PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY

Submitted by

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School of Education

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Dedication

To John-Victor Suwa, who has challenged me and ‘taught’ me the responsibilities of being a caring father, as I struggled at the initial stages of my candidature to respond with joy to his wide range of questions, among them: “Hi daddy, what’s for dinner? Is there bread? Hi daddy, are you going to be home in time to take me for soccer? Do you know how to get to Riverstone? Hi daddy, could you sign my school diary? Hi daddy, are you ready?” And so on…and so on.
Acknowledgements

While I claim to myself all the shortcomings of this dissertation, I would like to sincerely thank Associate Professor Carol Reid, the late Associate Professor Beth Southwell, and Dr Katina Zammit for their invaluable support and fellowship, and their patience and guidance during my research and writing stages. Many have described the PhD study program as a journey, and I would like to thank these three women for supporting me in such an important life journey and for helping me to arrive at the completion of this journey. The depth of their commitment was summarized in a statement by Dr Reid, my principal supervisor, back in mid 2005, when she emailed me thus: “Hi Bernard…I thought Dr ‘X’ might be challenging as she is right up to date on it all. Don’t despair; the journey is like this until the end – which is why some people never finish! But you will as we shall all work together to put a cap on it and a point of conclusion. Cheers.” Thank you also to those who offered to attend my focus group meetings and interviews. Without your support, I would not have been able to collect my data and this study would not have been a reality.

Lastly but not least, I am profoundly grateful to my wife Esther who, for a third time – undergraduate, postgraduate and now PhD – has demonstrated her dedication and commitment to supporting me in all of my studies. Also, I would like to express my heartfelt gratitude to our children (Susan, Jennifer, Joshua and John-Victor) and grandchildren for their patience over the entire period of my studies. And to Margaret and Robert Tickle for giving our family the opportunity to migrate to Australia about ten years ago, without which chance I would not have accomplished this goal. Thank you so very much and God bless you all.
**Statement of Authentication**

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

(Signature)
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<table>
<thead>
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<th>Full Form</th>
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<tbody>
<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
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<tr>
<td>AEC</td>
<td>Australian Education Council</td>
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<td>A-REP</td>
<td>Aboriginal Rural Education Program</td>
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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<tr>
<td>CD-ROM</td>
<td>Compact Disc-Read Memory Only</td>
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<td>CDT</td>
<td>Component Display Theory</td>
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<td>COL</td>
<td>Commonwealth of Learning</td>
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<td>CTGV</td>
<td>Cognition and Technology Group at Vanderbilt</td>
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<td>DE</td>
<td>Distance Education</td>
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<tr>
<td>DEC</td>
<td>Distance Education Centre</td>
</tr>
<tr>
<td>DEETYA</td>
<td>Department of Education, Employment, Training &amp; Youth Affairs</td>
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<tr>
<td>DET</td>
<td>Department of Education and Training</td>
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<tr>
<td>DI</td>
<td>Direct Instruction</td>
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<td>DL</td>
<td>Distance Learning</td>
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<tr>
<td>EDC</td>
<td>Education Development Centre</td>
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<tr>
<td>G1</td>
<td>Generation 1</td>
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<td>G2</td>
<td>Generation 2</td>
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<td>G3</td>
<td>Generation 3</td>
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<td>G4</td>
<td>Generation 4</td>
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<tr>
<td>GD</td>
<td>Guided Discovery</td>
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<td>GIGO</td>
<td>Garbage-In-Garbage Out</td>
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<td>GT</td>
<td>Grounded Theory</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>LM3</td>
<td>Learning Management Maturity Model</td>
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<tr>
<td>MCEETYA</td>
<td>Ministerial Council for Education, Employment, Training and Youth Affairs</td>
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<td>M-F</td>
<td>Monday to Friday</td>
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<td>NCES</td>
<td>National Centre for Education Statistics</td>
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<td>NETg</td>
<td>Net Generation</td>
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<tr>
<td>ODE</td>
<td>Open and Distance Education</td>
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<td>ODL</td>
<td>Open and Distance Learning</td>
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<td>PBL</td>
<td>Problem Based Learning</td>
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<td>SAIDE</td>
<td>South African Institute of Distance Education</td>
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<td>SCLEs</td>
<td>Student-centred Learning Environments</td>
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<td>TD</td>
<td>Transactional Distance</td>
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<tr>
<td>TV</td>
<td>Television</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Education and Scientific &amp; Cultural Organization</td>
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<td>USA</td>
<td>United States of America</td>
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Abstract

The goal of the current study is to contribute towards the improvement of support mechanisms for students and academics by enhancing anytime/anywhere learning opportunities. The study seeks to document students’ and academics’ experiences of blended learning at a regional university.

The context of this research is one wherein the present lifestyles and work experiences of potential students are creating new challenges for higher education institutions, as students increasingly desire opportunities to combine paid jobs and study. Further, competition for students between universities adds to the urgency of adopting blended learning, with particular regard to the use of internet technologies. These pressures operate in a political context that increasingly supports and demands technologically driven solutions. Although desires for further education continue to increase, the time and space available for learning is shrinking because of the multiple social roles of those who aspire to pursue further studies.

Through focus group discussions and interviews, this study seeks to gather stories and experiences from thirty two students and thirteen academics about support mechanisms at a regional university. These stories were analyzed using grounded theory. The research concludes that learning spaces provided by ‘blended learning’ have not supported students adequately. Similarly, the research concludes that these particular academics involved in teaching through blended learning do not have adequate time to prepare blended learning materials, to focus on face-to-face delivery approaches or to carry out research. The study
offers recommendations for improving support structures with a particular focus on time, space and pedagogy.
Chapter 1

BACKGROUND AND CONTEXTUAL INFORMATION

1.1. INTRODUCTION

The primary task of this chapter is to provide the foundation for the present study, and to discuss the fundamental frameworks for the research. First, the chapter presents the research background and motivation for the study. Second, it articulates the research questions used to gather information from students and academics in order to elicit their learning and teaching experiences in relation to support mechanisms in a regional university in New South Wales, Australia. Third, the chapter seeks to present the context within which the current research exercise is situated: a context that is greatly influenced by increasing access to technologies, and the technologies’ accompanying challenges. Universities are increasingly taking advantage of emerging technologies for teaching and learning purposes; education is fast becoming a commodity that can be marketed to students who, in turn, are increasingly being viewed as clients or customers. The chapter closes with a brief description of the thesis structure.

1.2. RESEARCH BACKGROUND

Traditional Open and Distance Education (ODE), also known as Correspondence Education, has enabled many learners to acquire degree certificates without necessarily attending campus-based classes from the universities that have awarded their respective degrees (Parker, 1992). This trend is increasing as technologies that support teaching and learning continue to improve, making teaching and learning more interactive without necessarily necessitating teachers or students to attend face-to-face classes (Ayala, 2009).
According to Portugal (2006: 1),

[globalization has affected many areas of society and will continue to shape the future of education and content delivery indefinitely. The impact of globalization has led to exceedingly higher enrolments for many universities and colleges. It has become increasingly apparent that individuals need to consistently learn new skills in order to remain employed and competitive in a knowledge and digital economy. Those individuals who cannot or will not learn new skills will have more difficulty finding employment and remaining competitive.

Meanwhile, the present social and economic pressures appear to indicate that many employees can not afford to leave their employment to undertake full time campus-based studies. Taking advantage of the above scenarios, many universities are now deploying resources and positioning themselves so that they might convert and offer their courses through ‘blended learning’ in order to maximize the ‘time’ and ‘space’ available to potential learners. Blended learning is designed to enable those students who desire to combine a face-to-face learning experience with technology mediated learning. According to Ayala (2009: 277),

the emergence and spread of the Internet has offered new possibilities for availability, interactivity and global applications that have sparked much interest in the use of this platform for education...a newly emerging trend in higher education is blended learning: the purposeful integration of traditional and online learning in order to provide educational opportunities that maximize the benefits of each platform and thus more effectively facilitate student learning.

Encouraged by what I believe blended learning is capable of achieving, I have decided to undertake a case study of a regional university’s blended learning experience, in an attempt to take account of global support strategies for university students and teachers in what is fast becoming a new teaching and learning zone. A case study approach has enabled me to anchor the research exercise to a particular context: that is, to situate this particular study within the experience of the students and academics of a regional university in New South Wales, Australia.
I am concerned about the various constraints that academics are likely to face as they step into this ‘new teaching zone’, and the need for them to be fully supported by their administrative structures if blended learning is to gain credible status as an alternative model for teaching and learning in the future. These concerns were nurtured in the context of my earlier involvement in teaching, facilitating workshops and seminars, and also designing ODE learning resource materials in Nairobi, Kenya.

I am personally encouraged by the prospect that individuals might be able to retain full-time employment while at the same time being able to pursue study programs, provided that they receive support that will allow them to maximize the time and space available. Indeed, “the impact of globalization” (Portugal, 2006: 1) is reshaping the idea of academic support in many universities today. Within the context of blended learning, spaces in which teaching and learning occur are varied, timing is flexible, and the pedagogical framework is increasingly student-centered; all these facets are oriented towards lifelong learning goals (Portugal, 2006).

My study will, therefore, seek to investigate the dynamics of these changes in relation to support provision by examining the experiences of students and academics in a regional university. The investigation will be informed by how effectively and efficiently students might make use of the time and space available to them. From the perspective of the current study, ‘time’ represents every available opportunity that students might seize (apart from any official time designated by either institutions, employers or family obligations) to support them toward completing their studies. The idea of ‘space’ represents ‘anytime/anywhere’ opportunities such as home, workplace, face-to-face,
library, online (technology-mediated), collaborative, social and reflective learning space. Some of these spaces offer formal arrangements such as classrooms; others provide informal learning opportunities through social interactions outside the routine classroom experience. Computers have offered yet another type of ‘classroom’ in which robust interactions can occur. (This situation will be discussed in more detail in chapter four.)

