Teaching midwifery face-to-face or via the
screen: The impact of flexible delivery of teaching on
student engagement

by

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ABSTRACT

The aim of this research was to describe how undergraduate midwifery students' engagement with learning is impacted when they have teaching delivered by different methods of instruction. It asks the question: does flexible delivery of teaching impact on their ability to engage in their learning?

This research describes the impact of different modes of flexible delivery of teaching within a new curriculum on students in a pre-registration midwifery undergraduate programme at Waikato Institute of Technology (Wintec), New Zealand. This new curriculum commenced in 2010 as a response to legislative and industry driven changes to midwifery education in New Zealand.

The research used an on-line survey to ask students enrolled in years one and two of the programme and those who had exited the programme during the same timeframe, A range of questions about their learning experiences. Surveys were sent to 104 enrolled students and 15 students that had exited the BMid programme. Fifty two (50%) responses were received from the enrolled students and three (20%) from those that had exited the programme. There were three key findings of this research. Firstly the participants identified differences with their sense of belonging amongst their peers, tutors and the administration team outside of their regional learning hubs. The second key and unsurprising finding was that respondents across the board preferred face-to-face sessions to video conferencing sessions and thirdly that the demographic profile of the respondents from the regional learning hubs was different to those attending from the Hamilton city hub.

The implications of these key findings are;

- For tertiary institutions to acknowledge and consider the links between high quality learning, student engagement and outcomes.
- To support the need for continuing training and education for both faculty and students with regards to flexible delivery of teaching and to provide professional development and relevant technology to support more interactive forms of learning if delivered via video conferencing or by online activities.

- To further research the needs of Māori students and those who have exited the programme in order to discover what would need to change in order for them to continue with their studies.

Key words: Midwifery, student engagement, flexible delivery, face-to-face, video conferencing and online learning.

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Chapter One - Introduction

kanohi ki te kanohi kanohi kitea Kātahi anō te kapa ka taka!

Face to face, visit, keep in touch; be seen to be actively involved. And then, the connections are made.

(Ngā Pae o te Māramatanga, University of Auckland)

This Māori proverb spoke to me about the potential that flexible delivery of teaching offers towards enhancing the learning experience for students. It speaks of connections, students to students and teachers to students; it implies active participation with a sense of community. It is about facilitating learning. The purpose of this research was to gain understanding of the impact that flexible delivery of teaching had on student engagement. This research sought to describe how midwifery students' learning was impacted when it was delivered via a blend of traditional and modern teaching methods and sought to find out if students favoured face-to-face learning sessions over video conferenced sessions.

The value of having engaged students cannot be underestimated. Adult learners that are engaged are; academically challenged, active in their learning, interact with staff [at the learning institution], have an enriched learning experience and can integrate their learning and work experiences (Australian Council for Educational Research, 2010). A programme that subscribes to the concept of a robust flexible delivery of teaching will enhance student engagement.

Flexible delivery of teaching is when learners have increased access to, and increased control over, particular teaching and learning environments (Nunan, 2005). It aims to support student centred learning, providing a range of options and approaches to the design of programmes. It allows learners to participate from their own space, at their own speed and in their own time.

Flexible delivery of teaching is more than simply offering learning that includes the latest in educational technology. It is about teaching in a way that meets the needs of the individual student. It is also important that students are engaged in their learning because engaged students will persevere and be successful in completing their qualification. They have a sense of belonging and have quality relationships with fellow students, teachers and the programme provider. Students are engaged when they; can rise to the expected level of educational challenge, are dynamic and collaborative in their learning, can apply critical thinking, are networking with their peers and faculty and have enriching educational experiences in a supportive learning environment (Deakin University, 2011).

A host of names are used when discussing flexible delivery of teaching, creating confusion and difficulty in providing absolute definitions. Flexible delivery was found within the literature to interchange with names such as blended delivery, e-education, online learning, and technology-mediated distance learning (for example video conference and Moodle- an online learning platform). For the purpose of this thesis the phrase I have chosen to use is 'flexible delivery of teaching' which will serve to cover the spectrum of diverse modes flexible teaching and learning referred to in the literature.

This research examined the impact that flexible delivery of teaching had on student engagement. It did this by describing the impact of different modes of flexible delivery within a new curriculum for students in a pre-registration midwifery undergraduate programme at Waikato Institute of Technology (Wintec), New Zealand. This new curriculum began in 2010 as a response to legislative and industry driven changes to midwifery education in New Zealand. Changes to the curriculum included the support and provision of a range of flexible types of delivery and that "flexible modes of delivery are used to enhance and support access for students outside main centres" (Midwifery Council of New Zealand, 2007, pp. 27-28). The new midwifery curriculum gained approval and accreditation from the Midwifery Council of New Zealand in January of 2010.

The midwifery teaching staff at Wintec arrived back at work in early 2010, after their summer break, to find out that the new curriculum had been approved and was to be implemented that year. The programme was to be in the form of flexible delivery of teaching to students. Teaching would be via a blend of deliveries that included face to face, video conferencing and online learning. The student intake was increased from 40 to 75 students and a third of these students would participate in the programme from a distance. Four learning hubs were to be established; the main hub was to be based at the Wintec city campus in Hamilton (HCH) and the other three established at regional Polytechnics in the Bay of Plenty, Hawkes Bay and Gisborne areas. These hubs were to be called regional learning hubs (RLHs). The requirement as directed by the Midwifery Council of New Zealand (MCNZ) was that students had to attend one third of their academic teaching modules by physically attending the main Hamilton city hub, for example as face to face teaching sessions with their entire year student cohort. The remaining two thirds of these teaching sessions would be via video conference or online learning. The teaching team was given very short notice to adapt their lesson plans from an entirely face to face classroom setting to a blend that included video conferencing. This meant that the midwifery curriculum would become the first fully flexibly delivered programme at Wintec.

Initially there were some technical failures with the video conferencing links due to issues such as lack of band width, equipment capability and technical personel support in some of the regional areas, especially Gisborne. Concern that flexible delivery of teaching might be impacting poorly on student retention, especially those with less face-to-face contact, was considered and discussed by the midwifery teaching staff towards the end of the second trimester as there were a higher than expected attrition rate of students learning from a distance. It was thought that the distributed students with less face-to-face contact may experience decreased student engagement. There seemed to be a disconnection for distributed students (students attending the course from a distance) with Wintec, their peers and tutors in the other hubs. In 2010, as part of a teaching quality project, teaching staff at Wintec were asked to define 'excellent teaching'. As an

academic staff member on the Bachelor of Midwifery (BMid) teaching team, I wanted to take that question a step further and find out what that meant for my practice as a midwifery lecturer. How I could better support midwifery students by inspiring, challenging and facilitating them to achieve. While I was still considering my initial concerns that the inadequacies of the technology was having a major impact on student engagement, I also knew that successful learning is much more complex. I wanted to ask the Midwifery students what if anything was impacting their ability to become successful learners in the flexibly delivered BMid programme.

The research question I therefore proposed was 'What impact does flexible delivery of teaching have on student engagement'?

Background

I felt it was important at this stage to put some background context to the development and changes to the midwifery pre-registration programme. The impetus for change to the way midwifery education was delivered in New Zealand was coming from a number of sectors. Firstly, midwifery in New Zealand is quite unique as it is a stand-alone profession outside of nursing. Midwives are autonomous practitioners that provide community based primary midwifery care as Lead maternity carers (LMC's). Midwifery students learn about their profession, founded on a partnership model between themselves and the women they care for. The first Wintec direct entry midwifery undergraduate programme commenced in 1996. The New Zealand Midwifery Council took over the responsibility for regulation of midwives from the Nursing Council of New Zealand in September 2004 and began a review process of the midwifery education programmes (Midwifery Council of New Zealand, 2007). The new curriculum was developed after consultation with all the key stakeholders and was aligned with international pre-registration degrees.

Between 2007 and 2010 four key reports were published and acted on, which determined the outcome of the new midwifery curriculum. *The Health workforce information programme: workforce forecast for midwives report*

(2005), the Midwifery Council of New Zealand annual report (2009), the Tertiary Education Strategy (2010) and the Standards for approval of pre-registration midwifery education programmes and accreditation of tertiary education organisations (2007).

Firstly, the Midwifery Council of New Zealand (MCNZ), the midwifery regulatory body, adopted new standards for approval for midwifery education programmes and a new accreditation process for tertiary education organisations (TEOs) in 2008 (Midwifery Council of New Zealand, 2007). The 10 new standards set the minimum requirements needed to gain this accreditation. At the same time Health Workforce New Zealand identified that there was a shortage of midwives and that this was likely to impact on ability of the current practicing midwives to cover the increasing birth rate. The report considered the projected demand for midwives based on high fertility rates, an accepted workload for Lead Maternity Care (LMC) midwives and the ratio of LMC midwives in the total midwifery workforce. The formula demonstrated that there would be a projected midwifery shortfall of 132 positions and that the shortage was likely to double by 2026 (The Health Workforce Information Programme, 2008).

Coinciding with this report the release of annually collected data from the MCNZ (2010) raised concerns about an aging midwifery population; the current average age of a midwife in New Zealand is 4. This information it was believed would further contribute to workforce short falls as midwives retired. During 2008 - 2010 the Ministry of Education was gathering background research and information to develop its strategic direction for the following five years. The Ministry was aiming to give New Zealanders from diverse backgrounds the opportunities to obtain global skills and knowledge (Ministry of Education, 2010). It also encouraged the TEOs to deliver programmes using flexible delivery of teaching. In order to meet the strategic direction of the Ministry of Education, the MCNZ developed a curriculum, in consultation with midwives and stakeholder groups that would offer global skills and knowledge, support access to potential midwifery students living outside the

main centres and help address the midwifery workforce shortage in rural regional areas.

The MCNZ released guidelines stating that programmes should be developed to improve access to students living outside main centres (Midwifery Council of New Zealand, 2007) and proposed that in order to address the workforce shortages an increased number of midwives must be registered from pre-registration midwifery programmes (2007). The council stated that Tertiary Education Organisations (TEOs) must make their programmes available to prospective students living in regional areas and encouraged the TEOs to deliver their programmes from a flexible platform that not only offered flexible learning, but also provided opportunity for interactive group learning (communities of learning) (Midwifery Council of New Zealand, 2007) . The publishing of these four reports from different influencing organisations at around the same time period could be described as the 'perfect storm' which was the impetus for change.

In January 2010 in response to the accreditation requirements the Wintec midwifery teaching team commenced the first year of the new accredited pre-registration midwifery programme. The flexible delivery of teaching enabled students from the greater Waikato, Bay of Plenty, Gisbourne/Tairāwhiti and Hawkes Bay regional areas to attend and have access to the BMid programme via face-to-face (FTF) videoconferencing (VC) and practicum sessions, whilst attending at a contracted Regional Learning Hub (RLH) in their nominated home base. This meant that these students would also be able to gain most of their clinical experience in their home areas. Exposure in these clinical placements would, it was hoped, lead to future offers of work once students were qualified.

There were a small number of students who entered the programme following the successful completion of their National Certificate of Educational Achievement (NCEA) level 3 and after providing evidence at their interviews that they could confidently participate as a student midwife. Other students come from a variety of backgrounds, ranging from nurses

who had chosen to change careers, to adults entering a profession for the first time. The students had a variety of educational experience some with recent tertiary level academic qualifications and others entering from an Introductory health foundations programme. The range of experience and exposure to flexible learning and e-learning was vast. Students who had post-secondary education and tertiary education had exposure to and experience with Student Management Systems (SMS) such as Moodle. Others had extensive computer technology skills. Conversely a number of students did not know what a SMS was and or had very little computer technology experience. For example a student expressed to me recently her excitement at sending her first email with an attached file. Students also had variable availability to technology, for example broadband versus dial up internet and access to a personal computer. Many students did not have any experience of learning flexibly, for example learning via video conference and with online interactive learning modes.

Since the change in curriculum and the introduction of a flexible delivery mode enabling participation in the programme from a distance, there has been an increase in the ethnic diversity of students attending the BMid programme. This is significant for Māori in particular as it enables Māori students to attend Tertiary education from their home regions. Māori women especially find this option appealing as they are often the main provider of social and whanau¹ support and place a high value on being able to maintain that whanau support while studying. At present students who identify as Māori make up 29% of the total BMid cohort, there were three that were registered as international students and the small number of Pacific Island student intake was increasing.

The three regional hubs supported a range of student numbers from two in Gisborne to sixty in the HCH over the two years. The largest RLH group in both years was the Tauranga / Bay of Plenty hub with a total of 22 students

¹ In New Zealand Whanau is the Māori word used to describe immediate and extended family.

² The Wintec BMid programme is broken down into three trimesters a year unlike most

and the smallest cohort in the Gisborne / Tairāwhiti hub with at the time of the survey only two students. The Hamilton city main campus hub supported two thirds of the total midwifery student cohort in both years one and two. Students who attended the programme from the RLHs were compelled to attend a minimum of one third of their academic learning session as face to face at the Hamilton City campus and attend all of their academic and skills examinations in Hamilton. All of the other timetabled academic teaching sessions were delivered via VC from the HCH to attendees in the three regions. This VC took place in a large classroom on campus with the HCH students in attendance. Therefore during these teaching sessions all students were together either physically in their hub classrooms or virtually via VC. This especially impacted the HCH students as they were required to maintain a high level of quietness so as not too disrupt the noise over the VC connection. There was a requirement from all students to develop VC etiquette. The compulsory attendance requirement at the HCH face-to-face sessions is higher in the first year when students are expected to come to the HCH for face-to-face sessions between two to three times a trimester. Over the three years of the programme this will decrease as the clinical component of the programme increases.

The background context that outlines the development of the new pre-registration midwifery programme at Wintec provides the platform for this research. A number of key legislative and industry driven reports published around 2008 indicated the need for change. The need arose from concerns about workforce shortages, an aging midwifery population, and access to tertiary education from the rural sector and curriculum development that provided opportunities on the global market. Subsequent concerns raised by the midwifery teaching team about the impact the flexible delivery of teaching was having on student engagement endorsed the need for further research that would provide some insight into the challenges we were experiencing as teachers.

This chapter has provided an introduction to the topic of my research project, presenting the topic of flexible delivery of teaching in the context of the BMid

programme at Wintec and the impact this delivery of the new curriculum in this format may have on student engagement and outcomes. The background and some history to the development of a new midwifery curriculum in New Zealand is discussed and introduced.

Chapter two examines the literature in relation to the development of flexible delivery of teaching, the impact of flexible delivery of teaching on student's engagement and the impact of flexible delivery of teaching on learning outcomes. Detailed definitions of key terms such as flexible delivery and student engagement are discussed. The literature search revealed the complexity in defining flexible delivery of teaching, confirming that it is more than the single use of technology. The question, what is flexible teaching and learning was a starting point for the literature search and confirmed the importance of the mode of delivery being clearly linked to sound models of adult learning (andragogy). The emergence of e-technology in education cannot be ignored and is very often intertwined in the literature when discussing flexible delivery. The use of many different names have been used it appears to describe the same concept. The literature search helped inform my decision to call it flexible delivery of teaching, as this research asks what impact flexible delivery of teaching has on student engagement. There is also a discussion in this chapter about research that has attempted to answer this question, both to ascertain what has been found and to inform the design of the research itself. The literature examined also revealed a number of reports that discussed the development of student engagement tools. These have been included in the discussion in this chapter, again to support the design of the research.

Chapter three presents and describes the research approach that was used to answer the question; 'What impact does flexible delivery of teaching have on student engagement'? The approach used for this research was a descriptive survey administered to currently enrolled students via an online survey and to exited students via either online or postal surveys. All the students were emailed a letter of introduction with the information on the link and password to the survey. The AUSSE tool (Australian Council for

Educational Research, 2010), a survey tool that is used throughout Australasian tertiary institutions to measure student engagement was used to inform the basic design and some themes of questions.

The results of the survey are presented in Chapter four. The findings are separated under two headings, enrolled student survey and exited student survey. There were 52 (50%) valid completed surveys from the enrolled student survey and three (20%) from the exited student survey. The results of each questions are presented and described. Figures and tables are included that summarise findings with raw numbers, percentages, means, standard deviation and weighted averages, which detail information provided by respondents.

A discussion of the results forms chapter five. Three key findings form the focus and framework of the discussion. Firstly the respondents identified differences with their sense of belonging amongst their peers, tutors and the administration team outside of their RLHs. Respondents felt more engaged with their peers from their home hub and less with the teaching, clinical and administration teams.

Secondly the respondents across all hubs favoured face-to-face teaching sessions and thirdly the results from the survey revealed that the demographic profile of respondents was different when comparing those from RLHS and the HCH as was computer access and capability of respondents when comparing the two cohorts. Māori students were generally poorly represented as were those students that had exited the programme. This chapter concludes with reflections on the research process. Providing discussion on the potential of the survey to reveal some significant data towards the enhancement of the BMid programme providing insight in the respondents experience and engagement with different modes of flexible teaching and suggestions for future research. The final section of chapter five includes discussion on the findings of this research and presents my reflections of the research, considerations for further research and the implications for midwifery education and undergraduate knowledge.

Chapter two - Literature Search

In order to examine and inform the posed research question “does flexible delivery of teaching impact on student engagement” the tertiary education sector literature was examined. When I began this search I felt like I was in the midst of that old saying, ‘I can’t see the wood for the trees’, the wood being the foundation of teaching and learning, in the context of sound andragogy (principles of adult learning) and the trees being the extensive and diverse amount of literature and research available. I began this search thinking that the mode of the flexible delivery of teaching was going to be a major contributor in effecting student engagement and thus student success. However, the review of the literature demonstrated the superficiality of this assumption. Kuh a member of the Alliance of Distinguished and Titled Professors has research spanning 50 years focussed on assessing undergraduate student learning. He has published 21 books and 300 publications about student engagement and is one of the founding directors of the National Survey of Student Engagement (NSSE) which was founded in 1998 (Indiana University 2012). The NSSE is an approach used to gather information about the quality of universities in the United States of America and together with Kuh’s work is seminal in the development and as a benchmark for a number of the reports, research projects and articles cited in this search,.

Kuh (2007) describes many influences that impact student engagement which include; pre-tertiary experiences such as tertiary study readiness, family support and motivation to learn, institutional conditions such as academic support, teaching and learning approaches and he also discussed student behaviours such as peer involvement, interaction with staff and study habits. Woven into this mix of influences throughout the literature was, the emergence of e-technology and the evolution of the distance (distributed) learning and principles of adult pedagogy (andragogy).

The range of literature as mentioned was vast and was more specifically focused on the classroom experience of students. For example, a report from

the United States of America titled “*The Heart of student Success*” discussed four key strategies that promoted a positive classroom experience. These were to “Strengthen classroom engagement, integrate student support into learning experiences, and expand professional development focused on engaging students and focus institutional policies on creating the conditions for learning” (Center for Community College Student Engagement, 2010, p. 2). These examples showed the depth and complexity of this topic and indeed the considered range for the search.

The literature was therefore extensive and complex. In order to fit within the scope and size of this research project, the search was narrowed to fit within broad themes. This chapter outlines the search terms and strategies, presents the findings of the literature review under four main headings that interlink the impact flexible delivery of teaching has on students. I began with a discussion of the literature that examined the development of flexible delivery of teaching, in order to set the scene. During the literature search it became apparent that most of the current research that examined the impact of flexible delivery of teaching focused on either postgraduate or one off modules within undergraduate programmes. However a small amount of current research was found that informed the practice of flexible delivery of teaching over an entire programme. This information has informed the choice of the second heading; undergraduate programmes and flexible delivery of teaching.

The literature was therefore also canvassed under the following themes; the impact of flexible delivery of teaching on student engagement and the impact of flexible delivery of teaching on outcomes for students. These themes formed the headings for the literature review. The literature search revealed a number of reports that are very relevant to student engagement and outcome. The most relevant of these have been included within the context of the discussion in this chapter as they have been very influential in many of the research articles reviewed.

