

SIR06863

What matters most in online learning environments: A New Zealand case study

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Abstract

Universities are under increasing pressure to compete in an environment where globalisation of learning has produced increased numbers of student admissions into courses. Programs can potentially be delivered to offshore partner institutions with little consideration for the contextual or cultural differences between the organisation delivering the program and those grappling with the program content and technology at a distance. The focus of this paper is to describe a small case of students studying within an online adult education program throughout 2005. The case represents a small group of adult learners who embarked upon a Graduate Certificate delivered by an Australian university in New Zealand. Rich qualitative data were collected through a focus group approach facilitated onsite in New Zealand. The results revealed a certain level of discomfort for students when learning through technology, a sense of apprehension when communicating online and varying levels of communication competence which impacted upon the success of the learning experience. The results also indicated that while the sample was determined to succeed in navigating the online environment they considered it to be problematic in terms of the competing demands of family, work and their specific learning styles.

Background

This paper focuses on describing and understanding a unique adult learning program and a small case of students within that program as they completed a unit of study based upon effective teaching for effective learning throughout 2005. The unit is part of the overall Training and Development Program at a Western Australian university and is unique in that it is delivered in a fully online mode. The Program includes a Bachelor of Education, Graduate Certificate, Graduate Diploma and Masters of Educational Studies in Training and Development. All units are delivered through WebCT and the student cohort comprises local, onshore and offshore students.

The Training and Development Program has been offered to students completely online since the late 1990s. The program was developed to complement Brennan's (2000) concept of utilising computers as tools to support the teaching and learning process. The initial decision to implement an online approach was influenced firstly, by the financial implications of continuing to offer face-to-face teaching. Secondly, the online refinement and development of both programs adheres to what Craig (2002); Goddard (1996), and Ruberg, Taylor and Moore (1996) suggest should influence teaching and learning online which includes the need to cater for students who actively avoid face-to-face communication and use online options to a greater extent. The majority of students prefer the current method of delivery, as they are largely adult learners who are engaged in full-time employment and the online nature of the program allows many of them to work at their own pace in between further ongoing commitments.

Throughout 2005 a relationship was developed between the Western Australian university and a New Zealand university which is dedicated to the development and ongoing education of the local indigenous population. Staff at the New Zealand site were encouraged to engage with and complete the Graduate Certificate in Tertiary Teaching with a view to enhancing learning and teaching skills as part of their cycle of continuous improvement and overall professional certification. The project offered Western Australian lecturing staff a profound opportunity to work with a representative group of students with Maori backgrounds throughout 2005. The student cohort comprised nineteen students who were themselves teaching in a variety of areas.

The students were involved in the completion of the unit Education 526 Effective Teaching for Effective Learning as a component of the Graduate Certificate in 2005. The unit is designed to introduce teachers, lecturers and trainers to a number of the skills required to facilitate effective adult learning. It is based on an approach to teacher development, which requires participants to become well versed in key learning theories and to illustrate such understanding through a demonstration of selected teaching skills in their own teaching situations. This approach recognises that teaching skills and methods described in texts are rarely (if ever) implemented into every teaching situation without some adaptation or modification. Consequently, the unit encourages students to be reflective about the implementation of various teaching skills and their role as a facilitator of learning.

A major aim of Effective Teaching for Effective Learning is to provide educators in a variety of settings with practical experiences which will encourage thoughtful reflection about the teaching-learning process, while never forgetting the ultimate outcome is to facilitate effective adult learning.

Throughout second semester in 2005, the nineteen students within the Graduate Certificate in Tertiary Teaching course were invited to participate in focus group activities. A small sample of these student ($n = 3$) responded and engaged in a qualitative case study which involved a focus group and a semi-structured interview. Data were gathered in the familiar surroundings of the New Zealand setting over a period of five days as part of an integrative workshop facilitated by an academic staff member from Western Australia. This same staff member had been involved in delivering the Effective Teaching for Effective learning unit online with the New Zealand cohort.

The aim of the focus group and interview was to gather qualitative data related to the students' levels of comfort when learning through technology, their potential sense of apprehension when communicating online, their level of communication competence, their feelings of loneliness in the online environment, their locus of control, their willingness to collaborate with other students and the lecturer, their sense of institutional support and their conceptualisation of their own self efficacy in relation to their study.