1.3. RESEARCH QUESTIONS

This study seeks to document and reflect on some critical concerns about support mechanisms for university students and academics using blended learning in one higher education institution. The perceived criticality of support mechanisms is informed by the fact that students and academics need to maximize the limited and/or different times and spaces that they might have, without necessarily compromising the quality of their learning and/or teaching. Just as campus-based students and academics require effective and efficient support from higher education institutions, it is expected that similar, but unique support systems would be extended to students and academics who are learning and teaching through blended learning.

The need for effective and efficient support for university students and academics is a fundamental requirement for most universities already involved or seeking to offer their courses by blended learning. A robust support mechanism is one of the critical elements contributing toward retaining students. My central research question therefore is: what are the blended learning support needs of students and academics at a regional university in New South Wales, Australia?
Expanding upon this foundational question, I have developed sub-questions in relation to the significance of such support, factors likely to create satisfaction among students and academics, and assessments of the effectiveness of existing blended learning practices. These are:

1. **Why is it critical for higher education institutions to provide effective and efficient support for students and academics involved in blended learning throughout their learning and teaching experiences?** This question seeks to explore the significance of support mechanisms to both students and academics, as blended learning arrangements must be responsive to learning and teaching spaces that are different from the usual classroom or face-to-face learning experiences and require flexible timeframes. An understanding of the rationale for supporting both students and academics in a blended learning environment is essential to developing an in-depth understanding of why higher education institutions are currently using technology for learning and teaching.

2. **What are some of the factors likely to create satisfaction for students and academics learning and teaching through blended learning?** Informed by available literature on the successes and constraints of blended learning, this question is intended to identify global experiences likely to contribute to the successes of blended learning and to compare them to those that are practiced at a regional university in New South Wales. The global experiences will be used to analyze the local experience at a regional university (informed by the current research outcome).
3. How effective and efficient are the current support mechanisms being provided in relation to blended learning and how might they be improved? This question offers students and academics at a regional university the opportunity to share their own stories and assessments of the effectiveness and efficiency of the support mechanisms available to them. It seeks to understand students’ and academics’ explanations for the disparities identified in research question number one and two, insofar as the reasons for support and the operation of such support mechanisms are concerned. In other words, this question explores linkages between impediments to blended learning and its required support mechanisms. To elicit responses from both students and academics, I will:

a) conduct a case study of one institution in order to compare and contrast with identified global academic support strategies necessary for effective learning and teaching in the context of a changing higher education landscape;
b) conduct focus group discussions and interviews in order to document the experiences of students and academics in relation to issues of time and space that impact on their teaching and learning experiences; and
c) analyze these students’ and academics’ data in order to discern whether or not the current support being provided by the university administration to students and academics is effective and efficient.

1.4. SIGNIFICANCE OF THE RESEARCH

The significance of this research derives from the fact that the Australian government considers the effective use of technology in education as critical, if Australia is to compete successfully in the global information economy (DEETYA, 2000; MCEETYA, 2005). As
universities increasingly invest in information technology in order to deliver educational material to both on and off campus students, it is evident that expenditure on technology contributes to the success of education outcomes.

Although there is considerable literature on the management of information technology in higher education institutions, and several professional organizations are focusing on the use of technology in teaching and learning, there seems to be a disconnection between these two arenas, in that one of the most important information technology issues currently facing higher education institutions is how to support academics to integrate technology into their academic instruction. In response, this research contributes toward addressing the aforementioned disconnection between technology and service delivery, and also the necessary support for both students and academics – arguably the most important stakeholders. The practice of blended learning challenges the traditional notion that students must be ‘at the right place at the right time’ in order to acquire learning. However, it must be acknowledged that some aspects of learning technologies, including Internet connectivity and chat rooms, are still ‘space’ and ‘time’ bound. (The accompanying challenges in relation to blended learning will be discussed in more detail in chapter three.) By exploring issues of support for both students and academics in relation to blended learning arrangements, and giving each a voice through research, this study will assist higher education institutions in shaping future practices in blended learning environments.

There are a number of reasons for implementing blended learning and, according to Igneri and the American Management Association (2005), blended learning approaches
contribute to teaching and learning processes in very many ways. Adoption of blended learning by higher education institutions helps reduce the cost of education, reduces time spent ‘off the job’, and reduces training overheads and direct costs by re-using existing teaching materials rather than developing or re-developing programs for online delivery. A blended learning approach provides more flexible learning models, increasing rates of learning, satisfaction with learning, motivation and uptake of training. In addition, blended learning is capable of aligning training with business objectives and increasing transference to the workplace (Ignieri & American Management Association, 2005). It promotes collaboration among employees and employers beyond the lifespan of a course or program. Blended learning also allows for different learning styles.

Consumption of blended learning is gaining popularity and is likely to further increase due to peoples’ desire for lifelong learning opportunities, and also to the need for people to keep their jobs while pursuing further studies. In order to create effective blended learning experiences, higher education institutions will be required to improve their support structures for both students and academics. Access and flexibility are the key factors influencing the growth of blended learning, because these factors encourage students who have paid work to seek further education.

1.5. RESEARCH CONTEXT

This research takes place in the context of today’s higher education landscape, which is increasingly being influenced by neo-liberalism and the ‘commodification’ of education, coupled with rapid technological changes (Maguire, 2005). According to Cooner (2010: 273), “the changing context within higher education institutions has seen an increase in
students’ numbers and pressure to expand access and cut costs”. This changing context has created a culture that views technology as a means to overcome some of the practical challenges that staff face when teaching large numbers of students, rather than as a means to focus on how technology may be used to enhance the actual learning and teaching experience (Cooner, 2010). With the recent availability of robust Internet connectivity for teaching and learning in various higher education institutions, universities are now able to increase their annual enrolment under the banner of the liberalization of learning opportunities but, at the same time, are provoking concerns that some of their technological initiatives are motivated by economic return and actually exploit ‘innocent’ students (Braimoh & Osiki, 2008).

In summary, blended learning raises new challenges as to how effectively academics can manage the ‘new learning space’, and how their work loads might be equitably distributed. There are also concerns about what technology can and cannot do; concerns are often raised over intellectual property, pedagogical rigor and methods, course management, and basic competence in facilitating this new approach (Braimoh & Osiki, 2008). Justifications for some of these concerns arise from high levels of student enrolment and the resultant increased revenue.

Local communities can also play major roles via the pressure they exert on higher institutions. Parents of students of all ages, and communities across the globe, expect their local universities to be at the cutting edge and responsive to their educational needs. In their attempts to meet community expectations, universities will perhaps be encouraged to broaden and improve their levels of support and course delivery methods (Maguire, 2005).
As universities face up to these various expectations there are, according to Smith (2005), at least five objectives that should drive the vision of any particular institution seeking to adopt blended learning. These are i) improving access to learning, ii) expanding geographic reach of students, iii) improving educational quality, iv) increasing efficiency for both students and administration, and v) achieving customer satisfaction. According to Covington, Peterbridge and Warren (2005), making the professional transition from face-to-face teaching to teaching flexibly is not possible in a short time, as the transition presents universities with significant challenges regarding training tutors to competently facilitate blended learning. The call, therefore, is for higher education institutions to behave innovatively as their teaching staffs make the transition from face-to-face to blended, flexible learning.

1.6. THESIS STRUCTURE

This study explores the experiences of students and academics in relation to support mechanisms within the context of blended learning. This introductory chapter has established the context of this research, defined the research problem, and established the significance of the study in relation to blended learning practice.

Chapter two describes the emergence of blended learning, informed by the successive generations of Open and Distance Education (ODE). The objective of chapter two, therefore, is to establish and expound different perspectives of blended learning in the context of ongoing technological, social and cultural change.
Chapter three investigates the different perspectives of blended learning, and the accompanying technologies, delivery methods and policy issues, utilizing the themes of time, space, and pedagogy.

Chapter four presents hypothetical students’ profiles, the key indicators in determining the success of blended learning insofar as the provision of quality support is concerned. More importantly, this chapter focuses on discussions about key support indicators (where blended learning students and academics feel they most require support). It is on the basis of some of these key support indicators that both students’ and academics’ data will be compared and contrasted.

Chapter five outlines the research methodology employed for this particular study: i) qualitative approach, ii) case study, iii) grounded theory, and iv) thematic analysis. The chapter also explains the principal theoretical framework used to determine the level of support mechanisms available, or not available, to students and academics of blended learning within a regional university in New South Wales.

Chapter six provides detailed interpretations and discussions of the support mechanisms, as informed by students’ research data and illuminated by Grounded Theory Analysis.

Chapter seven is similar to the previous chapter, though focusing on interpretation and discussions of the academics’ rather than students’ data.
Chapter eight presents the main conclusion of the thesis. The chapter outlines both the significance and limitations of the study and at the same time offers some suggestions for future research in the area of blended learning.

1.7. CONCLUSION

Blended learning, comprises face-to-face and technology-mediated teaching and learning, and has its roots in print-based correspondence courses, educational television, broadcasting, documentaries, computer-based communication, and networked education via Internet connectivity. The next chapter will explore in detail the emergence of blended learning from these different perspectives. Since blended learning is informed by successive generations of open and distance education, it will also seek to describe and comment upon these successive generations.
Chapter 2

THE EMERGENCE OF BLENDED LEARNING

2.1. INTRODUCTION

This chapter is principally designed to explore the emergence of blended learning as informed by the successive generations of Open and Distance Education (ODE). The practice of ODE challenges the fact that educational opportunities have traditionally been ‘closed’ by various social and cultural barriers such as entrance requirements, time constraints, financial demands, geographical locations and gender insensitivity.

Secondly, the chapter will trace the various stages through which ODE has metamorphosed, taking into account the various technologies that have impacted on the processes of these changes. Thirdly, the chapter will seek to establish and expound different perspectives on blended learning in the contexts of social, cultural and technological change over at least the last ten years.

2.2. SUCCESSIVE GENERATIONS OF OPEN AND DISTANCE EDUCATION (ODE)

This section explores the history of ODE from as early as the eighteenth century until the 1990s, when technologies began to impact upon open and distance education arrangements with the introduction of audio-visual devices into schools (Stuparich, 2001). The ‘targets’ of correspondence education were both adults and children – anyone who was disadvantaged by their geographical distance from central learning locations.