Search terms and strategies

For the literature review I used standard search strategies involving query builders applied to a number of databases and library catalogues. The databases included EBSCOhost, ProQuest, PubMed, Google scholar, the Cochrane library CINAHL and ebrary. The search parameters were over a 30 year period to allow literature about the emergence of e-technology and distance-like education. A number of search terms combinations were used that included combinations such as *flexible learning, distance education, undergraduate midwifery, video conferencing, face to face, e-technology, student engagement, communities of learning, online learning, adult learning, pedagogy, andragogy and nursing education*. There was an extensive amount of literature about e-technology and e-learning, distance education, student engagement, and the adult learner. As mentioned above I compiled four themes from the literature search. I then placed all the relevant research, books, articles and reports into four main groups which form the framework for discussion of the literature search.

Development of flexible delivery of teaching

Over the last two decades the tertiary education sector has seen major developments in learning and in the delivery of programmes. Information technology, the most significant of these developments has not only enabled more complex flexible delivery of teaching environments, it has also supported the shift in adult education from being teacher focused to learner centred. Broadly speaking flexible delivery of teaching could be considered a form of distance-like teaching and learning. Flexible delivery of teaching can trace it's genealogy from a blending of distance education and the development of the pedagogy of adult learning (andragogy) (Smith, 2005).

Flexible delivery of teaching has strong evolutionary links with the concepts of distance education. Many educationalist would argue that the emergence of technology, including the internet and e-learning, have blended with the philosophies of distance education and adult learning theories to become

what we now know as flexible delivery of teaching. There are also a number of common premises shared between distance education and flexible delivery of teaching. These include separation of teacher and student, different methods of teaching, and student centred learning. Commentators of flexible delivery of teaching are growing in number and the importance of this philosophy of teaching has seen its rise and prominence in much of the national and international literature, especially within the context of adult teaching and learning. Examples of some key commentators and experts in the field of distance and adult education are: (Hart 2000; Imel 1998; Keegan 1980; Nunan 1996; and Smith 2005) and I will briefly describe their contributions in the above order how flexible teaching has evolved and is understood by them.

Imel has been a key contributor to the literature in the field of adult and distance education over the last 35 years. In 1998 she referred to distance education as traditionally being education in which teachers and their students are separated by both time and distance. She points out that this is not a new phenomenon and that it has been happening for over 100 years. She notes the influence of the World Wide Web and technology in distance education since 1995. Similarly, Desmond Keegan (1980) another well-known theorist in distance education noted one of the key concepts of distance education is that it is defined by a separation of teacher and learner. However, he adds that distance education is also influenced by the organisation, by how the media are utilised and how communication happens. Smith (2005), a past editor of the Distance Education online journal and assistant professor at the University of Canterbury, takes these definitions a step further and discussed the merging or mixing of the terminology between distance education and flexible delivery because of the increasing level of interactive communications technology (ICT). His research referred to this as the convergence in education and suggested that flexible delivery should be seen as an approach rather than technique. He distinguished between distance education and flexible delivery for teaching which itself need not be at a physical distance. His notion of 'convergence' I feel expresses the complexity and confusion in the literature when providing

a definition of the approach to learning. The terminology, it appeared, is also flexible in meaning. Another influential writer in the field is, Ian Hart, the head of the Interactive Media Group at the University of Hong Kong (1992-2004). He had proposed in a paper titled "Learning and the 'F' word" that there are eight principles that inspire flexible learning. These principles he believed are essential to the application of a flexible learning programme. The eight principles are, "flexible access, recognition of prior learning, flexible content, flexible participation, flexible teaching and learning methods, flexible resources, flexible assessment and on-going evaluation" (Hart, 2000, pp. 100-101). The progression in development of guiding principles for flexible delivery of teaching was further discussed in relationship to changing social forms.

Nunan (1996) currently works at the Flexible Learning Centre at the University of South Australia and is cited in a number of research articles and projects that I found on flexible learning. He suggested the 'birth' of flexible delivery and learning was part of the transformation of higher learning with advancement of information technologies and that flexible learning would support some of the growing social and democratic values of education such as greater access to education and student centred learning. Together with the democratising of tertiary education, flexible delivery of teaching has also been, it is believed by some, driven by economics.

Kirkpatrick (2001) discussed the wider changes affecting tertiary education and proposed that flexible learning was not an isolated phenomenon. Kirkpatrick proposed that there is an increased pressure for choice, flexibility and diversity, as a response to ICT and that these are situated in an environment of significant economic change. Institutions are therefore finding ways to support the need to offer programmes across a more diverse population, finding ways to become more economically viable and utilising innovative information technology. Hart (2000) was also concerned about the impact that economic factors might have on student learning and recognised the importance of separating the principles of flexible delivery from being an economically derived phenomenon. He challenged institutions

to remain focused on the pedagogical (the science of education) implications, ensuring that flexible delivery remain focused on the goal of learning. He was cautionary about a tug of war between economic and pedagogical drivers, promoting the need to get the balance right between too much student control of learning, the student as the economic commodity and the core business. This rang true for my own experience with the development of flexible learning. It will be important that Wintec continue to develop and support the teaching team and technology based on sound adult learning practices as opposed to IT technicians making decisions based on economics and making what's available fit.

There are also a plethora of websites and agencies that are dedicated to the development, promotion and enhancement of flexible delivery of teaching. In New Zealand for example, Ako Aotearoa, New Zealand's National Centre for Tertiary Teaching Excellence has a real focus on this in its 2009 resource guide. It states that flexible and distance learning refers to two modes of learning that often involve technological support or e-learning. The report states that flexible delivery of teaching supports both distributed and on-site learners with more varied methodologies and practices for learning – mainly but not exclusively with technology, and confirms that flexible learners are not necessarily distance learners (Ako Aotearoa, 2009).

Similarly, in the United Kingdom there are a number of reports commissioned by government agencies which have undertaken research into the impact of flexible delivery of teaching on student engagement. For example, in Scotland, collaboration between the Scottish Funding Council, the Universities of Scotland, the National Union of Students in Scotland and the Quality Assurance Agency for Higher Education set up a steering committee to address the challenges facing tertiary institutions in developing a more flexible approach to learning. They recognised the importance of addressing the issue of the complexity of defining flexible delivery before being able to address the development of flexible delivery of teaching. The result of the work done by this committee was the publishing of a model that developed five *Enhancement Themes* that would provide the framework for a unified

approach to guaranteeing the quality of tertiary education by supporting both learners and teachers (Normand & Littlejohn, 2006). The committee determined flexible delivery to incorporate; flexible admissions, credit, recognition of prior learning (RPL), flexible programmes, student support, advice and guidance, continuing professional development and collaborative partnerships. As with the other literature discussed, this report acknowledged the difficulty in giving meaning to the term flexible delivery and supported the notion that there is no single definition. It seems that it is a generic term that can be used to describe flexible learning and teaching, distance learning e-learning and open learning. Developing clear meaning to the philosophies of flexible delivery of teaching provides a framework for learning institutions to address the issue of providing flexibly delivered programmes that meet the needs of all students.

Another example, this time from New Zealand, is Wintec that has a history with addressing this issue. The institute has had a long history of flexible delivery of some of its programmes, beginning with the introduction of distance courses in the early 1990s by use of video conferencing and mobile 'classrooms'. By 2001 there were 100 courses that were offered at the Institute as either web delivered or web supported (Clayton, 2009). The 2010 Bachelor of Midwifery programme was the first fully flexibly delivered fulltime degree programme at the institute (Ministry of Education, 2002).

Flexible delivery of teaching has gained a prominence in the field of tertiary education over the last decade both national, and internationally. Many educationalists have commentated on its origins and links to distance-like education and recognise the importance of defining flexible delivery of teaching in its own right, challenging institutions to have valid reasons for encouraging its use from a sound pedagogical basis. Flexible delivery of teaching can support and enhance student centred learning. It is clear from the literature that there are many varied definitions and perceptions of the term 'flexible' when applied to education. For this piece of research I have chosen to focus on the flexible delivery of programmes.

Undergraduate programmes and flexible delivery of teaching

Distance-like education was one of the first topics I examined when I began to review the literature. I began by looking for any research related to distance-like flexible delivery of teaching within midwifery education. No studies were found that fitted this description. However the search did disclose four research articles closely linked to the descriptor. Clarke (2009) who is the Associate Director at the Centre for Inter-professional e-learning and a Senior Lecturer in Midwifery at Coventry University described the introduction of e-learning in a pre-registration midwifery curriculum in the United Kingdom. Two articles were related to undergraduate nursing programmes. In one, Carter and Heale (2010) both professors of nursing at Laurentian University describe the use of video-conferencing in Canada. While Hegarty and Stewart (2007), Hegarty a Principal lecturer and Educational Developer at Otago Polytechnic and Stewart a Doctor of Nursing who at the time of publication was working as a Divisional Human Resources manager for Health Sciences at the University of Otago, discussed a case-study reviewing the reality of online learning in the nursing programme at Otago Polytechnic, New Zealand. The fourth research article came from the United States of America (USA), which described a collaborative project between two Universities specific to midwifery education at postgraduate level, following nursing registration. Johnson, Ghebreyohanes, Cunningham, Kutenplon and Bouey (2007) are nurses and midwives working at either the Stony Brook University in USA or the University of Asmara the two partner Universities for this collaboration.

The following paragraphs discuss these four articles in more detail. They reflect similar themes in the literature that demonstrate the relationship between the developments of flexibly delivered programmes. They also introduce the idea of inter-professional collaboration in the flexible delivery of programmes.

During 2005 changes to the midwifery curriculum in the United Kingdom created the opportunity for flexible delivery of teaching. Clarke (2009) wrote about a conjoint validation project between the Nursing and Midwifery Council, Health Professional Council and the Quality Assurance Agency of the undergraduate courses at Coventry University. The article is a mix of Clarke's own personal reflection and experiences of students, about the opportunity to use e-learning as a way to support a component within the midwifery curriculum that focused on inter-professional education. She discussed that while many sectors of the general population, health community and practicing midwives were absorbing and utilising the benefits of technology and that those enrolled in post graduate learning programmes were using e-technology, there was little research about the use of this in pre-registration programmes. The article reflected on how learning had been integrated into a specific component of the curriculum for undergraduate midwifery students. The framework has closer connections to a flexible delivery of teaching, as the discussion centred on an inter-professional learning pathway which integrated an e-learning approach. Clarke concludes that the curriculum did not exist in a vacuum but was dynamic. She also stated that this way of learning, positively supports the midwifery curriculum and that it also brings midwifery students into line with the consumers they care for who also engage in e-technology for their own information.

The Canadian article located did not report the experience as being quite as positive. Carter and Heale (2010), two nursing professors from Laurentian University reviewed the use of video conferencing (VC) with 100 third year nursing students. The sessions were delivered over three hours, once a week, to the students who attended in classrooms fitted out with video-conferencing equipment in three separate towns. The courses were run over two semesters and focussed on the topic of nursing research. A reflective case study review of the experience was detailed mainly from the perspective of the teaching staff in their reflections of their experience of teaching via video conference. However, the authors note that some of the reflections are of observations made from the student's experiences of VC. The authors described the results in a section of the article they call "the

good the bad and the ugly of teaching video conferencing” (p. 112). They concluded by stressing the importance of planning and design, and the support of IT technicians. Much of what I read in this article resonated with the experiences of video conferencing at Wintec at the beginning of the programme. An important key message from the authors is that institutions need to consider the educational value of VC in terms of design and application rather than letting the technology determine the value. Significantly in support of this survey they end with the following statement that gives a voice to the tutors that delivered the lessons through VC, “teaching through video conferring is hard work” (p. 115). They stated that their teachers were not in a hurry to teach by VC again.

In the second of the articles found relating to undergraduate nursing programmes, Hegarty and Stewart (2007) discussed lessons learnt over a ten year period of online learning. Their review was in the format of two case studies. A review of the online module taught in 1996 was undertaken and compared with a case study review of the same module again in 2005. The authors used a five stage model of online learning developed by Salmon (2002) a professor of e-learning and e-technologies from the University of Leichester, to evaluate the efficacy of the changes made over the 10 year period. Salmon (2002) described the 5 stages as (1) access and motivation (2) online socialisation (3) information exchange (4) knowledge construction and (5) development. Hegarty and Stewart used the model as a framework for their case study review (2007). Over the 10 year period a range of learning strategies were used that could be described as fitting within a flexible delivery of teaching model. Many of the participants were in fulltime time work and accessed the modules online. However some also attended on-campus lectures at nominated times over the semesters. What worked well, Hegart and Stewart said was that the modules could be “designed for those studying in both rural and urban settings and that the modules could support learners with different learning styles” (2007, p. 71). They also thought that, although they could not replace face to face lectures they did provide another medium for learning. Similar to the previously discussed research (Normand & Littlejohn 2006 and carter & Healr 2010), the

challenges identified were around students' and lecturers' experience and skill in the use of technology and in providing the appropriate level of support. They suggested that the key learning from their research was that flexibility was important both in strategies applied to learning and in the way that student communication was handled.

The fourth research article discussed a partnership programme between the University of Stony Brook (New York) and the University of Asmara, (Eritria) that was delivered by distance (Johnson et al, 2007). The curriculum was delivered via a learning management system (LMS) that included recorded lectures, graphics, suggested readings and worksheets. As the students did not have access to any computer technologies at home or work, a designated learning space was set up at the University of Asmara with funding from USAID. Five main recommendations were identified to further support the flexible delivery of the partnership programme. These with the acknowledgement of the individual differences in healthcare and educational systems of both countries were; appropriate educational technologies for example internet connectivity; preparedness of student and teachers; acknowledging the importance of clinical education and the need for synchronicity of feedback and finally the need for forward planning and the ability to provide flexible delivery of teaching that was relevant to students in Eritrea.

These four studies (Clarke 2009; Carter & Heale 2010; Hegarty & Stewart 2007 and Johnson et al 2007) demonstrate the complexity of issues related to flexible delivery of teaching. They highlight the importance of developing flexible programmes that keep abreast of technological changes. They support the need for professional development of the teaching team and show that flexible programmes can be beneficial in supporting the different learning needs of individual learners but all conclude that flexible delivery of teaching cannot in all circumstances replace face to face teaching sessions. These studies also support my decision to undertake this research. There also appeared to be a gap in the literature that considered the impact of

engagement and outcomes for students when enrolled in a fully flexibly delivered undergraduate degree programme with a distributed students.

The impact of flexible delivery of teaching on student engagement

Student engagement is a process that is interpreted at different levels. Sometimes depending on who is asking the question it just simply means student enrolment. An example of this is demonstrated in one of the priorities noted in the *New Zealand Strategy for Tertiary Education* (Ministry of Education, 2010). This strategy aimed to increase the number of young and less advantaged students enrolling in tertiary education. It described five factors as influencing student engagement:

how the government funds institutions and students, school achievement levels, the information and advice students and their families receive on study paths and options for higher education, the learning environment at tertiary organisations, including effectiveness of teaching and the academic and pastoral support students receive (Ministry of Education, 2010, p. 12).

This strategy assessed student engagement purely by measuring the number of enrolled students. The report proposed that changes to funding structures and developing clear learning pathways would contribute to student engagement and therefore to retention. This policy applies mainly to the vocational style programmes such as midwifery or nursing and suggests changes such as 'fee-free', structures especially for those students whose initial learning experience was not successful (second chance learners), or for those who require pre-undergraduate foundation courses. This report referred to flexibility delivery of teaching in terms of the structure of enrolment.

In other literature it is a complex process influenced by many factors and not easily measured. Student engagement and success is more than just about providing a learning environment that is student centred. That it is more than

just learning for learning sake; I was interested in finding a way to support student engagement and success that is educationally effective from a multifaceted perspective, taking into consideration the learner, teacher, institution and policy makers. The following example of student engagement, also from the New Zealand Ministry of Education, is a better fit with the broad concept of this research. Engagement in this document is described quite differently. It is stated that engagement “encompasses attracting and holding students attention” (Ministry of Education, 2008, p. 1). This discussion paper suggested that there are a number of reasons students find it difficult to engage in learning, especially flexible learning modes that incorporate online learning. Of significance say the authors, students need to have the ability to be self-directed and adjust to the multi-media mode of learning and also that the learning design needs to fit with the needs of the learner (Ministry of Education, 2008). The five key measurements for consideration are that learners need to engage with “self, content, other learners, the teacher and technology” (p 1). The key to successful student engagement this resource stated is successful design.

Student engagement in the following example is rather complex. A tool called a conceptual organiser was developed by Leach and Zepke (2011). A review of the literature was undertaken to try and gain some understanding and group the concept of student engagement into four conceptual areas for consideration. Unlike other tools that measure student engagement via calculating outcomes Leach and Zepke (2011) developed their ‘organiser’ as a framework that incorporated a diagram that is divided into four sections. They described in detail four identified conceptual perspectives of their meaning or interpretation of student engagement. Leach and Zepke (2011) from the School of Educational studies at Massey University, New Zealand, suggested that student engagement is influenced by a number of complex key elements. Their ‘conceptual organiser’ was tested on students enrolled in their first tertiary programme at Massey University and captured four key perspectives – motive and agency, transactional engagement, institutional support and active citizenship.

Leach and Zepke focused their review of the literature on student engagement, on two perspectives that would inform the four components of the organiser. One perspective they grouped into a constructivist view where it is assumed that, students are independent learners able to achieve their own goals. Research from this viewpoint also suggested interest and a preference to act, can also explain student engagement (p 194). The grouping of research for the second perspective was when institutions measured student engagement by calculating focused activities between faculty and students. The American National Survey of Student Engagement (NSSE) and the Australian University Survey of Student Engagement (AUSSE) are examples of this focused activity perspective and are discussed later in this chapter.

Seventy two students and teachers from Massey University were surveyed and interviewed to evaluate the organiser that Leach and Zepke (2011) developed. The interviews were transcribed and data analysed to see if there was any relationship to the four key perspectives; motive and agency, transactional engagement, institutional support and active citizenship. The researchers concluded that the organiser required some revising of these categories however argued that it offered a worthwhile way of thinking about the intricacies of student engagement and potentially this tool could be valid for use at other institutions when considering student engagement.

The development of frameworks and tools seems to be a way that educationalists have attempted to make sense of student engagement. During the literature search a number of research articles and reports were found that discussed frameworks for gauging student engagement and retention. These frameworks also measured the impact of different educational activities and have developed a means to measure engagement. One such instrument, the National Survey of Student Engagement (NSSE) which appeared to be the foundation for other tools, provided a framework that captured information on students experience and their educational activities across a number of participating institutions. There were 761 colleges and universities who participated in the 2011 NSSE and since 2000

1,493 have participated throughout the United States (Trustees of Indiana University, 2011). Four research articles were found during the literature search, which pursue additional inquiry of the NSSE. Gordon, Ludlum and Hoey (2007) investigated the ways in which results from the NSSE can be used to further explain student success. Instead of this tool being used by institutions to rate their success against other institutions in relationship to the target scores of the NSSE, the authors developed three research questions;

1. To what degree, are NSSE benchmarks correlated with the student outcomes (for example) job attainment?
 2. To what degree are the NSSE scale-items correlated with student outcomes?
- And;
3. Can a model be generated that provides a better fit to student data? What NSSE items are most associated with positive student outcomes?

(Gordon et al, 2007)

In the authors' discussion they concluded that the NSSE tool is valuable as a means to provide institutional self-reflection however caution that there may be restrictions when measuring the institutions effectiveness in student outcomes (Gordon et al, 2007).

