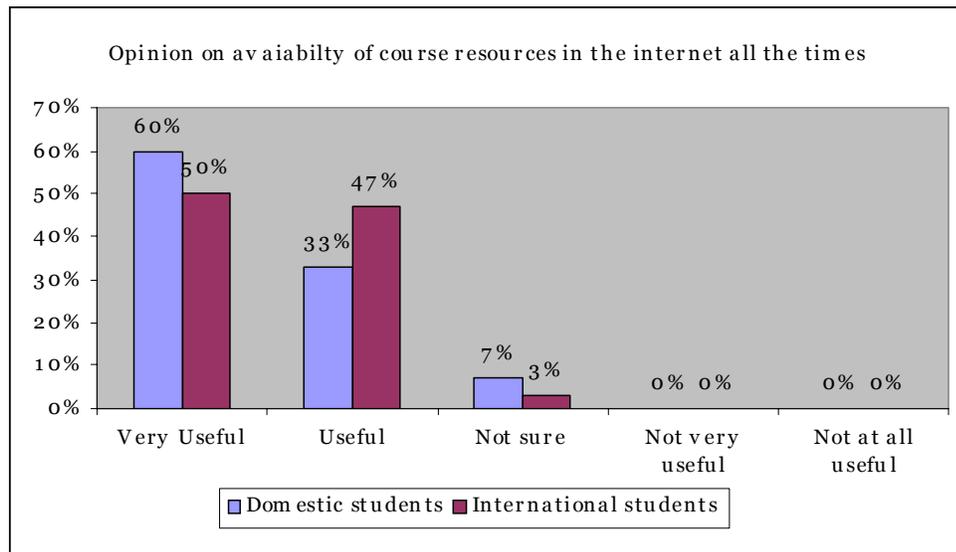


Chart 5: Availability of course resources Domestic Vs International

The same situation applies to students with English as additional language (EAL) and students with English as first language (EFL). EAL students are more positive than EFL students but the difference is only 1% as illustrated by the following graph.

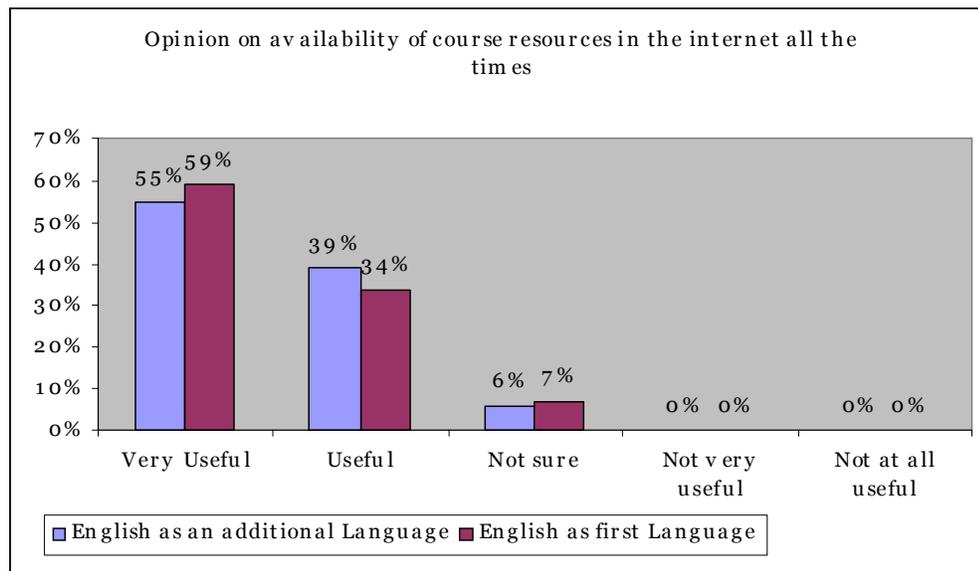


Chart 6: Availability of course resources EAL Vs EFL

In summary, survey results indicate that availability of the course resources on the internet all the time can help students learn well, because it provides opportunities to access the notes anytime and they are better prepared for the class before-hand. They argue that they can have at least a small background knowledge about the topic they are learning in the class before they attend the class. Even in the class they do not need to waste their time in taking notes and they can concentrate on the presentation because all the notes are available on the website. Even if someone missed the class they do not need to worry because all the course content and the resources are available on the website and they can visit it at anytime convenient to them.

Availability of the resources on the internet can help students avoid errors when taking notes. Students can have difficulties if they haven't got a chance to view the notes online anytime as they cannot double-check their notes after the class. So the above discussion explains that the opportunities created by online learning (latest version of flexible learning) with the help of the survey data from the students (from various ethnic communities of New Zealand) even though there are some challenges which can reduce the effectiveness of the learning and teaching process.

ADVANTAGES OF ONLINE LEARNING OVER TRADITIONAL LEARNING

According to Ascough (2002) online learning encourages critical thinking skills, collaborative learning and advanced learning because it is providing enough time to think and do their study by themselves at times suitable to them. Online learning is a blessing for full time mothers with various commitments; they are able to utilize their time with toddlers to gain qualifications (Furst-Bowe, 2002). So there are advantages in online learning (latest version of the flexible learning) over the traditional classroom learning environment.

The survey results show that the majority of students agreed that there are advantages in online learning over traditional learning environments and around 29% are not sure and under 20% students do not agree, as depicted in the chart below.

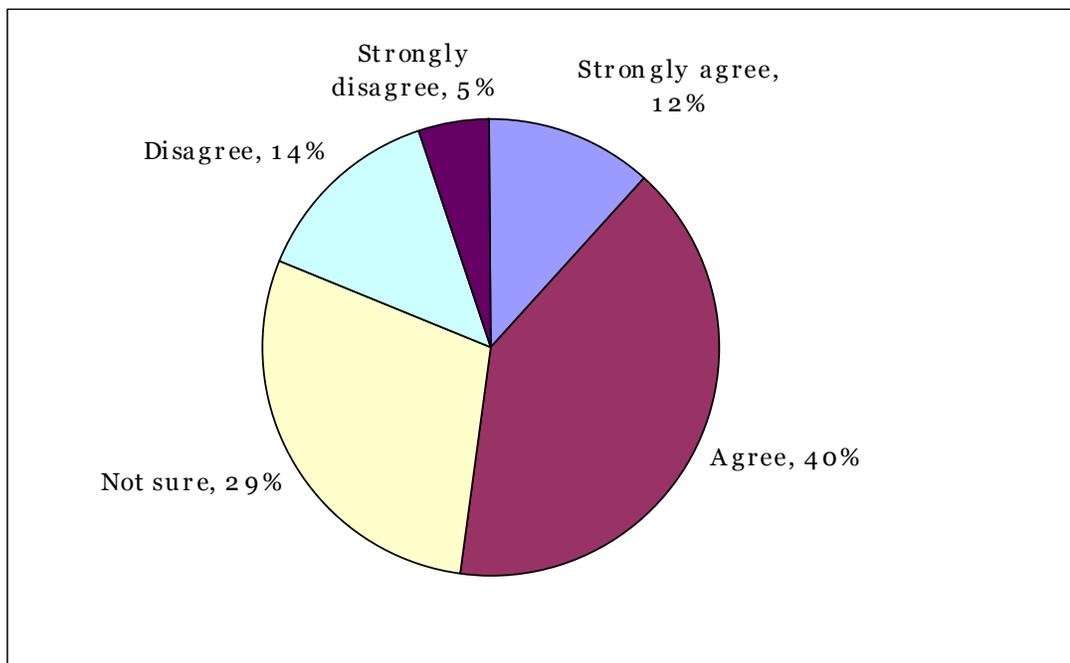


Chart 7: Advantages of E learning

Sixty seven students out of 145 stated reasons for their answers. A majority of them argued that online learning has a lot of advantages over the face-to-face traditional classroom environment because it is more convenient, resources are accessible all the time and time is available for critical thinking. On the other hand around 20% students stated that face-to-face interaction is very important in teaching and learning process, they argued that online learning has advantages and it can be used to complement face-to-face but it cannot be a substitute for it.. They strongly believed that “interaction is important”.

Twenty four students stated that online learning environment is a convenient way to seek knowledge so students are free from the hassles of traveling and parking etc as one of the students noted “*some students have children and with the use of e-learning they don't have to be in 2 places at the same time*”. And they do not need to take time off their work because course resources can be accessible from any locations as one of the students remarked that “*Availability convenience and accessible at any time*”. Six students believe there are advantages in online learning over the traditional face-to-face environment because of the accessibility from any location.

However 21 students argued that online learning can enhance teaching and learning processes but interaction is very important. They believe that certain subjects are difficult to learn online; as some students mentioned “some courses need face-to-face and some ideas cannot be explained by email”, “its easier to have a set time to come to class whereas e learning, you don't have the same motivation” and “It seems traditional method allows one to fully understand because the teacher will be explaining”. Nine students believe that the effective teaching and learning method should be a combination of face-to-face and online, both methods must complement each other, they are expressing their belief as follows “I believe they complement each other”, “in addition to classrooms but not as replacement “and “I think there needs to be a combination otherwise you can't benefit from the vast amounts of knowledge the lecturers have”.

Survey results indicate that the majority of the students agreed that online learning is an advantageous mode of delivery compared to the traditional face-to-face method and students with English as first language (EFL) are more positive than the students with English as an additional language (EAL), albeit EAL students number more than EFL amongst those who are not sure. On the other hand around 20% of EFL students do not acknowledge the advantages of online learning and 9% among them strongly disagree whereas around 17% of EAL students do not accept while only 1% strongly disagrees about the advantages of the online learning. The following graph shows the details.

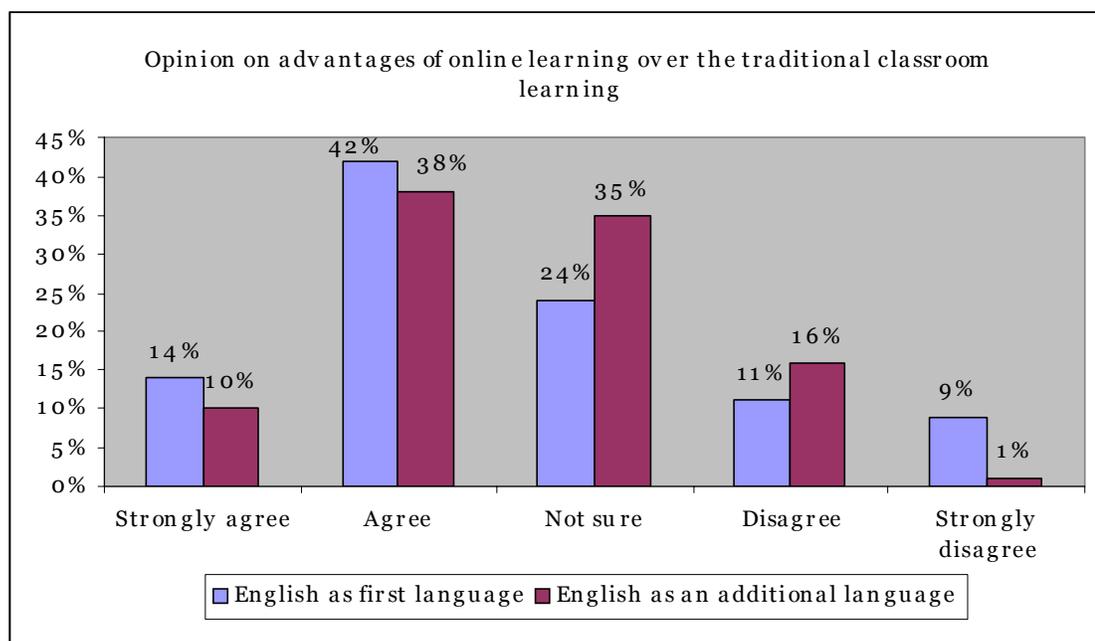


Chart 8: Advantages of E learning EFL Vs EAL

Survey results indicate that majority of students agree that online learning is a more advantageous mode of delivery in relation to traditional face-to-face method, and international students are more positive than domestic students. The same percentages of international and domestic students (19%) do not accept this opinion but the percentage of international students who strongly disagree is higher.

There is no appreciable difference between the numbers of international and domestic students who are not sure, but international students are more positive than domestic students by 2% (see chart 9).

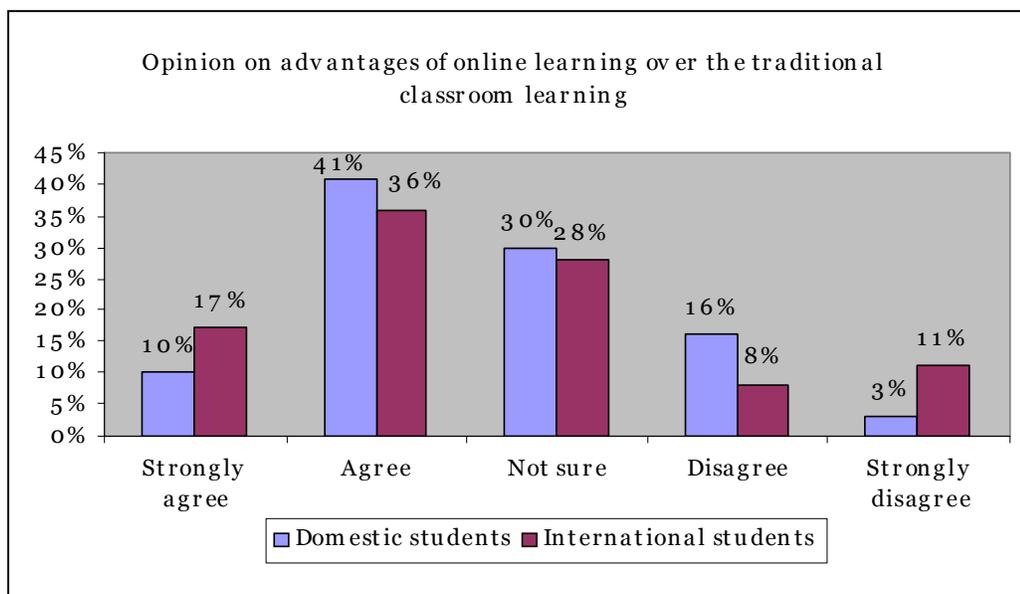


Chart 9: Advantages of E learning Domestic Vs International

Survey results indicate that majority of students agreed that online learning is an advantageous mode of delivery compared to the traditional face-to-face method, and the students aged 28-33 are more positive than any other age groups. The students aged 16-21 are less positive than any other groups. Students aged 40-45 are less negative than any other age groups. See following chart please.