Although ODE began as text-based correspondence education, distributed through the
postal service, it has since evolved along technological, social and cultural trajectories toward contemporary ‘internet-based classrooms’. According to Ayala (2009: 277), “distance education is a formal student-teacher arrangement in which the student and teacher are separated by space and/or time”. ODE has changed tremendously over the last ten years, as universities have begun to consider the technological and sociocultural milieu as well as the financial and job demands upon contemporary students. Although the goal of distance education – to increase learning access for students – has remained relatively constant throughout successive generations, delivery times and strategies have changed due to development and diversity. Braimoh and Osiki (2008: 55) have categorized ODE courses as:

i) correspondence conducted through regular mail, ii) internet conducted either synchronously or asynchronously, iii) telecourse/broadcast where content is delivered via radio or television, iv) CD-ROM where the student interacts with computer content stored on a CD-ROM, and v) pocket PC/mobile learning where the student accesses course content stored on a mobile device or through a wireless server.

The Commonwealth of Learning (2001) has documented that there are four generations of technical evolution in open and distance education that have direct bearing on the theories and practices of current blended learning approaches. It is in the context of some of these changes that blended learning will be discussed, after detailing these successive generations of ODE.

Generation #1 (G1): This phase was characterized by text-based correspondence courses. Correspondence education, through which courses were offered to both adults and children by mail either from one country to another or within the same country, is one of the oldest expressions of distance education. Regarding the development of distance education, Braimoh and Osiki (2008: 54) comment that
…dating back to 1728 [distance education] programmes, whether in pedagogy or andragogy, have disseminated information via technology and its multiple instructional systems design which aim at students who are not physically on site.

Correspondence education is characterized by a study guide, often in printed text, and often supplemented by audio and video tapes. Correspondence education was, and still is, written or printed materials conveyed through postal delivery (UNESCO, 2002). While correspondence education materials can be posted electronically today, this has not altered the fact that it is a print-based arrangement. Although correspondence education provided the kinds of flexibility distance education students needed, the materials for correspondence courses were often prepared without greater understanding of the competing interests of time and space impacting on students. Prior to the 1960s, courses of distance education were of a ‘to whom it may concern’ or a ‘one-size-fits-all’ nature, and there was no deliberate attempt to understand and support students who might combine work with studies and thereby compromise the success of their learning. This may today be interpreted as a lack of pedagogical sensitivity on the part of the institutions.

Because the correspondence education arrangement lacked an understanding of students’ profiles, it limited the level of support each student was likely to receive from teachers and university administration. Once support strategies to students are compromised, pedagogy is equally compromised. Therefore, although correspondence education had its place in the history of distance education, and continues to be valued for providing largely print-based forms of education, its failure to engage students in ‘real time’ experience limits its efficiency and effectiveness. It lacked the kinds of support mechanisms that my current study seeks to establish.
Generation #2 (G2): This period is characterized by educational television and radio systems. The period also witnessed a variety of delivery methods, such as cable TV and radio broadcasts, of live or recorded lectures to both individual home-based learners and groups of learners in remote classrooms. According to Parker (1992), instructional TV was introduced in the USA in the 1960s to offer courses to professionals at their workplaces, when it was difficult for them to travel to physical campuses. By the 1990s, a number of electronic networks were involved in educational programming via satellite to groups such as schools, colleges, business corporations and professional associations (Parker, 1992). For example, Parker (1992) reports that, in the 1990s, students from Scandinavian countries were already undertaking doctoral studies from a number of foreign countries without ever visiting the campuses that awarded their degrees.

The introduction of electronic networks into education also brought with it the concept of ‘home study’, which was another way of describing correspondence education. Home study was meant to provide college courses to students through radio broadcast and TV within their home contexts. Home study targeted technical and vocationally orientated institutions, and the overarching goal was for upgrading the skills of people on the job. It appears, therefore, that the terminology ‘home study’ does not provide an accurate description, as some of its students would not necessarily study at home (Keegan, 1996). Throughout this period, the educational environment was becoming increasingly more liberalized, giving students more freedom to study and also work full time.

Generation #3 (G3): This generation represents a combined multimedia system such as text, audio, video, CD-ROMS and Internet-based materials, delivered to either individuals
or groups of learners. During the 1990s, teaching was no longer an individual effort but the work of teams of specialists such as media specialists, information specialists, instructional design specialists and learning specialists. As could be expected, the multimedia system reached a large population of learners across a given country, lessening the perceived importance of the individual student (UNESCO, 2002).

With multimedia learning also emerged the concept of ‘independent study’. The proponent of the ‘independent study’ approach was Charles A. Wedemeyer. According to Wedemeyer, ‘independent study’ in the American context was a generic term for a range of teaching and learning activities that sometimes went by different names such as correspondence study, open education and radio-television teaching (Wedemeyer cited in Keegan, 1996). The difficulty with Wedemeyer’s proposition, according to Keegan (1996: 36), is that the idea of ‘independent study’ meant “independence from an educational institution and this is not the case in distance education”. Generally, distance education requirements and expectations are controlled by the institutions administering the courses. However, ‘independence’ in this case referred more to freedom of time and space, and there were little or no deliberate support mechanisms put in place by universities to guarantee success in teaching and learning outcomes.

Generation #4 (G4): This is a recent and a revolutionary phenomenon characterized by Internet-based systems supporting course delivery and learning processes. The difference now is that text, audio and video are in electronic forms and are delivered to individuals through Internet connectivity, enabling integrated teacher–student and student–student interactions. As UNESCO documents have revealed,
Just as each previous generation of technology, that is; correspondence, broadcast and narrowcast audio and video, and multimedia systems produced its particular form of open and distance learning organization, so the spread of broadband Internet communication is stimulating new types of educational organizations and also stimulating re-thinking about the effectiveness of the older ones. (2002: 24)

The successes of the various technologies that have impacted on distance education experiences throughout successive generations are not simply determined by the technologies themselves, but by how they are employed in practical terms to provide access and convenience to students. Thus, although some of these successive generations of ODE did not provide the kinds of support mechanisms the present study seeks to establish, their successes should be interpreted in light of their unique contexts and appropriate for the time.

From the Australian perspective, the recognition of distance education goes back to 1911, when print-based correspondence education began to be administered to post-secondary students with the aim of overcoming geographical separation of students from universities (DEETYA, 1998). According to the Department of Employment, Education, Training and Youth Affairs (DEETYA), other reasons for the demand for distance education from the Australian government were: i) growth of distance education economy, ii) growing demand for skills and continuing education, iii) developing global market in education, and iv) growing acceptance by academics of the value of distance education as a teaching method (1998). Although the challenge of physical distance is increasingly becoming blurred, many Australian students continue to choose distance education for convenience. For example, there are some on-campus students, such as Aboriginal Rural Education Program (AREP) students, who make use of both face-to-face teaching and online materials as a matter of choice.
In summing up and comparing the four generations, one can draw out approaches to pedagogy in relation to where education occurs (place) and when education occurs (time). Table 2-1 represents a summary and the researcher’s critique of the different generations of ODE as described by the Commonwealth of Learning (2001).

<table>
<thead>
<tr>
<th>Delivery Method</th>
<th>Characteristics</th>
<th>Comments/Critique</th>
</tr>
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<tbody>
<tr>
<td><strong>G1:</strong> Correspondence course (print-based), beginning circa 1728</td>
<td>Print-based course materials, distributed through the postal delivery method. This was later supplemented by cassette tapes and audio/video tapes. No face-to-face teaching.</td>
<td>An attempt by universities to close the gaps created by time constraints, financial constraints and geographical distance. This was also an attempt by the universities to liberalize learning space, so that more students could have access to learning opportunities.</td>
</tr>
<tr>
<td><strong>G2:</strong> Radio, satellites, Cable TV (1960s)</td>
<td>Live/recorded lectures delivered to individuals and groups, mainly for technical and vocational students to upgrade skills. Learning theories followed the traditional classroom format, fostering a duplication of traditional classroom. No face-to-face teaching.</td>
<td>Education environment was becoming more liberalized and most courses followed a ‘one-size-fits-all’ format. While these media created learning space, time was a matter of procedure and study arrangement was location bound; that is, one had to be in a particular location to be able to access learning.</td>
</tr>
<tr>
<td><strong>G3:</strong> Multimedia – text, audio, video, CDRomS, Internet connectivity (1990s)</td>
<td>Amalgamated media delivery method to individuals and groups. Facilitated by groups of specialists. Course management skill was an important factor.</td>
<td>With the advent of Internet connectivity, multiple delivery opportunities took the centre stage, and education became a ‘commodity’ to be marketed to students who in</td>
</tr>
</tbody>
</table>
turn have become ‘customers’ or ‘consumers’. On a positive note, learning is now not so space-bound, and timeframes were becoming more flexible, if the student had the power to control these. However, a proper understanding of the profiles of students was still lacking in G3. Most course content and learning procedures still reflect the traditional face-to-face format, and time and space remained the ‘commodities’ of the higher education.

| G4: Electronic delivery method (Current) | Internet-based delivery method for individuals and groups. The electronic delivery method has provided for interactive opportunities between students and academics and among students for collaborative learning. This stage is characterized by the liberalization of both time and space.  

This phase sees universities taking advantage of opportunities to offer courses electronically to increase student enrolments at the same time as providing access to education. What is lacking at this level was/is a purposeful documentation of the students’ profiles in terms of affordability, effective connectivity and the challenge of working with multiple Internet-based technologies. Like the previous generations, learning space has become more liberalized (except for individuals who might not have access to facilities such as electricity and/or computers) but the pedagogical challenges still remain. It’s important to note that, despite the liberalization of both time and space, these are still tightly controlled by higher education institutions. |
Common to the successive generations of correspondence education is the creation of learning spaces away from campus-based classrooms, and also the flexibility of time as provided by various technologies. While the various generations described above were context-specific and appropriate for the time, what was lacking throughout these developments, however, is the deliberate attempt by higher education institutions to seek to understand the fears and anxieties of individual students about how they might be supported in order to maximize the limited time and space they might have. According to Braimoh and Osiki (2008: 59),

> [m]ost course writers in distance education institutions do not have in-depth knowledge of the students who are the intended users for which they produce modules, and some writers may be deficient in the art and practice of writing distance learning course materials. Therefore, the course materials which are ultimately produced are drab, esoteric, non-compliant to the global standard and sometimes they are mere sources of hindrance for effective learning to take place.