LaNasa, Cabrera and Transgrud (2009) writing in the attempted to deconstruct the NSSE tool in their research which asked if the five benchmark scales of the NSSE instrument that are used to compare student engagement between different institutions can be used to assess student engagement for a single standalone institution. They proposed that there needs to be additional components applied to the scale in order for this to be considered. The five 'benchmark indicators' of the NSSE they examined are "(1) level of academic challenge, (2) student-faculty interaction, (3) active and collaborative learning, (4) enriching educational experiences, and (5) supportive campus environment" (p. 322). They posit that a further three dimensions be added to test the validity of the NSSE tool in order to make the data more useful for stand-alone use. The method was an online survey

and a factor analysis model was used to interpret the data. The authors concluded that the NSSE on a national level is a critical tool that allows educational institutions to measure and improve the environment to enhance student outcomes. They cautioned, however that in an attempt to simplify the measuring of student engagement into five dimensions institutions run the risk of isolating beneficial practices and activities on an individual student basis (LaNasa et al 2009).

In an attempt to develop new student engagement scales, Carle, Jaffe, Vaughan and Eder (2009) from the University of North Florida proposed tools to measure engagement with the teaching faculty. The NSSE survey tool was sent out to a random selection of first and second year students of whom 940 responded. The data collected from the surveys formed the basis of their scale development. In particular the authors wanted to address gaps they felt occurred in the NSSE that did not address engagement topics such as “Student-faculty interaction, community based learning experiences & high impact or transformational experiences” (p. 777). Item response theory (IRT) a framework for measuring abilities and attitudes and confirmatory factor analysis (CFA) were used in this study to establish the psychometric properties on three new scales (related to the above engagement topics) to test the measurement reliability of the NSSE. The three new scales tested were; student-faculty engagement, community based activities and transformational learning opportunities. The new scales were tested on undergraduate students at an urban university. The authors cautioned that while the results showed the scales were a valid measure of these constructs and the NSSE is rich in data they cannot assume the generalisability of the results to other institutions Carle et al 2009).

Coates (2007) from the University of Melbourne takes the NSSE a step further, in his research which developed a typological model. Coates used a survey he called a student engagement questionnaire to ask a selected cluster of students across four institutions and four fields of study. There were a total of 1,051 responses from students. This model he believed helped address the gap in other student surveys such as NSSE by

specifically targeting the issue of the online learning environment. Coates made specific mention of 'learning management systems' (LMS) such as blackboard as having the capacity to influence education in many ways and suggested that the LMS were rapidly being adopted by many tertiary education institutions to expand the flexible learning environment by way of virtual classrooms. Coates (2007) developed a student engagement questionnaire which was used to gauge the online and overall engagement of campus-based university student. The results revealed that students who said they were extremely engaged, also demonstrated a high level of involvement in their study, participated often with the university learning management system, had a sense of connectedness with other students and tutors and participated in extracurricular activities (Coates, 2007).

Another framework or tool for assessing student engagement is the Australasian Survey of Student Engagement (AUSSE). This tool was established in 2007 and was informed by the NSSE. By 2010, 35 participant educational institutions from Australia and New Zealand were participating in this survey. One of the main objectives of AUSSE is to "stimulate evidence-focused conversations that will lead to the enhancement of student engagement and student outcomes" (Australian Council for Educational Research, 2010, p. iv). The tool is a survey that has both an online and paper option for students to fill out taking approximately 15 minutes to complete. The survey comprises four pages totalling 41 questions mostly Likert in style with the last two questions being open text questions. The questions in the survey are grouped together under six different themes which are called scales. These scales form the basis of the tool and measures different forms of student engagement.

The AUSSE (2010) six scales of student engagement are "academic challenge, active learning, student and staff interaction, enriching educational experiences, supportive learning environment and work integrated learning" (pp. 68-69). AUSSE reports extensively on levels of engagement in 'distributed learners' (those that are learning either part time or by distance) and found there was very little measurable difference in the academic

challenge for distance students and the students based on campus. The distance students however were noted to spend on average 12 hours more in preparation time for classes than their on-campus counterparts. Distance students and on campus students overall interaction with teaching staff scored the same. With regards to perception of supportive environment students who were campus based scored higher than those who were based off site (distributed students) as was the score for relationships with other students especially in the distance cohort. The survey also found that those students from remote areas had slightly lower levels of vocational preparedness and that Māori students had considerably lower levels of vocational preparedness compared with campus based students (Australian Council for Educational Research, 2010). The career readiness questions were developed as new items from research that was undertaken with Victoria University, Wellington. The question asked students whether their resumes were up to date, had they thought about networking with prospective employers during their education and had they developed a professional development plan.

Chapter five of the AUSSE (2010) report comments on the equity and outcomes of students following higher education. It focuses on the outcomes of students in socio-demographic groups that have been historically underrepresented in higher education. Information provided by the New Zealand Ministry of Education for the survey showed that Maori and Pasifika students had less than average rates of admission to tertiary institutions and that the attrition rate of these students in the first year was much higher than that of European and Asian students (Australian Council for Educational Research, 2010).

Kuh, Cruce, Shoup, Kinzie and Gonyea (2008) also addressed the issue of student engagement. The purpose of their study was to define the different associations between key student actions and the institutional practices and circumstances that nurture student success. Two questions directed the study focussing on engagement, one about the first year of attendance and the other the influence of race and ethnicity on engagement. This study

which involved 18 colleges and universities also used data from the NSSE, and found that student engagement can be influenced positively by institutions adopting a number of behaviours such as, teaching practices and programmatic interventions, for example the implementation of first-year seminars, service learning courses and learning communities. These institutionally introduced behaviours according to Kuh et al (2008) clearly contributed to higher grades for at risk students especially in the first year of a programme. In addition, the study found that by applying the above mentioned institutional behaviours, at risk students gained higher grades. There was also a reduction in the attrition rate for students in minority groups and for those students who were struggling.

The concept of 'reciprocal engagement' was introduced by Kuh et al (2008). This is similar to two of the AUSSE scales, enriching educational experiences and supportive learning environment (2010, p. ix). Reciprocal engagement describes when there is a connection between students and the campus setting. The two cohabit in a mutual relationship that enables student success. The authors note that priority should be given to the importance of using the classroom to construct 'communities of learning' (P. 555). This form of learning encourages collaboration and cooperation that provides support, enhances student engagement in a way that is a rich and relevant process that kept students motivated and reinforces development of higher-level cognitive and emotional skills. An example of this would be the establishment of a support group for Māori students that is led by Māori teachers and students in a way that is culturally appropriate in order to help address issues such as early attrition and poor grades.

According to the AUSSE report (2010), the students from rural areas report slightly higher levels of departure intention than urban based students. The survey also found that the Māori students reported significantly higher levels of departure intention than the other ethnic groups.

There is much support in the literature for Institutions to take into consideration equity issues. Flexible delivery of learning needs to be equally fair to both the distributed and on-campus learner. There are many different

suggestions introduced across much of the literature cited. For example, institutions should provide extra training for staff and students on the different modes of flexible learning and the introduction of practices that are additional to the support that the students get who attend the main campuses, such as face to face contact. These they say can lead to improvements for distributed students in their ability to engage in their learning and improve their overall outcome in their chosen programme.

Impact of flexible delivery of teaching on outcomes

There is a great deal of debate that is supported by evidence and valid arguments, both for and against, the impact that flexible delivery of teaching has on student outcomes. In fact an entire website and book has been published called the *No significant difference phenomenon* compiled by Thomas Russell (2001). The book is a comparative research annotated bibliography detailing 355 research documents relevant to the impact of flexible delivery of teaching on outcomes. Additionally the website provides further analysis under three headings comparing learning. It asked whether student results are better through technology, or better when they are in the classroom or when there is a mixed of both (About us, 2010). This research and website is a living document that continues to be updated regularly and many educational specialists have based their own research from the compilation of documents. Ramage (2002) is one such educationalist and has published a literature review that summarised his key findings of all the literature from Russell's work. A number of studies from the collection are reviewed and the data are discussed comparing the traditional classroom setting to the virtual classroom. Ramage's literature review discusses studies under a number of headings including; faculty and student perceptions and effectiveness of the different classrooms comparing grades and study. Ramage concludes from his review that there is "no study, no evidence of any kind that categorically proves that technology *does not* impact learning in some way, positively or negatively" (p. 6). There are studies however that found in some way the mode of delivery can and does impact student outcomes.

Schreiber, Fukuta and Gordon (2010), conducted what they believe was the first cross over randomised controlled trial. This study compared live lecture against video podcast with a class of 100 medical students. Both groups were taught the same clinical topic by the same lecturer provided the same power point via either live face to face lecture or video podcast. Students' knowledge was tested with a multi choice quiz following the presentation. The survey found that students' ability to recall the delivered information was similar for each method of instruction. However, the students commented they felt the podcast was generally less engaging and they were not as motivated to stay the full length of the session.

The literature I read presents an overview that flexible delivery of teaching does not necessarily impact student outcomes. However, what the literature did show was that in some way, the mode of delivery for example video conferencing does change the learning environment for students and teachers, especially if for example the technology is of a lesser quality or does not suit the teaching method. What I did find through teaching experience, in discussion with my educational colleagues and extensive reading about flexible delivery of teaching was that; unless sound andragogy (adult learning strategies) is supported and teachers are well trained, student engagement and outcomes are negatively impacted. A number of contributing factors related to measuring student success were found that were over and above the method of delivery. Of note are the principles of adult learning.

There are a number of educational principles supported by more than 50 years of research that do not appear to have changed. These principles of adult learning can be applied to both the traditional modes of teaching and the current practices of flexible delivery of teaching. Professors Chickering and Gamson (1987) discussed "seven principles for good practice in undergraduate education" (p. 3). In their influential paper the principles introduced appeared to be seminal in relationship to discussion on student success and have been re-published by a number of educationalists since.

They discussed the importance of balancing the content of courses with sound principles of andragogy.

Chickering & Gamson's seven principles of good practice introduced were:

(1) encourages contact between students and faculty, (2) develops reciprocity and cooperation among students, (3) encourages active learning, (4) gives prompt feedback, (5), emphasizes time on task, (6) communicates high expectations, and (7) respects diverse talents and ways of learning (pp. 4-6).

More recently these principles were tested in a research project by Arbaugh and Hornik (2006). Arbaugh and Hornik tested the application of these principles to flexible delivery of teaching in an online Masters programme. The research they undertook compared students studying via web-based and students studying via classroom based courses and used a survey method for data collection. A six and twelve item- scale was used to measure alleged student learning and satisfaction. These scales were measured against the seven principles developed by Chickering and Gamsin (1987). Although the authors found some limitations when applying the seven principles of good practice they suggested that with some refining of five of the seven principles these could be used as a framework for the theoretical development within the context of flexible delivery of teaching.

Other research emerged during the literature search that introduced tools for measuring student success. Whitt, Kinzie, Schuh and Kuh (2008) using the NSSE as a baseline developed a template that institutions could use to assess educational effectiveness. They call this tool ISES (the inventory for student engagement and success). Core questions are asked based on measurements of student engagement. They tested ISES on six participating institutions across the USA. One cluster of questions asks and measures students on the number of times they participate in class activities and discussions and how they work in collaboration with other students. These are similar to questions that have been used in the survey for this research. The common wish of the institutions choosing to use the ISES tool was a

desire to improve student outcomes. The institutions had “compelling reasons to learn more about the nature of students’ experiences and what (they) could do to improve the learning environment for all students” (Whitt et al., p. 17).

Whitt et al., (2005) have also collaborated in a project that was a two year study examining 20 universities that reported higher than expected graduation results. The project called DEEP (documenting effective educational practices) found these institutions had a philosophy of self reflection and continually looked internally for ways to improve student success. This success was not always measured by the number of graduating students but about students perceived success. What the project found was that all the schools involved had similar philosophies to student success. Providing a learning environment that combined academic challenge with support was found to be one of the most important aspects to improving student outcomes.

The work of the team in the DEEP project led to similar conclusions to those made by Kuh et al., (2008) that the teaching faculty increase student outcomes by acknowledging and implimenting practices that support these concepts and acknowledge the importance of sound educational practices that sustain the adult learner. One way of measuring this was to ask students how often they participated in class activities and apply the answers to a process of reflective practice by the Instituion and teaching faculty. Giving the students a voice and providing the teachers with important feedback that informed practice change.

Research implications

The literature presented in this chapter informed the design of my research in a number of ways. Firstly there was minimal research that pertained to fully flexibly delivered programmes at an undergraduate level as most of the literature examined the impact to students that were in postgraduate

programmes. Secondly it supported the notion that student engagement is an important aspect of teaching and there are a number of identified concerns about what impacts certain students' level of engagement which has an impact on recruitment and retention of students. Reports such as the AUSSE and NSSE surveys demonstrated the importance that International Tertiary Institutions are placing on student engagement. These survey tools revealed a need for institutions that undertake programmes such as the BMid programme for pre-registration develop faculty and educational models that use appropriate educational technology and support strategies that focus on improving student engagement. The literature endorsed the need to support student centred learning that is pedagogically sound and that keeps abreast of the changes in teaching strategies especially within the context of e-technology. Students who can develop critical thinking and skills with flexible learning are more able to then transfer these skills into their chosen professions for example in midwifery and health care. The literature search also revealed that flexible learning and delivery modes are an important component of adult learning and are considered a strategic learning package to address many issues for future teaching strategies for example the Tertiary Education Strategy (Ministry of Education, 2010).

The reports and research discussed also impacted on the design of the survey for this research. The AUSSE tool was used to influence all of the questions for the survey excluding the demographic and open ended questions. This tool has been used to survey over 450,000 bachelor students across Australia and New Zealand; the data collected focusing on student learning and outcomes. Across the randomised sample of students a target response rate of between 20 – 50 per cent was expected. The AUSSE tool was developed in collaboration with the NSSE team in the United States of America; the contributors to this team are authors whose separate works have been cited in this literature review including Kuh et al (2005 & 2008).

The literature also revealed the complexity of measuring student engagement and success. This confirms that it is not possible within the scope of this thesis to address all of the components of student engagement.

However it affirms that when asking the question; *what impact does flexible delivery of teaching have on student engagement?* I can apply the pertinent and relevant literature to the survey for the students of the BMid pre-registration programme at Wintec, New Zealand.

The literature search revealed a number of changing trends in tertiary education. There has been an emergence of flexible delivery of teaching as mainstream and as a way of opening access to higher education to a more diverse student cohort. It revealed the development of a number of reports that discussed the development of tools to measure and support student engagement and identifying challenges and opportunities for institutions with regards to providing high quality learning and outcomes for learners. The search revealed the wide-ranging and complex nature of the topic and identified a multidimensional range of influences on student engagement such as social influences, motivation and skill of both student and teacher. The research revealed the importance of interactivity between the learner and teacher and encourages institutions to support ongoing professional development for faculty.

Chapter Three – Research design

One of the key research techniques known within the field of social science is the social survey. A social survey is a mode of research that seeks to collect information about a particular group of people. It is also known as descriptive research as the researchers' objective is to describe a social phenomenon (Buckingham & Saunders, 2004). An online survey method was used for this research. This chapter explains this research approach. It provides the detail about descriptive research and why this approach was used. Surveys and online surveys are discussed providing detail about why this particular research method is appropriate given the context of the research. Ethical considerations are discussed in relation to the research methods. An outline of the research approach, including descriptions of the survey, participants and analysis is given. Validity of the data including a discussion on bias control forms the final part of this chapter.

Research approach

This research sought to examine the level of student engagement within a flexibly delivered midwifery programme. The style of approach used for a piece of research is determined by the question. For this research I sought to answer the question *what impact does flexible delivery of teaching have on student engagement?* Therefore the chosen approach for this research is descriptive. It primarily sets out to describe 'what exists' or finds out 'what is'. In this chapter the research approach is discussed and validated. The different types of descriptive research are discussed and the reasons for choosing an online survey. The questionnaire design is described detailing specific aspects of individual questions and gives comparison with the AUSSE tool as this tool was used to inform the design of my survey. This research surveys a total population and therefore detail of the respondents profile is discussed. The data is analysed using descriptive statistics and ethical considerations are discussed.

According to Gillis and Jackson (2002) a research project that is primarily descriptive is generally concerned with a detailed portrayal of some group of

society or a population. The process involves the researcher finding commonalities with the specific group, enabling a summary of the observations. There are three basic types of descriptive research whose main aim is to simply describe a situation. This can be achieved by using observational, case-study or survey methods. The most commonly used methods for collecting data; in this style of research are; observation or survey. I chose a survey method for the purposes of this research because of the distributed nature of the BMid cohort. Buckingham and Saunders (2004) state that descriptive research “seeks to measure the incidence and describe the character of phenomena without trying to explain their causes” (p. 289). The phenomenon that I sought to describe was the impact of flexible delivery of teaching on student engagement and student outcomes. Phenomena are often understood to be appearances or experiences. A tool is frequently required to be able to measure or make sense of these appearances and or experiences. For this research the questionnaire was such a tool.

According to Knupfer and McLellan (2001) descriptive research is difficult to easily fit within the framework of either quantitative or qualitative research as it can contain features of both methodologies. In this research, quantitative information via a survey method has been collected in order to provide some understanding of the data. Descriptive research also involves assembling data organise and tabulate it in a way that enables the researcher to describe the data collected. It is said that quantitative research strives to measure, or replicate with numbers, observations about human behaviour whereas qualitative research uses ideas and attempts to understand human behaviour (Gillis, & Jackson, 2002). As the purpose of this research was to describe a phenomenon in a specific population, therefore this research is primarily quantitative.

A survey is a sound method for collecting information from a defined population that is of interest to the researcher. Surveys are a popular method of gathering information because they are user friendly, flexible, cost effective especially when collecting large amounts of data and are

responsive to statistical analysis (Cohen, Manion & Morrison, 2007). According to Alreck and Settle (2004), surveys are often used by institutions, organisation and companies to find out the essential social situations that make their 'goods and services' beneficial and valued, and to provide greater understanding of the needs of the clients (students) in order to better achieve positive outcomes, (student engagement, positive learning experiences and better retention). Survey research is often, they say, used to furnish information for making decisions about the needs and desires of their clientele. In this survey, questions were asked in order to better understand the needs of the students and find out what impacted their ability to engage in their learning. After six months of teaching with a blend of FTF and VC it became apparent to the teaching team that a number of students were not engaging in their learning and this appeared to be impacting their learning outcomes. It was important to ask the students what was happening for them and consequently affirm the need to make changes to our teaching style. In order it was hoped to better achieve positive outcomes and support the need from Wintec to fund further professional development about flexible delivery of teaching for the tutors.

Surveys are used to uncover realities of a certain population. According to de Leeuw, Hox and Dillman (2008) a survey contains descriptions that recur and use specific terminology. There is a sample, a collection of information, a methodology to the collection of the data and it is quantitative. Therefore a survey can be defined as "a research strategy in which quantitative information is systematically collected from a relatively large sample taken from a population" (de Leeuw et al., 2008, p. 2). There are a number of different types of survey methods including telephone interviews, online surveys, face to face interviews, examination of records and postal surveys (Knupfer & McLellan, 2001). For the purpose of this research a survey, online for those students enrolled in the programme and postal for those that had exited the programme was proposed.

When deliberating the right approach to answering the question a number of concerns were considered. I was able to justify choosing a survey approach

when considering constraints such as cost, time, distance and a total BMid population. The programme is delivered via a blend of flexible modes of teaching to three regional learning hubs and to students who attend the main city campus. Therefore the distributed nature of the student cohort supported the use of an online or postal survey.

An online survey was considered appropriate for the enrolled students as it is a tool the students are familiar with using. Currently students are surveyed on a regular basis, being asked about the content and delivery of module information and feedback on the lecturers' teaching. The surveys are called SETmap (student evaluation of teaching) by Wintec and are sent out to students at the end of the trimester² via an online method.

There has been considerable increase in internet use over the last decade, especially influencing education and research. As discussed in Chapter two, the internet forms a large part of the framework for the flexible/blended learning mode of teaching. There has been a corresponding increase in its use in research, especially in the area of technology of online surveys. The students enrolled in the BMid programme are surveyed on a regular basis for their feedback and are therefore comfortable with the online survey format. This familiarity with online surveys contributed to the decision to use an online survey method.