Online delivery

Universities are under growing pressure to compete in an environment where globalisation of learning has produced increased numbers of student admissions into university courses. An expanding student mass has led to a greater variety of student backgrounds demanding greater flexibility in the delivery of higher education courses

(Ryan, Scott, Freeman, & Patel, 2000, p. 12). To accommodate this increased mass of learners and demand for flexibility, universities are delivering a growing number of their courses through the Internet. Salmon (2000) sees the term as 'online learning' as covering a range of technologies such as informatics, computer-assisted instruction and computer-mediated conferencing. Brennan (2000) defines it as requiring situations where computers support teaching and learning and where there is a mixture of computer support and online delivery or computer technology alone delivering education and training.

Rapid advancements in current technology have meant that flexible delivery has advanced equally rapidly, offering students wide choices in learning methods. According to Cornell and Martin (1997) challenges for facilitating online learning include the maintenance of learner motivation, the degree of acceptance by student and teacher, the prior knowledge of each participant, the students' attitudes towards technology, the level of content and the degree of interactivity. Cornell and Martin (1997) also included aspects such as ease or difficulty in using the system and basic communication skills as having an impact on the successful implementation of online learning. Similar issues were raised by Corrent-Agostinho and Hedberg (1998) in their implementation of online learning in a post-graduate educational technology course. Oliver and Omari (1999) found that students believed the online environment required them to invest greater amounts of time in preparation for class activities and as such, added to their workload. Despite this however, the students reported a positive response to the new learning environment.

The term "online learning" is often used to describe the wide variety of uses of the Internet for learning. While this term implies that learning is occurring online, this may not always be the case. An "online learning environment" may, in some cases, only be used for a repository of information (e.g., unit outline, lecture notes, assessment requirements, etc.) for students to access, printout, and read away from their computer. In these cases where learning is not actively occurring online, the term "class Website" may be more appropriate. A class Website may be built within an online learning management system (LMS), such as WebCT, or it may be a Website that does not utilise an online LMS. The term "online learning" may be used to describe active learning which occurs through the students' interaction with the learning materials via the Internet. Online learning can occur through meaningful interactions with other students and their lecturer using online communication facilities. Students are actively encouraged to engage with the online learning materials within a predetermined structure. For example, students may be required to read information about a particular topic on the screen, reflect upon what they had just read, and then post their thoughts onto the class bulletin board for other students to add their comments. Another example of online learning is where students are required to complete pre-programmed automated activities on the Internet

Brookes, Nolan & Gallagher (2001) argued that the most effective learning environments require educators "... to create and employ strategies to make learning active" (p. 108). Laurillard (2002) argued that a teaching strategy needs to be developed to form the "...bridge between what we know about student learning and what we should therefore do as teachers" (p. 62). To facilitate active online learning, suitable learning strategies need to be developed. However, authors such as Greening (1998) argued that "... generally, instructional designers either do not always appear to take advantage of the hypermedia technology, or do so without pedagogical

foundation" (p. 2). Thus, the literature would suggest that there are gaps between the bodies of knowledge relating to learning theories, instructional design principles and research into student learning in higher education, and the application of this body of knowledge to the use of online learning technologies (Siragusa & Dixon, 2005).

Much of the literature supports the notion that students who tend to avoid communication with fellow students and teachers in face-to-face contexts tend to contribute much more in online learning situations (Craig, 2002; Goddard 1996; Ruberg, Taylor & Moore 1996). While issues surrounding technologies and technology use are dramatically altering all areas of education and training in Australia, online delivery is still in a relatively embryonic stage. Ongoing evidence from the literature suggests, however, that the maturation of online delivery will be realised once innovators begin to develop realistic strategic, pedagogical and commercial models as we move further into the twenty first century.

Research method

A qualitative case-study methodology was adopted to meet the researchers' need for presenting the dynamics, peculiarities and processes involved in the learning experiences of offshore students engaging in online program delivery. The importance and strength of qualitative research lies in its potential to uncover and portray meaning, understanding and insight into important educational processes. It is not merely about collecting data but rather about portraying a larger picture with all its complexity and interrelated sets of variables (Denzin & Lincoln, 2000; 2003).