This lack of “in-depth knowledge of the students who are the intended users” reinforces the concern that education is increasingly becoming a commodity that universities seek to market and sell to potential students, without necessarily taking into consideration the felt needs of the ‘customers’ (Maguire, 2005).

![Blended Learning Timeline](chart.png)

**Fig. 2-2 A representation of the emergence of blended learning**

Figure 2-2 presents blended learning as a gradual progression towards the liberalization of learning spaces and time, informed by social and economic changes impacting on many
people. Driscoll (2002 cited in Matheos, Daniel & McCalla, 2005: 56) has defined blended learning as a “strategy for gradual movement from a traditional course delivery into Web-based platform”. According to Matheos, Daniel and McCalla (2005: 65), the goal of a blended learning environment is

- to offer a wide range of learning resources and experiences, together with appropriate technological and human support based on learners’ learning needs. With this goal the design of a blended learning environment requires a deep understanding of learners’ characteristics and their learning goals. One important aspect of learners’ characteristics is their variation in preferences for learning and learning support.

Therefore, by blending face-to-face teaching and learning experiences with computer-mediated experiences, we are also blending various learning theories such as i) constructivist theory (Mayer, 2001); ii) problem-based learning theory (Sage, 2000; Ronteltap & Eurelings, 2002; Bjorek, 2002; Lehtinen, 2002; McConnell, 2002; Wertsch, 2002); and iii) activity theory (Jonassen, 2000). These theories will be discussed in detail in the next section.
2.3. BLENDED LEARNING PERSPECTIVES

The purpose of this section is to explore different perspectives on blended learning held by various practitioners. As a result of advancement in information and communication technologies, more innovative instructional delivery methods and learning solutions have emerged in order to provide more meaningful learning experiences in higher education settings. The idea of blended learning began in the corporate world, when researchers found out that ODE experiences alone were not sufficient for knowledge and skill development and retention, and that most learners needed experiential learning through the blending of technologies and face-to-face interactions (Singh, 2003; Collis, 2002). According to Lim and Morris (2009: 282), “use of blended instruction is growing rapidly because instructors believe diverse delivery methods may significantly embrace learning outcomes as well as increase student satisfaction from the learning experience”.

A study conducted by Osguthorpe and Graham (2003) has established that the “blended instruction method improved pedagogy, increased access to knowledge, fostered social interaction, increased the amount of teachers’ presence during learning, improved cost effectiveness and enhanced ease of revision” (Lim & Morris, 2009: 282). From their perspectives, blended learning provided learners with greater control over the pace of learning, instructional flow, selection of resources and time management. They also argued that blended learning is effective in addressing diverse learning styles.

Blended learning has the ability to offer student and teacher participants a wide range of communication possibilities. It offers relatively easy access to instructional materials, enhances equity in the process of teaching and learning, gives students the freedom to
study independently and improves quality of learning through a technologically rich learning environment (Ulbahar & Madran, 2009).

According to Picciano (2010: 8),

[...]there are many forms of blended learning but a generally accepted definition does not exist. One school’s blended is another school’s hybrid, or another school’s mixed mode. The issue is not just of labels but the lack of agreement on a broad versus a narrow definition as well. Without a clear definition, blended learning is perceived as some nebulous combination of online and face-to-face instruction.

While there is a growing body of literature that associates blended learning with the notion of flexibility, in practice it may mean different things to different people (Collis & Moonen, 2001). First, there are those who define blended learning as an arrangement that mixes or combines different pedagogical frameworks. According to Rovai and Jordan (2004: 56), blended learning is “an important building block of the new schoolhouse, which offers students both flexibility and convenience, important characteristics for working adults who decide to pursue post-secondary degrees”.

Second, there are those who consider blended learning from the point of view of blending the various technologies. Driscoll (2000b, cited in Montera-Gutierrez, 2006: 315) suggested that the following characteristics define blended learning: i) to combine or mix modes of Web-based technology, ii) to combine various pedagogical approaches to produce an optimal learning outcome with or without instructional technology, iii) to combine any form of instructional technology such as videotape, CD-ROM and/or Web-based training film, and iv) to mix or combine instructional technology with actual job tasks to create an harmonious effect of learning and working. It’s important to realise that Driscoll’s description represents only the mix of technologies and not the combination of
two delivery methods (face-to-face teaching with technologies). He does however acknowledge one very important aspect of blended learning, which is the blending of the various pedagogical approaches.

A third perspective is presented by Carman (2002, cited in Ashton & Elliott, 2007), who describes blended learning as online learning blending not just modes of delivery but theories and philosophies. He noted five key ingredients necessary for a successful blended learning experience: i) live events, in which all learners participate at the same time, ii) self-paced learning where individuals learn at their own speed and in their own time, iii) collaboration, iv) assessment, and v) a concept of integrated support materials to enhance learning retention and transfer of knowledge. Similar to Carman’s view, Harding, Kaczynski and Wood (2005: 56) have stated that blended learning is

a mixture of online and face-to-face learning using a variety of learning resources and communication options available to students and lecturers. In other words, blended learning mixes e-learning with other more traditional types of learning... In so doing, a (new) learning environment is created that is richer than either a traditional face-to-face environment or a fully online environment.

Thorne (2003, cited in Yoon & Lim, 2007: 476-477) describes the blended approach as “a mix of traditional and interactive forms of using classroom training and/or any of the following innovative technologies: multimedia, CD-ROM video streaming, virtual classrooms, email/conference calls and online animation/video-streaming technology”. Valiathan (2002: 56) identified at least three categories of blended learning necessary for training and performance; these are “skill-driven learning activities focusing on teaching a specific set of skills, learning activities geared toward change in attitudes, and blending performance support tools with knowledge management resources and mentoring to develop workplace competencies”.

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While this research into definitions is reasonably comprehensive, there is seemingly a lack of research into and examination of other aspects that influence students’ learning processes in higher education settings. It should be acknowledged that the various combinations of time and technologies offer not only advantages but also enormous challenges to both students and academics with relation to their personal and institutional blended learning arrangements. From the perspective of this study, the ultimate goal of blended learning is to combine the best features of classroom teaching with the best features of online learning, and for higher education institutions to create effective and efficient support mechanisms for both students and academics.

2.4. DEFINITIONS OF BLENDED LEARNING AND ITS COMPONENTS

Blended learning is both simple and complex. In its most complex form, we can blend the various instructional strategies by using different technologies and other activities for learning process (Bersin, 2004). It also means a combination of online and face-to-face instruction or delivery methods (Bonk & Graham, 2006; Rooney, 2003). According to Graham (2006), it is the blending of face-to-face and online experiences that more precisely defines or describes the historical background of the emergence of the blended learning platform.

This section seeks to provide a working definition and detail the various components of blended learning. The definition of blended learning may be considered from such a broad perspective that practically any learning experience that integrates some educational technology and some face-to-face instruction might qualify. Moreover, the traditional face-to-face delivery mode may also vary along a spectrum from one-to-one coaching,
group activities, seminars and classroom teaching through to lectures for large audiences. However, necessary to the field of blended learning are the following characteristics: i) integration of online and face-to-face delivery methods, ii) extension of learning through the innovative use of information and communications technologies, and iii) the combination of multiple approaches by blending virtual and physical resources. As blended learning continues to evolve, other related terms such as flexible learning, online learning, e-learning are also used interchangeably, although interpretations may differ. For example, online learning involves a range of activities in which the Internet is used to facilitate learning. According to Underhill (2004: 6), “online learning is used both as a supplement to and in some cases as a replacement for face-to-face delivery method. The term ‘e-learning’ is also synonymous with online learning.”

Blended learning, here defined as the combination of traditional face-to-face teaching methods with technology-mediated learning activities, has the potential to transform students’ learning experiences and outcomes. Once students have embraced blended delivery models they are able to study from home, whilst continuing with their jobs and/or managing multi-faceted lives, because such an arrangement offers them greater flexibility in their use of time, and more freedom in terms of space. Essentially, time flexibility and access to learning anytime/anywhere have been the driving motives for students. But blended learning can present issues for academics, as Oh and Park (2009: 327) have identified.

[T]here are still issues related to delivering blended courses with online components. These become challenges for faculty, institutions and instruction. In particular, issues such as instructional support, faculty motivation and enthusiasm, and technology problems have been raised as problems in developing online instruction in many institutions since online instructional strategies have been available.
Academics’ attitudes toward the use of technology present one of the biggest challenges (besides unmanageable workloads, which express lack of support by higher education institutions). According to Oh and Park, if academics do not have faith in the ability of technologies to deliver learning, this will impact upon their active involvement in blended learning arrangements.

When online instruction is involved, instructors usually have to put *more* time and energy for the course, dealing with various instructional and technical problems. In many cases, even though faculty are interested in technology or new delivery medium[s], they tend to be reluctant to participate due to the commitment of time needed to produce course content and to deliver course materials. (2009: 332)

There is considerable complexity to the implementation of blended learning, with its virtually limitless design possibilities and applicability to so many contexts.