This type of web-based survey is considered to be a list-based survey, as it is applied to a sample of students within an organisation. The sample is also described as a probability survey which according to de Leeuw et al., (2008), is often described as a scientific survey meaning there is a framed specific population, compared with a non-probability survey, often perceived as unscientific in which the target population is not usually contained within a framework and often employs opt out panels in the survey. This type of survey was chosen as it was considered to be cost effective therefore reducing the cost to the researcher and no financial cost to the participants. I

² The Wintec BMid programme is broken down into three trimesters a year unlike most Universities and other Institute Bachelor programmes which are divided into semesters.

was aware that students enrolled in the programme have a high work load and only attended onsite at the main city hub two to three times a trimester therefore considering time and distance was another factor in choosing the online survey method for all of the enrolled participants. Wright (2005), in his review of the advantages and disadvantages of online survey research suggested a twofold advantage when considering the 'time' factor. The researcher is able to reach a large number of participants in a shorter timeframe than for face-to-face interviews, especially when considering geographical distance and the online survey also allows the researcher flexibility of time to work on other tasks. The respondents contributed in the survey at their convenience therefore reducing the participant's burden. This method also meant the geographical distance of students in the RLHs from the main city hubs was not a limiting factor to participation and time in turn-around of surveys.

The list-based survey also has defined parameters of solicitation of participants. The survey was sent out via individual invitation from a list consisting of all enrolled students. The database included all email addresses of enrolled and withdrawn students. The participants form what is called a total population survey. This simply means that questions are sent to every known person in a given population (enrolled year one and two BMid students and student that had exited the programme) and that there is no randomisation of the polling. This type of self-completion survey considers data collected at one point in time. This is described as either a cross-sectional or retrospective survey (Bowling, 1999) or 'one shot' study (Rees, 2003).

Questionnaire design

In this study I wanted to find out about the impact on student engagement for midwifery students in a flexibly delivered programme. Rees (2003) suggests that one of the most crucial components to a survey is the body of questions. It is important to consider the selection structure, style and mode of answering and analysis of responses of questions. The survey is a method of gathering evidence that can be used to describe, contrast or enlighten the

researcher about the frame of mind, beliefs and tendencies of a specific cohort. The type of survey used for this project was a self-administered online survey. Students were given the opportunity to partake in the survey via links provided in an email and student midwifery social networking site. The URL access and password were provided, with an attachment that contained a letter of introduction providing the aim of the research and instructions on how to complete the survey. The survey opened for contribution on 10 October 2011 and students were invited to participate upon receiving their emails and through the Wintec student 'learning management system' (LMS) Moodle. A second reminder was sent to students email addresses and through the LMS three weeks later. The students that had exited the programme were emailed reminders at the same time.

The design of a number of questions was to provide some insight into the level of student engagement and sense of belonging with the BMid programme at Wintec in order to answer the question *what impact does flexible delivery of teaching have on student engagement?*. By using examples of question style and engagement scales from the AUSSE tool I was able to develop the questions in the survey in a way that I hoped would be objective and easily understood by the respondents. For example engagement scale three "student and staff interactions" and four "enriching educational experiences" (Australian Council for Educational Research, 2010, p. ix) have been used to inform a number of questions that use a Likert scale. Questions were also asked that would measure variables such as place of learning, for example did learning from one of the RLHs via VC impact the student's ability to engage? Did place of learning impact on student outcomes such as passing modules? It was important to gain some sense of student engagement not only from the perspective of the students that attend the bulk of their learning sessions by distance via video conference and online learning activities but also for those students that attend their learning sessions at the Hamilton city hub via face to face sessions. All FTF sessions from the HCH are video conferenced to the RLHs.

As mentioned the survey was developed taking examples of style and structure from the AUSSE tool, which was introduced and discussed in Chapter two. This tool has formed the framework for a number of the questions in the survey used for this research excluding the demographic and open ended questions. The AUSSE tool has been used to survey over 450,000 bachelor students across Australia and New Zealand; the data collected focusing on student learning and outcomes. Across the randomised sample of students a target response rate of between 20 – 50 per cent was expected, the top end of this range is comparable to this survey response rate of 52 per cent. The AUSSE tool was developed in collaboration with the NSSE team in the United States of America; the contributors to this team are authors whose separate works have been cited in this literature review including Kuh et al (2005 & 2008). The AUSSE tool mainly uses a Likert scale and under thematic questions asks students to answer a number of questions related to their university experience, therefore in this survey questions one through to seven are linear in style and all offer a four point Likert scale asking the students how often they have participated in a number of Institution wide activities such as using the library resources, used online learning activities, made presentations to their peers, attended tutorials and used student learning services.

The student engagement questionnaire in AUSSE sets out to measure one hundred different aspects of engagement which are applied to six engagement themes. Three of these themes are applied to the survey that I developed; Active learning, student and staff interaction and supportive learning environment. However the AUSSE tool also seeks to find out the level of student involvement within a wider institutional context which is outside the scope of this research project. The AUSSE survey to students also asks a number of questions regarding specific aspects of their academic year. These questions include detail about the course work, how much time they spent reading and writing and planning for the future once graduated. The breadth of this detail was I felt asking too much of the BMid students. I did not want them to have to spend too much time on the survey as this could have had negative implications to the response rate.

Many of the questions used to gauge student experiences at their specific educational institution in the AUSSE tool are as mentioned above linear style. The option of the following four ordinal scale choices are given; Never, Sometimes, Often, Very Often. Fink (2009) suggests that by offering an even number of ordinal choices the respondent is forced away from the middle ground, whereas if an odd number of ordinal choices a middle ground is often offered, for example “neither agree or disagree” (p. 25). Fink further suggests that if specific information is required and the researcher considers that the respondents will be willing and able to give it then the higher the number of ordinal choices given the more accurate the information will be.

The Likert scale according to Alreck and Settle (2004) offers the researcher a position of control and simplicity suggesting that there is an amount of flexibility, economy and ease of arrangement. One of the major advantages of using the Likert scale is that it provides the ability to achieve a collective assessment from a broader paradigm. For example attitudes can be tested and numbers used to score the respondents attitudes. An example of this in the survey can be seen in questions 17 and 18 (Appendix 1) in which the linear scale uses a scoring from zero-10, with word prompts to assist the respondent to make their choice. Therefore when describing the results I was able to group the respondents according to their attitude about involvement, ‘no involvement, moderate involvement and maximum involvement’.

For this research the survey included a blend of question styles. These include multi choice options, Likert scales that offered a varied number of ordinance choices, matrix tables, sliders, rank order, and finally open ended questions one for the enrolled students and four for the students who had exited the programme. A Meta information question that recorded for example, the participants’ operating system was used by the survey programme as a default question.

The survey began with a section of demographic questions. Question one-12 asks a range queries that focused on gathering information about the participant’s age, ethnicity, if English is their first language and from which region they attended the majority of their lessons. Participants are also asked

about the number of dependants they have, who they lived with and their qualifications prior to commencement in the BMid programme. Demographic data has the potential to reveal the diversity of the respondent cohort. The programme requires at times students to be on-call (expected to attend a birth anytime their preceptor midwife calls them) while on clinical and have the ability to maintain a high academic achievement level. I felt that having dependants might influence student's ability to learn and engage in the programme. I felt that age might be a contributor to student's ability to engage with the different modes of flexible learning and also felt that living rurally may impact student's access to computer technology such as internet access.

The participants were also asked what year of the programme they were currently enrolled in or exited from. Questions were also asked in relation to their computer skills, internet access and type of computer available to them for private use. These questions are all in a multi choice style format. From these questions I was able to see if their age, educational qualifications pre-entry, living environment and technology had any negative or positive influence and if so how this impacted their ability to engage in the programme and their success with.

Questions 13 and 14 ask the participants to self-rate their skills with different modes of flexible delivery prior to and at the present point in the programme. The rating scale for these two questions was from 1-10 (Appendix 1). Questions 15 and 16 asked if technical issues with Moodle or VC and if lack of access to a computer impacted their learning.

In order to gain some sense of the impact of flexible delivery of teaching had on student's questions 17-19 asked students to rate their level of learning and their confidence to participate during different modes of flexible delivery of teaching. These questions are specific questions that I hoped would help identify if there were any differences between face to face and video conferencing sessions. These questions were specifically designed as part of this survey and were not informed by the AUSSE survey.

The next question (question 20) is formatted as Likert scale and was informed from question one of the 2009 student engagement questionnaire (AUSSE, 2010). There are 28 different statements within question one of AUSSE, which are narrowed down to 14 for this survey. This type of question can be described as being multi-layered in that students were asked “how often have you...” and given four response options never, rarely, sometimes and often (Appendix 1). Respondents were asked to record their participation in a number of activities. This type of question enabled me to extract connections between different activities within the context of one question.

The next two questions (21 and 22) focus the respondent on their sense of belonging and the quality of their relationships with other students and members of the BMid faculty. These questions ask respondents about their relationships with other students, tutors and support staff. The design of these questions it was hoped would provide insight into the level of student engagement and sense of belonging with the BMid programme at Wintec. The last two questions ask respondents to self-rate their overall achievement in the BMid programme and give themselves an overall grade. These questions have also been informed from the AUSSE survey and offer the same score range (Appendix 1).

The focus of the questions differs slightly for those students who have exited the programme. The reason for this was to encourage those participants to focus their responses positioning themselves when they were enrolled in the BMid programme and not from their present day feelings or attitudes. For example the enrolled students were asked; “I feel confident to participate in class discussion during: video conferencing, face to face, online forums and online activities”, the withdrawn students were asked “when I was enrolled in the BMid programme I felt confident to participate in class discussion during”.

The questionnaire was distributed to my Wintec midwifery academic colleagues for comment and pretested on a small group of midwifery students prior to distribution. Suggestions for change were minor and included suggestions included not using abbreviations such as VC for video conference and FTF for face to face sessions. Software available through

Victoria University called Qualtrics has been used to distribute and tabulate the results of the survey.

Survey respondents

This was a total population survey of all 104 midwifery students in the [new curriculum] BMid either enrolled (n=104) or recently exited (n=15) the BMid pre-registration programme at Wintec. The student cohort for this survey age range was between 18 and 50 years. Many programmes restrict the minimum age of entry to 20 years of age. This is not the case for the Wintec BMid programme, for which the minimum age of entry is 18. There are a small number of students in their mid to late forties with the average age of the student cohort being 30 years.

One hundred and four year one and two BMid students were invited to participate in the survey. A link to the survey website was sent via personal individual emails and was also posted on the student Meta communication website (a global posting to all enrolled students in year 1 and 2 of the BMid programme), providing detail of the URL link and password required to activate the survey. A BMid administration data base was used to identify students that had exited the programme during year one and two in 2010 and 2011. Of the twenty identified students I was able to source fifteen postal or email addresses. A mix of both postal and online surveys options were offered to the students that had exited the programme. If an email address was available I sent the access link and password to the ex-students with a covering letter inviting them to participate in the survey. If no current email address was available I sent a printed copy of the survey via New Zealand post also with a covering letter (Appendix 4).

Data analysis

Cohen, Manion and Morrison (2007) say that descriptive statistics merely supply data and describe it. There are a number of ways that this can be done, including minimum and maximum scores, averages, ranges, weighted averages and the mean. The data from this survey was described by using these formats. Descriptive statistics therefore do not make any inferences or

predictions. Due to the small size and scope of the research project inferential statistics were not undertaken. The AUSSE tool uses numbers and percentages for analysis including weighted and un-weighted numbers and percentages. Tables and graphs are used to demonstrate the gathered information. This style is also used for this research in the results chapter.

The data from the survey are collected via the Victoria University Qualtrics system which allows for the results to be downloaded, giving four format options. I chose to receive the results via Statistical Package for Social Sciences (SPSS), a program available that measures data. Using the tools within this program I was able to collect information and apply descriptive comparisons to various questions. Once the data are downloaded into SPSS I then loaded the information onto a Microsoft Excel 2010 spreadsheet in order to apply the gathered information into a workable format for inclusion in this thesis as tables and graphs and discussion format. In some instances standard deviations are applied which is a measure that calculates the range of scores applied as a root square. The results were published in SPSS for each question in this format however I chose not to include these tables in the results chapter in order to simplify the amount of detail presented.

The results of the data are presented in the next chapter in the format of bar graphs (Figures 1- 12) and as tables. These measurable results are then discussed in Chapter five.

Validity and reliability

Validity of a research instrument in this case the questionnaire is often spoken within terms of internal and external validity. Internal validity refers to how well the survey actually ends up measuring variables against what it has set out to measure. External validity according to Bowling (1999) refers to the degree in which the survey can be replicated and demonstrate similar results when tested on for example a different group of students. Alreck and Settle (2004) describe validity simply as; results being free from both bias and error. The AUSSE survey states that the methodology used for its surveys is valid and that it reflects ethical and sensitivity considerations

approved by the Australian Council for Education Research (ACER). The results are validated by involving an iterative and multi-model approach. Iterative design according to Culatta (2011) is an approach using a step by step development and refines the design by basing it on feedback and evaluation. The multi – model approach ensures participation and response rate are maintained. The scale of this design is not within the scope of this research survey. However to a lesser extent a multi-model approach was used to reach participants, for example as an email attachment, through the SLS and via post. The AUSSE survey aims to have an average response rate of 29%, (the response rate for this survey 53/104 (50.9%) from the enrolled student group and 3/15 (20%) for the exited student group).

Ethics considerations

An ethics application was sought and approved from the Victoria University of Wellington's Human Ethics Committee (Faculty of Humanities and Social Sciences) and the ethics committee from the research department at Wintec.

Students that were currently enrolled in year one and two of the BMid programme and those that had exited the programme over the same time frame were invited to participate in the research. Consent from participants was implied by the voluntary participation and completion of the online and or postal questionnaires, which were strictly anonymous. Access to the research data was restricted to the research investigator, supervisor, and Wintec research department administrator who agreed to distribute and collate the raw data. The participants were offered the chance to go into a draw to win one of three midwifery text books upon completion of the survey, this was administered by the survey distributor keeping the confidentiality of participants and the draw was done by random computer number generation.

The respondents were known to the researcher as one of their academic staff members therefore consideration was given to the collection of demographic data; gender was omitted from the data collection as there was only one male in the programme. The participants were not asked to provide their name and contact details so that their privacy was maintained. The raw

data was collated by the survey web programme. The data I received in from the Qualtrics system had no identifying features; respondents were assigned a number based on the timing of their participation.

Conclusion

The advantage of using a descriptive method when undertaking educational research is that, the many variables cannot be controlled and experiences can be described. There are three main types of descriptive research, surveys, interviews, and observational studies. An online and postal survey method was chosen because the student participants were familiar with completing online surveys, it meant I was able to reach a large number of participants in a shorter timeframe than for face-to-face interviews, especially when considering geographical distance, and the students were able to participate in the survey at their convenience. The survey tool automatically delivers the results in a format that suits the researcher's available programmes such as Excel and SPSS.

The survey was developed using examples and question design taken from the AUSSE tool. These formed the framework for the style and context of a number of the questions. Many of the questions were used to gauge student experiences about particular modes of flexible delivery of teaching. The BMid students were asked a number of multi-choice demographic questions and rating style questions that were presented in different linear style format, with Likert scale options, many of which used a point slider. All the students that were currently enrolled in the BMid programme and fifteen students that had exited the programme in 2010 received a questionnaire. The questionnaire design was informed by taking some examples of question style and format from the AUSSE tool which is a survey instrument that is currently being used across Tertiary institutions in Australia and New Zealand. The principal objective of the AUSSE (2010) is to grow a repository of information about students' engagement in their learning.

Chapter Four – Results

The results of the survey sent to students of the BMid Wintec programme are detailed in this chapter under a number of headings. Firstly the demographics of respondents from the survey of enrolled students are outlined, giving details of their age, ethnicity, number of dependents, who they live with and where, what type of computer technology is available to them and their qualifications upon entry into the programme. The participants were asked about their skills with different modes of flexible learning prior to and at the present point in the programme and the results of these questions are then described. Technical problems that students had, detail about learning experiences and learners' relationships with different groups of the BMid community is provided. Results that compare findings between the respondents from the Regional Learning Hubs (RLH) and the Hamilton City Hub (HCH) are then presented followed by the results of the open ended question. There is missing data across some of the questions therefore the denominator will change in places. This chapter concludes with a brief written summary of the survey data from the exited students.

Results for enrolled student survey

Response rate and missing data

Fifty four (52%) responses were received from a possible 104 enrolled students in year one and two of the BMid programme at Wintec. Two of the responses were invalid as the surveys were not completed. Therefore the completed response rate was adjusted to 50%. Missing data is apparent in two questions and in part of one other. Fifty per cent of respondents chose not to supply their age, the question that asks students to rate their skills with modes of flexible learning prior to entry to the BMid programme records nine non-responses to the section about video conference (VC). One respondent did not record any response to all four parts of this question. Finally when respondents were asked about their sense of belonging, specifically with either the clinical or administrative team there were four and five non-responses respectively.

Demographics

A range of demographic data was collected including age, ethnicity, educational qualifications, and the number of dependants and living environment to ascertain if any of these factors contributed to respondent's ability to engage in the BMid programme and to establish the representativeness of the respondents. These results are presented in table one. Of the 26 who responded to the question about age the oldest student was 50 and the youngest was 18 giving an average age of 31 years (Table 1.1).

Forty one (79%) of respondents stated they were NZ European/Pakeha, six (12%) stated they were NZ Māori and the 'other', group of four (8%) included ethnicities described as NZ Chilean, European (UK) Maori and British. One respondent stated that English was not their first language. This respondent's ethnicity was noted as Pacific Island (Table 1.2).

The BMid programme at Wintec accepts students from the greater Waikato area; students can apply to attend from one of four learning hubs. The main city campus is called the Hamilton City hub (HCH) and the three regional learning hubs (RLHs) are in Gisbourne/Tairāwhiti, Hawkes Bay and Bay of Plenty. Of the 52 responses, 37 (71%) stated that they were based at the Hamilton City campus (Table 1.3). Twenty nine (56%) of the respondents stated that they were in year two of the programme and 23 (44%) stated that they were in year one. This calculates as a response rate for year two students of 65.9% and a response rate for the year one students of 38.3%. However, the number of responses obtained from the year two students is higher in proportion than for year one with 20% more year two students responding than year one students (Table 1.4).

There were a high number of respondents who stated they had access to their own laptop (58%, n=30) or desktop computer (6%, n=4). However 18 (34.6%) of the respondents stated that they either shared a laptop or desktop computer with other members of the household (Table 1.7). Fifty one respondents (98%) stated that they either had wireless broadband or

broadband at home. There was one respondent who stated that they had no internet access and also identified as attending from the HCH (Table 1.8).

There was a diversity of qualifications for those entering the BMid programme (Table 1.6). Thirty six (69%) of the respondents had some post-secondary school study, including three with postgraduate diplomas or degrees and two, in the 'other' category, with post-secondary school certificates. Fourteen respondents stated they had come from a level 4 health foundation programme and 15 (29%) of respondents had no post-secondary school qualification. These results are shown in table 1. The other category refers to respondents who had gained some form of post-secondary school certificates, including a level 2 certificate in early childhood education.

Thirty two (62 %) of students who responded to the survey stated that they had dependants ranging from one to more than six. Giving a mean number of dependants of four and a half (4.5) (Table 1.5).