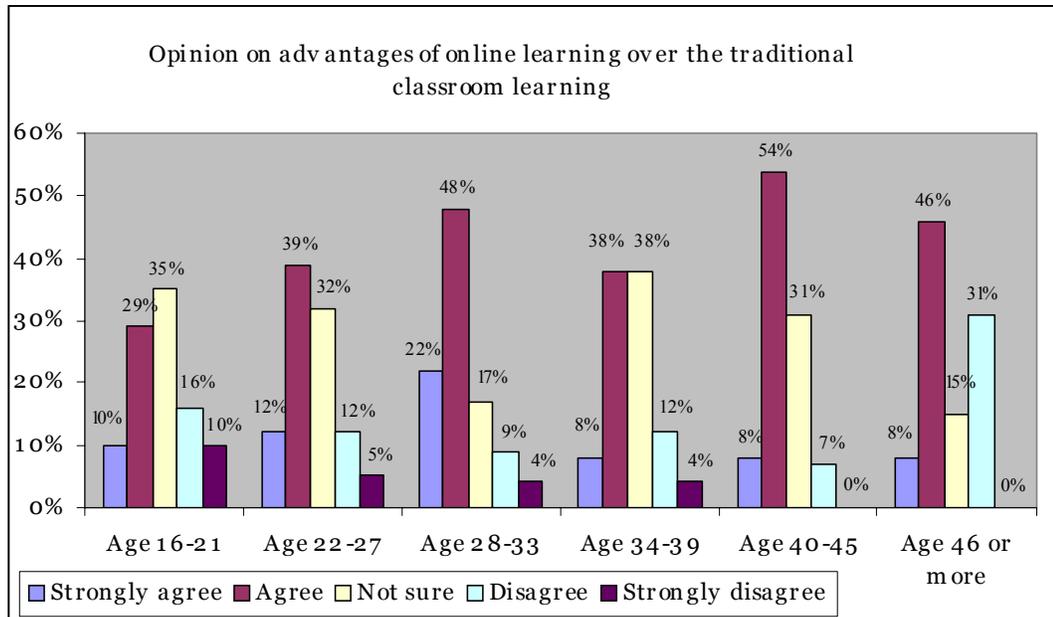


Chart 10: Advantages of E learning by age groups

In summary, the majority of the students agreed that there are advantages in online learning and they believe that is the convenient way of seeking knowledge and they are able to organize their time along with other commitments. On the other hand students expressed their belief that online learning has advantages but interaction is important for effective teaching and learning, they argue that online learning will be effective if it is used as a complement to face-to face not as a replacement. So using online learning and face-to-face learning to support each other, is one of the ways to increase the effectiveness of online learning environments.

WORK AND STUDY AT THE SAME TIME

According to Gray (2001) students found the opportunity in online learning to earn money while they are doing their studies, and he argues that students do not need to take time off from work as well as they are able to pay their tuition fee from their earnings.

The great majority of students (69%) expressed their positive opinions saying online learning can help them to work and study at the same time. Only 26% says it doesn't make any difference and a very low percentage (5%) of students have negative opinions. The following chart shows the details.

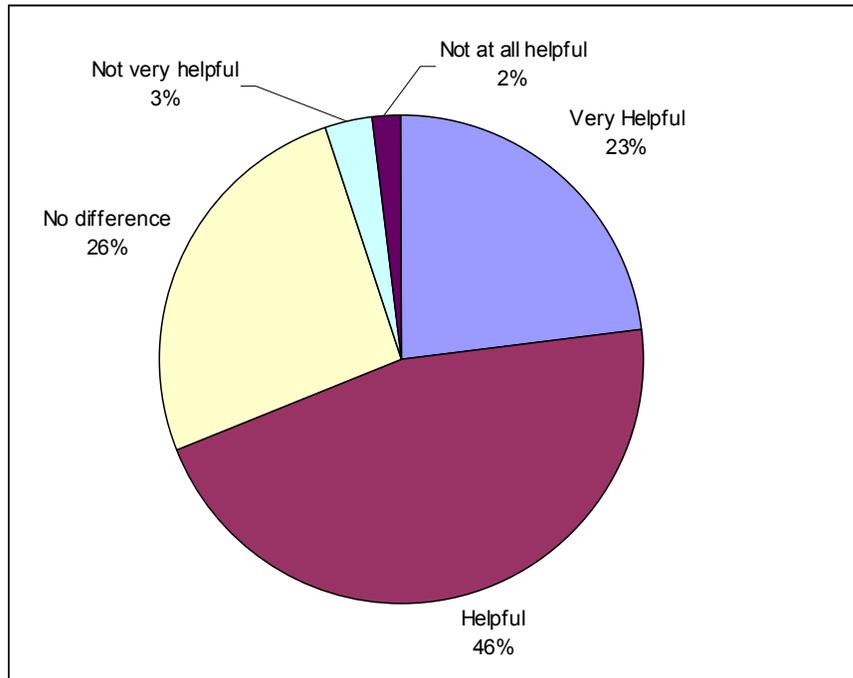


Chart 11: Work and study in same time

Sixty two student stated reasons for their answers, 44 students gave positive reasons and they argued that online learning can help them to continue their routine work and up skill themselves without having any difficulties at work. 33 students believe online learning facility is more convenient because they do not need to take time off from work as one of them mentioned that *“I could work during the day as I wouldn't have to attend classes”*. Students are comfortable in online learning because the resources can be accessed after their work. Three students stated that online learning can save their time and they can utilize their time for their routine work, one of them expressed their belief in the following sentence *“There is less need to be on site, and it's a 2.5 hour commute (each way) from home to Unitec”* .

Three students stated that they prefer classroom interactions but 13 students stated that whether face-to-face or online it won't make any difference because students still need to put in some time on it. Two students accepted the need to spend time irrespective of online or face-to-face, at the same time they argued that online learning can provide some sort of opportunity to organize themselves as one noted *“Be more skilful in organizing”*

The survey indicates the majority of the students agreed that online learning can help them learn and work at the same time without any disruption to each other, but international students are more positive than domestic students, details of the differences between these two groups are as follows

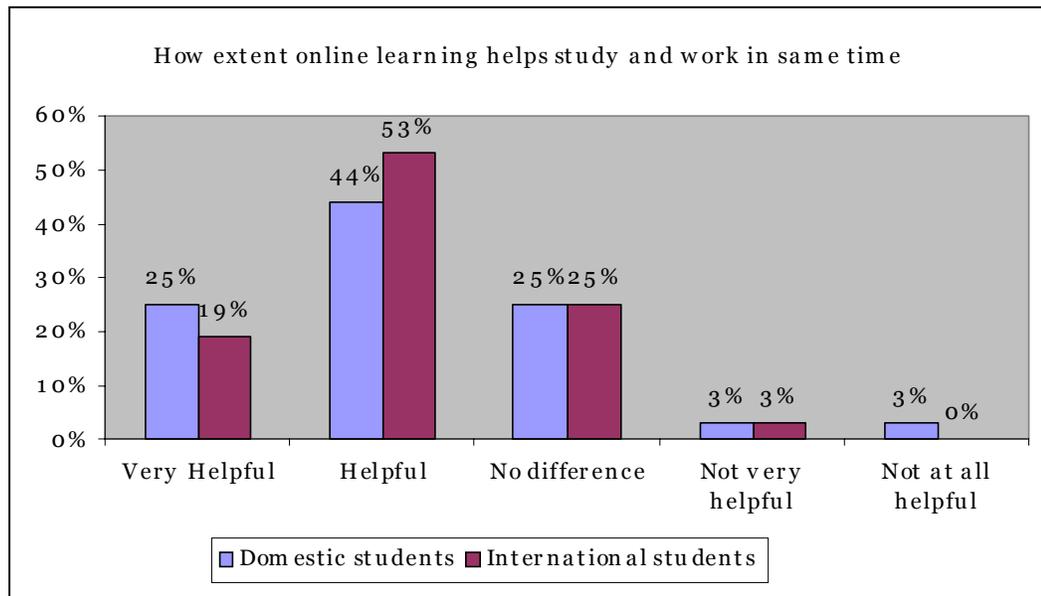


Chart 12: Work and study in same time Domestic Vs International

English as first language (EFL) students are more positive than English as an additional language (EAL) students. The following chart showed the details.

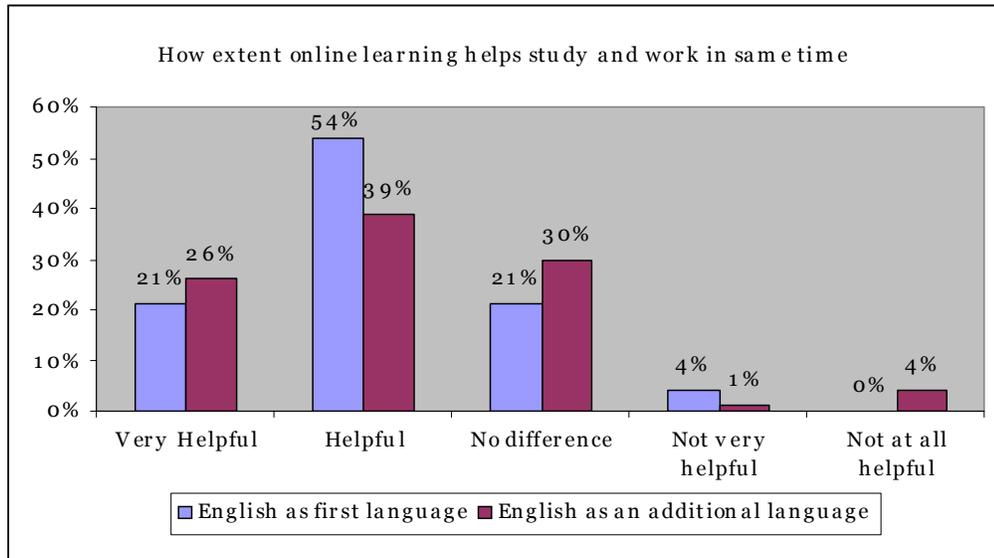


Chart 13: Work and study in same time EAL Vs EFL

Students aged 46 or more are more positive than any other age groups. The following chart indicates the differences.

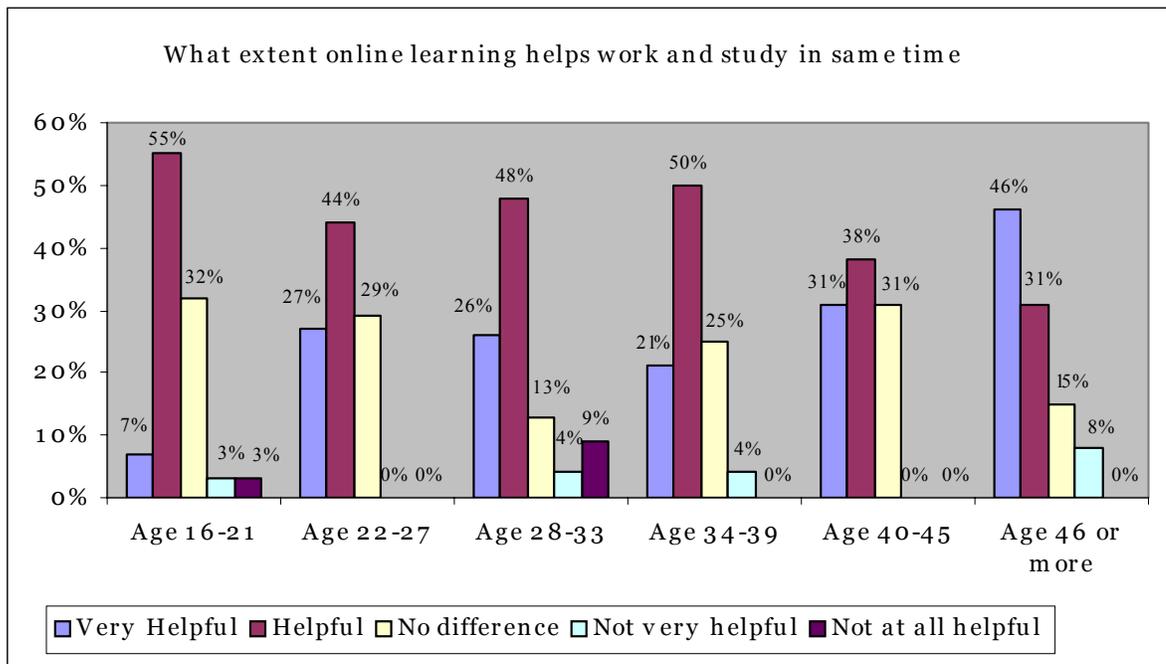


Chart 14: Work and study in same time by age groups

In summary, online learning creates opportunities for more convenient, easy access to the resources and much more facilities but students prefer to have mixed mode of face-to-face and online and they believe they can create a better learning environment with both modes. The

majority of the students believe that the new mode of delivery enables them to continue their work and study at the same time. But this opportunity can be more effective if the online and face-to-face are used as mixed mode.

6.4 CHALLENGES

INTERACTION IMPORTANT

According to Laurillard (2002) interactions and discussions are very important for effective teaching and learning process. She rejects the claim that online discussion can replace the face-to-face interactions.

The great majority of the students agreed that face-to-face interaction is important. Only 2% of students say that interaction is not important and 5% are not sure. The following chart illustrates the details.