According to Merriam (1990) the focus of qualitative research should be to understand the meaning of what is being studied. She goes on to describe a qualitative case study as an in-depth and holistic examination of a defined entity. This can include a person, a process or program. The case study should be focussed upon providing a holistic description and explanation and it should be adopted when the researcher is interested in insight, discovery and interpretation rather than hypothesis testing. The case study has the potential to be one of the most powerfully reliable, comprehensive and relevant research methodologies able to portray the intricacies and reality of complex educational practice (Bogdan & Biklen, 1982; Borg & Gall, 1989). Yin (1994), notes that the case study is especially suited to situations where it is difficult (or not appropriate) to separate the different aspects of a process from its context. The data that has emerged as a result of this research is highly contextualised to the New Zealand and in particular Maori setting, and in this way is linked to a number of cultural aspects such as the high level of importance given to family interaction and how this has impacted upon the perception and utilisation of the online learning environment.

Data collection

The selected approach for interviewing the case study sample was based upon the work and recommendations of Oppenheim (2001) and followed the procedures necessary for free-style interviews or *focus groups*. Focus groups are not ordinary conversations although some exploratory interview techniques may be used within the group framework. The purpose of the interview is to obtain information of a certain kind. This information may be in the form of factual replies to factual questions or responses to attitude scale items, or ideas and feelings or expectations, perceptions

and beliefs. The respondents may, or may not 'have' this information or they may 'have' it but be unwilling or unable to communicate it. The purpose of the exploratory interview that forms the foundation of the focus group approach is essentially heuristic: to develop ideas as well as to gather facts. The major concern is to try to understand how the sample think and feel about the topics of concern to the research.

It was the intention of the interviewer to encourage the sample to talk and interact freely over the period of two hours. The major aim of the focus group approach was to enable the sample to share their insights, thoughts, feelings and formative experiences regarding their learning experiences in the Graduate Certificate in general with particular attention to the online nature of the delivery of the Program, their levels of comfort, communication and perceived loneliness, as well as their sense of control over the learning experience, sense of collaboration, levels of institutional support and self efficacy.

The focus group was conducted in comfortable surroundings on site in New Zealand. This approach was deemed important so that a set of comprehensive transcripts of the participants' responses could be recorded. It was the aim of the researchers to encourage an open and relaxed interchange in order to allow the sample to converse freely and respond to a number of questions related to overall satisfaction with their study and reflection on the learning experience overall. The sample was asked to respond to questions related to their own perceived learning style, the impact of their involvement with the program on their own teaching, their perceptions of the online materials, their initial feelings about starting their study, their comfort levels whilst working in an online environment and factors that had enhanced or negatively impacted upon their learning. According to Oppenheim (2001) such exploratory interviews need to be conducted with more than one interviewer if tape recording has been omitted from the process. In the case of the New Zealand sample, the interviews were tape recorded and this allowed for a comprehensive transcript of their responses to be taken. These rich data were stored in order to emerge as authentic participant vignettes of the participants' learning experiences as well as providing the researchers with the opportunity to apply a content analysis to bring to light the key themes and issues that had influenced the sample's engagement with the online learning experience.

Participants in qualitative research remain more comfortable in the company of interviewers who listen attentively and exchange the note taking process while actively engaging in the 'conversation'. In this way, the transcripts can be analysed in detail afterwards and can also be examined by more than one person. The researcher in this case study, therefore, recorded the responses of the sample as well as engaging in a note-taking exercise throughout the focus group. A useful set of exploratory interviews can broaden and deepen the original plan of the research and possibly initiate new dimensions to be studied. The participants' responses were content analysed and coded by the researchers through an examination of recurring themes. The following represents the major findings of the New Zealand focus group.

Data analysis

A transcript of the entire interaction between the sample and the researcher was created from the recorded information. The transcript contents were validated by two academic staff in the Western Australian University as being a correct and accurate recording of the dialogue which occurred between the researcher onsite in New

Zealand and the three members of the case study sample. The transcript was analysed using the computer aided content analysis application, Tropes (www.semantic-knowledge.com/tropes.htm). This tool provided qualitative semantic analysis of the text including classification, keyword frequencies and linguistic coding of concepts and propositions in a relational and hierarchical context. This enabled the researchers to use both a-priori and emergent coding to aggregate common themes and the clustering of related themes to be compared and contrasted in order to gain an insight to the cultural and social patterns of the participants.

Research findings

Following the qualitative analysis of the text twenty nine categories of words by frequency emerged. These are presented in Table 1 below.