Table 1 – Demographic results of enrolled students Years 1 & 2

Demographic Questions	Results			
1.1 Age of respondents	Age range 18-50 yrs.	Mean 31.26 yrs.		
1.2 Ethnicity of respondents	NZ Pakeha 40(78%)	Māori 6(12%)	Pasifika 1(2%)	Other 4(8%)
1.3 Hub attendance	Hamilton 36(71%)	Bay of Plenty 11(22%)	Hawkes Bay 3(6%)	Gisbourne 1(2%)
1.4 Year enrolled	Year One 28(55%)	Year Two 23(45%)		
1.5 Number of dependants	1 4(15%)	2 10(20%)	3 7(14%)	4 7(14%)
	5 3(6%)	6+ 1(0.5%)	None 19(37%)	
1.6 Qualifications	UE/NCEA2 9(18%)	NCEA 3 6(12%)	Undergrad dip/degree 15(29%)	
	Health Foundation 14(27%)	PG Dip 3(6%)	Other 5(10%)	
1.7 Type of computer	Desktop shared 12(24%)	Desktop personal 4(8%)	Laptop Shared 5(10%)	Own Laptop 26(52%)
	Other 3(6%)			
1.8 Internet access	Wireless Broadband 41(79%)	Broadband 10(19%)	Dialup 0(0%)	None 1(2%)

Representatives of the survey respondents compared with the total BMid cohort

The survey respondents were in general reflective of the total BMid student cohort. The age range of the respondents was representative of the age range for the entire BMid programme (from 18 to 50 years). The average age of the BMid programme students over year one and two is 30.3 years.

The respondents who stated they attended from outside the Hamilton City Hub reflect the proportion of actual students who attend from the regions for the BMid programme. Approximately one third of students at any given time attend their learning sessions from the RLHs. Fifteen (29%) of the respondents stated they accessed their learning from one of the RLHs.

The area where the survey population was not reflective of the BMid student population was in the area of ethnicity. Māori were not well represented in the survey. In the current year one and two BMid programme 60% of students identify as New Zealand (NZ) Pakeha and 29% identify as NZ Māori. This is contrasted with the survey respondents in which 80% identified as NZ Pakeha and only 12% as Māori.

Skill with flexible learning

Given the number of students who stated they had post-secondary school qualifications, it was surprising that 40% (n=21) of respondents considered they had minimal experience with both Moodle and VC. Respondents were asked a range of questions related to their skill in relation to flexible learning experiences. They were asked to rate their ability with different modes of flexible delivery of learning prior to and at the present time in the programme. Respondents were asked to decide on a rating score between zero and ten, (minimal to advanced). The response rate was different within this question over the four choices, Moodle (Modular Object-Oriented Dynamic Learning Environment), Video conferencing (VC), online learning activities (OLLA) and online forums (OLF) prior to entering the BMid programme. Twenty one (40%) of the respondents stated they had minimal skills with Moodle and 25 (48%) minimal skills with VC. However, only 7 (13%) stated they had minimal skills with OLLA.

When respondents were asked the same question regarding their skill with these modes of flexible learning at the present point in the programme, one (2%) respondent stated they had minimal skills with Moodle and seven (13%) with VC. No respondents indicated a minimal skill with OLLA and OLF. With both of these questions, 10 (19%) people did not respond to the video

conference option, three (6%) to the Moodle and two (4%) for both of the online options.

Figure 1 - Weighted averages of participant responses to Skills with Modes of Flexible learning

In all categories, all the respondents described an improvement in their skills (Figure 1). The most significant increase in skill occurred in both Moodle and VC modes, although ten respondents did not reply to the VC question. For both these modes 13 and 12 respondents respectively recorded their skill with Moodle and Video Conferencing prior to the commencement of the BMid programme as either zero or one. Respondents were asked to rate their skills at the present point in the programme, only one person indicted a zero or one score. Conversely at the other end of the scale, prior to the BMid programme, four respondents rated their skill in Moodle at 10, changing down to a lower score of eight at the present point in the programme. No respondents rated themselves at an eight or more with VC prior to the commencement of the BMid programme. However, 21 respondents gave themselves a score of; eight, nine or ten at the present point in the programme.

Technical issues

The survey asked respondents if issues with the use of technology had impacted negatively on their learning with either Moodle or VC. All six

options provided were used by the respondents in their assessment of how access to computer technology impacted their learning. While this impact was none or only once a month for the majority, it was marked for a small group of students (Figure 2). Twenty nine (56%) respondents indicated that technical issues with Moodle had a negative impact on their learning once, twice or three times a week. Seventeen students stated that technical issues with Moodle and VC had impacted on their learning less than once a month. Seven (13%) respondents indicated that technical issues with VC impacted on their learning on a regular basis and one (2%) participant stated that technical issues with VC impacted on their learning on a daily basis (Fig 2).

Figure 2 – How often respondents stated technical issues impacted negatively on their learning

Respondents were also given the similar Likert choices when asked; ‘Limited access to computer technology at my learning hub has impacted on my learning? Never, once a month, two to three times a month, once a week, two to three times a week and daily see Figure 7. Eight (15%) respondents indicated that access to computer technology at their hub impacted on their learning on a regular basis. However the majority (80%) of respondents did not appear to see this as an issue that impacted on their learning and 13 respondents stated that access to computers had never impacted on their

learning. Therefore most respondents did not feel that there was any issue with the availability of computers at their hubs.

Figure 3 - Difficulties with access to computer technology at respondents' hub and the impact on learning

Learning experiences

Respondents were asked about their learning experiences from a variety of perspectives and were directed to rate their score on a Likert scale of zero to 10, zero being no involvement, five moderate and 10 maximum involvement. Respondents were asked about their level of involvement in learning with face-to-face and VC sessions, and their learning experience with tutors and lecturers.

Most respondents rated their involvement in learning much higher when in face to face sessions than with VC (Figure 4). The average response score for involvement in learning from face-to-face sessions was 7.22 with a standard deviation of 1.84. While the average score for involvement in learning from VC was 5.02 with a standard deviation of 2.11. Thirty seven (71%) respondents stated that their involvement was towards the maximum level of involvement (scoring seven through to 10) when in face to face sessions compared to 13 (25%) giving themselves the same rating for VC

sessions. Three respondents (5.7%) rated their involvement level between none to below moderate in the face to face sessions compared with 20 respondents (38%) rating their involvement below moderate for VC sessions. There was no missing data from this question.

Figure 4 – Comparing level of involvement between face-to-face and video conference.

Respondents were asked to rate their learning from the tutors when in face to face and VC sessions (figure 5). The average response score for learning from tutors with face-to-face sessions was 8.04 with a standard deviation of 1.46. While the average score for learning from tutors with VC was 5.88 with a standard deviation of 2.2. Forty five respondents (86.5%) recorded learning from tutors at levels between seven and ten (maximum involvement) with face to face sessions compared with 24 (46%) during VC sessions. No respondents rated the learning from tutors under five for face to face sessions compared with 13 (25%) of respondents during VC sessions who rated their learning from tutors under moderate to no learning.

Figure 5 – Level of learning from tutors comparing face-to-face and video conference sessions

Respondents were also asked to rate their confidence to participate in class within the four different modes of flexible delivery of learning (Figure 6). Five choices were offered. This question asked that respondents affirm or negate the statement ‘when enrolled I felt confident to participate in class discussion during; VC, FTF on campus, Online forums and Online activities.

Figure 2 - Confidence to participate in Class with different modes of flexible learning.

The majority of respondents indicated that they felt confident to participate in different modes of online learning activities. Forty six respondents either agreed (52%) or strongly agreed (36.5%) with the statement about being confident to participate in online learning activities. Forty respondents (77%) either agreed or strongly agreed that they were confident to participate in online forums. The results were different when respondents were asked about their confidence to participate during the VC sessions. With only six (11.5%) of respondents strongly agreeing they were confident to participate when teaching sessions were delivered via VC and 19 (36.5%) agreeing with the statement which leaves 25 (48%) respondents indicating a lack of confidence to participate in learning session when delivered via VC. Two thirds of the learning sessions throughout the BMid programme are delivered via VC.

With questions related to students' response about their confidence and excitement with VC, respondents felt more confident to ask questions in the classroom setting when they were on campus and attending face-to-face learning sessions. Over a third of respondents revealed they were not confident to ask questions during VC sessions. Eighteen (35%) respondents stated that they never or rarely asked questions during VC and a further 25

(47%) stated that they only sometimes asked questions. A similar number of respondents, 25 (48%) stated that they sometimes asked questions during the FTF sessions however, 20 (38%) respondents stated that they often asked questions during FTF sessions.

It seemed that respondents were much more excited about their learning sessions when they are face-to-face. Forty seven (90%) respondents stated that they either sometimes or often used the library services, similar to those stating that they accessed Moodle often during modules (Table 2). Sixteen respondents (31%) state they often felt excited during discussion in the FTF sessions compared with three (6%) during the VC sessions.

Table 2 – Participation & experience with modes of flexible learning activities

	Never	Rarely	Sometimes	Often
Asked questions during VC	4(8%)	14(26%)	25(47%)	9(19%)
Asked questions during FTF	2(4%)	5(10%)	25(48%)	20(38%)
Contributed to on-line forums	0(0%)	12(23%)	31(58%)	9(19%)
Accessed Moodle prior to each session	0(0%)	2(4%)	23(44%)	27(52%)
Used the library services	0(0%)	5(10%)	23(44%)	24(46%)
Used the distance library services	31(60%)	8(15%)	6(12%)	7(13%)
Attempted on-line quizzes	0(0%)	4(8%)	18(35%)	29(57%)
Used student support services to complete an assignment	22(42%)	22(42%)	7(13%)	1(2%)
Accessed Moodle throughout each module	0(0%)	0(0%)	6(12%)	45(88%)
Left a session due to family commitments	15(29%)	22(42%)	12(23%)	3(6%)
Left a class feeling frustrated with VC	15(29%)	10(19%)	14(27%)	13(25%)
Felt excited about a class discussion during VC	7(13%)	16(31%)	26(50%)	3(6%)
Felt excited about a class discussion during FTF	2(4%)	0(0%)	34(65%)	16(31%)
Gained support from a fellow student to complete an assignment	7(13%)	10(19%)	23(44%)	12(23%)

Learners' relationships – sense of belonging

Respondents were asked to rate the quality of their relationships with specific communities within the BMid programme (Table 3). A Likert scale option was provided that enabled respondents to rate their score from unsupported (0) to well supported (7). The first two options asked about respondents' relationships with fellow students either in their own RLH or with students from other regions. The next three options asked respondents to rate their relationship with Wintec teaching, clinical and administration staff members.

It seemed that respondents had a strong sense of belonging and sense of community with their peers at their RLHs. Forty one (79%) respondents indicated a high quality relationship with peers from their own RLH (scoring 5-7) whereas 18 (34%) respondents indicate a lower quality relationship with their peers outside their RLH (scoring 0-3).

Twenty six (50%) respondents rated the quality of their relationship with teaching staff as high (score 5-7) a further 13 (25%) as an average relationship. The respondents related their relationship with the clinical team overall lower than with the teaching team with two respondents giving a score of zero. Thirty (60%) respondents rated their relationship with the administration and support staff as low (score 0-3).

Table 3 – Quality of relationships within the BMid programme

	Unsupported							Well supported
	0	1	2	3	4	5	6	7
Students in your RLH	0(0%)	0(0%)	1(2%)	3(6%)	5(10%)	11(21%)	14(27%)	16(35%)
Students outside your RLH	0(0%)	2(4%)	8(15%)	8(15%)	14(27%)	10(19%)	3(6%)	7(13%)
Wintec BMid teaching team	0(0%)	2(4%)	6(12%)	5(10%)	13(25%)	13(25%)	6(12%)	7(13%)
Wintec BMid clinical team	2(4%)	6(12%)	5(10%)	5(10%)	12(24%)	7(14%)	9(18%)	5(10%)
Wintec administration & support staff	1(2%)	8(16%)	10(20%)	11(22%)	8(16%)	7(14%)	4(8%)	2(4%)

Respondents stated they were more supported by and had a higher sense of belonging to peers from their RLH. Forty Four responded that they felt a well-supported sense of belonging with their peers from the same RLH (84% scored 5-7) compared with thirty 38% with peers outside their RLH (table 4). Half of the respondents (50% scored 5-7) recorded a well-support sense of belonging with the teaching team, a slightly lower rating to the clinical team (42%) and a larger number feeling less-supported sense of belonging with the administration and support staff (60% scored 0-3).

Table 4 – Sense of belonging within the BMid programme

	Alienation							Belonging
	0	1	2	3	4	5	6	7
Students in your RLH (52)	0 (0%)	1 (2%)	1 (2%)	3 (6%)	3 (6%)	16 (30.5%)	12 (23%)	16 (30.5%)
Students outside your RLH (49)	0 (0%)	3 (7%)	3 (7%)	8 (16%)	11 (22%)	10 (20%)	8 (16%)	6 (12%)
Wintec BMid teaching team (51)	0 (0%)	5 (10%)	3 (6%)	8 (15%)	6 (12%)	19 (37%)	7 (14%)	3 (6%)
Wintec BMid clinical team (47)	1 (2%)	6 (13%)	5 (10%)	7 (15%)	8 (17%)	8 (17%)	8 (17%)	4 (9%)
Wintec administration & support staff (48)	3 (6%)	10 (21%)	10 (21%)	9 (19%)	6 (13%)	4 (8%)	3 (6%)	3 (6%)

Achievement

Respondents were asked to comment on their overall achievement by rating their BMid programme achievements in three categories; clinical, academic and science modules. The scoring was a five point Likert scale ranging from poor, below average, average, above average and excellent (Figure 7) category. Four respondents chose not to answer this question.

Figure 7 – Respondents perception of their achievement in three Module categories.

Forty nine (94%) respondents responded to the question about failure of any modules during the BMid programme. This was a simple yes or no question that also offered respondents the opportunity to give a written response to their yes, asking for detail of which module(s) they had failed. Five respondents acknowledged that they had failed one module. Responses included science modules (n=2), Skills exam (n=1), Art and Science of Midwifery (n=1), and Cultural Frameworks (n=1).

Those same 49 respondents also responded when asked to tick which category best describes their grade over all subjects in the BMid programme. Forty nine per cent of respondents rated their overall grade as between 80-

89. Two per cent of respondents rated their overall grade below 50% (Figure 8).

Figure 8 - The self-reported grade over all subjects in BMid programme (n=49)

Open ended questions

Forty respondents chose to respond when asked to comment on what they believed needs to change to improve their experience of flexible delivery of learning. There were six identified common themes from the comments of respondents (comments are written in italics). They wanted to have increased access to online quizzes, that quizzes be more interactive, respondents enjoyed face-to-face sessions, they were frustrated with technology, respect for those students who attend session via VC and that they would like designated time with tutors. One of the more common themes from these comments was that respondents wanted to have more access to online quizzes; these respondents felt that they were positive forms of learning. For example one respondent wrote;

Exciting interactive learning, I enjoy the science quizzes. I like receiving answers as to why the answer was wrong at the time, so I don't need to go looking forever to try and find the answer. I learn a lot from positive feedback (Questionnaire 1).

Seven respondents included suggestions that there be more interactive quizzes available. They wanted and enjoyed getting timely feedback which is

what the online quizzes did. In real time they get feedback whether their answer is correct or not. Three respondents further added that that they wanted this feedback with more than just online quizzes. These respondents felt quick responses and critique of their work would assist their learning. This type of learning is called synchronous when feedback is given to students in a timely fashion as opposed to asynchronous when feedback can be delayed for several days. The synchronous theme continued with a further four respondents suggesting that tutors to be timelier with responses on Moodle and the importance of availability to RLH students and for assignment feedback from tutors.

‘Consistency- tutors also need to be active online by giving feedback, making available more quizzes’ (Questionnaire 1).

Seven respondents’ comments related to the theme ‘enjoy face-to-face sessions’. These respondents stated that they enjoyed the face to face sessions more especially when the style of learning was more interactive. Some students stated that group work and tutorial styled lessons some stated were more suitable to their learning. They felt that the learning from smaller face to face sessions would be beneficial to their learning. For example;

‘I feel at time[s] there are more involved learning/teaching sessions via VC which would be more beneficial face to face

‘More face to face that isn’t lecture based’,

‘Need more visual aids or tutorials to understand things better?’

(Questionnaire 1)

Ten respondents made some comment about their frustration with technology. There were strong feelings about the need for more reliable equipment, that the sound quality was not good enough, that the equipment needs to work more effectively. The respondents stated that ‘Wintec’ needed to get sorted with equipment and technology, that VC and Moodle needed to be more reliable, and that there should be better access to computers onsite at the RLHs including the main city campus in Hamilton. Two respondents further commented on the need for more training for both students and tutors

with the use of VC and modes of flexible learning. For example the following respondents suggested:

'Better technology, training and support around video conferencing'

'Ensure the technology is working better, more time for RLH students to ask questions after VC time'

'Change of the strength of speakers for video conferencing, they seem to be too sensitive still' (Questionnaire 1).

Three respondents commented on the need for more respect for those students who attend sessions via VC from the RLHs, acknowledging the difficulty with hearing during VC, having time to ask questions.

'More acknowledge[ment] of distance students'

'More interaction with VC students'

'Ability to bond with hub students'

'Ability to build relationships with teaching staff on [Hamilton] campus'

'Patience of all students, sound technology' (Questionnaire 1).

A further four RLH respondents commented that they would like the tutors and support staff to have more designated time for them either when the RLH students are on campus and or when they are distance learners.

'Ability to build relationships with teaching staff on campus'.

'More one-one time with tutors calling us to see how we are going with assignments, especially tutors checking up on us since they are privy to our marks, they can make the effort to ensure those that are struggling are aware of all the help that is accessible to them, rather than wait until it's too late'.

'Online bookings for student services' (Questionnaire 1).

Comparing the regional learning hub and Hamilton city hub responses

Demographics

There were 37 (71%) respondents who stated they attended from the HCH and 15 (29%) from the RLHs, 10 of whom were from Tauranga, four from the Hawkes Bay and one from the Gisbourne region. Students from the RLHs were older; had more dependants and had a higher response rate from Māori. Twenty six respondents (50%) chose to give their age, 8 from the RLH and 18 from the HCH. The age range from respondents at the RLHs was 23 to 50 years old giving an average of 33.75 years, compared with a range of 18 to 47 years and an average age of 30 for the total survey cohort (TSC). Three out of the 15 respondents from the RLH identified as New Zealand Māori (20%) compared with three (8%) from the HCH. As mentioned previously these figures do not reflect the overall number of Māori in the BMid programme. Māori students in 2011 made up 29% of the total BMid student cohort.

Respondents from the RLHs came into the BMid programme with more educational experience. Respondents were asked to indicate what their highest qualification prior to commencement in the BMid programme was. Six (40%) of the RLH respondents had an 'undergraduate diploma or degree' compared with nine (24%) from the HCH group. Health Foundation Certificates are available at all the Institutes of Technology and Polytechnics (ITPs) in all four regions, Hamilton, Bay of Plenty Tairāwhiti and Hawkes Bay, however only two (6%) respondents from the RLHs indicated this was their highest qualification compared with 13 respondents (35%) from the HCH.

One third of the RLH respondents have no dependants and eight (53%) live with dependants and a husband/partner. These figures are similar to the HCH students. Forty eight per cent live with dependants and partner/husband and 14 (37%) have no dependants.

Computer skills and access

The respondents from the RLHs entered the BMid programme with greater computer skills and were more likely to have their own laptops than the respondents from the HCH. Prior to commencement in the BMid programme nine (59%) of students from the RLHs rated their skills with computer technology as above average to advanced, compared with 17 (46%) of respondents from the HCH. Nine (60%) of RLH respondents had their own personal laptop compared with 17 (49%) from the HCH.

Skill with flexible learning

One of the objectives of this research was to ascertain if VC and other forms of flexible delivery of learning was effective and whether learning from a distance impacted on student learning. During FTF learning session's respondents from the RLHs indicated a higher level of involvement, learning and participation than their HCH counterparts. VC sessions however appeared to negatively impact more on respondents from the RLHs. All RLH respondents (100%) indicated maximum learning from FTF sessions compared with 30 (81%) of respondents' from the HCH. Six (40%) of respondents from the RLH indicated that their involvement with learning was minimal during VC sessions compared with eight (22%) from the HCH. The results suggest that the RLHs respondents make the most of their learning experiences with FTF sessions when they attend intensives at the HCH.