Blended learning is inherently about rethinking and reintegrating the teaching and learning relationships between face-to-face and online learning experiences. The real test of blended learning, therefore, is the effective integration of the two delivery modes, taking into consideration the various technological, social and cultural contexts of the students. Verkroost, Meijerink, Linsten and Veen (2008) have argued that there are at least five blended learning dimensions necessary to producing a suitable mix of pedagogical methods for blended learning. These are i) online versus offline, ii) self-paced versus live collaborative, iii) structured versus unstructured, iv) custom versus off-the-shelf content, and v) working versus freedom to learn at any time. The challenge for higher education institutions in this regard is “to learn to harness technology to integrate learners, not to isolate them, and to provide better personal support and motivation to students” (Mills & Tait, 1996: 48). According to Covington, Petherbridge and Warren (2005), making a professional transition from face-to-face teaching to teaching flexibly is not possible in a
short time, and this presents universities with significant challenges. Summing up the challenges of blended learning, Meyer (2008: 212) states that

getting the right mixture of media and technology that includes the right use of the classroom teacher in a well-designed integrated multimedia program is the most promising approach to obtaining both a high-quality learning experience and at the same time, the best return for dollars invested in the educational enterprise.

Some of these challenges will be discussed in more detail in chapter three.

Despite anxieties and fears that education with technology diminishes the quality of learning, Lloyd (2000: 81) attests to the fact that there are “impressive literatures concerning quality which suggest that distance learning [flexible time and space] is at least as good, and sometimes better, in terms of learning and retention” (brackets added).

Pedagogically, blended learning encourages students to contact the teaching staff frequently through email, telephone, ‘real time’ discussions, chat-rooms and other means (Lloyd, 2000). By use of technologies, it is possible for students to participate in either ‘real time’ class or ‘delayed’ learning arrangements (Lloyd, 2000). However, a 2005 study by Matheos, Daniel and McCalla supported the idea that different people learn differently and process knowledge in different ways. They observed through their research that “independent learners doing class assignments on their own with little support from their peers and the instructor of the class are more likely to use more technology support compared to…other types of learners” (2005: 65).

Kerres and De Witt (2003) have provided yet another dimension to consider when thinking about how to deal with the issues related to building the components of blended learning. They declare that blended learning refers to at least the mix of the didactic methods, which consist of expository presentation of information, discovery learning, and
cooperative learning. They also argue that blended learning consists in its delivery formats, that is, in personal communication and any other technology-mediated forms of delivery. Kerres and De Witt go on to propose three main components that should be considered when planning, developing or delivering a blended learning program: 1) content, 2) communication, and 3) construction.

2.4.1. **Content component**
The content component is about preliminary information, which might consist of facts or rules the learner needs to be able to recall. Knowledge of certain information could be considered as pre-requisite for other communicative or constructive learning activities. In the context of blended learning, it is the responsibility of higher education institutions to clearly spell out, where possible, what necessary information the blended learning student might require prior to their enrolment. Unfortunately, it is often assumed by higher education institutions that this information is already available online, without guaranteeing that students will be able to access it.

2.4.2. **Communication component**
The communication component is one of the most important constituents of blended learning, and is applied when, for example, i) a deeper understanding of a theoretical framework is required, ii) the knowledge being acquired consists of different competing concepts, and/or iii) students should learn to formulate, express and discuss a personal point of view. The communication component means that higher education institutions do not depend entirely on technology for delivery. They should also engage in face-to-face communication to enable students to express and exchange ideas with academics and experience ‘cross-pollination’ of knowledge with their peers.
2.4.3. **Construction component**

The construction component is applied when i) knowledge is to be applied and not only to be recalled or memorized, ii) knowledge consists of procedures and not only declarative knowledge, and/or iii) the content includes “fuzzy knowledge” (2003: 105). The fact that blended learning allows students to work independently from academics is an advantage here, because they are thus encouraged to think through issues independently, informed by their local context. The construction component challenges the view that some students only learn to simply memorize and pass exams, without the ambition of applying their learning outside the institutional arena. (One of the implications of blended learning is that it refutes the traditional belief that learning occurs only in the context of a classroom. In the words of Brown (2005: 4), “the result is that we are compelled to expand our concept of where learning occurs. Learning spaces encompass the full range of places in which learning occurs, from real to virtual, from classroom to chat room”.) In so doing, academics allow students to experience learning where they are most comfortable, but at the same time challenge them to think, learn and construct in other ways.

Blending with purpose becomes critical because learners represent different generations, personalities and learning styles (Picciano, 2010: 7). This requires that academics employ multiple approaches including face-to-face methods and online technologies to meet the needs of the students. Acknowledging the diverse perspectives of blended learning, Rosset, Douglis and Frazee (2003) proposed that blended learning should “originate from integrated strategy for teaching and performance goals, combining instructional approaches (problems that can be fixed by training) and non-instructional ones (problems better addressed by solutions other than training), such as work redesign, incentives and environmental changes” (Yoon & Lim, 2007: 477).
Blending with purpose also means that pedagogical objectives will drive the teaching approach, instead of the availability of the technologies used for delivering the courses. It means that the blending objectives or activities become the most important aspects of students’ learning processes. While one can identify characteristics and common components of blended learning, there is no ‘one-size-fits-all’ formula for designing blended courses because blended learning design varies widely depending on the nature of the course content, the audience or students, the goals of the course, the instructor and the technology available (Garrison & Kanuka, 2004; Garrison & Vaughan, 2008; Osguthorpe & Graham, 2003; Vaughan, 2007; Ayala, 2009). Blended learning, according to this study, needs to take into account the students’ learning goals, their learning contexts, the technology and human support available to enhance their learning, and how students are enabled to make choices between technology-mediated learning and traditional classroom teaching.

2.5. WHY BLENDED LEARNING?

Much discussion has been occurring in higher education institutions in Australia, at least over the last ten years, about how universities might be prepared to institutionally embrace the process of change (Collis, 1998; Cunningham, Tapsall, Ryan, Stedman, Bagdon & Flew, 1998). According to Corderoy (1998: v), a significant issue that has dominated such discussions has been the “rush to embrace flexible and alternative teaching and learning approaches and delivery methods”. This is corroborated by Nicoll (1998: 301), who states that “flexibility in learning has come to the fore as a newly dominant metaphor within the Australian university sector”.

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Meanwhile, a review of the literature (Baldwin, 1991; Cunningham, 1998; Cunningham et al., 1998; Flew, 1998; MackNight, 1996; Nicoll, 1998) indicates that, while discussions toward change within the university sector in Australia abound, there are a number of common issues that confront this change: i) economic and government policy pressures; ii) the growing capability and significance of Information Communication Technology (ICT), and iii) the complex nature of students’ profiles and how students learn. In spite of the prevailing issues, there appears to be a consensus among experts that the most effective learning experience in higher education today is a learning theory which supports the learner-centred approach (Duffy & Cunningham, 1996; Bostock, 1998).

The growing acceptance of new educational philosophies and practices, such as constructivism and action learning during the 1980s, have challenged the valence of the didactic lecture/textbook model common in higher education, promoted the notions of the academic role as ‘a guide on the side’ rather than ‘the sage on stage’, and conceived of the student role as one of the independent self-directed learner. (Cunningham et al., 1998: 25)

Therefore, Australian universities’ appreciation of the effective and meaningful teaching and learning experiences provided by ICT and their support for flexible delivery modes have placed blended learning at the centre of discussions for change (Duschatel & Spahn, 1996; Levin, 1999). The university sector in Australia has in recent years put in place the required infrastructure to support ICT as a delivery medium for teaching and learning, and the good news according to Harper, Oliver and Agostino (2001) is that the Commonwealth government of Australia has now provided funds to support and promote quality teaching in relations to blended learning. Harper, Oliver and Agostino lament, however, that there still exist major impediments to blended delivery such as a lack of quality teaching and learning models, and a lack of appropriate teaching material and software for academics.
In summary, although ICT has provided possibilities for efficient delivery outside classrooms settings, there are concerns about appropriate, effective, efficient, pedagogically sound support mechanisms for both academics and students. Salomon (1998) supports these concerns when he notes in his study that technology seems to be outpacing our pedagogical and psychological preparedness in relation to blended learning. It is from some of these concerns that the current study derives its motivation.

2.6. CONCLUSION

This chapter has explored and documented the successive generations of ODE that have helped inform the emergence of blended learning, which is a combination of face-to-face and distance learning experiences. Both students’ and academics’ time and space have been considered and critiqued in relation to the pedagogical frameworks employed in successive generations of ODE.

This chapter has also examined various perspectives on blended learning. Despite the differing perspectives, blended learning is gaining popularity in higher education as an effective pedagogical approach that integrates classroom and technology-mediated learning delivery methods. By presenting these different perspectives, the chapter offers higher education institutions an opportunity to appreciate both the simplicity and the complexity of this particular learning and teaching approach; blended learning is, or should be, a thoughtful mix of delivery methods intended to accommodate the various learning needs of diverse learners and their choices, not only of subject matter, but also of the time and space within which their learning will take place.
Although blended learning is an effective educational alternative, there are persisting questions about *why*, *what*, and *how* to implement blended learning in higher education institutions. Chapter three will discuss some of the challenges presented by blended learning – particularly to do with technology, delivery methods and policy, which all also relate to the current research themes of space, time and pedagogy.
Chapter 3

THE CHALLENGES OF TIME, SPACE AND PEDAGOGY

3.1. INTRODUCTION

This chapter will discuss relevant learning principles and how they may assist in determining the mix of various delivery methods that guides the practice of blended learning. It will argue that there exist significant challenges around, not only pedagogy itself, but the time and space within which students and academics work.

While higher education institutions are recognizing the potential of blended learning to increase student enrolment and retention (Rossett, Dougis & Frazee, 2003), there are numerous issues to be addressed around how time, space and pedagogy challenge the theories and practices of blended learning. First, there is a variety of technologies and delivery methods that can be exploited for blended learning, but little is officially known about the actual effectiveness of such blends (Rossett, Dougis & Frazee, 2003). Blended learning also presents a challenge because it requires state-of-the-art technologies for both higher education institutions and learners, and user-friendly content design and teaching materials.