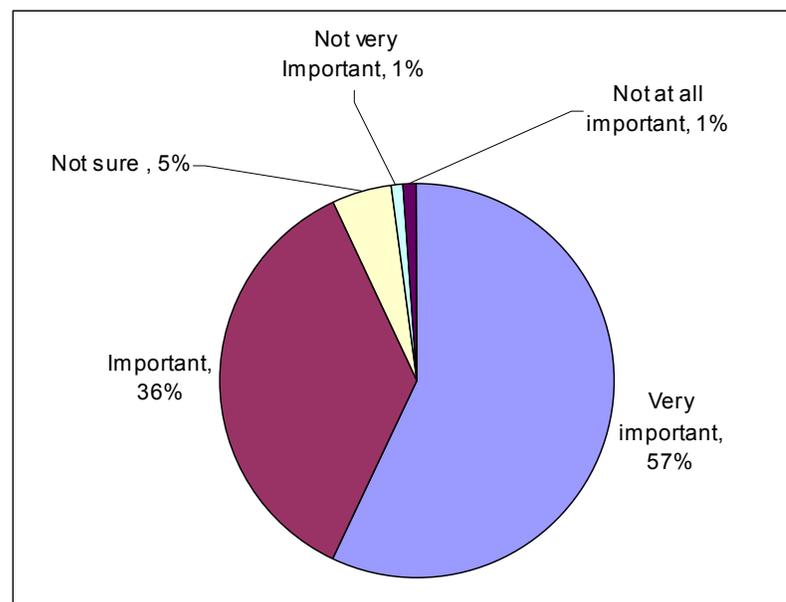


Chart 15: Interaction important

Eighty one students out of 145 gave reasons for their answers and almost all of them indicated that interaction is important for effective teaching and learning activities. They argued that face-to-face will help them to learn well because students can clarify their doubts with the teacher and the teacher will have the opportunity to give feedback to the students straight away. Also they mentioned that face-to-face communication can give the students adequate motivation.

Eighteen students stated that face-to-face interaction is important because they are able to clarify the topic straight away, as one student mentioned “...for clarification that you are learning the correct material”, it can be helpful for them to have correct understanding from the teacher. Sixteen students argued that face-to-face mode helps students to have better feedback about the subjects they learn as one mentioned “Staff can explain and student can get a feedback better”, so they believe that interaction is indispensable for clarification of the subjects and the feedback.

Twenty four students mentioned that interaction is important for better learning and understanding as one mentioned “Better interaction Better understanding”. And 10 students expressed their belief in terms such as “There are some subjects that cannot be learnt just by reading the course material”. About 10 students stated their reasons in terms of communication skills and motivation factor, while 4 of them said face-to-face sessions can improve their communication skills and 6 of them argued that class room interaction motivate them to learn as one mentioned “periodic class sessions help to maintain motivation”. Clark (2002) mentioned that motivation factor influences a lot in learning and teaching environment.

Students with English as first language (EFL) are more positive than the students with English as an additional language (EAL). Face-to-face interaction and immediate feedback can be considered as an important part of the learning process (Zhang et al., 2004). The following chart indicates the details.

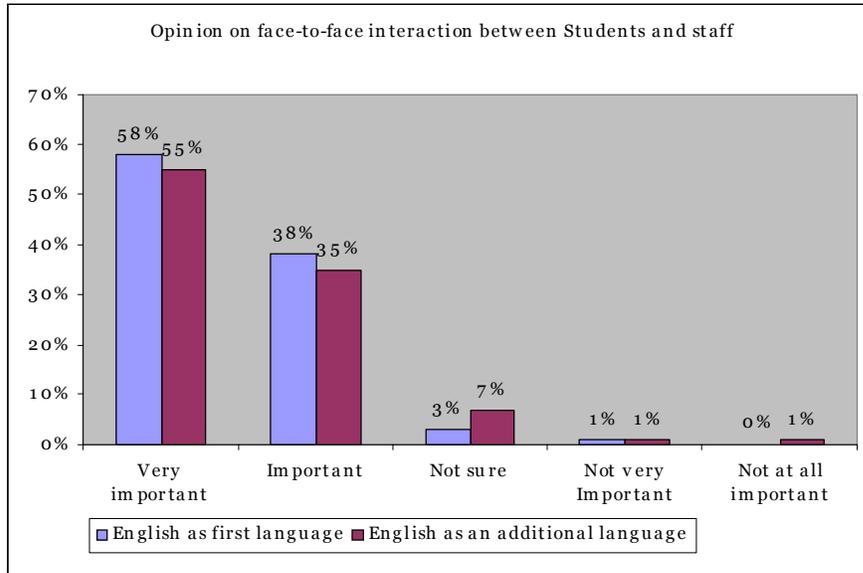


Chart 16: Interaction important EFL Vs EAL

International students are more positive than domestic students but the differences are very small. Following chart indicates the details

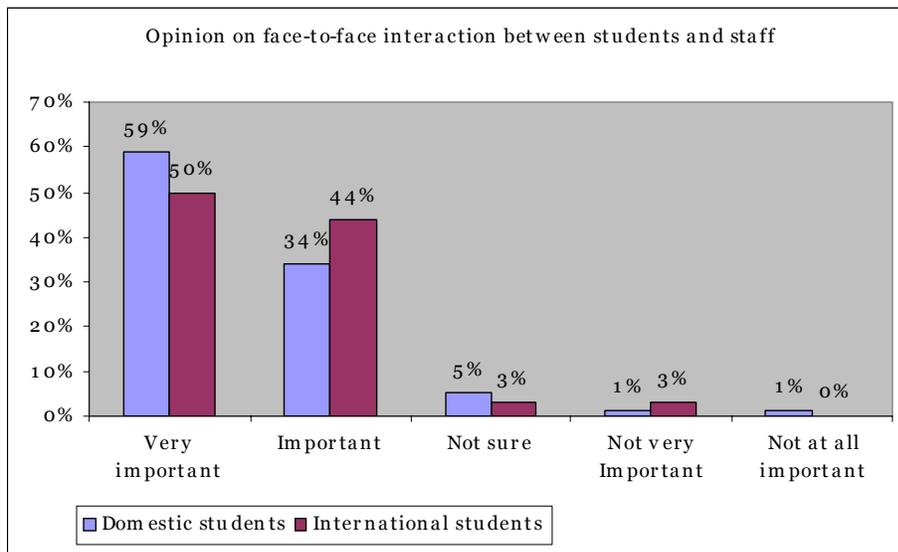


Chart 17: Interaction important Domestic Vs International

Students in the age group between 40-45 years are more positive than other age groups, but almost all of them strongly believe that interaction is indispensable for effective learning. The following chart shows the details.

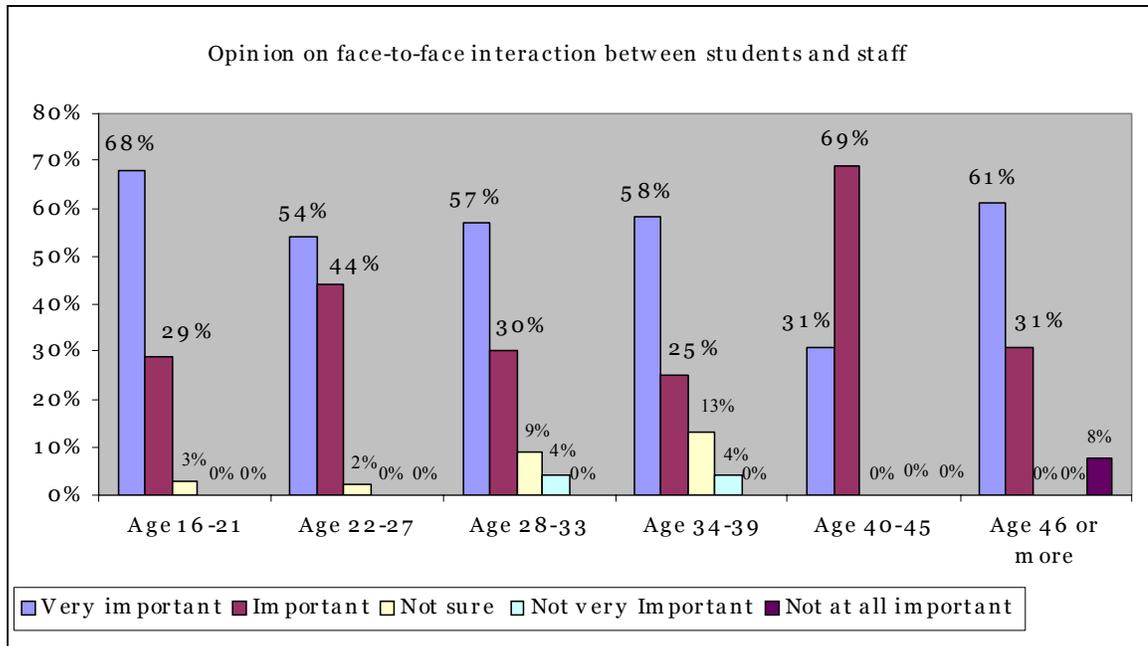


Chart 18 : Interaction important by age groups

In summary, students like online environment as complement to face-to-face classroom sessions and they strongly agreed that interaction between students and staff are very important. So they favor mixed mode delivery as Richard (2005) explains

Mixed mode: students are required to participate in online activities, e.g. online discussions, assessments, online project/collaborative work, as part of the course work, which replace part of the face-to-face teaching/ learning. Significant campus attendance remains (P.11)

So, online learning allows students to work and study at the same time, but the results from the survey indicate that students believe that interaction between students and staff are very important, regardless of how good online learning is. So the challenge identified here is lack of interaction. Online learning will be more effective if it provides an opportunity to include an interaction component in course delivery which was found to be important by students.

Even though online learning has become very popular among the young generation, it has lots of practical difficulties, because some of the online learning provides only text based materials. This does not give the students a clear idea to avoid any confusion. Also students need to wait for the feed-back from the staff if they have any confusion in their lessons (Hara & Kling, 2000).

TOTAL ONLINE LEARNING

The majority of students rejected the idea of doing the entire course online without face-to-face for various reasons. They argued that interaction is very important and they mentioned that combination of both will contribute a great deal for better learning. The following chart shows the details.

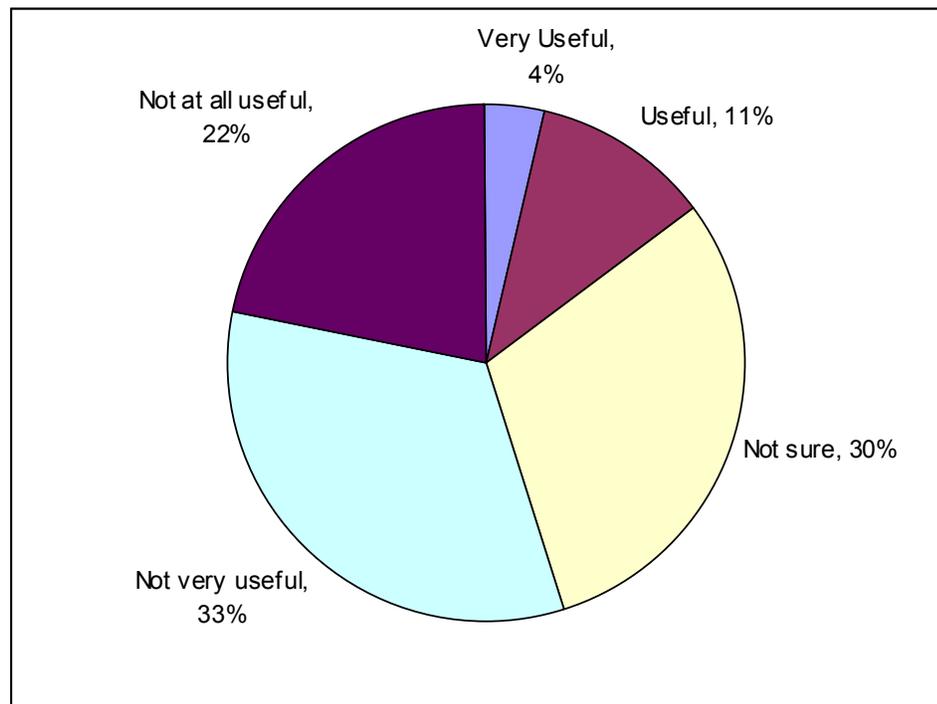


Chart 19 : Total online learning

Sixty seven students gave reasons for their answers and a majority of them (49 students) argued that learning process should involve face-to-face interaction because students not only learn from the teacher but also learn from their colleagues. Face-to-face environment creates an opportunity for the students to practice team work which is very important in a real world work environment, as two students noted *"We live and work in a world where we are required to interact with people. Our studies in classes and with lecturers prepare us for work mates and bosses"* and *"There should be a balance and interaction with people is very important as that is also a part of learning"*. Two students among 49 argued that mixed mode with face-to-face and online helps a lot.

On the other hand 13 students gave reasons for favoring total online learning and they claim that total online learning can help them learn better and in a more flexible manner without having to take time off from work and saving time going to see the teacher, but this percentage is very low.

The survey results indicate that the majority of the students reject the concept of total online learning without face-to-face for various reasons but students with English as an additional language (EAL) are more negative than the students with English as first language (EFL). There are more EFL students than EAL students who are not sure. The following chart shows the details of difference between EAL and EFL.