Respondents were asked to rate their computer skills prior to and at the present point in the programme. It appeared that nearly half of respondents had minimal experience with Moodle prior to entering the BMid programme, while a quarter of respondents from the HCH self-rated their skill as advanced. Surprisingly no respondents from the RLHs put themselves in this category. Twenty one (40%) of total respondent cohort rated their skills with Moodle as minimal prior to commencement in the BMid programme. However no one from the RLH rated their skill as advanced compared with nine (24%) from the HCH. Respondents were asked to rate their skill with VC, prior to entry in the BMid programme 10 (66%) of respondents from the RLH rated their skill as minimal compared with 15 (40%) from the HCH. Nine

(24%) respondents from the HCH and one (2%) from the RLHs chose not to comment on this VC question.

Respondents were then asked to rate their skills with modes of flexible learning at the present point in the programme, to ascertain if skill base had an impact on students learning. While it was evident that there was something about VC that was impacting the respondents learning, skill with the mode of flexible learning did not appear to influence this. Clearly respondents from the RLHs felt a high level of confidence with their skill with different modes of flexible learning. Fourteen (93%) of RLH respondents stated they had advanced skills with Moodle and VC compared with 29 (78.3%, Moodle) and 13 (35%, VC) from the HCH respondents. Similar statistics are evident with the other two categories of OLLA and online forums, RLH respondents rate their skills as higher than the HCH respondents over all four categories.

Technical issues

Technical issues with Moodle and VC impacted on the HCH respondents more than the RLH respondents with 11 (30%) of HCH stating Moodle learning had impacted their learning two to three times a month and 3 (8%) stating this was a weekly occurrence. Nine (60%) of RLH respondents stated that this only occurred less than monthly or never. A similar trend is noted when respondents were asked about technical issues with VC. Respondents attending from the RLHs indicated that technical issues were not a regular problem for them. Eleven (74%) of RLH respondents stated that technical issues impacted their learning less than once a month or never, compared with 18(49%) of HCH. Again three respondents from the HCH stated that technical issues with VC impacted their learning more than two to three times a week compared with none from the RLH.

Learning experiences

The results indicate, as previously mentioned, that respondents learning experiences were superior when in FTF sessions. There were differences with their level of involvement with FTF and VC sessions, 13 (87%) of

respondents from the RLH rated their involvement in FTF sessions in the maximum categories (7-10) compared with 24 (65%) of HCH respondents. The response of respondents from RLH changes significantly when asked about their level of involvement in VC sessions four (27%) state a maximum level compared with 15 (40%) of HCH respondents.

Similar results were gained when respondents were asked to distinguish their learning from tutors between FTF and VC sessions. The entire cohort of RLH respondents rated their level of learning from tutors during FTF sessions at a maximum level compared with 30(81%) of HCH respondents. However both the groups 7(47%) of respondents from the RLH and 18 (49%) from the HCH rated their learning at the maximum level. Seven (19%), respondents from the HCH rated their learning at minimal to no learning with VC and two (13%) from the RLHs.

Respondents were asked to rate their confidence to participate in class discussion with VC, FTF sessions, forums and OLLA. Respondents from the RLHs were less likely to participate in sessions when delivered via VC. Five (33%) respondents from the RLH stated that they did not feel confident to participate in class during VC compared with seven (19%) of HCH respondents. Half of the HCH respondents felt confident to participate compared with a third from the RLH. Five (33%) from the RLH and nine (26%) HCH respondents recorded their answer as neither agree or disagree.

When asked about confidence to ask questions during VC and FTF sessions respondents indicated a mixed response. More respondents from the HCH indicated they often asked questions during VC compared to those from the RLHs however the trend reversed with option three (sometimes). One (7%) RLH and eight (22%) of HCH respondents often ask questions during VC. Ten (67%) RLH respondents state that they sometimes ask questions during VC compared with 15 (40%) of HCH respondents. During FTF sessions there was a similar reverse trend of responses between these two options of 'often' and 'sometimes'. For example five (33%) of RLH respondents often asked questions during FTF sessions compared with 15 (40%) of HCH respondents. Nine (60%) of RLH respondents identified that they sometimes

ask questions during FTF sessions compared with 16(43%) of HCH respondents.

A higher number of respondents from the RLHs (93%) indicated that they left sessions due to frustrations with VC. Nine (60%) of RLH sometimes and 5(33%) often left the class frustrated with VC compared with nine (24%) sometimes and 15 (40%) often from the HCH respondents.

Respondents were then asked if there were times that they felt excited about class sessions. Their responses were compared between the HCH and RLHs and with the difference in excitement level of FTF and VC sessions. Fifteen (100%) of RLH and 95% of HCH either sometimes or often feel excited about class discussion during FTF sessions compared with 54% (RLH) and 70% (HCH) with VC sessions.

Learners relationships

Respondents were asked to rate the quality of their relationships with students within their hub, outside their hub, with the teaching, clinical and administration team. Results are very similar for both the RLH and HCH respondents except when asked about their relationship with the teaching team which indicated that the HCH respondents felt their relationship with tutors was of a lesser quality than those respondents from the RLHs. The mean score for the RLH respondents was 5.2 compared with 4.1 from the HCH when asked about their relationship with tutors. One (7%) from the RLH compared with 13 (35%) of HCH describe the quality of their relationship with the teaching team as unsupportive. Three (20%) from the RLH compared with 15 (40%) of HCH describe their relationship with the clinical team as unsupportive. The mean score when asked about relationships within their own hub was 5.6 for the RLHs and 5.7 for the HCH.

When asked about their sense of belonging with fellow students the teaching, clinical and administration team students at the HCH describe a greater sense of alienation with the teaching and clinical team than

respondents from the RLHs. Both groups acknowledge a sense of alienation with the administration team.

Achievement

Respondents were asked to rate their overall achievement in three areas, academic, clinical and science modules. Results are similar for all categories for both RLH and HCH respondents except for the science modules where eight (22%) of HCH respondents rated their achievement as below average compared with one (7%) of RLH respondents. RLH respondents also rate their overall grade throughout the programme higher than those from HCH with 10 (66%) of RLH respondents stating their overall grade as 80-89% compared with 16(43%) of those from the HCH. Eighty per cent of both RLH and HCH respondents chose to make a comment for the open ended question

Results for students who have exited the programme

Only three responses from a possible 15 were received from students who had exited the programme. The response rate was very low and therefore the results cannot be considered valid and should be read as a generalised summary of responses from three respondents. Two were completed from the online survey and one from the postal survey. All three stated that they were of New Zealand European/ Pakeha, attended a majority of their lectures from the Hamilton City Hub and exited the BMid programme following the completion of year one trimester two. Two of the respondents stated that they entered the programme from a Health Foundation level four programme and one from completing University Entrance / NCEA level two. They all had dependents (one n=1 and two n=2).

Respondents all appear to have favoured the FTF sessions compared with VC in confidence to participate, with the impact on their learning and learning from tutors. They all demonstrated an interest and engagement with activities such as accessing the library online forums and Moodle however had not accessed student learning services or ask for support from fellow students

for assignments. In general the three respondents felt supported by their peers, teaching and clinical team, all respondents responded positively showing a sense of belonging.

Open ended questions

The exited respondents were given the option to comment with three open ended questions. From these questions two stated that they wished to return to the BMid programme in 2012. They were asked why they left the BMid programme, two had failed modules and one stated “*due to unforeseen circumstances and family commitments*”. They were asked to state what changes would need to happen if they considered re-entry, one responded “*none*”, one responded with; getting a “*midwifery science plan*” and the other “*I would change my ability to ask the tutor(s) to be more informative*”. Finally they were asked to comment on what they would need to improve their experience of flexible/online learning? One stated “*nothing*” another “*midwifery science plan. Keeping on top of my readings and midwifery knowledge with practicing my skills*” and the other stated “*none – it’s up to me to access the online learning*”

Chapter Five Discussion

This research was undertaken to address some concerns the BMid teaching team had about the impact that flexible delivery of teaching was having on student engagement. The teaching team at Wintec had a sense that the cohort of students from the regional learning hubs (RLHs) were less engaged in the programme. In one region especially, there were concerns about the higher than expected attrition rate. While the results of this survey substantiates some of the teaching team's concerns the results also revealed other possible causes that require further reflection, discussion and research. There is limited statistical testing of the survey. This research is therefore indicative that student engagement is impacted by the method of flexible delivery of teaching in light of the responses and when considered with the current literature.

This chapter discusses the findings of the survey, and focuses on three key areas. Firstly the respondents identified differences with their sense of belonging amongst their peers, tutors and the administration team outside of their RLHs. Respondents felt more engaged with their peers from their home hub and less with the teaching, clinical and administration teams.

The second key and unsurprising finding was that respondents across the board preferred FTF sessions to VC sessions. Respondents in both the regional and Hamilton hubs declared that they feel more confident to participate and more engaged in their learning sessions when face-to-face. The third and quite startling finding was that the demographic profile of the respondents from the RLHs was different to those attending from the HCH. This key finding is discussed under three sub headings. Firstly that respondents from the RLHs appeared to be higher qualified prior to entry into the BMid programme and were older than their HCH counterparts. Secondly the respondents from the RLHs reported higher skills with modes of flexible learning and more had their own laptops than their HCH counterparts and thirdly that Māori were generally poorly represented .

Sense of belonging and community (engagement with the programme)

In the survey I wanted to be able to measure the respondents' level of engagement and sense of belonging to each other, to their peers in other hubs, to the Wintec BMid staff and with the Institution. Much of the literature discusses this sense of belonging and connectedness as a means to measure student engagement with their learning and learning outcomes. Research has confirmed, according to the AUSSE report that Institutions while acknowledging the importance of academic challenge should also emphasise the importance of students being able to integrate into institutional life and that their involvement in learning is educationally relevant beyond the class experiences (Australian Council for Educational Research, 2010).

An overwhelming majority of respondents stated that they had high quality and strong sense of belonging and were engaged with their peers at their RLHs. Respondents from both the RLHs and HCH expressed a desire to be able to connect with the both the academic and clinical teaching teams. They also expressed a similar desire to be able to and feel more connected with their peers outside of their home hubs. Eleanor Drago-Severson, an Associate Professor of Education of the University of Columbia, has been researching and writing about adult learners for over 45 years. As a research contributor to the National Centre for the Study of Adult Learning and Literacy (NCSALL) she discussed the "*Power of a cohort and collaborative group*" and described this as a; "*tight-knit, reliable, common-purpose group*" that is very important to adult learners (Drago-Severson et al, 2001, p. 15). These collaborative groups give the learners a 'sense of belonging' and are sometimes called a 'community of learning'. The frequency and value placed on connection with the institution and other students, for example being able to be involved in activities such as 'orientation events' is important. There is also value in easy frequent access to staff (teaching, clinical and administration). These concepts, research has shown to be one of the strongest predictors not only of student perseverance but also of student learning and outcomes. This connection to and sense of belonging with other

students, the faculty and Institution is also supported in the findings of the AUSSE survey which reported on items measured about student engagement. Six scales of engagement form the foundation for these items, four of which I feel are specifically related to the respondent's sense of belonging. These are "active learning, student and staff interactions, enriching educational experiences, and supportive learning environment" (Australian Council for Educational Research, 2010, p. ix). Active learning supports the principle that students learning is about collective participation in a number of areas and is supported when students feel actively involved (sense of belonging) with the institution, teachers and peers.

Another measure of students' sense of belonging was in the way that they related to each other. Most respondents in the survey stated they had a strong sense of connection with their peers within their own RLHs. However, did not have a sense of connection with students from the other hubs. Although two thirds of the respondents felt a sense of connection with the teaching team a number of the comments in the open ended question section indicated that the respondents wanted tutors to be available more often.

It appears from the survey responses such as;

Ability to bond with hub students, more interaction with VC students, ability to build relationships with teaching staff on campus, I like receiving answers as to why the answer was wrong at the time, so I don't need to go looking forever to try and find the answer. I learn a lot from positive feedback,

that students would value closer easier access to the teaching team. Since the survey there have been a number of developments to improve regular access and communication between students and the BMid teaching and clinical team. Including regular small group tutorials both face-to-face and via VC, synchronous forum discussions and availability of one-on-one Skype sessions between tutors and students.

Chickering and Gamson (1987) are considered to be experts in higher education. As mentioned previously they believe there are seven principles that are essential to sound practice in undergraduate education three of these are “encouraging contact between students and faculty, developing reciprocity and cooperation among students, and giving prompt feedback” (1987, para. 4) . Given that this paper was written in the late 1980s it would appear that the issue and importance of engagement and belonging for students is an on-going issue.

Further acknowledgement about the importance of a multi-layered sense of connection can be confirmed once again from the AUSSE report where it is recognised by both teachers and students that communication, active participation, and peer interaction are very important. However the results from this survey and from the 2010 AUSSE report, record high numbers of respondents who are not involved in activities such as online forums and tutorials (FTF & online). More of the respondents from the HCH than from the RLHs rated their sense of belonging with their peers, the teaching and clinical team as low. This I believe maybe explained in part by their frustration with VC and its impact on their learning. However this does not explain their sense of disconnection with the teaching and clinical teams. It is possible that this has more to do with the HCH being a larger cohort of students that do not have the same sense of community as those attending from the RLHs. The RLH students had a clinical tutor assigned to them for clinical support. Therefore they had a maximum ratio of one clinical tutor to 12 students over both years. However for the HCH students this ratio had been much higher, closer to one clinical tutor to 30 students over the two years. This issue has been addressed this year (2012) with two extra clinical tutors for the HCH being appointed. There are also more formal regular clinical tutorials in all the hubs. Feedback from students about these tutorials is very positive and it appears that there is an increased sense of connection and engagement from students with each other.

Commonly more RLH respondents commented that they would like to be better supported by the teaching and clinical team. Many of the open ended

question comments from respondents supported this. Respondents wanted synchronous communication (a timely, current agreed upon style of response). They wanted tutors to be more accessible to answer questions, again in a synchronous manner, and they enjoyed more interactive forms of learning. Respondents also identified differences and challenges with computer technology, especially when comparing FTF sessions and VC. Recently the teaching team has initiated an increase in tutorial time with both FTF and VC sessions. The students are split into smaller groups with a tutor and given the opportunity to discuss and deconstruct recently taught topics. These small tutorials are also done via VC where the RLH students get the opportunity to participate in smaller group discussions. The feedback from students about these again is positive.

Comparing video conferencing and face to face sessions

When comparing video conferencing (VC) and face to face (FTF) sessions respondents consistently reported that they favoured FTF sessions. Across all hubs, respondents indicated that they preferred FTF sessions to VC. There were a number of identified reasons why this was so, including problems with technology, lack of confidence to participate, lack of teacher delivery experience, lack of student experience and lack of VC etiquette.

The literature reviewed specific to VC supports this finding. Carter and Heale (2010) for example, in their case study measuring the success of video conferencing some of their sessions to outreach campuses, found that the success of VC depended on two variables: the teachers' and students' general comfort with the technology and the practice of instructional design. The lecturers especially, found this method of instruction challenging and many of the staff commented that they would not be in a hurry to use this method of instruction in the future. The authors discuss the importance of advanced planning and attention to detail such as the use of specific appropriate technical equipment that delivers good sound quality. They stressed the need for sound research informed andragogy, learning strategies focused on the adult learner and the importance of enhanced human skill of the teacher and learner. The tutor and student experiences in

this case study are reflected in the responses in this survey. The BMid teaching team initially were not expecting to present their lessons via VC. Their lesson plans had been developed with an andragogical framework, that was originally developed for another mode of flexible learning. The technical support teams, especially those at the RLHs, were not as prepared and some of the equipment was not appropriate for the level of VC required. Neither staff nor students had been given the opportunity to develop their skills and practice around learning and teaching 'via the screen'.

What was not supported by the results of the survey was the assumption made that VC would impact more on respondents from the RLHs. I had hypothesised that students from the RLHs would be less engaged and find VC more challenging than those attending from the HCH. I had underestimated the impact VC had on respondents from the HCH. The sentiment from respondents is succinctly portrayed in the following quote from a respondent (a HCH student), who answered the open ended question asking "what needs to change to improve your experience of flexible learning?"

'My own attitude towards favouring face to face learning (feeling like I am physically and emotionally involved in a class) as opposed to videoconferencing (physically not in attendance therefore not feeling involved)' (Questionnaire 1).

Half the respondents from the HCH rated their learning from tutors as either no learning through to moderate learning.

In a white paper commissioned by Wainhouse Research in the United Kingdom, Greenberg (2004) summarised the findings of several studies undertaken regarding VC based education. He concluded that VC is a crucial educational tool however, cautions the reader about the technology's limitations, namely that it is not ideal for large lecture style teaching, and is not ideal for long sessions. It can be a highly effective method of instruction if it is truly interactive and collaborative in style. He stated that in order for VC to be effective "video conferencing requires the teachers adapt not only

content but also technique to account for the distributed, highly interactive nature of the pedagogical situation” (p. 4). Writing and planning effective lesson plans takes a considerable amount of time, especially when this forms part of a new curriculum. The original sessions for the BMid programme were timetabled for a mix of blocks of FTF sessions in a lecture theatre and smaller tutorial type sessions that would be either FTF or via an online platform. With the change in mode of delivery to include large blocks of VC sessions, there was little time for the teaching team to make adaptations to lessons such as incorporating either interactivity or the collaborative style that is specifically recommended for VC sessions. Since this survey a number of these issues have been addressed. Small interactive group tutorials for example now form a regular part of learning for BMid students,

There was an absence in the literature of studies undertaken on the impact of flexible delivery of learning on students specifically when considering an entire undergraduate programme, therefore substantiating the importance of this research. There is however a large amount of research into understanding the relevance and value flexibly delivered learning has in the tertiary education sector. Greenberg (2004) commented that research to date concludes that as means of delivery of teaching, video conferencing is neither more or less effective than its counterpart, the traditional face-to-face classroom setting. And that the key component of either is being interactive (2004). The key words he used were ‘instruction and interactive is king’ are of relevance to the results of this survey. Twice the number of respondents stated they had maximum involvement with sessions when FTF compared with VC sessions. The interactive nature of the FTF sessions appears to be more appealing to students because they are more engaged and feel more confident to ask questions and to partake of discussions. VC, it appears, negatively impacts on their confidence and ability to participate. Again, twice the number of respondents stated they often felt confident to ask questions during FTF sessions compared with VC sessions.

In Chapter two, I quoted a report from the United States of America titled *The Heart of Student Success*, that discussed four key strategies that

promoted a positive 'classroom' experience (Center for Community College Student Engagement, 2010). These were to "Strengthen classroom engagement, integrate student support into learning experiences, expand professional development focused on engaging students and focus institutional policies on creating the conditions for learning" (p.2). Some of the core aspects of these strategies, such as expanding professional development (more training for tutors), creating better conditions for learning, and development of user friendly technology for tutors and students have common associated themes with the comments and responses of respondents in this survey and reflect the impact flexible delivery of teaching has/had on the BMid students.

One participant commented that they would like *"Better technology, training and support around video conferencing"* while another suggested the way forward is to, *"have less constant listening to lecturers, (we) need more visual aids or tutorials to understand things better"*. These respondents appeared to favour small group discussions led by tutors (tutorials) and not lecturing style lessons especially when they were delivered via VC.

When comparing the different responses from respondents in the regions to the main city hub respondents from the regions clearly show their appreciation of FTF sessions. The BMid RLH students attended face-to-face sessions at the main campus in Hamilton every trimester. The Midwifery Council of New Zealand gave approval to Wintec to deliver the new curriculum on the proviso that students attend a minimum third of their learning time in person at the HCH. When asked to rate their level of involvement with FTF sessions, most respondents from the RLH rated their involvement at a maximum level, compared with only a quarter of HCH respondents.