Second, given the many challenges of blended learning, there is lack of clear policy direction relating to where blended learning is headed and how practitioners can plan for its effective implementations in their institutions (Kim, Bonk & Oh, 2008). It is possible therefore, for those involved in the establishment of blended learning to underestimate the difficulties involved in changing deeply entrenched teaching and learning habits, and consequently to pay less attention to the enormity of the challenges of combining the
traditional classroom delivery mode with that of blended learning. According to Spitzer (1991), blended learning experience necessitates radically new forms of communication and even different etiquettes. It demands that academics gain appropriate skills in managing discussions and online debates (Ashton & Elliott, 2007), as the effective management of a student’s learning space will contribute to the success of their learning outcome. “Examples of other significant roles that online tutors may have to play include the ‘pastoral care’ of students in terms of advising about careers and course choices, marking students’ assignments and coursework, and providing feedback on submitted materials and so on” (Barker, 2002: 7). It is important therefore to appreciate that change must be informed by learning principles relevant and appropriate to blended learning.

3.2. LEARNING PRINCIPLES INFORMING BLENDED LEARNING

This section aims to identify and examine some of the learning principles that support both face-to-face and online experiences. With the advent of educational technologies, new ways are becoming available for using computer-based communication to distribute and store information online. According to Barker (2002: 3), “using e-learning technologies implies that it is possible to provide more widespread access to education for larger groups of people. This in turn, is likely to mean that ‘consumers’ will have a wide range of abilities and prior experience”. Such developments necessitate that we critically review the approaches that we employ for the realization of educational infrastructure (Barker, 2002).

A fundamental principle that informs learning practice is that knowledge and understanding are promoted through dialogue, discussions and debates. Blended learning environments must therefore provide appropriate mechanisms enabling people to ‘talk’
within a variety of different topic areas (Barker, 2002). It is critical that educational infrastructure is provided for the support of both collaborative learning and cooperative learning activities.

There are several learning principles associated with blended learning that can appropriately contribute to effective teaching and learning. These include constructivist learning theory and activity-based learning theory. Although traditional instructional designs were based on the assumption that there is only one way of learning (Newby, Stepich, Lehman & Russell, 1996), blended learning is constructed around constructivist learning theory. Constructivist learning theory considers both the content and context of the learner as critical in determining the pedagogical success or outcome. Thus, the objectives of constructivist learning theory are the creation and transfer of context-dependent, flexible and adaptive learning and complex problem solving skills (Spiro, Feltovich, Jacobson & Coulson, 1992).
The assumption underlying constructivist learning theory is that knowledge does not exist independently of the learner, but that it is constructed through interactions with the context and/or other individuals (Piaget, 1977). In addition, constructivist learning theory is based on understandings of learners’ unique learning styles and their self-reflective cognitive skills (Vygotsky, 1978). What this means is that the goals and outcomes of learning in a constructivist environment often differ from those in an information processing environment, in which the goal of learning is to adopt pre-specified knowledge – a ‘one-size-fits-all’ skill that can be applied across content domains (Jonassen, 2000). It is therefore not enough to simply deliver old content via a new medium (Ayala, 2009).

In summing up the constructivist theory, there are at least three grounding principles:
First, understanding comes from the learner’s interactions with the environment. One cannot determine what is learned separately from how it is learned. Instead, learning is a function of the content, context, activity and goals of the learner combined (Spiro et al., 1992; Jonassen, 2000).

Second, the learner’s purpose or goals are the starting point for learning. This is central in considering what is to be learned. Therefore, prior knowledge of the precise stimulus for learning is critical to academics so that they may provide quality support to students (Savery & Duffy, 1996). Third, constructivist learning theory suggests that knowledge evolves through social negotiations and through evaluation of the viability of individual understanding. In other words, a social environment is critical in providing alternative views and additional information against which learners can test their understanding and build a set of propositions (Spiro et al., 1992; Jonassen, 2000).
Constructivist learning theory underscores the importance of creating conducive learning environment that takes into consideration the varied learning styles of blended learning students. Constructivist learning approaches can assist students to flourish in their learning experiences and to assume ownership for their learning processes, as informed by their unique contexts. In an article entitled ‘Constructivist Caution’, Airasian and Walsh (1997) pointed out that a number of issues will confront both students and academics who are involved in learning and teaching using blended learning. Some of these issues are: i) change from telling to guiding, and creating rich environments to provide opportunities for students to work out their own meanings, ii) change to learning and thinking independently instead of waiting or totally relying on teachers to tell learners what to do, and iii) change to working and coping with more diverse student profiles, and thus spending more time responding to individual students’ needs.

Blended learning environments need to be able to provide a rich and diverse set of resources to support students in finding solutions for potentially diverse sets of instructional problems, and to help them make decisions about what resources and tools to use for their own learning purposes (Airasian & Walsh, 1997). Higher education institutions need to take greater interest in documenting the profiles of potential blended learning students prior to their enrolment, so that they are better informed about some of the unique needs of the various students. The institutions’ task is actually to blend time and space to minimize frustrations for both students and academics.

Another learning theory relevant to developing pedagogy for a blended learning environment is activity-based learning theory. The idea of activity-based theory is to offer
greater responsibilities to the students for their learning outcome (Airasian & Walsh, 1997). In addition, activity-based learning theory provides opportunities to understand and describe how learning occurs in a complex ‘blended’ learning experience. However, not everyone agrees that it is a theory of learning. For example, Kuuti (1996: 25) contests that activity-based learning is not a theory because it is not “a fixed body of accurately defined statements”, but rather that activity-based learning is a collection of broadly defined concepts that are open to interpretation. Yet, Issroff and Scanlon (2002) argue that activity-based learning theory helps comprehension that the addition of technologies into a learning experience changes the dynamic of the learning discipline.

In the context of the current study, activity-based learning theory is considered to be useful in informing course designers and academics about making blended learning materials interactive and supportive for learners. Schroeder (2002) laments that, oftentimes, course designers and academics do not take into consideration that learners require new competencies when they are responsible for their own learning processes. When thinking about how to balance the activity-based and teacher-directed learning approaches, academics and course designers need to consider that, though it may be desirable to give more responsibility to the learners, the learners then require the right support to carry out their activities. According to activity-based learning theory, students can determine and allocate their time over different learning activities, and thus learn at their own convenience. But whether or not they have the skills to accomplish this is questionable, as activity-based learning theory promotes a solitary learning environment that is managed by the individual learners who are each responsible for his or her own learning outcome.
The above learning theories, if appropriately integrated into the blended learning environment, will assist academics in determining and situating appropriate instructional methods and learning strategies within the overall context. They can positively inform the designs of blended learning materials and assist in the understanding of the potentials of blended learning students. They can also act as lenses through which academics might view and think about the learners’ capacities and their unique circumstances. However, the successful integration of the two theories will depend on the effective use of the learning environment by students, in relation to both time and space.

3.3. CHALLENGES OF AN ANYTIME/ANYWHERE APPROACH

This section will explore the concepts and accompanying challenges of time and space in relation to blended learning. From the perspectives of this study, time means anytime-anywhere opportunities, real time or delayed, that students might seize to complete their studies, apart from the official time designated to institutions, employers and family obligations. On the other hand, space represents anywhere-anytime opportunities, such opportunities presented by/at home, workplace, face-to-face classroom, library, online (technology-mediated), wireless space, collaborative space, social space, individual space (personal reflective), and small groups. Some of these opportunities offer real time interactions (synchronous), while other interactions may be delayed (asynchronous).

This study recognizes that the two aspects of time and space are closely linked, so their challenges to blended learning students and academics are considered here as a package. One of the reasons for presenting the challenges of time and space as a unit is, for example, that by opening up learning space for blended learning students, higher education institutions will be cutting down commuting time for these students. It also
needs to be appreciated that by opening up learning space for blended learning students, it presents a real challenges to the academics in terms of cost and workload. From the perspective of this study, therefore, although time and space are considered conceptually separate, in practice they are closely linked.

With the advent of robust Internet connectivity, there is already an emergence of *new classrooms* – a continuing transition from physical spaces to virtual spaces using various technologies in an integrated manner. According to Brown (2005: 4), the new “learning space encompasses the full range of places in which learning occurs, from real to virtual; from classroom to chat room”. Nevertheless, Brown warns that “in order to best serve the educational enterprise; we must design learning spaces that optimize the convergence of the Net Generation, current learning theory, and information technology” (2005: 1). Therefore, the fundamental concern with regard to technological innovation in relation to blended learning relates to the fusion of technologies, curriculum delivery, pedagogy, support, and the consequent impact of the whole. Taking advantage of the availability of Internet connectivity, the student body is becoming increasingly diverse and greater emphasis is being attached to the development of higher skills such as creativity. According to Jankowaka and Altay (2008), when it comes to using educational technology for teaching and learning, there are three kinds of space that must be taken into consideration:

a) The S-space (social learning space) is designed to enhance learner engagement in a relaxed setting.

b) The F-space (formal space) is a ‘boardroom’ used for seminars and lectures and includes a range of technologies to support learning.
c) The C-space (creative space) is designed to free users from the constraints of the traditional classroom. It facilitates open and creative thinking by blended learning students.

Jankowaka and Altay (2008: 272) argue that “the idea of developing the C-space derived from the notion that delivering an applied curriculum in the context of an institution committed to widening participation and employability requires an alternative approach to teaching other than merely traditional lectures and seminars”. Characteristics of C-space, for example, include factors such as privacy, multimedia for interactions, and cooperative ways of learning which encourage the contributions of others. According to Jankowaka and Altay, “C-space creates more room for exploration, experiencing and experimentation than a traditionally set classroom as it is easy to brainstorm, vote, re-evaluate ideas, reflect [and work on] solutions in a flexible way” (2008: 277). Therefore the C-space is often perceived as bridging the gap between academics and students, and creating a sense of robust and honest discussions by reducing the usual classroom formalities (Jankowaka & Altay, 2008).

Academics may no longer be considered the primary source of knowledge in the information society of the twenty-first century, as computer technology plays an integral role in blended learning. The ability to utilize this technology has provided a new learning space, and the role of academics is now to enable future generations to maximize their capability to use information technologies effectively and efficiently (Phelps, Graham & Kerr, 2004). However, this is not a simple translation of face-to-face to learning: “even for staff who continue to teach on [sic] the same modules and wish to carry on with blended learning, there are issues to do with updating the digital resources they have created,
especially if the information technology infrastructure changes and/or they no longer have local, timely technical support” (Davis & Fill, 2007: 822).