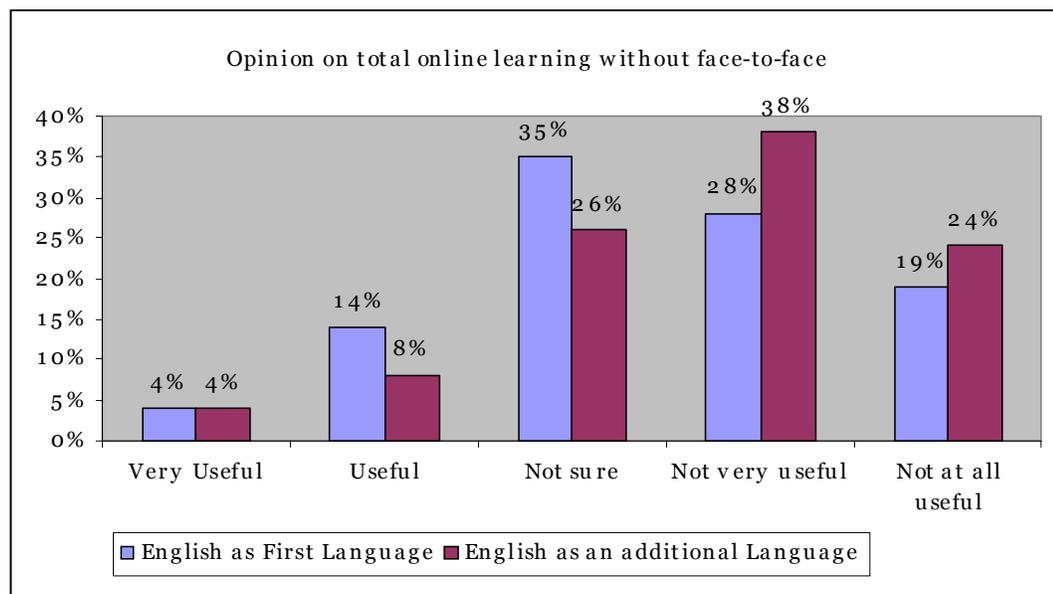


Chart 20 : Total online learning EFL Vs EAL

International students are more positive than domestic students. About 30% of the students from both groups are not sure about the total online learning. The following chart indicates the differences between groups in detail.

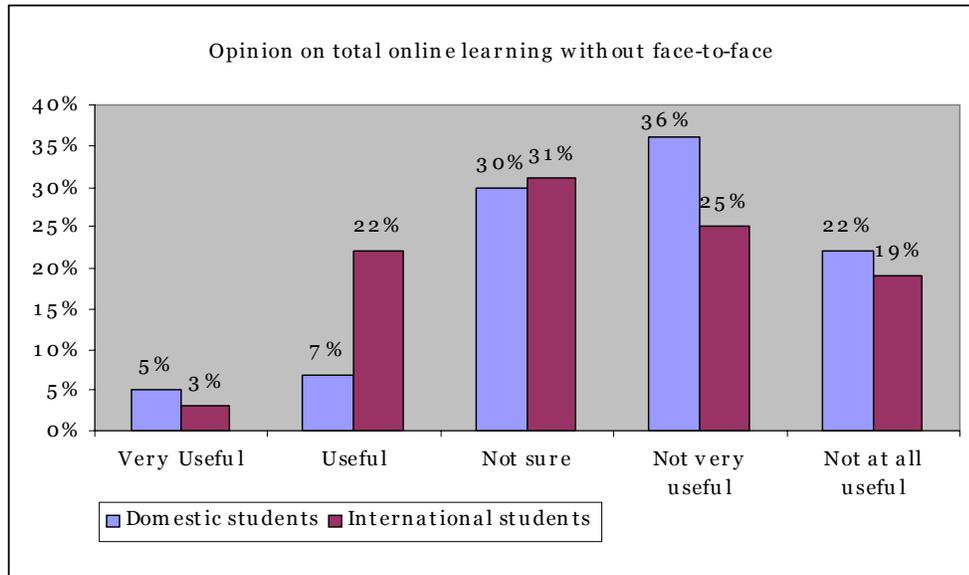


Chart 21: Total online learning domestic Vs international

Students who are 34 and over are more negative than any other age group. Student age group 40-45 has no positive opinions. The following chart shows the difference in opinions between the age groups.

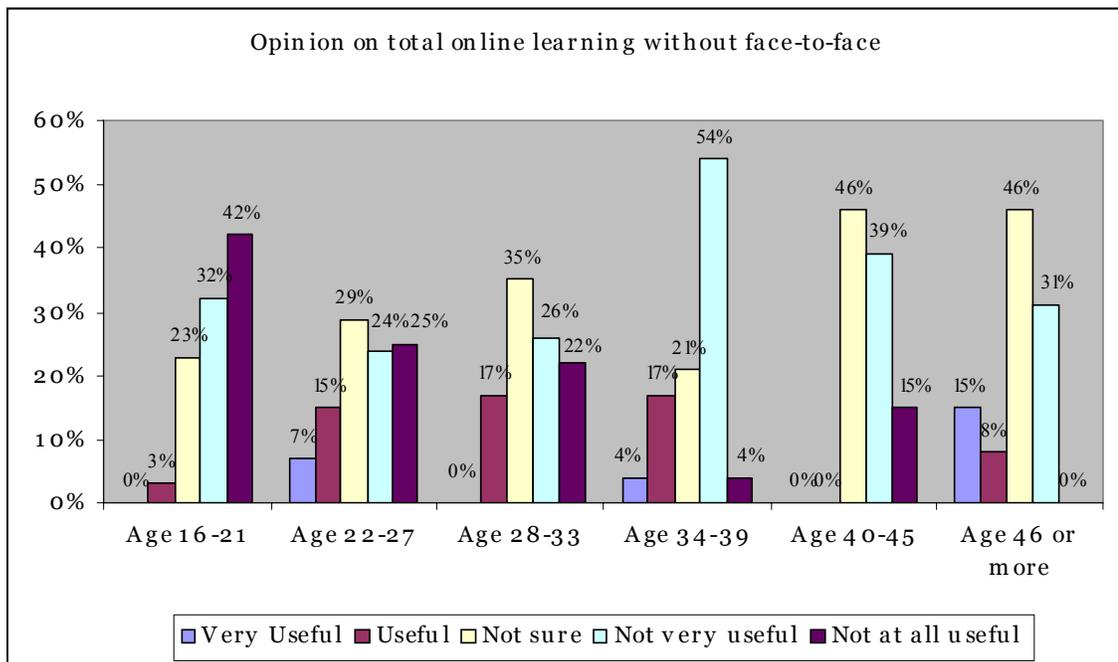


Chart 22 : Total online learning by age groups

In summary, students like online learning mode but they found that lack of face-to-face interaction, lack of immediate feed back and lack of communication between students and staff

are the biggest challenges. Students rejected the idea of total online environment, but they preferred the mixed mode delivery.

INTERNET AND COMPUTER FACILITIES

The survey indicates that around 65% of the students have access to computers at home for their sole use and 31% of students have shared access to computers at home, and around 3% have no access to computers at home. Among these students more than 90% have internet facility at home, about 68% of them have broad band connection and more than 85% of the students are using antivirus software to protect their computers from interference.

The report by Butterfield et al. (2002) stated that problems and challenges may differ from one country to another in terms of development, usage of technology and ability to invest money on purchasing computers and internet access. New Zealand as a first world country is in a relatively good position to overcome these problem and challenges

6.5 IMPACT OF ONLINE LEARNING ON TEACHERS

The role of the instructors has been changed in online learning as the delivery method has changed because the learning and teaching environment changed from teacher - centered to student-centered. Interview data indicates that teachers are trained to teach face-to-face and the adoption of online learning will be a big challenge for them.

Four members of the teaching staff out of 7 stated that they trained to teach students face-to-face and new methods of delivery gave them extra work to learn how to teach effectively using the new mode of delivery. Two teachers out of 7 stated that they are not confident using the electronic tool when they deliver the course.

Two teachers mentioned that teachers need to do a good deal of preparation to deliver an effective learning through online. But almost all the staff mentioned about the nature of the UNITEC course in such terms as *“we only do few papers through total online and other papers we do in mixed mode with face-to-face and online”*.

Technologies have become the prime medium of the course delivery, so using technology for instructional delivery is another challenge for the teachers. Educators should be confident with the tools (Black board) which they use to deliver the course. Formal training sessions on the use of the Black board should be considered as an important part of creating an effective online learning environment.

Four staff members who had not any formal training gave their opinions: first one said "Blackboard was a very simple tool to learn by myself", second one commented "I do not find Blackboard hard to use", third one observed "I attended some of the user group sessions, but most of what I know I learned from more experienced colleagues or worked out myself", and the fourth one answered "I mostly ask other colleagues how to use it". The other three staff had attended Unitec training sessions: first one had "one or two earlier on [and] used to go to the user groups" but observed "I will forget the more advanced stuff] if I am not using them ... I am sufficiently experienced in Black board, people in our school still come to me for help", second one had found a training session outside Unitec more useful, and third one commented "not particularly useful ... I wanted more practical tuition ... I learned a lot by just using it myself and asking people to help me".

Teaching staff were asked "*what are the challenges in using Blackboard as a tool to deliver the course content?*" the responses were as follows:

Two staff had not experienced any challenges: first one answered "I can't really think of any" and second one said "none, it is very easy to use". The other five staff did identify challenges: two of them mentioned that Blackboard could be slow, third one answered "very limited ... won't allow to do HTML very well", fourth one commented "you have to be creative to write in a way that is conversational ... you also need to engage the students", and fifth one observed "[you] have to have expertise to ... make modifications to the documents and add links".

In summary, teaching staff found that online learning is a new way of teaching which has a significant amount of appreciation among the students, but staff members need more training to utilize the electronic tools to get maximum use out of it. The Learning and teaching environment has changed from teacher - centered to student-centered so the staff members need to follow different guidelines to prepare the course notes. As one of the staff members mentioned "*you have to be creative to write in a way that is conversational ... you also need to engage the students*"

6.6 COMPARISON BETWEEN DATA COLLECTED IN 2003, 2005 AND 2007

Northover (2005) mentioned the opinion of AUT students regarding adopting online activities in learning and teaching process, around 66% of the students gave positive answers and around 19% strongly agreed among the students who have positive opinions. Only around 10% of the students gave negative answers and the remaining 24% are neutral. The same questions were asked of UNITEC students by the author in 2007 and the answers differed significantly, 90% of the students have positive opinions. Among the students who have positive opinions, around 48% said very helpful. Around 10% are not sure but there are no negative opinions recorded in 2007. So the survey data indicates that students' opinions of online learning may have become more favorable over the last two years.

Malcolm (2003) explained the teachers' opinion about using Black board to deliver the course and the staff members noted the benefits of using Black board, those are as follows

- Able to provide up to date information to the students
- Students can catch up even if he/she missed the class session
- Good way of communication between students and staff and among students
- Flexibility for students and staff because teachers can facilitate the subjects while they are off campus
- Saving money and time because they do not need to photocopy extra handouts
- Materials can be re-used with minor changes

The same question was asked of staff members in 2007 and the answers were similar to the answers in 2003. In addition to these reasons, the staff members (2007) mentioned that they like to provide the same environment as the classroom environment but in a different way. So we can notice the advance in thinking over the last four years. The staff in 2003 were just mentioning the basic facilities of Black board; staff in 2007 are trying to use Blackboard to provide much more advanced activities.

Malcolm (2003) explores the motivations of the staff using Black board to deliver the course. Those are as follows

- Opportunity to be more flexible because teachers can facilitate the subject while they are out of campus
- Easy to use and very good technical support by learning technologies
- Policy of the faculty because some courses are available only through online.

The same questions were asked of the staff in 2007 and answers were similar but not exactly the same. Flexibility was mentioned in their answers by the staff in both periods of time (2003 and 2007).

Findings in 2003 showed that Learning Technologies provided very good technical support for the staff to use Black board but some staff members in 2007 mentioned that they have not had any formal training from UNITEC and the rest of them had training but it was not very useful, and they are very keen to learn more. In addition to these opinions, one teacher in 2007 mentioned that this is the new way of teaching so this is our motivation.

Northover (2005) set out issues that concern teaching staff by adopting online learning. Those are as follows

- Increased workload
- Technology issues (IT literacy for both students and staff and IT currency for individual and institution)

Malcolm (2003) noted the extra difficulties as follows

- Increased workload
- Difficulties with technologies
- Lack of recognition of online learning compared to face-to-face and organizational issue

The challenges identified by staff members in 2007 were slightly different than Malcolm's findings, two staff members had no challenges and the rest of the challenges are as follows

- Blackboard could be slow
- very limited ... won't allow to do HTML very well
- increased workload because course notes should be conversational
- have to have expertise to ... make modifications to the documents and add links

In summary, we are able to notice the different approaches to adopting or using technologies to deliver education, also staff in 2007 have more widely favored use of technologies to deliver education.

6.7 SUMMARY OF THE FINDINGS

This research project focused on flexible learning delivery of UNITEC's course delivery and seeks to identify the challenges faced by students and staff; it also concentrates on identifying the technical difficulties encountered by students from various ethnic communities of New Zealand. The purpose of identifying the challenges is to find out the opportunities when the identified challenges and difficulties are resolved.

6.7.1 CHALLENGES

Face-to-face interaction between students and staff: - students like online environment as a complement to face-to-face classroom sessions and they strongly agreed that interaction between students and staff is very important. So they favor mixed mode delivery, even though online learning has become very popular among the younger generation. Majority of the students agreed that face-to-face interaction is important for effective teaching and learning processes, and students with English as first language (EFL) are more positive than the students with English as an additional language (EAL). International students are more positive than domestic students but the difference is very small

Total online learning: - students like the online learning mode, but they found that lack of face-to-face interaction, lack of immediate feed back and lack of communication between students and staff are big challenges. Students rejected the idea of total online environment; they prefer the mixed mode delivery. International students are more positive than domestic students. About 30% of the students from both groups are not sure about the total online learning. Students with English as an additional language (EAL) are more negative than the students with English as first language (EFL). There are more EFL students who are not sure than EAL students.