The responses from the RLHs changed significantly however when asked about their level of involvement in VC sessions. A quarter stated a maximum level compared with nearly half of HCH respondents. The reason for this could be that tutors tended to apply a more interactive learning style to the on campus FTF sessions than with VC. This confirms the need for the on-

going development of instructional strategies for maximising VC based learning sessions at both an institutional and professional level. Professional development for teachers is supported throughout the literature when considering flexibly delivered programmes. For example from an analysis of research that looked into how health professionals in the United Kingdom experienced online learning, one of the key lessons for teaching practice according to Carroll, et al., (2009) was that “course designers and providers need to consider issue’s regarding flexibility, assessment, learner interaction and presentation” (p. 240). This is further supported in a report commissioned by the United States Department of Education; ‘A Meta-analysis and review of online learning studies’ (USA Department of Education, 2009). In a number of the sections in this report the theme of no significant difference to outcomes across media types is consistent. The authors suggested following the literature review, that it is the way in which the medium is used that is far more important. The interactivity of the learning mode is once again cited as key.

Respondents felt more engaged with their learning when in face-to-face sessions and expressed a need for more interactive modes of learning. The teaching team also gained a sense of this when comparing students’ interaction in FTF and VC sessions, also noting increased engagement with students when they are all on campus with FTF sessions. Many of the experts agreed that the mode of delivery does not impact students’ ability to engage or succeed however instructional design does. Courses and programmes need to be effective and creative to meet the individual needs of different learners and learning styles. The literature reviewed revealed common themes with teaching and learning strategies. These included concepts such as consistency and the importance of andragogically sound systematic approaches to the development of flexibly delivered programmes. Boettcher (2011) writing for Faculty Focus a distance education collaboration stated that learners are drawn to puzzles, simulation, games and “what if” scenarios, rather than reading or listening. This style of lesson is what most tutors are experienced in presenting during FTF sessions.

With the rapid growth in e-technologies for learning, faculty need to be supported towards enhancing their own learning and institutions need to develop strategies that support the transition to delivery of flexible modes of learning. Boettcher (2011) pointed out; “just as learners are very individual, so too are faculty, therefore course designs need to be flexible so that faculty can shape designs to their skills and capabilities within a range of programme requirements” (pp. 11-12). Prior to the commencement of the new 2010 curriculum the teaching team had been shown and provided training on a computer desktop style system that were being considered for the delivery of teaching sessions for the distributed students. The VC system they were presented with at the commencement of the programme was new to the team and was not part of the pre-summer break training. Therefore the design of their teaching plans did not initially meet the needs of the VC specific interactivity required.

Another contributor to this difference in experience of engagement could be that a higher number of students from the HCH come into the BMid programme from a Health Foundation programme. We have heard anecdotally that students believed they only had to pass the certificate in order to gain entry into the midwifery and nursing programmes. This low level of expectation and commitment to learning may have had a flow-on effect with these students ability to engage with learning. This could impact the respondents from the Health Foundation Certificates confidence to participate especially in different learning environments such as VC. Over two thirds of the HCH respondents stated they gained maximum learning from FTF sessions compared with 40% during VC sessions. The AUSSE reports states that “overall, most students beginning in higher education expect to be challenged, to work hard, and expect that their teachers will have high expectations of them and their work” (Australian Council for Educational Research, 2010, p. 13). If the perception from students coming from the Health Foundation certificate is that just enough is good enough then they may struggle with the challenge of flexibly delivered learning.

Differences in demographic profile

Qualifications and age

The demographic data revealed some unexpected insights into the student profile and the possible impact this had on their level of engagement and their success in the programme. Respondents from the RLHs had higher educational qualifications coming in to the BMid programme and they were older.

It was surprising that the data revealed respondents from the RLHs had on average come into the BMid programme with higher qualifications than those from the HCH. More students from the RLHs had undergraduate degrees and diploma qualifications. This could explain why more respondents from the RLHs felt less impacted by technical issues, had better access to technology and were more equipped to engage in the VC sessions and with different modes of flexible learning than those from HCH. While I was not able to find any detail in the AUSSE report findings about a qualification difference in distributed students (those studying from a distance) the 2010 study found that these students were; “more likely to report pushing themselves to work harder than they thought they could and also report spending a greater number of hours preparing for class – than their campus based peers” (Australian Council for Educational Research, 2010, p. 17) .

This difference could also be explained by a trend identified by Statistics New Zealand (2011) that there are some rural areas that are ‘moderately’ or ‘highly urban influenced’. This is evidenced by the education profiles of some of the areas cited in this report. Hawkes Bay is named as one of the rural areas in New Zealand that is ‘highly urban influenced’.

“The influence of main urban areas in this profile area is apparent when educational qualifications are examined. In 2001, in rural areas with high urban influence only 25.1 per cent of adults lacked formal qualifications, compared with 27.6 per cent nationally. This figure was

almost identical to that for main urban areas, where 24.9 per cent had no qualifications” (Statistics New Zealand, 2011, np).

Similarly the report shows that seven per cent of the population in rural areas with high influence compared with eight per cent from urban areas have Bachelor degrees. Tauranga is similar in demographic to the Hawkes Bay which could some way go to explaining why the students from these two RLHs had higher qualification prior to entry to the BMid programme.

The respondents from the RLHs were on average older than their counterparts from the HCH. Similar demographic data differences were collected by the AUSSE Institutes of Technology and Polytechnics (ITPs) pilot project (2010). The results found that students who attend ITPs are far more likely to be over 25 years of age when studying as distributed learners and or via flexible modes of attendance (Radloff, 2010, p. 5). This report on a pilot survey of ITPs in New Zealand uses the AUSSE tool and focuses on three student groups these are Māori, Pasifika and distributed students. There is no discussion in this report that I could find detailing why there is this age difference or any other literature reviewed however it seems that most acknowledge that the extramural student is often older than their ‘on-campus’ student counterpart. I feel that the flexible learning option offered by Wintec BMid programme to distributed students would attract a similar student demographic as the extramural student.

Computer technology – skill and learning flexibly

RLH respondents felt less impacted by technical issues. They had better access to technology, reported higher skills with modes of flexible learning and more had their own laptops. I had assumed that technical issues with VC and Moodle would be negatively reflected in the results and assumed that VC impacted on student learning especially in the RLHs. However for students from the RLHs the results do not support this assumption. Instead the results reveal a higher level of impact on learning for those respondents attending sessions at the HCH (49%). The survey results revealed that more RLH respondents than their HCH peers felt they had advanced skills with all

modes of flexible delivery learning, including VC. When this result is viewed together with the key finding regarding demographics of the RLH respondents this is not so surprising. Another consideration is that the VC component of learning is of more value to those students attending from the RLHs as it allows them to attend a majority of their learning session from their homes and therefore it is not surprising that they are more engaged and attached to VC.

As mentioned previously RLH respondents on average came into the BMid programme with higher qualifications than those from the HCH. The AUSSE ITP pilot project reports similar findings stating that graduate students studying at ITPs are “slightly more likely to be engaged with active forms of learning” (Radloff, 2010, p. 13). The reason for this could be that these students have had previous experience with different modes of flexible learning and exposure to computer technology used by Tertiary Institutions to support the different modes of flexible learning for example Moodle.

Access to computer technology also seemed to be more of an issue for those attending from the HCH than those from the RLHs. While the majority of respondents across all hubs had access to broadband more RLH respondents had their own laptops and stated that access to computer technology at their respective campuses was not an issue for them. Respondents who attended from the HCH commented that on number occasions they were unable to access computer technology at the student hub. These results were unexpected. I had assumed the opposite, that the students from the RLHs would be disadvantaged with broadband access and computer technology, especially in view of the New Zealand Government ‘Rural Broadband Initiative’ which has been instigated by the government to address the specific broadband infrastructure needs of rural New Zealand building equity between rural and urban sectors (Ministry of Economic Development, 2011, p. np).

I had also assumed that the RLH students were disadvantaged with access to computers when attending from their satellite ITPs. The HCH students have access to a state of art complex that includes several 100 desktop

computers and learning suites. However, a number of HCH respondents stated that they were not able to access these and that this was for some a weekly occurrence. One respondent clearly frustrated stated when asked what improvements need to happen;

Blocking out computers for that specific use in the hub. Do you know how many people use them to watch You Tube or Asian Games??? It's so bloody frustrating when you have assignments or research to do!!!

Similarly I had also assumed prior to the results and responses from the survey that some impact for disadvantaged groups such as Māori and Pasifika would be disclosed and could impact their learning from RLHs. The E-Learning advisory group established by the New Zealand Government in July 2001 reported to the Government in 2002 some key constraints in the ability of certain groups to access e-learning opportunities. The advisory group discussed the 'digital divide' a phrase to describe the breach between students who can access Information and Communication Technology (ICT) stating that rates of internet access are much lower for Māori and Pacific peoples and also those on low incomes and further commenting that e-learning will only work if New Zealanders have confidence and skills to use ICT (2002, p. 13). The demographic data from the survey did not include questions about income, and so I can only hypothesise that this may have contributed to the difference between the HCH respondents and RLHs. There were insufficient respondents who identified as Māori or Pasifika to discuss results one way or the other.

Māori midwifery students

Attrition rate among Māori students especially in the first year of the BMid programme was higher than expected. Distributed learners, a number of who are Māori are those that attend from RLHs such as Tairāwhiti, Hawkes Bay and Bay of Plenty. It appeared from anecdotal evidence from the BMid teaching team were struggling with the workload and were considering leaving the programme.

Twelve per cent of survey respondents identified as Māori, compared with 29% of the total BMid cohort identifying as Māori. This is a small response rate. Some reasons for this small response rate could be that; results from academic modules revealed that some Māori BMid students appeared to be struggling with the workload and therefore I hypothesised that they may have felt that participating in this survey was not a priority; that the design of the survey may not have been culturally appropriate; and finally information from our BMid programme leader revealed that during this time a number of the year one students especially in the Gisborne RLH where there is a higher percentage of Māori had or were about to leave the programme.

The Gisborne/Tairāwhiti RLH student profile is different to the other two RLHs. This cohort of students is smaller than the Hawkes Bay and Bay of Plenty hubs and had a higher proportion of Māori students and, by the end of year one, the highest attrition rate. One of Wintec's key priorities and core values is to encourage, support and retain more Māori into higher education. Statistics show that 47.3 per cent of people living in the Gisborne region identify as Māori, compared with 14.6 per cent for all of New Zealand (Statistics New Zealand, 2006). Combine this with Government priorities; it was important to support Māori midwifery students.

Pasifika students are also under-represented in the survey. Seven per cent of the BMid programme identify as Pasifika compared with 2% of the survey respondents. The ethnicity component of the demographics of the survey was not representative of the Wintec BMid student profiles. However, the age range and average of respondents in the survey reflected a very similar range and average to Wintec BMid students. I was hoping for a better response rate from Māori students, especially those who had exited the programme. I was hoping to gain some understanding of Māori learning needs. There had been a higher than expected attrition rate of Māori students in the first year of the new curriculum. BMid teaching to the Gisborne /Tairāwhiti region commenced in 2010 with eight students five of whom identified as Māori. Two of the non-Māori students transferred to other BMid programmes and to date only one student from the original cohort of

eight remains in the programme. One might propose that a different research approach would be needed in order to capture the needs of Māori especially for those considering entering the BMid programme that are distance respondents. A more culturally appropriate research approach needs to be considered together with input from Māori researchers.

The Midwifery Council of New Zealand is very clear about the entry criteria for acceptance into a BMid programme. Minimum qualification standards are set out in Standard Two, Section Two in the document; Standards for approval of preregistration midwifery education programmes and accreditation of tertiary organisations (TEOs) is available to all approved Institutions (Midwifery Council of New Zealand, 2007, pp. 10-11). The *Tertiary Education Strategy* (Ministry of Education, 2010) is a document that outlines the Government's target priority groups for the tertiary sector which include Māori, Pasifika and young people under 25 "achieving qualifications at levels four and above, particularly Degrees" (Ministry of Education, 2010, p. 11). The student profile of Wintec's BMid programme is reflective of these priority groups and qualification standards. The BMid teaching and administration team are committed to support Māori students to gain better outcomes.

In the last decade there have been a growing number of researchers who have examined the needs of Māori learners in order to address disparities in attendance, retention and outcomes in the tertiary education sector. Porima (2007) a member of the Māori Development Research Centre (MDRC) has written a report that contributed to a project that undertook looking into the development of effective e-learning programmes for Māori. The report details information gained from focus groups whose members were Māori adult learners from urban, provincial and rural areas who were participating in tertiary study via distance. The key messages from the focus groups were that the learners felt positive about the flexible delivery of learning, and that they needed sufficient support to guarantee their continued motivation. Access to the Learning Management System (LMS) for example Moodle the respondents commented was they said unproblematic (Porima, 2007).

Similar comments are made by number of respondents from this survey especially with regards to sufficient support from the teaching team. However negative aspects specific to Māori were identified in the report prepared by Porima (2007) 'Understanding the needs of Maori learners for the effective use of e-learning'. These were; "feelings of isolation discomfort with a style of learning that may not suit Maori and inadequate computer resources" (p. 10) the feeling of being connected and a sense of belonging is described by the Māori learners as 'whanaungatanga' (a sense of belonging, a relationship through shared experiences (te whanake, 2003-2012)). One of the respondents from the MDRC comments about learning from a distance as being unnatural.

"That's not natural. We [Maori] need face-to-face contact...kanohi-ki-te-kanohi that's what we are like!" (Porima, 2007, p.11). Recently at Wintec a blended learning framework has been developed that incorporates the concept of wānanga into a framework for a Māori way of learning. With this in mind, further research and development of a Māori framework for flexible delivery of the BMid programme is necessary in order to address the issue of engagement and retention. This research should consider barriers to learning for Māori.

Māori education advocate Ruakere Hond (2008) describes in an editorial for Ako Aotearoa some potential e-learning barriers to Māori participation in education and barriers for education providers. A few examples of these are that they lack the educational achievement and have therefore not been exposed to forms of e-learning, have a fear of technology, are not economically situated to enter such programmes and may have difficulty with internet access and technology. Educational providers, he suggested, may not see the relevance between e-learning and traditional knowledge, and do not have enough Māori educators skilled in delivering culturally appropriate e-learning. Policy he suggested can be influenced by the small number of Māori students attending (Hond, 2008, p. np). However, this is not the case for the BMid programme at Wintec as nearly a third of the intake for 2012

identified as Māori, certainly affirming the need to support the success and positive outcomes for Māori BMid students.

Reflections on the research process

This research set out to describe the impact that flexible delivery of teaching was having on students' ability to engage in the BMid programme. Potential respondents were invited to contribute in an online survey from the total cohort of the new BMid curriculum at Wintec. Theoretically this survey could have revealed some significant data towards the enhancement of the BMid programme. No one has previously published about the impact of a fully flexibly delivered undergraduate midwifery degree programme. This research is the first piece of research which looks at the issue of the impact of flexibly delivered learning for undergraduate students in Midwifery over an entire programme. This research has offered a small glimpse into this aspect of teaching via a mix of FTF and VC sessions and has provided some useful insights. The data did actually support what the literature says that students value FTF style lectures and also more interactive forms of learning if delivered via VC and or online.

A significant gap in the data came from not getting enough response from students who have exited the programme. The potential data from this cohort could have provided insight into the challenges for students especially when attending from the RLHs and participating in forms of flexible modes of learning for the first time. The data from exited students could have provided valuable information that could enable the BMid teaching team to develop important support strategies to meet the needs of students that are not engaging in their learning, especially in the first year of their study.

I would suggest that further research that includes other BMid programmes in New Zealand would be valuable to compare other students' experiences of flexible delivery of teaching. This research is therefore a sound beginning in both design and approach which would benefit from a larger national sample. Additional development of the survey that incorporates more of the tested engagement scales from the AUSSE tool would be valuable to both

midwifery education and the Institutions who offer the BMid undergraduate degree study. A qualitative piece of research, particularly with participation from Māori, could be a step forward in supporting Māori to becoming more connected with flexibly delivered programmes. E-technology may not be a good way for Māori to learn. Instead more face-to-face and smaller interactive group teaching session maybe favoured and more culturally appropriate for Māori learners.

I would like to see this research repeated in another few years to see if the changes already introduced have improved student experience and to gain some insight to further changes and innovations for teaching and learning from a flexibly delivered programme. It would also be interesting to gauge if there are any changes to the student demographics in anyway.

Another area for further examination that could emerge from this research is the perspective of tutors' experiences of flexible delivery of learning. This would help identify any gaps in the capacity of the teachers to work with flexible learning and may then lead to a clearer and well integrated andragogically framework for the BMid programme. Tutors should be supported by professional development in this area.

The principles behind the New Zealand Midwifery Council's new curriculum for the Bachelor of Midwifery programme, took into consideration flexible access for distributed students. This was to address the national issue of rural recruitment and retention of the Midwifery workforce and open access to Midwifery education. Well supported flexible delivery of learning will help address workforce shortages and enable BMid programmes to be more successfully accessible to a more diverse cohort of midwifery students. A collaborative partnership approach is endorsed by the New Zealand Governments Tertiary Strategy as a way forward that provides a learner centred approach. Included in the report is the vision that learning will "reflect New Zealand's unique cultures, Treaty based responsibilities and the special strengths of its teacher and educators" (E-Learning Advosory Group, 2002, p. 21). This I believe has particular significance to this research project when

considering the percentage of Māori in the BMid programme and the higher than expected attrition rate experienced during 2010.

Midwifery practice in New Zealand is unique. It is based on a model of partnership and woman centred care. This places midwifery educationalists in this country in a unique position with a duty of care to find a way that best supports the learning needs of Māori and other students in the flexible learning environment that is based on a similar model of partnership that is student centred. This model coupled with the academic discipline of andragogy, a framework that is based on the principles of the lifelong learning /education of adults and a culturally appropriate model for example wānanga could positively impact students learning 'via the screen'.

Engaged students have positive higher education experiences. The potential is that engaged students will be able to transfer these behaviours into learning gains that lead to better grades and graduation, employment and to become lifelong learners. There is still a gap in the knowledge about the difference in how distributed students are learning due to their different location of attendance. It is important that more research is done to help identify and maximise the learning opportunities to engage all students in flexible delivery of teaching.

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Appendices

Appendix One: Questionnaire one - enrolled students

Q1 what is your age?

Q2 what is your ethnicity?

- ☐ NZ European/Pakeha (1)
- ☐ NZ Maori (2)
- ☐ Pacific island (3)
- ☐ Asian (4)
- ☐ Other (5) _____

Q3 Is English your first language

- ☐ Yes (1)
- ☐ No (2)

Q4 From which of the regional learning hubs do you currently attend the majority of your lectures/tutorials

- ☐ Wintec/Hamilton City Centre (1)
- ☐ Bay of Plenty (2)
- ☐ Hawkes Bay (3)
- ☐ Gisborne/Tairāwhiti (4)

Q5 what year of the BMid programme are you currently enrolled in?

- ☐ Year 1 (1)
- ☐ Year 2 (2)

Q6 what is your highest educational qualification prior to commencing the BMid programme?

- ☐ University Entrance / NCEA 2 (1)
- ☐ NCEA 3 / Bursary / Higher School Cert (2)
- ☐ Undergraduate Diploma / Degree (3)
- ☐ Health Foundation Level 4 (4)
- ☐ Postgraduate Diploma / Degree (5)
- ☐ Other (6) _____

Q7 What number of dependents do you have?

- ☐ 1 (1)
- ☐ 2 (2)

- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6+ (6)
- ☐ None (7)

Q8 Who do you live with?

- ☐ Alone (1)
- ☐ Flatmates (2)
- ☐ Relatives (3)
- ☐ Board (4)
- ☐ Dependents + Partner / Husband (5)
- ☐ Dependents only (6)
- ☐ Other (7) _____
- ☐ Partner / Husband (8)

Q9 how would you rate your computer skills prior to entry into the BMid programme?