Table 1 Overall categories of words by frequency

Word Category	Frequency	Word Category	Frequency
Time	89	Man	6
Education	71	Substance	5
Social Group	28	Transport	5
Communication	27	Life	5
Family	22	Business	5
Language	20	Person	4
Work	16	Computer Science	4
Science	15	Law	3
Device	14	City	3
Child	11	Housing	3
Feeling	11	Food	3
Cognition	9	System	3
Body	9	World	3
Characteristic	9	Behaviour	3
Oceania	9		

Categories of words by frequencies of ten or more were examined in context of the transcript. These were deemed by the researchers to be the responses most likely to provide the strongest representation of the key concepts as described by the sample. Word categories of nine and less were not likely to provide such insights into the major thematic constructs as they emerged in relation to the experiences of the sample while engaging in the online learning environment. Table 2 below presents a sub-set of the most frequently occurring word categories.

Table 2 Word categories sub-set by frequency of ten and above

Word Category	Frequency	Word Category	Frequency
Time	89	Work	16
Education	71	Science	15
Social Group	28	Device	14
Communication	27	Child	11
Family	22	Feeling	11
Language	20		

The most frequently occurring category was *Time* (frequency = 89). The sample indicated that concepts related to time were important to them when considering their engagement with the online program. In context the category emerged as being important at a number of levels including overall time management of the study and periods during each week when the sample could work uninterrupted on completing the necessary work. Time was also conceptualised as comprising smaller components such as hours spent on preparation for assignment tasks and overall preparation. As adult learners who were also in full employment, the sample indicated a concern with the period of duration of the study program and the concepts of ‘starting’ and ‘finishing’ were important. The flexible location of the timeframe for the unit of study was also important to the sample and they indicated that being able to join in online discussions at a time of their own choosing was a key factor in being able to successfully complete the unit.

‘Mary’

“I want a teaching qualification, but the delivery of the program was not suitable for me. The program runs on WebCT and I have a family that I can’t spend time away from and the compulsory teaching on top of my own courses is heavy, so I thought the online course would be an excellent option because it allowed me to study at my own time without making a weekly commitment for each class.”

Time constraints for the completion of the program were also initiated by the New Zealand university. In an effort to provide a quality professional development opportunity for their staff the program was contracted to be delivered and completed by the conclusion of 2006. This clearly added to the pressure the participants were already experiencing and impacted on their initial adoption of the online mode of delivery and their willingness to engage with the learning materials and the Australian academic staff member who was responsible for facilitating the program.

‘Rosemary’

“...all of us need this teaching qualification from 2006 onwards. But I felt that this was a requirement and not something I willingly came to. I’m resentful about having to do this but as I got into teaching (and I’m at my six month half way mark) my attitude changed and since then it’s really been useful. The students keep me on my toes and it took a period for me to get into the classroom experiences and this is what I thought was wrong of the [university]. They shouldn’t burden staff with the training requirements at the beginning of the contract. They should actually wait for 6 months of the review period so if I decided at any time this wasn’t for me I could make a better decision. It’s been

six months now and I've decided that it's good stuff- a good opportunity. So now I feel comfortable taking it on board, but also I've learned to judge my time as well and it's taken me six months that's why it's probably not until a couple of months ago that I felt eligible for this course. I started off initially not very keen. I felt like I'd been put under pressure but if you go for it and you've got a few classes under your belt you actually start to get a feel for it."

The second most frequently occurring category was *Education* (frequency = 71). The sample indicated that education represented an ongoing opportunity to improve their working conditions and their own teaching through the material covered in the program. The emphasis on reflective practice was deemed to be important to the participants in the research by way of focussing on their own learning needs as well as those of their students. The Graduate Certificate was seen as a program best suited to those who had been teaching for some time as it encouraged reflection on a number of issues related to education such as motivation, readiness for learning and the importance of voluntary engagement with materials.

'Paula'

"My only suggestion is that I think people who've had three or four months already of teaching might want to take up this course. I don't think they should be doing it straight away. I think I should be getting some kind of teaching experience otherwise it's not really relevant. Especially thinking of yourself as an adult learner rather than just a teacher it's a really good course. For example one of the modules is about motivating the students and as a teacher how far do I start making things compulsory and insisting that my students come to class ... that they be there. Should I start using the heavy hand? I start thinking we're all adults, we have come to learning voluntarily. I've really been thinking of other ways of motivating our students. This study has helped me to start thinking about learning."