The role of the teachers: - teaching staff found online learning as a new way of teaching that has a significant amount of appreciation among the students, but staff members need more training to utilize the electronic tools to get maximum use out of it. The learning and

teaching environment has changed from teacher - centered to student-centered so the staff members need to follow the different guidelines to prepare the course notes as one of the staff members mentioned *“you have to be creative to write in a way that is conversational ... you also need to engage the students”*

6.7.2 OPPORTUNITIES

Availability of course documents:-survey results indicate that availability of the course resources on the internet all the time can help students learn well, because it provides opportunities to access the notes anytime and they are better prepared for the class beforehand. They argue that they can have at least a small background knowledge about the topic they are learning in the class before they attend the class. Even in the class they do not need to waste their time in taking down notes and they can concentrate on the presentation because all the notes are available on the website. Even if someone missed the class they do not need to worry because all the course content and the resources are available on the websites and they can visit it at anytime convenient to them. EAL students are more positive than EFL students but the difference is only 1% International students are more positive than domestic students (by 4 %)

Advantages of E learning: - the majority of the students agreed that there are advantages in online learning and they believe that online learning is a convenient way of seeking knowledge and they are able to organize their time along with other commitments. On the other hand, students expressed their belief that online learning has advantages but interaction is important for effective teaching and learning. They argue that online learning will be effective if it is used as a complement to face-to-face and not as a replacement. Students with English as first language (EFL) are more positive than the students with English as an additional language (EAL), more EAL students than EFL students are not sure. On the other hand around 20% of EFL students do not acknowledge the advantages of online learning and 9% among them strongly disagree whereas around 17% of EAL students do not accept while only 1% strongly reject the claim of the advantages of online learning.

Opportunity to study and work in same: - online learning creates the opportunities for more convenient, easy to access resources and much more facilities but students prefer to have mixed mode of face-to-face and online and they believe they can create a better learning environment with both modes. Majority of the students accept that the new mode of delivery enables them to continue their work and study at the same time. English as first language students (EFL) are more positive than English as an additional language (EAL) students; international students are more positive than domestic students

6.8 CONCLUSION

This chapter expounds the ideas of the prime stakeholders of the online learning (latest version of the flexible learning) which were collected through online survey and interviews. The common themes from the opinions of the stakeholders and the relevant literature were identified. So the data has been analyzed in relation to the relevant literature.

UNITEC offers very few papers in total online mode and the rest of the papers are offered in web dependant mode as defined by Richard (2005) *“Web dependant: students are required to use the internet for key “active” elements of the programme- e.g. online discussions, assessment, online project/collaborative work- but without significant reduction in classroom time”* (P.11).

The data from survey and interview indicate that students and teachers agreed on the convenience afforded by the flexible learning environment but both parties prefer to have face-to-face interaction even minimally. The majority of them reject the concept of total online environment.

This chapter focuses on flexible learning delivery of UNITEC’s course delivery and seeks to identify the challenges faced by students and staff, also concentrates to identify the technical difficulties encountered by the students from various ethnic communities of New Zealand. The purpose of identifying the challenges is to find out the opportunities if the identified challenges and difficulties are resolved.

The next chapter summarizes the outcome of the thesis and is titled conclusions and recommendations.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 AN OVERVIEW

The purpose of this thesis is to identify the challenges of flexible learning environment in the tertiary education sector. This thesis was planned as an institutional study using UNITEC as a basis for this research.

UNITEC is a well established tertiary education institute which offers around 1408 courses online; most of the courses are conducted by mixed mode and web dependent delivery, only very few courses are conducted totally online without face-to-face. As Richard (2005) noted

Web dependent: students are required to use the internet for course activity such as online quizzes and online assessments, but no deduction in classroom session.

Mixed mode: where students are required to involve in online activities, but they need to attend face-to-face sessions. Online activities can only replace part of the face-to-face sessions. (pp.11)

Students' opinions have been collected from an online survey and the author used relevant electronic tools to draw meaningful conclusions. The opinions of teaching and support staff were gathered from face-to-face interviews.

Survey and the interviews were focused around the flexible learning environment and its effect on students' learning and the advantages and disadvantages of the particular mode.

There are very few courses available at UNITEC using the electronic version of distance learning called online learning. The courses being offered one hundred percent online are designed for the student who is currently working full time as a nurse or at educational institutions and who cannot come to Auckland as well as students who are working and living overseas and want to follow a course at UNITEC.

This research project is focused on flexible learning delivery of UNITEC's courses and seeks to identify the challenges faced by students and staff, and the technical difficulties encountered by the students from various ethnic communities of New Zealand. The purpose of identifying the challenges is to find out the opportunities if the identified challenges and difficulties are resolved.

The following sections summarize the answers for the research questions. Section 7.2 (challenges) is covering first two questions, those are as follows:-

- What are the challenges faced by students, teachers and support staff which can reduce the effectiveness of the learning and teaching process?
- What are the learning/technical difficulties encountered by the students from various ethnic communities of New Zealand?

Section 7.3 (opportunities) is covering the last research question, it is as follows:-

- How can flexible learning be made more effective if the identified challenges and difficulties are resolved

7.2 CHALLENGES

(1) Face-to-face interaction between students and staff: -

Students like the online environment as a complement to face-to-face classroom sessions and they strongly agreed that interaction between students and staff is very important. So they favor mixed mode delivery even though online learning has become very popular among the younger generation.

The majority of the students agreed that face-to-face interaction is important for effective teaching and learning process, and students with English as first language (EFL) are more positive than the students with English as an additional language (EAL). International students are more positive than domestic students but the differences are very low.

Students like face-to-face interaction and they all have negative opinions about making the whole course available online without face-to-face interactions. Some of the opinions are as follow:

"It's very difficult to get the meaning of a question across in an email, whereas in face to face, discussions can become more meaningful so that a greater understanding can be developed" (EAL student)

"Important to increase knowledge, through explanation and lectures, increase motivation and inspiration, opportunity to ask questions, and ensuring social environment for students" (EAL Student)

"Communication is more than just words: body language, expressions and other non-verbal signs are important too. For me, the best communication is face-to-face--it's the fastest, and it's more dynamic" (EFL Student)

"It's important to be able to have contact with the lecturer if you have any queries or need one on one help with things. Also it is motivational to have to attend class" (EFL Student)

"You cannot learn without the emotional, physical responses or observational learning skills that come with developing therapeutic communication skills" (Domestic Student)

"There are some subjects that cannot be learnt just by reading the course material" (International Student)

Students found online learning very comfortable and convenient but they reject the concept of total online learning because they think interaction is very important for various reasons. The challenge identified by students is lack of face-to-face interaction, so online learning mode will be more effective, if it will combine with face-to-face interaction.

(2) Total online learning: -

Students like online learning mode but they found that lack of face-to-face interaction, lack of immediate feed back and lack of communication between students and staff are the big challenges. Students rejected the idea of total online environment; they prefer the mixed mode

delivery. International students are more positive than domestic students. About 30% of the students from both groups are not sure about total online learning. Students with English as an additional language (EAL) are more negative than the students with English as first language (EFL). More EFL students than EAL students are not sure.

In summary, students have positive opinions about migrating to new technology in education as an additional help for teaching and learning process, but they have totally negative idea about replacing face-to-face with online learning. As one of the students says that *"I tried distance learning thru Open Polytec, didn't work, I like the interaction with other people"* another student replied *"I would leave the course I am doing and go somewhere else where I would get face to face contact with lecture"*.

Older students and EAL students don't like total online learning and they argue that interaction is important, --- one reason may be the language barriers because some of the students mentioned that face-to-face can help to improve communication skills and clarify ideas.

Older students are not confident in online learning because of their unfamiliarity with the new mode of delivery.

International students are more positive than domestic students about total online learning----one reason can be that they are able to have more time to do what they are normally doing such as working at a routine job as, one of the students said *"I can do my studies from my country with an agreement with the education provider of new Zealand and I do not need to travel to NZ"*

(3) Role of the teachers: -

Teaching staff found online learning is a new way of teaching which has a significant amount of appreciation among the students, but staff members need more training to utilize the electronic tools to get maximum use out of it. The learning and teaching environment changed from teacher - centered to student-centered so the staff members need to follow the different guidelines to prepare the course notes as one of the staff members mentioned *"you have to be creative to write in a way that is conversational ... you also need to engage the students"*. The majority of the teaching staff

are not confident using electronic tools and they expressed that they need more formal training, but in general, they are all happy to use Blackboard as a tool for flexible learning because of more convenience, easy access and live update.

(4) Internet communication technology as medium of course delivery:-

Students accept that internet technology as an effective medium of the course delivery in an online learning environment, some of the opinions are as follows:

"I use books 24x7 on the e-journals via the library and use library catalogue to see if relevant books for my studies are available. These are just as effective" (EAL student)

"Blackboard and internet are great for downloading course notes but for success you must interact with the notes by lectures tutorials and text, talking to tutors, questioning" (EFL Student)

"its better to use the PC and internet as it is the only medium I know of that gives out fast and instant info Unless the education provider can think of a better 'tool' to give out info" (International Student)

"Computer and internet are the fastest way to deliver materials" (Domestic Student)

Internet technology can be a challenge to the staff and students if they haven't got enough experience. As we stated earlier, New Zealand is in a better position than developing countries to overcome this challenge but interviewing teaching staff shows that they still need more training and experience.

7.3 OPPORTUNITIES

(1) Availability of course resources:-

Survey results indicate that availability of the course resources on the internet all the time can help students learn well, because it provides opportunities to access the notes anytime and they are better prepared for the class beforehand. They argue that they can have at least a small

background knowledge about the topic they are learning in the class before they attend the class. Even in the class they do not need to waste their time to take notes and they can concentrate on the presentation because all the notes are available on the website. Even if someone missed the class they do not need to worry because all the course content and the resources are available on the websites and they can visit it at anytime convenient to them. EAL students are more positive than EFL students but the difference is only 1% International students are more positive than domestic students (by 4 %)

Students appreciate online learning as an additional help, some of their opinions are as follows:

"If all learning material is made available on the internet then it is an excellent way of learning through internet" (EFL Student)

"Gives different stuff to text books, interactive input and immediate access to any topic your heart desires. Library is good to go get a book, but you need additional topics when you want them. Right now" (EFL Student)

"Because it will be easier to access the information that we need and also by making activities available, it will make revision easier as we wouldn't have to wait to see a lecturer"(EFL Student)

"I think it was helpful, such as black board, all of my classmates can place their ideas and opinions on BB, we can share views and discuss topics, and even don't have to meet together, it saves time" (EAL Student)

"Availability of lecture notes before class and group notices/participation" (EAL Student)

"For the internet is the biggest library in the world. Libraries at the local Institutes such as Unitech library, community library are very outdated at times. I find e-learning more efficient too" (Domestic Student)

"I am living in Germany now and finishing my dissertation and without e Tools (mail, chat, etc.) this would not be possible" (International Student)

Availability of the course resources will create a way to learn any time students like, they can refer the notes at a time that is more convenient to them. Almost all the students welcome this opportunity regardless of age group, international or domestic student status, EFL or EAL and the time stayed in NZ. Normally course resources are uploaded into the websites in text format but this opportunity will be more effective if the course resources are combined with some interactive activities, like streamed video.

(2) Advantages of E learning: -

The majority of the students agreed that there are advantages in online learning and they believe that is a convenient way of seeking knowledge and they are able to organize their time to fit in with other commitments. On the other hand students expressed their belief that online learning has advantages but interaction is important for effective teaching and learning. They argued that online learning will be effective if it is used as a complement to face-to-face not as a replacement. Students with English as first language (EFL) are more positive than the students with English as an additional language (EAL), more EAL students than EFL students are not sure. On the other hand around 20% of EFL students do not acknowledge the advantages of online learning and 9% among them strongly disagree and around 17% of EAL students do not accept while only 1% strongly rejects the claim of the advantages of the online learning.

Students realize the advantages of online learning because it provides the flexible learning environment and students can up skill themselves while they continue their routine work. Some of their comments included

"It helps when it's hard for me to attend the class for work purpose" (EAL Student)

"I work in a very busy hospital in shift work so it is very helpful" (EFL Student)

"You could do it at work in quiet times depending on the job" (Domestic Student)

"If unable to attend a class, the notes etc are still available" (International Student)

Of course there are advantages but it can be more effective if the course is combined with face-to-face session, at least once a week, as one student mentioned that

"It's very difficult to get the meaning of a question across in an email, whereas in face to face, discussions can become more meaningful so that a greater understanding can be developed" (EAL student)

(3) Opportunity to study and work in same time:-

Online learning creates the opportunities of more convenience, easy access to the resources and much more facilities but students prefer to have mixed mode of face-to-face and online and they believe they can create a better learning environment with both modes. The majority of the students accept that the new mode of delivery enables them to continue their work and study at the same time. English as first language (EFL) Students are more positive than English as an additional language (EAL) students and international students are more positive than domestic students.

It is more convenient to work and do the course through online, but it will be an effective mode if the course components include a face-to-face mode even around one session per week. Streamed video and live video sessions can be utilized to teach student from out of geographical boundary. Support staff argue that pure flexible learning using electronic tools cannot replace the face-to-face environment and it can give an additional help to the students.

All staff have strongly agreed on adopting electronic devices in flexible learning environment and their reasons as follows:

- Students are expecting to use electronic devices in their studies because of the trend of this era, they start using electronic devices when they are in primary school so they like to use the same style in their tertiary education as well.
- Students like the online mode because this will allow them to do their courses without disrupting their routine work etc.
- The course should be attractive, if the Black board used as parking space there are no attractions for students.

In summary, UNITEC offers few papers totally online but 1408 papers have online components. It means those papers are using sort of online learning activities but relatively low. Support staff

welcome the idea of using electronic tools for learning purposes but they all have negative opinions about replacing face-to-face with online and they all agreed that “Blended is Best”.

7.4 CONCLUSION

Online learning (latest version of flexible learning) provides an opportunity for students to have convenient learning because they can arrange their study time to suit their other commitments, but there are many challenges found in implementing online learning in an effective way. In summary students prefer mixed mode with face-to-face and online rather than total online learning.