Although one of the important motivations for higher education institutions is financial incentive, benefits are only possible if the processes are effective and efficient, which depends on the kinds of support mechanisms available to students and academics. Internet connectivity has changed higher education institutions by enabling rapid, easy real time access to learning and information, shared tools for collaboration, and what Morgan and Adams (2009: 130) have described as “instant communication and messaging, and 24-7 online help”.

A study conducted by Vaughan (2007) among students of the University of Calgary, Canada, revealed that blended learning has provided students with greater time flexibility and improved learning outcomes, although initially students encountered time management problems when they began to take greater responsibility for their own learning. There are many lessons higher education institutions can draw from this Canadian experience. Blended learning opportunities provide students with wider scope and options for course scheduling because of the reduction in face-to-face class time. Convenience is important for the growing numbers of students who manage multiple responsibilities such as work and family commitments. Time flexibility does not only support students in relation to their various circumstances, but also contributes to their pedagogic success. Flexibility of time comes with enormous responsibility on the part of students, testing how effectively they can manage their time and make use of their learning space. In this regard, timely responses and feedback from academics constitute
the most significant predictor of students’ satisfaction with blended learning (Wheeler, 2007).

As earlier discussed, the successes of blended learning can be attributed to the various learning principles that take into consideration students’ unique contexts as, facilitated by academics and staff; they take on more responsibility for their learning processes. And at the same time, some of these successes challenge traditional assumptions that learning can only occur in embodied classrooms or formal settings. The concept of distance might now be redundant in the area of blended learning, as physical distance should no longer be a barrier between academics and learners. However, gaining a better understanding of psychological distance may hold the key to the future success of teaching and learning through blended learning (Wheeler, 2007). This change in the concept of distance may have profound effects. One half of all blended learning students fail to complete their courses due to the time and space factors related to their study experience (Moore & Kearsley, 1996; Simpson, 2003; Wheeler, 2007).

Feelings of isolation are well documented in blended learning, particularly at higher education institutions with a diverse student intake (Moore & Kearsley, 1996). To produce effective blended learning materials, academics will be tasked to design quality instructional materials (Yelon, 2006) that take into account the influence of time and space and the various gaps (actual and virtual, physical and psychological) between learners and teachers. Although physical distance gets increasingly narrower with the development of Internet connectivity, there is another fundamental distance that blended learning practitioners should account for, and that is transactional distance. This is a distance
between students and academics based on perceptions either of intellectual differentials, demographic variables (such as age or gender), or cultural disparities (such as language), which are likely to create misunderstanding (Moore, 1993).

Transactional distance theory suggests that psychological distance between students and academics varies as a result of the structure of, and the dialogue mix within, educational transactions. If structure is high, for example, dialogue decreases; whereas if dialogue is high, structure decreases. Moore’s transactional theory also suggests that greater opportunities for dialogue in learning should reduce transactional distance, thereby enhancing understanding and reducing the potential for misunderstanding to occur (Moore, 1993). According to Moore, transactional distance expresses itself in three different areas: 1) immediacy, 2) social presence, and 3) structure (1993).

3.3.1. Immediacy
Immediacy refers to the extent to which students feel that they can gain quick access to academics, and their perceptions of the timeliness of academics’ responses. Immediacy is established in face-to-face settings through nodding, smiling and other non-verbal behaviours such as eye contact and gaze (Argyle & Dean, 1965). It can also be characterized in para-verbal utterances such as back channeling and other confirmatory utterances. These behaviours are often subconsciously managed (Argyle & Dean, 1965), but if they are absent or poorly mediated through the communication medium, students will notice their presence or absence. Immediacy also encompasses the notion of the student’s perceptions of connectedness to the academic as mediated through the appropriate technologies, and this effect is better represented as a feature of social
presence. Immediacy has been identified as an important measure of psychological distance, and could therefore be associated with perceived social presence in blended learning (Argyle & Dean, 1965).

In view of the challenges of time and space, the academics ability to minimize transactional distance is critical to the success of blended learning from the student perspective. According to Argyle & Dean (1965), immediacy may also directly influence feelings of intimacy in relationship building between students and academics. In the same way, Gunawardena (1995) has argued that immediacy can convey closeness, indicating that there is a clear relationship between immediacy and intimacy. These kinds of relationships reinforce the argument that the concepts of time and space are closely linked.

Of even greater concern is the potential for blended learning students to feel disconnected, which has been found to impact on their levels of participation, their satisfaction and their learning outcomes (MacDonald & McAteer, 2005; Ashton & Elliott, 2007). Spitzer (1998) acknowledges that blended learning, from a cognitive perspective, is as effective as a traditional education experience; however, he emphasizes the importance of recognizing that there are two distinct dimensions of blended learning, the “technical dimension and the equally important human or social dimension” (52). It is therefore critical that academics choose technologies strategically in order to allow students to connect with both the content and the delivery of the course.

Another factor worthy of consideration is the perceived urgency or importance of messages sent by the students to the academics. If students perceive that messages they have sent to academics are urgent but receive no response, or receive responses they
consider unduly delayed, more transactional distance may be experienced than if they perceive their messages to be less urgent. Transactional distance could also be a function of the students’ perceptions of the urgency, or importance, of their messages regardless of the media or technologies they have used to mediate the communication processes. In the context of blended learning, students who gain quick access to academics’ responses will be more predisposed toward perceptions of immediacy than those who experience longer delays.

3.3.2. Social presence

Social presence is about feelings of connectedness. According to Moore (1993), less autonomous students tend to be more dependent on academics and will often seek a higher level of social presence. Social presence is characterized by the affordability of the communication medium, and resultant perceptions that the student is communicating with a real person rather than with mute technologies. Social presence also inheres in the qualitative difference between students being able or not to communicate their support needs from a distance, and in the comparative ease of accessing academics’ support and rapid responses.

3.3.3. Structure

Structure has been defined by Wheeler (2007) as the extent of the constraints imposed upon students when courses are delivered, managed and evaluated. Taking up Moore’s (1993) concept of transactional distance, telephoning should produce the least transactional distance for blended learning students due to its greater potential to reduce structure. Telephone-mediated dialogue may subvert structure due to its often informal
and open-ended nature. The telephone is also the most easily accessible and familiar of technologies for the majority of blended learning practitioners (Wheeler, 2007). It would then follow that the Internet would create more transactional distance for blended learning students than many other modes of communication, due to the complexities it presents (Moore, 1993). Chen (2001: 327) contests that

distance is a pedagogical, not geographical phenomenon. It is a distance of understanding and perception that might lead to a communication gap or a psychological space of potential misunderstanding between people.

Chen contends that in Moore’s conceptualization, distance is not determined by geography but by how and to what extent instructors, learners and the learning environment interact. Rumble (1986) contends that Moore’s concept of ‘transactional distance’ encompasses the distance existing in all educational events, even those in which learners and teachers meet face-to-face in the same environment. To demonstrate that transactional distance is not a geographical phenomenon, Chen (2001) proposes that factors that predict the existence of transactional distance are: i) the skill level in using the internet, ii) the level of learner’s support, and iii) the degree of online asynchronous interactions. In other words, students need to possess the necessary skills to operate delivery systems before they can successfully interact with the course content, academics, and other blended learning practitioners.
Fig. 3-1 Predictors of transactional distance among academics and students (adapted from Chen, 2001)

Teacher–student transactional distance can further be considered in the following dimensions:

- Skill level in using the Internet
- Level of learners support
- Degree of online asynchronous interactions

Fig. 3-2 Predictors of transactional distance among academics and students (adapted from Chen, 2001); 2nd model

The concept of transactional distance represents some multifaceted ideas of blended learning arrangements. According to Chen (2001: 336),

[T]ransactional distance was found to consist of four dimensions: learner-instructor, learner-learner, and learner-interface transactional distance, which separately reflected the relationships between instructor and learner, among
learners, between learners and course content, and between learner and the world wide web environment.

There are also issues for students at the lower level of the socioeconomic spectrum who, while they might own computers, have little money to invest in the software, broadband or wireless connections required to support a real time delivery process. Higher education institutions are therefore tasked to recognize the fact that technologies present significant costs to students studying through blended learning. According to Lloyd (2000: 145), “the costs of accessing education in this form are significant and, unlike the traditional methods, access is ongoing and will involve, at a minimum, access to a PC, modem, printer, a range of software, and an on-ramp to the Internet”. This concern makes a strong case for an integrated approach to education for the future of blended learning – an approach wherein the new learning space and the classroom delivery mode find mutual expressions and mutual support. In the new learning space, higher education institutions will be required to provide participants with effective and efficient tools. And besides technologies, the manner in which individual courses are designed and take into consideration the time, space and resources available to personnel, will equally define the success of blended learning. Wisely employed and equitably distributed, technologies are meant to enrich and provide new ways of expanding the notion of a classroom.

3.4. THE CHALLENGES OF BLENDED LEARNING DESIGN

This section will discuss challenges for pedagogy in relation to the effective use of time and space by both students and academics. Although the various discussions about blended learning have their differences involving both theory and practice, they all seem to express the notion that blended learning is technology-driven or market-driven. Surprisingly, they don’t necessarily consider the ‘human’ component. As already
discussed in chapter two, there is no clear definition of an optimum mix of technology and face-to-face interaction. Some of these limitations could be a result of shallow understanding of blended learning students’ profiles.

A fundamental purpose of the present case study is to explore whether there is indeed a purposeful mix of delivery methods and support mechanisms in relation to blended learning that is intended to improve learning performance in one regional university. The development and implementation of strategic blending requires a purposeful mix of face-to-face interactions and technologies for supporting particular learning performance solutions. An important factor that will influence future directions of blended learning is whether academics can become more efficient and effective in designing and managing this mix.