The concept of *Social Group* was the third most frequent word category to emerge from the content analysis (frequency = 28). The influence of others viewed as part of the social world of the sample, were seen to be influential in relation to the quality of the learning experience. This social group included peers and colleagues as well as family members and the online lecturer himself. The emerging personalities of co-learners through the online discussions were seen to either encourage or discourage the level and enjoyment of communication in the online environment. The social group was understood to also include the university hierarchy in New Zealand and the workplace arrangements in place at the time of the research. A perceived lack of job security, looming redundancies and pressure to locate students for their own courses impacted significantly upon their engagement with the online program.

The fourth most frequent word category to emerge from the analysis was *Communication* (frequency = 27). The sample indicated that it was essential to become involved in the online discussions in order to achieve a sense of effective dialogue with colleagues as well as the lecturer. There was a perceived pressure to do this as the comfortable notion of a physical 'meeting place' had been reduced both by the online environment in which they were expected to interact and the fact that the group were scattered geographically across a number of campuses. Culturally the concept of such a gathering was significant to the sample as it promoted a sense of well being and identity. The results suggested that this was not achievable through

technology and that the usual practice of interacting through emailing or posting discussions could often be a lonely experience. Responding online in a timely manner was described as being a potential factor which impacted upon the flow of communication practice. One member of the sample posited that she needed time to read and reflect upon the discussions prior to responding herself and she was concerned that this may be interpreted as lack of interest in communicating.

'Mary'

"I often look at other peoples' discussions but I may not post anything myself and it's not because I'm not interested or heading in the same direction of these thoughts, it's because I'm still trying to learn. I like to read other peoples' views even though I'm not actively contributing..."

Family was noted as the fifth most frequent word category (frequency = 22). Whether as a positive or negative conceptualisation, descriptions of family, individuals and family life emerged as an important influence on motivation to study, perception of materials and theories, physical settings, time management and actual study habits.

'Paula'

"...I didn't know what the expectations were- could I meet the expectations, can I be consistent throughout the year because what I had to consider was this is my last year so my family would have to slip down again – can I do this successfully. I guess everybody has family and that was the biggest problem I am facing throughout the duration."

'Mary'

"I wanted to go and get an education...and my children were saying 'mum why don't you go and do computing because you already know how to work with a computer' but I didn't have a certificate... and my son just kept pushing and we moved on together."

The sixth most frequent word category to emerge was *Language* (frequency = 20). In context this was conceptualised as being both written and spoken. It appeared evident that much of the participants' concerns were based upon past unsuccessful experiences with online learning and the tone inherent in the written communication processes which were used. One member of the sample described how she withdrew from a previous attempt to learn online due to the structure and wording of the lecturer's postings and email. Without the physicality and interaction available in traditional face-to-face learning and teaching settings, the sample had imbued the written word in the online environment with characteristics such as feelings, mannerisms and tone. Difficulties with reading language as opposed to hearing language also emerged as a problem for one member of the sample. The oral tradition is preferred in this instance as it is described as being more accessible and timely.

'Rosemary'

"I actually love computers and 'New Zealand Online' and I'm going to say that a particular lecturer I had in the past is one man that I got very angry with very easily. I know he was only writing but it was the way he sent his emails. I think punctuation has a lot to do with how you emphasise and you stress the way you feel... I didn't like him. So I withdrew. I didn't like it. Certainly it was his tone – the way that people can write and the tone or the mannerisms in which they write certainly has an impact on your learning and your relationship with that person."

'Mary'

"I kept getting behind so I must have taken the ten hours that we're supposed to have to do the work and extended it to about thirty hours because I didn't want to be behind. So it may take someone about half an hour to read something but I have to sit down and take about three hours... I have to listen to a tape or listen to somebody or say it – I'll do whatever it takes but I've got to try different methods that suit me. Then I'm hit with lots of words and so I'm going to have to go home and sit with it – it's all wonderful but it's not working for me."

It was suggested that a more informal and natural approach to the use of language enhanced the overall learning experience by making the participants feel as though they were active partners in the interaction.

'Paula'

"The online materials are really good and so is the CD that you get. Also the feedback you give to us is wonderful – I love the way in which you feedback to us and it's really responsive and you really feel a part like 'hey hi guys, great to hear from you!' And that's the kind of response I like. As a learner it makes me feel part of the learning..."