As far as teachers are concerned, adopting this new mode of delivery can make them confused because they trained to teach face-to-face and the ability to handle the technology is also a challenge. So the new opportunity will be most effective if the teaching staff is provided with enough training to teach online.

7.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Flexible learning environment is growing rapidly and the new technologies were utilized from time to time to enhance the flexibility of the particular mode. E learning, M learning and virtual classrooms have been made possible because of the latest technologies. There is a need to repeat this research again after some time because of the rapid growth of the technology. Also it is possible to have a different mode of delivery which will differ from the current learning modes.

Also the future research needs to be done in developing countries because of the situations they face. As Butterfield (2002) says, the challenges of implementing E learning differ in many countries. This research project concentrates on the challenges faced by students and staff in New Zealand. Hence there is a need to look at the challenges in developing countries which will be much more different than here in New Zealand.

More research also will be useful to explore the opportunities and the challenges to market the New Zealand educational products to developing countries (eg.Middle East), because the people who are working in industries would like to up-skill them selves without leaving their jobs in order to obtain better positions in their industry or to secure their current jobs. Universities from Europe and United States already started to market their educational products but New Zealand

educational products will be appreciated by the people in Middle East because of the value of the currency.

More research will be valuable in exploring the difficulties involved in implementing virtual class room using the new technology called virtual mentor (VM). VM is a programme in which the education provider or teacher can upload lessons using the interactive video clips and students can watch it using their provided username and password. It is like a class room session because the teacher will explain a particular topic and the students can listen to that lecture in the same way they listen in a class room; also, students type their questions on the screen and the system displays the answer from a data base (such as the Google search results). There is a need to research the difference between face-to-face classroom sessions and the VM sessions. So research on expounding the opportunities and challenges in virtual classroom will be valuable.

Flexible learning has become more popular among students and other professionals because of its convenience, mainly e learning offering more chance to educate people regardless of where they are and what they do. It will be possible to enjoy different modes of delivery in the decades to come.

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9 APPENDIX

9.1 SURVEY QUESTIONS

1. Is English your first language?

Yes

No

2. Are you an International student?

Yes

No

3. In what country were you born?

4. How long have you been living in New Zealand?

1 - 4 years

5 - 9 years

10 - 14 years

15 - 19 years

20 years or more

5. What is your age group?

16-21

22-27

28-33

34-39

40-45

6. Do you think adopting e-learning (learning materials and activities available on the internet) in your course will be helpful? (Choose one answer and state the reasons at the end)

- Very helpful
- Helpful
- Not sure
- Not very helpful
- Not at all helpful
- Please state the reasons -----

7. Do you think face-to-face interaction between students and teaching staff is important? (choose one answer and state the reasons at the end)

- Very important
- Important
- Not sure
- Not very important
- Not at all important
- Please state the reasons -----

8. How many questions do you normally ask the teaching staff each week face-to- face?

- None
- 1-3
- 4-7
- 8-11
- 12 or More

9. How many questions do you normally ask the teaching staff each week via e mail?

- None
- 1-3
- 4-7
- 8-11
- 12 or More

10. Do you think availability of course documents on the e-learning site at all times will be useful for learning?(choose one answer and state the reasons at the end)

- Very useful
- Useful
- Not sure
- Not very useful
- Not at all useful
- Please state the reasons -----

11. There are advantages for e-learning over the traditional classroom learning (choose one answer and state the reasons at the end)

strongly agree
agree
not sure
disagree
strongly disagree
Please state the reasons -----

12. Suppose your course has no face-to-face interaction and has totally become online learning. What is your opinion about it? (Choose one answer and state the reasons at the end)

Very useful
Useful
Not sure
Not very useful
Not at all useful
Please state the reasons -----

13. Do you work during your studies?(choose one answer and state the hours at the end)

Full time - More than 40 hours a week
Full time- about 40 hours a week
Part time-----hours(Please state how many hours per week at the end)
On call ----- hours (Please state how many hours per week at the end)
Not working at all
Please state how many hours per week on average -----

14. To what extent would e-learning help you to continue your work and study in same time?(choose one answer and state the reasons at the end)

Very helpful
Helpful
No difference
Not very helpful
Not helpful at all
Please state the reasons -----

15. Do you have access to a computer at home?

Yes for my sole use
Yes but sharing with others
No

16. What sort of internet connection do you have at home?

Dial up
Broadband
No internet connection

17. How is fast your internet connection?

Very Slow
Slow
Medium
Fast
Very Fast

18. How many hours per week do you normally spend on the internet?

Less than 5 hours
5 to 9 hours
10 to 14 hours
15 to 19 hours
20 hours or more

19. Do you normally use antivirus software (such as Norton Antivirus) to protect your computer data?

Yes
No

20. How you feel if the computer gets slow while you downloading the course materials?

I get frustrated and cannot tolerate waiting
I wait and do some other thing until the download is completed
I always use Unitec labs to download because those are faster

21. There are better ways by which we can get course materials other than through computer and internet (Choose one answer and state the reasons at the end)

strongly agree
agree
not sure
disagree
strongly disagree
Please state the reasons -----

9.2 INTERVIEW QUESTIONNAIRE

9.2.1 TEACHING STAFF

1) Does your course have any compulsory online activities for students?

- a. Yes
- b. No

2) What percentage of the course materials is online?

- a) Less than 20%
- b) 20% to 39%
- c) 40% to 59%
- d) 60% to 79%
- e) 80% or more

Pedagogy

3) What were your expectations in using Blackboard to deliver a course?

4) What are the tools/activities in Blackboard that you use during the delivery of your course?

5) What Blackboard activities do you feel are most beneficial to your students?

6) What was your motivation to start using Blackboard first time?

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

8) What is your opinion about continuing to use Blackboard to deliver the course?

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

10) What are the challenges in using Blackboard as a tool to deliver the course content?

Convenience (Flexibility)

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

12) Which Blackboard features have helped make your workload either less or more efficient?

14) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

15) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

9.2.2 SUPPORTING STAFF

1) What is the goal or target of the institution in implementing online learning?

2) Can you explain the infrastructure required to set up an online learning course?

3) Did your organization require any restructuring to adopt flexible learning?

4) Why is your institution using Blackboard rather than other systems (Eg Moodle)?

5) Which instructional design theories should be considered when setting up a flexible learning environment and why? **(This question is for the staff from centre for teaching and learning innovation)**

6) What is your opinion about the cost of setting up online learning per course?

7) Do you think the institution can save money through online learning?

8) What support staff are involved in setting up and maintenance of online learning?

9) Please indicate the approximate percentage of teaching staff involved in online learning?

10) Which schools are conducting online learning courses in your institution?

11) Is your institution encouraging staff and students towards online learning? If yes, how?

12) Are there any rewards for teachers for developing online coursework? If yes, what?

13) Do you think your institution is succeeding in online learning? If yes, what is your evidence?

14) Do you think online courses are popular among students in your institution and why ?

- 15) Is there a difference between the drop off rates between class room learning and online learning? What do you think about the reason? Have you got any data?
- 16) Do you think the online learning system has changed or will change the way students use the institution resources?
- 17) Do you think online learning systems will attract the students in New Zealand and overseas? Why?
- 18) What are the risks and challenges you identify in implementing online learning?
- 19) Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?

10 INTERVIEW TRANSCRIPT

10.1 TEACHING STAFF

(1)

Name of the Staff: [REDACTED]

Interview Date: - 27th October 2006

1) Does your course have any compulsory online activities for students?

No

2) What percentage of the course materials is online?

80% or more

Pedagogy

3) What were your expectations in using Blackboard to deliver a course?

I use Bb to provide resources to my students

4) What are the tools/activities in Blackboard that you use during the delivery of your course?

Used for directing students to useful websites, especially as my course is about internet applications. This is done through links in Blackboard.

I use the chat room to communicate with my students on a weekly basis because I only see my students once every 4 weeks. Without this students who have questions will have to use email or the telephone or make an appointment to see me. To overcome this disadvantage I use the chat room on a weekly basis, normally on Wednesdays at 9 pm.

5) What Blackboard activities do you feel are most beneficial to your students?

Chat room

Links to resources

Course materials - lecture materials and course information

6) What was your motivation to start using Blackboard first time?

To make my course resources available to the students 24x7, this is my motivation

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

Not at all

8) What is your opinion about continuing to use Blackboard to deliver the course?

I believe that it is great way even though my courses are not delivered online but if it is necessary my course can be delivered online.

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

The statistics on the site show that the students are accessing the materials and most have found the resources useful.

10) What are the challenges in using Blackboard as a tool to deliver the course content?

None, it is very easy to use.

Convenience (Flexibility)

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

Of course

12) Which Blackboard features have helped make your workload either less or more efficient?

Ability to make resource material available to students

Access 24x7

Chat sessions on a weekly basis

The convenience of the e-mail setup.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

Perhaps video conferencing would be a useful enhancement.

14) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

No, I have not had any formal training. I do not find Blackboard hard to use.

(2)

Name of the Staff: - [REDACTED]

Date of Interview: - 16th November 2006

1) Does your course have any compulsory online activities for students?

Yes I do I have some mini tests as part of the formative assessment, mostly quizzes. They do submit other assessments on the Bb now.

2) What percentage of the course materials is online?

Quizzes depend on the course, in one course I have around 5% of the whole marks, they actually do one quiz every one or two weeks, we have 8 quizzes to do. But also in addition to this I have "group tutorials" which originally have meetings in class and the groups go out and communicate through file exchange and they post up the assignments a week after they start and they are also worth about 1% of the over all marks each. I also get them do home pages just to know their background and their photos go up too. So the part of the assessments for the particular economics course is 10% of the total.

Pedagogy

3) What were your expectations in using Blackboard to deliver a course?

Great for archiving and the materials you use. You just can put it up there for them whether news articles or some other articles Some materials you don't use which is interesting. You often come up with news paper stories, things like that which are relevant to the topic. Whether you end up using it or not, they can be background reading for students or you may use it as base of the assignment questions.

4) What are the tools/activities in Blackboard that you use during the delivery of your course?

So the content area is the main one: your course materials, lecture notes and handouts which are very important, as PDF file and power point slides. I normally put up the assignments and few weeks later put up the solutions, I also put up some practice quizzes which are similar to the original quizzes which they can do first.

5) What Blackboard activities do you feel are most beneficial to your students?

That is beneficial because they are doing a little bit on each topic week by week and because they are keeping up with the course. If you have an assignment due after seven weeks they won't do anything until closer to the due date, so it's really beneficial to keeping up getting feedback. Often the students tell me that when the stuff explained in the classroom is straight forward, then they go and do something, then they think this is

not so easy.

6) What was your motivation to start using Blackboard first time?

Well I guess at that time we did when I was starting it. My point of view is I don't mind because I would probably want it anyway. So I guess we did but that wasn't a problem for me personally

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

Policy and our senior admin person Pam Malcolm was pro-active in terms of providing online support for our course, so she took initiatives, using Bb, putting up materials and so on. I do have background in IT for many years so I am one of those who are very keen to get maximum use of it.

8) What is your opinion about continuing to use Blackboard to deliver the course?

It is not quite delivery online because we have normal lectures but Bb is the main resource backup and the administration stuff is all there. So you don't have to spend much time in class for administration things because it's all there.

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

Generally they are always asking for things to be put on. I don't get people saying "waste of time" or anything like that.

10) What are the challenges in using Blackboard as a tool to deliver the course content?

Two kinds of challenges. The positive challenge really helps you in terms of your own development of the course so I think it make the course a better course for having to manage it in terms of timing and every thing. Then there are challenges in terms of features, some features are slow, other feature becomes very slow when you copy stuff. We cannot fix the questions on the quizzes because all of the questions for quizzes come from the pool.

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

Definitely and also even for databases that we have in the library - students can login from outside the library using the Unitech login and they can access materials from their homes. Materials we use are a statistical database called infox which students can either use at the library or the lab here but if they prefer they can download the software and

use it from home.

12) Which Blackboard features have helped make your workload either less or more efficient?

I am not sure that they made it less or more efficient. So far I have been hoping that - even things like quizzes. Just managing, but I am getting there, we are having lots of multi questions now. I am able to make minimum changes semester by semester. Otherwise if we need to redo the stuff each semester that becomes time consuming and takes quite long a time to manage the resources.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

I would say the more important thing is to make the main one fast and efficient rather than just having lots and lots of alternatives. I think even though I have got broadband at home still some things are quite slow. I know in America broadband is a lot faster than ours. Students are still using dial up connections and they get frustrated if the Bb is slow. So if the features get bigger, the process will be slower and they need to go to many screens to get what they want.

14) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

We had one or two earlier on. We used to go to the Bb user groups but I am sufficiently experienced in Bb, people in our school still come to me for help. I have been to one or two sessions that Thomas and others used to put on but I haven't been doing digital media movies and that kind of stuff. I haven't really got a call for it so I quite like to learn more about those things but don't get to use them. I will forget them if I am not using them, so that is the problem with the more advanced stuff.

(3)

Name of the staff member: [REDACTED]

Date of Interview: - 10th November 2006

1) Does your course have any compulsory online activities for students?

Yes, I will talk about two courses that I run. They are both for people who trained for my profession and they are up skilling to a bachelor's degree in the discipline. So all the students require lots of activities in order to understand the material and it is very much related to their practice

2) what percentage of the course materials is online?

100 %

3) what were your expectations in using Blackboard to deliver a course?

First of all it is a flexible learning environment particularly for people in my profession who work full time and have family commitments and need to be able to identify when they can do study because they work often seven days a week. They do shift work so flexibility is really vital.

My expectations are they will engage with the course every week for fifteen hours. I have set topics and modules to do each week and I suggest students put in eight hours per week to do the preliminary work and of course any assignments and researches on top of that.

4) What are the tools/activities in Blackboard that you use during the delivery of your Course?

There are lots of facilities to access library sites and websites from all over the world

5) What Blackboard activities do you feel are most beneficial to your students?