- ☐ Minimal (1)
- ☐ Below Average (2)
- ☐ Average (3)
- ☐ Above Average (4)
- ☐ Advanced (5)

Q10 how would you rate your computer skills at this point in the BMid programme?

- ☐ Minimal (1)
- ☐ Below Average (2)
- ☐ Average (3)
- ☐ Above Average (4)
- ☐ Advanced (5)

Q11 what type of computer do you have access to at home?

- ☐ Desktop (shared) (1)
- ☐ Desktop (personal) (2)
- ☐ Laptop (Shared) (3)
- ☐ Laptop (Personal) (4)
- ☐ None (5)
- ☐ Other (6) _____

Q12 what type of Internet access do you currently have at home?

- ☐ Wireless broadband (1)
- ☐ Broadband (2)
- ☐ Dial up (3)
- ☐ None (4)
- ☐ Other (5) _____

Q13 Prior to entry into the BMid programme how would you rate your skills with the following types of flexible delivery/learning? Give yourself a rating between 1 -10 (1 being minimal, 5 moderate and 10 advanced)

- _____ Moodle (1)
- _____ Video conference (2)
- _____ On-line learning activities (3)
- _____ On-line forums (4)

Q14 At this point in the BMid programme how would you rate your skills with the following examples of flexible delivery/learning?

- _____ Moodle (1)
- _____ Video Conferencing (2)
- _____ On-line learning activities (3)
- _____ On-line Forums (4)

Q15 In the last 6 months technical issues have impacted on my learning?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
With access to Moodle (1)	☐	☐	☐	☐	☐	☐	☐
With access to Video Conferencing (2)	☐	☐	☐	☐	☐	☐	☐

Q16 Limited access to computer technology at my learning hub has impacted my learning?

- ☐ Never (1)
- ☐ Once a Month (2)
- ☐ 2-3 Times a Month (3)
- ☐ Once a Week (4)
- ☐ 2-3 Times a Week (5)
- ☐ Daily (6)

Q17 How would you rate your level of involvement in learning sessions when:

_____ In Face to face sessions (1)
 _____ In Video Conference Sessions (2)

Q18 How would you rate you're learning from tutors / lecturers when:

_____ In face to face sessions (1)

_____ In Video Conference Sessions (2)

Q19 I feel confident to participate in class discussion during:

	Strongly disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Video Conferencing (1)	☐	☐	☐	☐	☐
Face to Face on campus (2)	☐	☐	☐	☐	☐
On-line forums (3)	☐	☐	☐	☐	☐
On-line activities e.g. Quizzes (4)	☐	☐	☐	☐	☐

Q20 In your experience during the BMid programme at Wintec how often have you done each of the following?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)
Asked questions during Video Conference (1)	☐	☐	☐	☐
Asked questions during Face To Face sessions (2)	☐	☐	☐	☐
Contributed to on-line forums (3)	☐	☐	☐	☐
Accessed Moodle prior to each session (4)	☐	☐	☐	☐
Used the library services (5)	☐	☐	☐	☐
Used the distance library service (6)	☐	☐	☐	☐
Attempted on-line quizzes (7)	☐	☐	☐	☐
Used student support services to complete an	☐	☐	☐	☐

assignment (8)				
Accessed Moodle throughout each Module (9)	☐	☐	☐	☐
Left a session due to family commitments (10)	☐	☐	☐	☐
Left a class feeling frustrated with Video Conference (11)	☐	☐	☐	☐
Felt excited about a class discussion during Video Conference (12)	☐	☐	☐	☐
Felt excited about a class discussion during Face To Face (13)	☐	☐	☐	☐
Gained support from a fellow student to complete an assignment (14)	☐	☐	☐	☐

Q21 Tick the number which best describes the quality of your relationships with the following people in the BMid programme?

- _____ Students in your Regional Learning Hub (1)
 _____ Students outside your Regional Learning Hub (2)
 _____ Wintec Bachelor Midwifery teaching Team (3)
 _____ Wintec Bachelor Midwifery Clinical Team (4)
 _____ Wintec administrative & support staff (5)

Q22 Tick the number that best represents your sense of belonging with:-

- _____ Students in your Regional Learning Hub (1)
 _____ Students outside your Regional Learning Hub (2)
 _____ With Wintec Bachelor of Midwifery Teaching Team (3)
 _____ Wintec Bachelor of Midwifery Clinical team (4)
 _____ Wintec Administrative & Support Staff (5)

Q23 During your enrolment in the BMid programme how would you best describe your overall achievement in:

	Poor (1)	Below Average (2)	Average (3)	Above Average (4)	Excellent (5)
Clinical Modules (1)	☐	☐	☐	☐	☐
Academic Midwifery Modules (2)	☐	☐	☐	☐	☐
Science Modules (3)	☐	☐	☐	☐	☐

Q24 Have you failed any modules since commencing the BMid programme

- ☐ Yes (If yes please state which one(s) (1) _____)
- ☐ No (2)

Q25 Which category best represents your average overall grade so far in the BMid programme?

- ☐ No Results (1)
- ☐ 0-49 (2)
- ☐ 50-59 (3)
- ☐ 60-69 (4)
- ☐ 70-79 (5)
- ☐ 80-89 (6)
- ☐ 90-100 (7)

Q26 What needs to change to improve your experience of flexible learning/on-line learning?

Appendix Two: Questionnaire two - exited students

Q1 what is your age?

Q2 what is your ethnicity?

- ☐ NZ European/Pakeha (1)
- ☐ NZ Maori (2)
- ☐ Pacific island (3)
- ☐ Asian (4)
- ☐ Other (5) _____

Q3 Is English your first language

- ☐ Yes (1)
- ☐ No (2)

Q4 From which of the regional learning hubs did you attend the majority of your lectures/tutorials

- ☐ Wintec/Hamilton City Centre (1)
- ☐ Bay of Plenty (2)
- ☐ Hawkes Bay (3)
- ☐ Gisborne/Tairāwhiti (4)

Q5 How many Trimesters did you complete?

- ☐ Year 1 trimester 1 (1)
- ☐ Year 1 trimester 2 (2)
- ☐ Year 1 Trimester 3 (3)
- ☐ Year 2 trimester 1 (4)
- ☐ Year 2 trimester 2 (5)

Q6 what is your highest educational qualification prior to commencing the Bachelor of Midwifery programme?

- ☐ University entrance / NCEA 2 (1)
- ☐ NCEA 3 / Bursary / Higher School Cert (2)
- ☐ Undergraduate Diploma / Degree (3)
- ☐ Health Foundation Level 4 (4)
- ☐ Postgraduate Diploma / Degree (5)
- ☐ Other (6) _____

Q7 what number of dependents do you have?

- ☐ 1 (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6+ (6)
- ☐ None (7)

Q8 who do you live with?

- ☐ Alone (1)
- ☐ Flatmates (2)
- ☐ Relatives (3)
- ☐ Board (4)
- ☐ Dependents + Partner / Husband (5)
- ☐ Dependents only (6)
- ☐ Other (7) _____
- ☐ Partner / Husband only (8)

Q9 how would you rate your computer skills prior to entry into the Bachelor of Midwifery programme?

- ☐ Minimal (1)
- ☐ Below Average (2)
- ☐ Average (3)
- ☐ Above Average (4)
- ☐ Advanced (5)

Q10 how would you rate your computer skills now?

- ☐ Minimal (1)
- ☐ Below Average (2)
- ☐ Average (3)
- ☐ Above Average (4)
- ☐ Advanced (5)

Q11 what type of computer do you have access to at home?

- ☐ Desktop (shared) (1)
- ☐ Desktop (personal) (2)
- ☐ laptop (Shared) (3)
- ☐ Laptop (Personal) (4)
- ☐ None (5)
- ☐ Other (6) _____

Q12 what type of Internet access do you currently have at home?

- ☐ Wireless broadband (1)
- ☐ Broadband (2)
- ☐ Dial up (3)
- ☐ None (4)
- ☐ Other (5) _____

Q13 Prior to entry into the Bachelor of Midwifery programme how would you rate your skills with the following types of flexible delivery/learning? Give your-self a rating between 1 -10 (1 being minimal, 5 moderate and 10 advanced)

_____ Moodle (1)
 _____ Video Conference (2)
 _____ On-line learning activities (3)
 _____ On-line forums (4)

Q14 Now, how would you rate your skills with the following examples of flexible delivery/learning? Give your-self a rating between 1 -10 (1 being minimal, 5 moderate and 10 advanced)

_____ Moodle (1)
 _____ Video Conferencing (2)
 _____ On-line learning activities (3)
 _____ On-line Forums (4)

Q15 In the last 6 months of enrolment technical issue's impacted on my learning?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
With access to Moodle (1)	☐	☐	☐	☐	☐	☐	☐
With access to Video Conferencing (2)	☐	☐	☐	☐	☐	☐	☐

Q16 when enrolled limited access to computer technology at my learning hub impacted my learning?

- ☐ Never (1)
- ☐ Once a Month (2)
- ☐ 2-3 Times a Month (3)
- ☐ Once a Week (4)
- ☐ 2-3 Times a Week (5)
- ☐ Daily (6)

Q17 When enrolled how would you rate your level of involvement in learning sessions when:

_____ In Face to face sessions (1)
_____ In Video Conferencing Sessions (2)

Q18 When enrolled how would you rate your learning from tutors / lecturers when:

_____ In face to face sessions (1)
_____ In Video Conferencing Sessions (2)

Q19 when enrolled I felt confident to participate in class discussion during:

	Strongly disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Video Conferencing (1)	☐	☐	☐	☐	☐
Face to Face on campus (2)	☐	☐	☐	☐	☐
On-line forums (3)	☐	☐	☐	☐	☐
On-line activities e.g. Quizzes (4)	☐	☐	☐	☐	☐

Q20 In your experience during the Bachelor of Midwifery programme at Wintec how often did you do each of the following?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)
Asked questions during Video Conferencing (1)	☐	☐	☐	☐
Asked questions during Face To Face sessions (2)	☐	☐	☐	☐
Contributed to on-line forums (3)	☐	☐	☐	☐
Accessed Moodle prior to each session (4)	☐	☐	☐	☐
Used the library services (5)	☐	☐	☐	☐
Used the distance library service (6)	☐	☐	☐	☐
Attempted on-line quizzes (7)	☐	☐	☐	☐
Used student support services to	☐	☐	☐	☐

complete an assignment (8)				
Accessed Moodle throughout each Module (9)	☐	☐	☐	☐
Left a session due to family commitments (10)	☐	☐	☐	☐
Left a class feeling frustrated with Video Conferencing (11)	☐	☐	☐	☐
Felt excited about a class discussion during Video Conferencing (12)	☐	☐	☐	☐
Felt excited about a class discussion during Face To Face (13)	☐	☐	☐	☐
Gained support from a fellow student to complete an assignment (14)	☐	☐	☐	☐

Q21 when enrolled tick the number which best describes the quality of your relationships with the following people in the Bachelor of Midwifery programme?

- _____ Students in your Regional Learning Hub (1)
 _____ Students outside your Regional Learning Hub (2)
 _____ Wintec Bachelor of Midwifery teaching Team (3)
 _____ Wintec Bachelor of Midwifery Clinical Team (4)
 _____ Wintec administrative & support staff (5)

Q22 When you were enrolled in the Bachelor of Midwifery programme how would have rated your sense of belonging with the following people? (Place the slider against the number that best describes this).

- _____ Students in your Regional Learning Hub (1)
 _____ Students outside your Regional Learning Hub (2)
 _____ Wintec Bachelor of Midwifery Teaching Team (3)
 _____ Wintec Bachelor of Midwifery Clinical team (4)
 _____ Wintec Administrative & Support Staff (5)

Q23 During your enrolment in the Bachelor of Midwifery programme how would you best describe your overall achievement in:

	Poor (1)	below average (2)	Average (3)	above average (4)	Excellent (5)
Clinical Modules (1)	☐	☐	☐	☐	☐
Academic Midwifery Modules (2)	☐	☐	☐	☐	☐
Science Modules (3)	☐	☐	☐	☐	☐

Q24 which category best represents your average overall grade while enrolled in the Bachelor of Midwifery programme?

- ☐ No Results (1)
- ☐ 0-49 (2)
- ☐ 50-59 (3)
- ☐ 60-69 (4)
- ☐ 70-79 (5)
- ☐ 80-89 (6)
- ☐ 90-100 (7)

Q26 Do you intend to re-enrol in the Bachelor of Midwifery programme?

- ☐ Yes when? (1) _____
- ☐ No (2)

Q28 Why did you leave the Bachelor of Midwifery programme?

Q29 If considering re-entry what changes would need to take place?

Q30 What needs to change to improve your experience of flexible / on-line learning?

Q27 Browser Meta Info

- Browser (1)
- Version (2)
- Operating System (3)
- Screen Resolution (4)
- Flash Version (5)
- Java Support (6)
- User Agent (7)

Appendix Three: Question 26 - text answers

1. Consistency- tutors also need to be active online by giving feedback, making available more quizzes.
2. Moodle needs to be more reliable. It has improved this year but the beginning of the year was a shambles
3. Better set out Moodle pages that are easier to follow.
4. Power points up on Moodle prior to lectures.
5. Need more visual aids or tutorials to understand things better.
6. Early access to module information and reading and class timetabling and clinical placements, we need to know what we are doing for our personal needs in a timely manner! Having more flexibility around doing clinical hours, continuing over summer or not as some students have been 'allowed' and others are told they can't do hours over this time; this differs from year to year too!
7. Exciting interactive learning. I enjoy the science quizzes. I like receiving answers as to why the answer was wrong at the time, so I don't need to go looking forever to try and find the answer. I learn a lot from positive feedback.
8. Ensure the technology is working effectively, and provide time for learning hub students to ask questions after video conferencing or use live meeting to meet that need as it arises.
9. More communication of what is required with online learning. i.e. What is essential, must know must look at. Less technical issues.
10. Up to date info at all times not just previous years slides that are out of date
11. Clarification on everything with support.
12. More online quiz's
13. Better equipment, less sound delay; would make it easier to be interactive in class
14. More links to websites and references that are relevant to what is needed to be learnt
15. More support when video conferencing is unable -

- access to recording of session.
16. Ability to bond with hub students
 17. Better technology, training and support around video conferencing. Don't personally enjoy forums as an effective learning tool - although I understand that many other students do.
 18. Exercises to do AFTER classes rather than just readings before
 19. Online bookings for student services
 20. Moodle issues need to be sorted so that we are able to access it all the time and if it does go down at any stage for alterations then we need to be advised of this
 21. No work groups made from mixed campus students, more acknowledgement of distance students by teaching staff during class.
 22. More face to face that isn't lecture based
 23. More interaction with VC students
 24. Ability to build relationships with teaching staff on campus
 25. Respect from distance students regarding noise, less constant listening to lecturers speaking as it is often difficult to hear.
 26. It needs to be more reliable so that time/learning is not wasted.
 27. more support with answers and feedback
 28. Clearer instructions of what is required - the goalposts stop moving - once an assignment/expectation is set it is not changed including word counts and marking. That the online hours expectation meets the hours required - I don't believe they currently match. while forums are valuable learning - with the number of respondents in the class the time reading each input is exceeding the learning
 29. Less power points, more practical examples
 30. There are times when the face to face learning feels as though it is "padded" out to get the on campus hours. I feel at times that there are more involved teaching/learning sessions via satellite which would

be more beneficial face to face. I feel Midwifery for me involves a lot of self-directed learning which I am comfortable doing and I know adds greatly to my learning. I feel you have to be motivated to want to know more and continually seek information during this course, it doesn't stop with class and clinical.

31. My own attitude towards favouring face to face learning (feeling like I am physically and emotionally involved in a class) as opposed to videoconferencing (physically not in attendance therefore not feeling involved). On-line learning is great.
32. More access to computers
33. Need to space out time in class so we are in say for one week 3 times a term , not 3 weeks then nothing for 6 weeks, so we remember what we have done in class and can use it for our home online learning
34. Wintec needs to be more organised and plan forward more. feels like they are constantly trying to catch up
35. Video conferencing - less problems. Always have access to Moodle
36. Blocking out computers for that specific use in the hub. Do you know how many people use them to watch You Tube or Asian Games??? It's so bloody frustrating when you have assignments or research to do!!!
37. More time to go over science, more online quizzes, more reflective exercises, more one-one time with tutors calling us to see how we are going with assignments, especially tutors checking up on us since they are privy to our marks, they can make the effort to ensure those that are struggling are aware of all the help that is accessible to them, rather than wait until it's too late.
38. More quizzes
39. Consistency between modules.
40. More online quizzes
41. My attitude and commitment to making the time while at home and using the time well when I am in the city (Wintec)

42. A break. No placement, no assignments, no studying for exams. One week break at the very minimum, especially after exams. Just so I can power up and carry on for the rest of the year, otherwise I lose the motivation to carry on.

Appendix Four: Participant Information Sheet

Project Title: Learning midwifery face to face or via the screen: does it impact on student engagement?

You are invited to participate in this survey.

What is the purpose of the study?

The aim of this survey is to gain a greater understanding of **your** learning experience of the flexible delivery of teaching in midwifery education at Wintec.

I hope to examine the level of engagement of students within the flexibly delivered BMid programme you are or have been currently enrolled in. This research will provide information outlining the advantages and disadvantages, the barriers and enablers that influence your experience as a student based at either the regional learning hubs or the main city campus?

This research project will provide information on the impact the BMid flexibly delivered programme has on the relationship between students and tutors, how students can be better supported in a participant centered framework. Information will tell if there is any difference in students' grades and attrition rate between the different learning hubs?

How was a person chosen to be asked to be part of the study?

All students currently enrolled or have attended the Bachelor of Midwifery programme since the new curriculum and flexible delivery commenced in January 2010 will be given the opportunity to participate in this research.

Can I join the study?

If you are willing to answer an anonymous online or postal questionnaire, I would welcome you in to the study. The greater the number of participants the greater the impact on the research findings will have validity and provide greater understanding of your experience as a student.

What happens in the study?

Each participant will be asked to answer an online or postal anonymous questionnaire. The answers will be analysed and collated by the research department at Wintec (similar to SETmap style) and I will then be provided with the question analysis, which will help inform the results of my research.

What are the benefits?

This study will give you the opportunity to share your experiences from your point of view. People often find this a very empowering experience. The information provided will help inform the advantages and disadvantages to learning in a flexibly delivered programme from a student centered perspective. Your contributions to this research will be an important aspect of current adult learning research which will assist in the development of resources available to you.

How is my privacy protected?

The online and postal questionnaires will be anonymised. No material that could personally identify you will be used in any reports on this study.

Costs of Participating

The only cost of participating is your time. Students will go into a draw to win a text book once they have confirmed their participation.

Participant Concerns

If you have any queries or concerns regarding your rights as a participant in this study, you may wish to contact an independent health and disability advocate:

The researcher: Tania Milne
0800 2 WINTERC extn 7855
Tania.milne@wintec.ac.nz

The research supervisor: Dr Joan Skinner
04 463 6654
Joan.skinner@vuw.ac.nz

Results

The results of this research will be submitted for publication in a national journal.

Approved by the Victoria University Ethics Committee on 23/09/2011
Reference number RM#18828

Appendix Five: Ethics approval

MEMORANDUM

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TO	Tania Milne
COPY TO	Dr Joan Skinner
FROM	Dr Allison Kirkman, Convener, Human Ethics Committee
DATE	23 September 2011
PAGES	
SUBJECT	Ethics Approval: RM#18828/Learning midwifery face to face or via the screen, what's the difference?

Thank you for your application for ethical approval, which has now been considered by the Standing Committee of the Human Ethics Committee.

Your application has been approved from the above date and this approval continues until 01/03/2012. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Allison Kirkman

Human Ethics Committee