The word category *Work* was recorded as the seventh most frequent concept (frequency = 16). The participants described their attempts to balance their paid and unpaid employment with the demands of study. As adult learners this appeared to represent an ongoing struggle. They were concerned that their various approaches to achieving success in the Graduate Certificate could potentially fail and in context the uncertainty regarding the ongoing nature of their paid work contributed to this concern. It emerged that the participants' workplace was relatively unstable in terms of the student cohort and that they perceived their future employment as increasingly tenuous.

'Rosemary'

"You don't want to be logging on everyday. You don't want to be doing it in front of other people. And in my case there have been family problems. Night after night – my mothers is sick so I've had to spend nights in hospital at eleven o'clock at night. I'm absolutely exhausted – then going straight to work..."

'Mary'

"Family and friends come first for me and work and study come second but in order for me to finish this I have to push that around a bit for the next couple of months just to get on top of it. We've got up to ten days study leave and I'm going to have to draw on it I think to be able to complete this. I thought I could do it during work hours but there are so many meetings, they keep cropping up – just organising and managing my students. And then there's home life...I've got to make sure I get that time for study."

'Paula'

"I think that trough in June... I think it might have been the week when the enrolments started – It was an interesting time for me – just the mood of the place... everything changed...all the tutors had to get out and do the marketing for their programs and they had to or they might not have a job for the next year without their numbers. There was definitely that sense of uneasiness... I remember (it happens every year)... the jobs are on the line and people are possibly facing redundancy."

Science was the eighth most common word category (frequency = 15). This was largely contextualised as a focus on theory. The sample indicated that they were concerned as to their ability to find the time to actively apply the new theoretical approaches to education in their own teaching. They also suggested that in some instances they had experienced difficulty in being able to identify with the theories presented in the Graduate Certificate and expressed an inability to actively utilise the teaching strategies and models in their own teaching environments.

'Paula'

"I cannot identify with some of the theory...like constructivism and reflection on action."

'Mary'

"I haven't got time to apply all these theories."

The word category *Device* was recorded as the ninth most frequent concept (frequency = 14). The term was conceptualised by the participants as those objects and processes that had influenced their learning experiences in the Graduate Certificate. There appeared to be a clear focus on the quality of the materials available in the units of study and the need for a 'sounding board' whereby the sample could share thoughts and ideas related to their study. The physical and emotional experience of learning online was also mentioned as impacting on their sense of self efficacy and it seemed that 'staring at a blank screen' could be detrimental to a willingness to engage with the process.

'Rosemary'

"The readings were really good and as for the discussions... that's really lonely. I don't usually use my email it's only usually for short messages. It is lonely being used to having a 'sounding board'. I think we must have been lucky in the last few years to have face to face opportunities. I usually like to talk to the person, so when you're looking at a big blank screen and you've got lots of thoughts, by the time you start typing... it's gone out of your fingers it's gone out of proportion. It actually looks abrupt because you're trying to hurry up and put all your ideas down and when you look at it, it looks terrible. So you just back space or delete."

'Mary'

"At first I thought I could just read the introduction – it's all there. I thought I don't have to even read the book so I could understand it. It was explained really well."

'Paula'

"Actually yeah, the course contents were really relevant... it moves along with the textbook. So I thought the material was really good... I don't know whether I've applied any of it but I've enjoyed it. It's not like anything I've previously studied. I liked the journal type responses. They're a lot more reflective."

Child and Feeling were noted as the fifth and sixth most frequent word categories (frequencies = 11). The participants prioritised their interest in children (particularly their own children) as having an influence on their approach to study. The concept of children was clearly important to the sample as it appeared to be a central component

of their personal world. Extended family also played an important role in determining the timeframe allocated for study. The responsibilities experienced by the participants towards younger family members impacted upon their engagement with the online learning environment in both positive and negative ways. However there appeared to be a constant emotional and psychological link between the participants' perceptions of themselves and their relationships with those to whom they feel responsible.

'Mary'

"My son's had another baby so we've got to try to acclimatise and juggle the work and then study becomes difficult when we get the internet cut off."

"Paula"

"On the weekends... my intention every weekend is to read through a chapter and in between that it means getting up early and going back to the book. So that has been my intention since I started and my family support it – they clean, they cook... my children are there. When the younger ones are hungry they look after it – so I've been really lucky. I've got their support and they know it's my last year so...they're really looking forward to the end of it."