I think discussion board. Students require to read material, respond to it, interpret it themselves and share with other members. And also they have opportunities to support each others in their learning because they put up a brief profile at the beginning of the course, saying why they are doing the course and what they want to get out from the course. Also I really encourage the people to engage in the activities related to the module.

6) What was your motivation to start using Blackboard first time?

The Bachelor of Nursing degree puts the materials online but having said that, I think it is also important as I mentioned earlier because of the practice nature of nursing. Because of the wide hours people work I think they need the opportunity to receive education that doesn't require them to come and sit in classes.

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

As I mentioned earlier there was a requirement from within our management structure to offer our courses online as well as within the classroom (the normal every day classroom experience). So some of our students can do other courses within the Bachelor of Nursing program online as well. The majority of our courses are taught face-to-face to students in the classroom, but nearly all of the course however are also on Bb, even though they are taught in the usual mode: face-to-face situation

8) What is your opinion about continuing to use Blackboard to deliver the course?

Two online courses I will continue to use and develop them. I am getting new resources for them and I want to develop my expertise and delivery as well. I would very much like to do teleconferencing but the cost and ability to get the people in same place and the same time is virtually impossible so that's why I really intend to use the discussion board. Also the numbers of students are relatively small, but I have had student from Saudi Arabia, Samoa, America and South Island, so I have to try to meet all of their needs and teleconferencing is very expensive for the small number of students.

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

Yes I do. We don't have a formal procedure such a Sequel, but I always ask the student of the course too to get the written feedback. Because we are colleagues and we are all registered nurses, the feedback has been very positive.

10) What are the challenges in using Blackboard as a tool to deliver the course content?

The challenges to me and to many registered nurses are for a long time they didn't do any academic work. I would like to be able to offer the catch-up academic writing course before they begin because I do find I need to do one-to-one coaching and I give lots of formative feed back on assignments before they actually submit summatively.

I often choose to work from home every Thursday to deliver this course. Sometimes it's slow working off the campus and sending every thing electronically to Unitec: then I found loading and unloading and the time factor is very difficult

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

Yes it is for that reason. Sometimes I could wish that I have students sitting in front of me. It is very much easier than so much use of the technology and I frequently invite students in the Auckland area, if they can, to come in and go things with them one-to-one.

12) Which Blackboard features have helped make your workload either less or more efficient?

Digital drop box and Turnitin. I do find this reduces plagiarism and helps students to understand the academic writing style.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

I am not sure that I can answer accurately because I don't think I know enough about Bb.

14) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

I do but mostly ask other colleagues how to use it. I have been using it for three years but I didn't have any formal training.

(4)

Name of the Staff: - XXXXXXXXXX

Date of Interview: - 6th November 2006

Questions for teaching staff

1) Does your course have any compulsory online activities for students?

Yes, just discussion board, it is compulsory because there is an assessment attached to it worth 5%. In some courses there is compulsory discussion board; in others there is no compulsory activities.

2) What percentage of the course materials is online?

Well depends on which course we are talking about , some of my courses are totally online; some are supported 50% and some just have class notes and backups
One Postgraduate course called Healthcare ethics is totally online, for example students may be in Auckland or they may be in Samoa, one of my students is in Samoa at the moment, so they can be anywhere.

Pedagogy

3) What were your expectations in using Blackboard to deliver a course?

I expected to produce same kind of learning as classroom learning; obviously this would be in different way

4) What are the tools/activities in Blackboard that you use during the delivery of your course?

Discussion board
Course materials
Course documents
Staff profile
Assessment section
Digital drop box
Course statistics
Groups
Settings

There is group discussion board but I don't use it with all the classes because it doesn't always work, but it can be useful. And I use the facility to attach files; I provide lots of websites where I want my students go to.

in the lecture Initially I give them live links for the website in the 'lecture' and later in the course I might give them URL for the web site so that they can go to the website by them selves;, and later in the course I might give them the key words so they have to find the articles from websites or data bases. , So it is a kind of incremental process.

5) What Blackboard activities do you feel are most beneficial to your students?

I use variety of activities for each module. I will have lecture, sort of me telling the stuff , but even in that some links go to this or asking 'what do you think?', so little bit interactive and then the package (for a module) will include a 'tutorial' which asks the students to go to places, respond to questions. They might have to submit something via the digital drop box or they might have to contribute comment on the discussion board or they might attach file on discussion board

6) What was your motivation to start using Blackboard first time?

It was a very long time ago when I start using Bb. My motivation was 'this is the new way of the teaching' and I have to just find out about it.

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

No

8) What is your opinion about continuing to use Blackboard to deliver the course?

I think it is fine, but I think some people don't do it well, I think that staff need support to learn to use it very well. I had a colleague recently who asked me to introduce the Bb to her students because the guess speaker was sick. So I went to the class room. (before this I had said to her you need to logon to the course she asked me how do I do that?) So I got on to the course then when I got to her classroom students didn't have their IDs and password , nothing had been prepared so I had to do all of that. Then when I got her course on the screen to introduce it to the student there was nothing there - no course content, no time table just a message of welcome to her students. And to this date there is nothing on that particular course site.

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

Some of them don't like it because they want face-to-face learning and rest of them like it because they are always asking me for the course notes without (so they don't have to attend) attending the class

10) What are the challenges in using Blackboard as a tool to deliver the course content?

You have to be creative to write in a way that is conversational; still you have your own style of delivery; you also need to engage the students, that can be really hard. I say to them 'you can sit in front of the computer and let the words flow past your eyes or you can engage with them. I try to identify activities which can help them think and engage with the materials and that is why we have live links. It is also important that they go

back and forward answering questions and making reflections. That can help if they do it; if they don't engage with the material and activities, their learning will be compromised.

Convenience (Flexibility)

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

Yes, that is true. When I was in Norway about 5 years ago I was able to teach students from the university I was visiting. So I could logon to the Unitec site; I could write my comments to the students; I could read their assignment and I could continue my teaching.

12) Which Blackboard features have helped make your workload either less or more efficient?

It doesn't reduce the workload because of the need to prepare the notes in a different way. (in regular teaching) you can go to the class room talk to the students but in Bb learning you need to make the sentences very clear. You need to make sure audience understands the sentence; you can't look at the students and see that they don't understand. For lessons that are uploaded (from a previous year), for example, the course running at the moment is one which I updated at end of last semester and during the semester break. I worked every day to get it ready to go then I put it up and I set the release day for every module, But still I need to monitor it and check every links every week, because they can 'decay' or otherwise not work.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

There are services on Bb that we not using yet for example we could do more assessment on Bb but we haven't got familiar or our school doesn't use it. We could do multiple choice questions and tests but we are not using it. I always promise my students every year to put up 30 seconds video clips but I haven't got around to doing that. So a number of facilities are there, but we not using them.

14) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

When I began using Bb there was no course. I attended some of the user group sessions, but most of what I know I learned from more experienced colleagues, or worked out myself.

(5)

Name of the Staff:- [REDACTED]

Date of Interview:- 7th November 2006

Questions for teaching staff

1) Does your course have any compulsory online activities for students?

I can't really answer yes or no to that because yes indirectly, we don't state as compulsory but if the students don't use it they can't complete the course so indirectly compulsory but we don't state as such. You can do the whole of the course by distance, you don't have to come on campus at all, so all the materials are on Bb. But if they choose to they can use materials from books. We don't make them use Bb but obviously Bb facilitates learning much more.

2) What percentage of the course materials is online?

What? Percentage of what? Nearly all the materials are online, more than 80%, is it what you are asking? What I am saying is that is there but they don't have to use it if they don't want to.

3) What were your expectations in using Blackboard to deliver a course?

Expectation of what? Well if the students don't use the Bb then they need to access their own materials, so Bb provides the vehicle to provide materials.

4) What are the tools/activities in Blackboard that you use during the delivery of your course?

Discussion board, which is not compulsory, and communicate via Bb.

5) What Blackboard activities do you feel are most beneficial to your students?

We don't do activities on Bb . Students don't seem to use communication much via Bb, they use each other's email addresses and the discussion

board is rarely used. The main function of Bb is to provide the resources.

6) What was your motivation to start using Blackboard first time?

Well I didn't start the course up with the Bb tool but I do know that UNITEC is the only provider for MRT in New Zealand in health science. Because many of them are living out of Auckland, the intention was to provide the research methods course for postgraduates even if they don't get to Auckland or UNITEC.

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

No

8) What is your opinion about continuing to use Blackboard to deliver the course?

It is probably a good vehicle for reaching the students who can't get on campus. I had students in Bahrain and Canada complete the whole course and get as much as grade A- without ever being in UNITEC, they had done all courses online.

9) Did you get any feedback from your students regarding online delivery of their study? If so, how did they feel?

Yes I have, I have got an evaluation sheet which I prepared for distance students and they are extremely positive, I hardly ever get any negative comments because the students who use it completely online and other ones who use it for the reason they can't get here, so obviously if it has got lots of materials on it which is really useful, then it is a good vehicle and I obviously support the use of Bb through much communication with students by e mail.

10) What are the challenges in using Blackboard as a tool to deliver the course content?

Well I guess if someone is going to use Bb as a tool they have to have expertise to move around the site to make modifications to the documents and add links to live sites as extra materials sources I guess.

Convenience (Flexibility)

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

Well I think I more or less stated that. It must be useful because students who can't come to Auckland are using it because of flexible means. Whether or not flexible enough I can't answer that, but flexible way for MRT and health science people who are professionals to access learning tools when they don't come to Auckland

12) Which Blackboard features have helped make your workload either less or more efficient?

Discussion board. You have to keep monitoring it, I monitor it now and again because it is not an essential tool for the students to keep in contact with each other because it is not assessed. It might be an assessment tool I have to assess through. The assessments are written assessments or video presentations. The other tool on the Bb is the digital drop box where they can drop their assignments if they choose. One of the things that increases my workload is I have to go there every year on a regular basis and substitute the sites, so when I have links to external sites where the materials are and they go dead, then you have to get substitute sites in. That is one thing, the materials don't need a huge amount of updating because we have so much on there, there is quite a breadth and depth of text that students can access. Lecturers on the course that I coordinate, they actually will put their presentations on there, so PowerPoint presentations are on there.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

Well I don't know what other facilities could be available because I don't really know enough about Bb as a tool apart from what I utilize at the moment

14) Have you had any training to use Blackboard to deliver the course? If so, did you find those sessions helped you to get a good understanding of how to use Blackboard tools fluently?

Yes I have, not particularly useful. I wanted some more practical tuition I guess on the use of Bb but I didn't get it. I learned a lot about Bb by just using it myself, doing it by trial and error and asking people to help me, assist me where possible

(7)

Name of the Staff: - [REDACTED]
Date of Interview: - 7th November 2006

1) Does your course have any compulsory online activities for students?

No

2) What percentage of the course materials is online?

100%

3) What were your expectations in using Blackboard to deliver a course?

Having using Bb and before WebCT for years and I expect in particular course that I am using it simply store the documents that the students need for the course and they download the course work there and I put up various files including audio files so I expect them constantly monitor what is up on the web site

4) What are the tools/activities in Blackboard that you use during the delivery of Your course?

Course documents, announcements and just about everything

5) What Blackboard activities do you feel are most beneficial to your students?

The course documents being get everything what they want to do

6) What was your motivation to start using Blackboard first time?

I am the one who start the first website in the school , I was using Web CT in 1995 and Bb didn' t come until 1997 , we were using Web CT as an independent site , in 1997 UNITEC stop supporting Web CT so only thing they offer was Bb so develop the course through Bb . Bb is flexible compare to web CT

7) Do you experience pressure to use Blackboard from anyone? If yes who are they?

Our school encouraged all of us and everybody doing it except one person, I am the one in charge for it and one person refused to do that.

8) What is your opinion about continuing to use Blackboard to deliver the course?

Students are expecting the resources to available 24/7 so I think better continuing

9) Did you get any feedback from your students regarding online delivery of their study? If so, how they feel?

I got the feed back and they are satisfied with online learning

10) What are the challenges in using Blackboard as a tool to deliver the course content?

Very Limited to do the things won't allow to do HTML very well, you are stuck with their format but people who don't know how to program HTML and using the point and click it is ok.

11) Did you find using Blackboard is more flexible because you can access it from anywhere you like?

No I am always access here I only have dial up home so I always come here and do the work from here

12) Which Blackboard features have helped make your workload either less or more efficient?

I wouldn't say anyone in particular I don't think helps efficiently because even if we put the notes up there students come to the class without reading them so it doesn't help them basically Bb is the Parking place or storage unit for the course documents, one of the thing happen it reduce my load carrying stuff in the class but that is not efficiently, it will take such a long time to put up the things and take time to make changes every year so that is time consuming.

13) Do you think any more facilities need to be added to Blackboard to enhance the teaching and learning activities?

They do update all the times, at the moment you can load single things and you can delete single thing but they are working on document management system to overcome this

14) Have you had any training to use Blackboard to deliver the course? If so, did you

tools fluently? find those sessions helped you to get a good understanding of how to use Blackboard

I had at Unitec and I had a session outside UNITEC as well, the session which I had outside is more useful

10.2 SUPPORTING STAFF

(1)

Name of the support staff: - [REDACTED]

Date: - 7th November 2006

1) What is the goal or target of the institution in implementing online learning?

I think probably try to achieve that lecturers are aware of the tools and they feel less scared about those technologies, and try to see the potential of the tools, and try to engage them in teaching practices. Our role is basically just support and pointing out the directions where technology is going, kind of introducing the interesting ways of using technologies in teaching. I think the goal will be to have as many lecturers as possible using some innovative technologies that help the students learn.

2) Can you explain the infrastructure required to set up an online learning course?

Right now we have our servers, we have several servers, two or three of them are running Bb. One of them is really the Bb server, another one is a test server, the third one is a pre-test server. So we have three servers that just have Bb running, and the two servers are kind of test servers where we are trying our experimental things, that we install things on, they don't have to be up and running all the time. Because we have all the students accessing the Bb service server we have to make sure that is available all the times. So we have dedicated servers for just testing stuff, and we have one staff member basically full time taking care of the Bb servers.