Feeling was also central to the participants' interactions with the learning materials, the online delivery, the lecturer and their own beliefs and attitudes towards the learning experience. A level of fear was associated with embarking upon the study as well as a sense of uneasiness regarding the perceived ability of the sample to succeed. Cultural and historical factors such as the inaccessibility of earlier educational experiences had influenced the participants' reactions to the Graduate Certificate. In a number of instances the participants' children were the drivers for bringing about educational change and a sense of co-mentoring emerged which resulted in increased levels of self efficacy as the sample progressed through the learning process.

'Paula'

"When I entered the system I realised I was under-skilled. I knew that too and my motivation for learning was my family."

'Mary'

"Then I turn around one day and I didn't have any qualifications – I had nothing. Although I had all this experience I had no school... I was afraid to go to university. I was afraid because I was grown up and education never worked for me. I dropped out of high school at some stage and then got labelled 'dumb' you know...and then my boys, my children came along and challenged me... we struck a bargain that they would go back to school and I wanted to go and get an education."

'Rosemary'

"Who's responsible for my learning? I am... it's up to me... if I need information I have to not to be afraid to ask. And that's what a lot of my problem was... I was afraid of education because I didn't think I had the brain to do it... and then with age you grow wiser... and you look at the world completely differently. That's my story."

Conclusion

The research findings presented 11 word categories based upon their frequencies which represented significant key concepts as described by the sample. The sample considered the concept of *Time* (89) as being important to them in succeeding in their online program including concepts relating to time management for study activities, flexibility in being able to post online discussions at a time of their choosing, and the time constraints imposed by the New Zealand university. *Education* (71) represented an important opportunity to the sample for improving their working conditions and their own teaching through reflection on education related issues such as motivation, readiness for learning and engagement with the learning materials. The *Social Group* (28) concept was perceived as having influence on the quality of their learning experiences which included interactions with peers, colleagues, family members, the online lecturer and the university hierarchy in New Zealand. *Communication* (27) was important for achieving a sense of effective dialogue with colleagues and the lecturer through online asynchronous discussions in an attempt to compensate for the lack of a physical “meeting place” to foster a sense of well being and identity. The sample considered the concept of *Family* (22), including family life, as an important influence on their motivation to study, perceptions of materials and theories, physical settings, time management and study habits. The concept of *Language* (20), including both written and spoken, influenced a participants’ successful experience with online learning through the tone used by online lecturers which conveyed characteristics such as feelings, mannerisms and tone.

Other word categories were also examined including the concept of *Work* (16), which represented the participants’ attempts to balance their paid and unpaid employment with their study demands including ongoing struggles with instability of their future employment. The category of *Science* (15), contextualised as a focus on theory, included the samples’ concerns regarding their ability to apply the new theoretical approaches to education in their own teaching scenarios. The concept of *Device* (14), contextualised as those objects and processes that influence participants’ learning experiences, described the quality of the learning materials, the need for a “sounding board” for sharing study related thoughts and the participants’ physical and emotional online learning experiences. The *Child* (11) concept described the participants’ interest in their children as having a strong influence on their approach to study including determining the study timeframe, responsibilities towards younger family members impacting upon their engagement with the online learning environment, and the emotional and psychological link between the participants’ self perceptions and their relationships with these family members. The concept of *Feelings* (11) was also important to the samples’ interactions with the learning materials, the online delivery, the lecturer and their own beliefs and attitudes towards the learning experiences, which included the participants’ children contributing towards driving their educational change and increasing their levels of self efficacy.

With the increasing pressure on lecturers to teach masses of diverse students expecting quality education and training, accommodating individual student’s learning needs has become increasingly more challenging. Educators and researchers have been exploring solutions to this problem through the use of online learning technologies. Current widely accepted online content management systems are generally static environments which are unable to easily accommodate diverse learning styles of students. Martinez (2001) explained how researchers are making significant progress towards developing online learning systems which are able to

adapt content to individual learning styles through ‘reusable learning (content) objects’. Learning object technology has the potential to personalise learning by changing the individual objects presented on the screen to each learner based upon their individual needs. Although the reality of such online computer adapted instruction may seem far off, Bonk (2004, p. 15) reported that research into reusable content objects will have the most impact on online learning over the next five years. While these types of online learning technologies continue to develop, they will need to be informed by the bodies of knowledge which exist relating to well tested pedagogical theory and practice. In this way, educators, instructional designers and Web programmers may continue to collaborate in order to reduce the current ad hoc and largely uninformed development of online learning.

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