Another staff member is dealing with daily issues regarding Bb, she/he answers all the queries and kind of helps lecturers with practical things. So the site is hosted by IT development and maintained by IT guys as well.

The institution has 10 thousand students, hundreds of staff and lots and lots of courses online these days and lots of other tools and systems available. So we do not need an expensive setup especially if the educational institution is smaller and there are much more things available.

3) Did your organization require any restructuring to adopt flexible learning?

One thing about our learning management system is, it is very expensive to run, the annual fee is very expensive, actually next year we will try to look at other systems. As you know these days lots of open source systems are available, which are as good as Bb, even better than Bb, and we have to take into account the size of institution we are dealing with. Also when we come to choosing the system, the e learning system is not only the system itself but also maintenance work and if for example we choose the system based on the price based on the factor of free and then we run into problems later and nobody will help us, so it will be much more expensive actually than if we keep paying Bb for their license fee.

But we are trying to pre-empt any kind of surprises so we will looking at several systems and we will try to evaluate the kind of features they offer, you know the stability of the system. How easy is the administration and it is actually meaningful? Is the system good for the kind of learning which we want to promote?

4) Why is your institution using Blackboard rather than other systems (Eg Moodle)?

Moodle is one of the candidates; I think that one reason, one very important and good thing about Moodle is that is based on social constructivism theory. Actually it is a pedagogically sound tool compared to Bb. That is kind of more like a content management system and so Moodle is one of the tools we are looking into. The first of the things we are actually trying to evaluate is the kind of learning it promotes. I think Moodle really encourages lots of group work and collaborations and kinds of support, while other tools may be much more suitable for putting the slides online and publishing contents, not so much students interaction

5) Which instructional design theories should be considered when setting up a flexible learning environment and why?

Well, I think in here we are all believers in social constructivism - the idea that learning happens when people interact in groups and knowledge is not something to be absorbed and learned but something to be constructed so the students when they learn actually don't take the information in, they are not empty vessels to fill with the information.

But actually build knowledge and build it through interaction with their peers, and lecturers, reading materials and through learning activities.

Social constructionists came up early in the 20th century but at that time there were no tools to support all these things, so these days lots of online tools, lots of learning tools are based on this theory.

Actually when technology developed towards that direction everybody realized ok this is actually really good to support this type of learning. It seems it is changing towards to that direction and the people more and more are learning as a group through projects not so much kind of lecture deliveries.

6) What is your opinion about the cost of setting up online learning per course?

Well once again it depends on the scale you want to have, an institution license is US\$ 55000, beside all the maintenance work, servers, and system updates.

7) Do you think the institution can save money through online learning?

I think currently UNITEC uses a blended learning approach, meaning using distance and face-to-face. In that sense not probably much cost saving because still have to have people coming down to the classroom, maybe you can save on printing cost and read on screen.

8) What support staff are involved in setting up and maintenance of online learning?

As I mentioned before we have two staff, one of them a kind of programmer, the other one dealing with the day to day problems and interaction with lecturers, plus we have me and Thom who are working on kind of more teaching- related things not so much practical but more like pedagogical and contractual rather than practical

9) Please indicate the approximate percentage of teaching staff involved in online learning?

Good question, I think that once again you need to realize that some courses , all they do is upload their lecture slides to the Bb but they don't do any teaching there, so they just made the lecture slides and reading materials available online, so you can't really say that this is learning , there are other lecturers really engaging students and they

have discussions online and activities online.

10) Which schools are conducting online learning courses in your institution?

Probably Nicoletta, she will have the answer

11) Is your institution encouraging staff and students towards online learning? If yes, how?

I think one of the things that UNITEC really promotes is staff are offered training courses, actually get their courses online and I think each course is supposed to have an online presence but as I said lots of courses just put lesson plans , and the green cards

12) Are there any rewards for teachers for developing online coursework? If yes, what?

I am not aware of that , but not really

13) Do you think your institution is succeeding in online learning? If yes, what is your evidence?

We don't have many distance courses, except 2 or 3. I think students can get their lecture slides and notes from Bb and they can get some reading materials. So as far as I know everyone appreciates that but I am not sure whether they can compare with anything else.

14) Do you think online courses are popular among students in your institution and why?

As there are only 2 or 3 courses that are offered completely online, I can't really say that we have many "online" courses. It is more of "technology enhanced" courses, where BB is adopted to a varying degree. I can't really answer this question, as we don't have "online" courses as such.

15) Is there a difference between the drop off rates between class room learning and online learning? What do you think about the reason? Have you got any data?

I think that is not directly related to technology, usually engaged with

the tutor, technology may help but I wouldn't see that is the reason. Right now we are promoting students to setting up their own Blogs and we hope if the students have a community of learning online where they write their Blogs and read each other's Blogs that they would have much stronger bonds in the group, so we would predict it will encourage them to stay with the course but everyone actually likes to come to school and develop relationships with their students and peers but we don't have any numbers.

16) Do you think the online learning system has changed or will change the way students use the institution resources?

I think it is already changing. If you look at youngsters today actually lots of the time they are doing much more advanced things outside of school. They are not engaging in formal learning. I think they are doing lots of informal learning using technologies. Once again it is through a network of people who are browsing the web and finding interesting resources actually figuring out things and learning. There will be more and more demand from the young students coming from school, actually using the methods that they are already used to, also for the school thing, this is an actual challenge to the teachers.

17) Do you think online learning systems will attract the students in New Zealand and overseas? Why?

It depends what kind of online learning because if it is wisely planned, nicely designed and interesting activities then definitely, but if it is content and some kind of parking space it doesn't make any difference

18) What are the risks and challenges you identify in implementing online learning?

Well obviously from tutors it requires quite a bit of investing time and need to develop new strategies to use these tools in online learning, I think initially it requires, it is quite hard because you have to pick up all new skills, encounter all new technologies and actually then go out and teach using them. So I think what we are mostly dealing with is convincing lecturers that is all that not scary and difficult but actually useful and interesting and good for learning.

19) Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?

Not in 20 or 30 years but in the future it can happen. So may be

sometime in the future, we don't need to go to the institution to study may be it will be enough to learn in a group of people and involving with an expert in the field, getting somehow certified by some authorized body.

These days if you look at NZ, people coming here already have skills and they come to UNITEC to get a qualification which is basically assessing prior knowledge.

(2)

Name of the support staff: - [REDACTED]

Date: - 1st November 2006

Questions for support staff

1) What is the goal or target of the institution in implementing online learning?

Online learning is a tool to engage students to a better learning environment, we normally do the blended delivery of face- to - face and online.

2) Can you explain the infrastructure required to set up an online learning course?

Unitec has an online learning system run through Blackboard, basically we have a server which is maintained by our IT department, students are given a logon to it and tutors put their course content on it.

3) Did your organization require any restructuring to adopt flexible learning?

We keep looking at new tools, may be alternative new management systems, especially we can look at new open source management system like Moodle, keep looking at them and evaluating them.

4) Why is your institution using Blackboard rather than other systems (Eg Moodle)?

We are looking forward to use Moodle next year as a trial version to the departments who are currently not using online learning, at the same time we are looking at the potential benefits of Moodle software

5) Which instructional design theories should be considered when setting up a flexible learning environment and why? (This question is for the staff from centre for teaching and learning innovation)

6) What is your opinion about the cost of setting up online learning per course?

US\$57000.00 per year for only software (Institutional license) which includes the support. And we need to pay separately for (1) IT Technician (2) teaching learning support (3) training staff (4) admin from all the schools.

7) Do you think the institution can save money through online learning?

Doesn't save money but setting up a better environment for students. It can save money on photocopying and be environmental friendly not wasting too much paper but that is not the key driver.

8) What support staff are involved in setting up and maintenance of online learning?

- IT support staff to look after physical software and hardware
- IT Technician for hardware
- IT technician for software
- Full time support staff for Black board
- Academic advisors

9) Please indicate the approximate percentage of teaching staff involved in online learning?

Relatively high, some departments are very low. There are lots of basic updates on Distributing notes and course outlines, small percentages using online discussion board and other tools.

10) Which schools are conducting online learning courses in your institution?

Natural sciences and business schools and I don't know about other courses but most schools are using Bb.

11) Is your institution encouraging staff and students towards online learning? If yes, how?

Yes encourage staff towards to online learning.

How

One way we run workshops over here to encourage them

Senior management encourages tutors by advising them to use electronic means.

12) Are there any rewards for teachers for developing online coursework? If yes, what?

No

13) Do you think your institution is succeeding in online learning? If yes, what is your evidence?

We are offering over a thousand courses on Bb currently so this is a good indicator and around 40- 50 courses are interactive , apart from that all other courses are just content.

14) Do you think online courses are popular among students in your institution and why?
Yes

15) Is there a difference between the drop off rates between class room learning and online learning? What do you think about the reason? Have you got any data?
We use blended delivery with face-to face and online, we are not using pure online. There are some schools not using online and there are some schools using both, so even we haven't got any statistics.

16) Do you think the online learning system has changed or will change the way students use the institution resources?
Yes, particularly students using laptops and mobile devices,

17) Do you think online learning systems will attract the students in New Zealand and overseas? Why?

In general, students are expecting to use electronic devices since they are at school so when they come to the polytechnic or university they like to use it for their education.

18) What are the risks and challenges you identify in implementing online learning?
Up skill the teaching staff

19) Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?

No, the best is blended delivery

(3)

Name of the staff: - XXXXXXXXXX

Date: - 14th November 2006

1) What is the goal or target of the institution in implementing online learning?

One main reason for Unitec to start using e learning is to offer the degree of flexibility to allow students to access learning resources in their own time, also to maintain computer technology in the market. Most tertiary institutions in NZ are adopting mixed mode flexible learning because it is highly demanded.

2) Can you explain the infrastructure required to set up an online learning course?

Well other institutions are doing online learning without a learning management system, but our institution (UNITEC) adopted learning management systems like WebCT or Moodle or Blackboard.

3) Did your organization require any restructuring to adopt flexible learning?

They are planning to increase the number of wireless system so the students don't necessarily need to access the computer lab. UNITEC has a very small number of flexible learning staff, only two senior academic advisors and two e learning academic technologists and so really this organization needs a larger team. It would be good if they had a flexible learning person/advisor within schools rather than in a centralized location.

4) Why is your institution using Blackboard rather than other systems (Eg Moodle)?

Unitec is using Bb for various reasons. Bb was one of the early stable supported learning management systems available, and also it was a priority that there were guarantees of ongoing support and service updates/upgrades, also stability, so when the student numbers grow it will be able to support them. Bb has developed supplementary tools and one of those instructor tools which is developed by vern smith basically populates Bb from data obtained from the Peoplesoft database. So there is lots of integration between systems, this is the main reason why we are staying with this system. Also staff training and course development have all been done using Bb for so long, so it will be quite an expensive job to make changes, even to open source courseware. However, the option we are looking is open source courseware which is well developed. Moodle is an excellent example, it has local support communities now even though you can buy NZ support now.

5) Which instructional design theories should be considered when setting up a flexible learning environment and why? (This question is for the staff from centre for teaching and learning innovation)

I like Professor David Merrill's "people on the pond" approach, this approach basically is problem based learning .

6) What is your opinion about the cost of setting up online learning per course?

To be honest I don't know

7) Do you think the institution can save money through online learning?

Lots of institutions think they can save money using Bb in online learning but it is not

true. It costs too much money to set it up, it costs money to maintain and you need staff to maintain it.

8) What support staff are involved in setting up and maintenance of online learning?

Well, IT helpdesk, Centre for Teaching and Learning Innovation, and people who are looking after the database

9) Please indicate the approximate percentage of teaching staff involved in online learning?

There is a growing demand for instructors to be involved. Some schools have basically all staff involved because all courses have a Bb learning component but some staff are only using Bb for putting the green cards and other information. For the other users they are using lots of teaching online, so it is hard to say really how many percentage.

10) Which schools are conducting online learning courses?

Captive wild animals, so training how to handle lions and animals. And a couple of educational papers which are by distance that is part of the bachelor's degree, there are a couple of business courses. 1408 courses on Bb, but some of the courses haven't got any resources so we can say 1408 courses using Bb.

11) Is your institution encouraging staff and students towards online learning? If yes, how?

Yes, well in 2005 there was an elearning strategy which has milestones and goals for UNITEC involvements. Different courses have made it compulsory for instructors to have an online component but at the moment as far as I am aware there are no evaluations of how stuff is being used.

12) Are there any rewards for teachers for developing online coursework? If yes, what?

There is a reward but not specifically for online learning. There are teaching and learning award for teachers for their innovation and excellence.

13) Do you think your institution is succeeding in online learning? If yes, what is your evidence?

I think UNITEC has to go quite a long way to claim success in online learning

14) Do you think online courses are popular among students in your institution and why?

Yes, students are more expecting now to have access online

15) Is there a difference between the drop off rates between class room learning and online learning? What do you think about the reason? Have you got any data?

I honestly couldn't say anything like that.

16) Do you think the online learning system has changed or will change the way students use the institution resources?

Yes, for example just the fact we need to look at more wireless areas at UNITEC. Most students have their mobile technology for accessing online learning materials (PDAs, mobile phones and laptops) so probably the greatest need now is for UNITEC to make more wireless areas.

17) Do you think online learning systems will attract the students in New Zealand and overseas? Why?

Yes I do, especially as study is expensive and there is much more demand as I mentioned earlier. Most students are employed or needing to work to support the family so the option for students to work and study will be online

18) What are the risks and challenges you identify in implementing online learning?

The challenge is to get staff to be confident on the tools which they are using and integrate them in learning and teaching is a way that is innovative and creative and exciting to engage the students. Some students are coming with no prior technical knowledge so this is the big challenge: to train the students as well.

19) Do you think online courses will replace traditional face-to-face class room learning in the future? What are your reasons?

No, I think the technology can be changed but always be valuable to be blended