The principles governing the development of blended learning need not be solely informed by technologies, but should also incorporate the fact that every student brings with them into the learning process their own prior learning experiences (Vygostsky & Cole, 1979). Besides, blended learning utilizes technology-based communication to encourage meaningful learning to take place through community inquiry (Garrison & Anderson, 2003). This process can be achieved through dialogue, rendering technologically mediated learning actually more friendly (effective?) in contrast with didactic approaches that view knowledge as existing ‘elsewhere’ and able only to be received through rote transmission from teacher to student (Cooner, 2010).

Modern communication technologies offer students better opportunities to engage in learning that enables them to construct their own meaning around the subject taught, and have the opportunity to refine and reconfirm this meaning within a wider community of learners. (Cooner, 2010: 274)
Undoubtedly, major technological developments have created new opportunities for *anywhere, anytime* collaboration and collective learning. Unfortunately, it is also easy to be seduced by technology as an end in itself – by what Rosenberg (2001) has described as ‘techno-lust’ – and equate technical sophistication with learning success. Therefore, to create an effective learner-driven avenue requires careful pedagogical design; it is not just a question of assembling packages of relevant materials or technologies. Indeed, the pace of change requires teachers and designers to constantly re-equip themselves as new knowledge and new skills are needed. Students also require new knowledge and skills to ensure that their learning time and space are controlled and managed effectively.

Blended learning involves the re-conceptualization and redesigning of courses, taking into consideration the influence of time and space on students’ unique situations (Dziuban, 2004; Garrison & Kanuka, 2004). According to Garrison and Vaughan (2008), this process involves the fundamental rethinking of course designs in order to maximize student engagement, and the thoughtful integration of the face-to-face delivery mode with online learning. Therefore, a major issue for academics is determining the appropriate mix of class time with online learning (Olapiriyakul & Scher, 2006). Anderson, Rourke, Garrison and Archer (2001) propose three major components for blended learning design. These are: a) cognitive presence, b) social presence, and c) teaching presence.

a) Cognitive presence is about academics’ ability to create “an environment that enables learners to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry”. (2001: 11)
b) Social presence represents academics’ ability to project themselves socially and emotionally through the medium of communication being used.

c) Teaching presence is about blended learning designs, or “facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes”. (2001: 5)

Blended learning offers a variety of patterns by which to mix delivery media in accordance with various instructional methods or learning principles. Singh and Reed (2001) have offered at least five ways in which blended learning might be facilitated: a) off-line and online learning; b) self-paced, live, and collaborative learning; c) structured and unstructured learning; d) custom content with off-the-shelf content; and e) work and learning. These various ways of facilitating blended learning must all be approached with the overriding purpose of offering integrated support mechanisms to improve students’ learning outcomes. Ideally, blended learning should be approached not merely as a temporal construct, but rather as a fundamental redesign of the instructional model with the following characteristics (Singh & Reed, 2001):

- a shift from lecture to student-centered instruction in which students actively participate in their learning process
- a shift that increases interactions between student and academic, student and student, student and content, and student and other outside learning resources
• a shift that integrates formative and summative assessment mechanisms for students and academics

More importantly, blended learning represents a shift in instructional strategy. Just as online learning represents a fundamental shift in the delivery and instructional models of distance learning, blended learning offers the possibility to significantly change how academics and administrators view their roles in a new context in which online and face-to-face delivery modes are converging. For example, the balance between online and face-to-face components will vary for every course, informed by the nature of instructional goals, student characteristics, instructors’ backgrounds, and availability of online resources. The challenge of blended learning design is to find an harmonious balance between online access to knowledge and face-to-face interactions (Montera-Gutierrez, 2006).

3.5. RELATIONSHIPS BETWEEN TIME, SPACE AND PEDAGOGY

This section seeks to explore the level of mutual dependency between time, space and pedagogy in relation to blended learning. Although the major research themes of time, space and pedagogy have been discussed separately throughout this study, they often present as a package insofar as blended learning is concerned. We cannot talk about the challenges of facilitating flexible time without considering an effective and robust employment of the technologies available to both students and academics of blended learning. In the same way, robust and effective technologies and user-friendly course designs are likely to contribute to efficient use of the time available to students and academics, resulting in effective learning outcomes.
Each of the three concepts represents unique challenges to the practice of blended learning, but together they find areas of intersection in which they account for each other’s challenges. The middle area, where the three circles intersect, represents an integrated challenge which therefore requires integrated perspectives in relation to learning support mechanisms. As will be discussed in chapter four, some commonalities among the different perspectives of space, time and pedagogy that have emerged from the research data include technological support factors, institutional support factors, academics support factors, and pedagogical support factors.

Since the challenges of blended learning are interrelated, solutions and support mechanisms for both students and academics should be approached from an integrated
perspective. A growing body of literature on blended learning indicates that there is no quick fix for designing blended learning, and several authors have emphasized the challenges faced by designers in achieving the best proportions in every learning situations (Rossett, Douglis & Frazee, 2003; Bersin, 2004; Dentl & Motsching-Pitrik, 2005; Precel et al., 2009). Academics have to review their pedagogical approaches, since blended learning design challenges higher education institutions by “moving [them] away from a transmission paradigm to a constructivist paradigm” (Brown, 2005: 4, brackets added). While traditional technologies were associated with the “transmission of linear instructional messages, selected and organized by faculty” (Mills & Tait, 1996: 39), recent digital media are different in their usage and basic characteristics. Garrison and Kanuka (2004) have stated that the transition from the face-to-face delivery mode to blended learning is not trivial, while they applaud the greater potentials of blended learning arrangement. Research by Heur and King (2004) in the USA reveals that learners and institutional establishments do recognize that the roles of academics are multi-dimensional and that, if academics are to be effective in facilitating blended learning, they require administrative support, peer support and professional development.

In summary, these discussions have highlighted for us the fact that the right pedagogic blend of online and face-to-face instruction presents major challenges for both academics and students associated with blended learning. According to Yoon and Lim (2007), any model of blending requires strategic perspectives in order to implement blending practices to best support learning and performance solutions. These two authors have concluded that focusing on learning goals without considering the impact on organizational performance
will not be sustainable, given the substantial amounts of money and support required for academics and students of blended learning.

Although new teaching and learning technologies may be challenging for both academics and students, they have encouraged “debates, decision-making, new knowledge creation and action for change” and attempts to meet government and employer pressures and workplace needs (Ashton & Newman, 2006: 1). The rise in popularity of blended learning can be attributed to a number of factors, including the availability and widespread use of new technologies, a changing student population, and increased societal focus on lifelong learning (Mehrotra, Hollister & McGahey, 2001; Miller & King, 2003; National Centre for Education Statistics, 2002). Osguthorpe and Graham (2003) have affirmed that the effective use of blended learning is likely to result in improved pedagogy, in that it takes advantage of the benefits of both face-to-face and online experiences. There are however difficulties in diffusing innovations (Rogers, 2003). Studies by Mungania (2003) have revealed that there are several barriers to blended learning of which higher education institutions should be aware: a) personal barriers, b) learning style barriers, c) instructional barriers, d) organizational barriers, e) situational barriers, f) content stability barriers, and g) technological barriers. One of the purposes of my study is to determine whether some of these barriers also exist in implementing blended learning in a regional university in New South Wales, because without a well-grounded understanding of the various challenges and barriers discussed in this chapter, it will be unrealistic to successfully roll out any effective support mechanisms for blended learning.
3.6. CONCLUSION

This chapter has explored some of the relevant learning principles that impact upon the practice of blended learning, and discussed the various challenges of blended learning under the research themes of time, space and pedagogy. It has also been able to establish that the issues surrounding blended learning are closely interlinked, and therefore that support mechanisms to students and academics should be approached from an integrated perspective. In spite of some of these challenges, blended learning promises pedagogical soundness and excellence because it encourages students to think critically when alone, and this enhances their capacities to be creative and innovative (Tait & Knight, 1996).

The current chapter has also argued that flexibility as an expression of blended learning does not necessarily involve only the aspect of space, but many other aspects such as time, course contents, entry requirements, course delivery methods, and instructional approaches to teaching and learning. Flexibility in course contents requires that topics for study, course sequences and standards of assessment are all tailored with students’ temporal and spatial circumstances in mind. Therefore, recognition by higher education institutions that learning should not be constrained by designated or official time and space allocations will offer more freedom to students associated with blended learning in relation to their unique contexts, thereby contributing to their pedagogical success. Chapter four will present the essential blended learning student’s profile, and investigate some key areas where students and academics involved in blended learning and teaching most require support.
Chapter 4

BLENDED LEARNING SUPPORT STRUCTURES

4.1. INTRODUCTION

The previous chapter highlighted a number of issues confronting higher education institutions as they make professional transitions from the face-to-face delivery mode to blended learning. The variety of instructional technologies present formidable challenges to higher education institutions, and it is hence difficult to assure success in this area (Rossett, Douglis & Frazee, 2003). The relative clarity of policies governing the implementation of blended learning in higher education institutions has also been cited as a major challenge (Kim, Bonk & Oh, 2008). This chapter will consider the perspectives of students, and begins with a profile of a hypothetical student in an attempt to reveal some issues with regard to students’ challenges in time, space and pedagogy.

This chapter will highlight the fact that, though greater access to computer and Internet connectivity is partly responsible for creating new opportunities and new learning cultures, the successes of these technologies in implementing learning will depend, to a large extent, on effective support for students and academics. Lastly, the chapter will seek to document some key support indicators (KSIs) for academics and students of blended learning.

4.2. PROFILE OF A BLENDED LEARNING STUDENT

By day, Momo [not his real name] is a full time taxi driver in the Blacktown Central Business District (CBD). By night, he is a student enrolled in blended learning at a local university, where he is studying to become a social worker in order to practice within his
emerging community. Momo is also a father of four school-age children. Several years ago, individuals such as Momo would not have fitted the profile of a potential student, but now, with the liberalization of both learning spaces and learning timelines, students like Momo are increasingly becoming the norm rather than the exception. At the same time, as the demands for continuing education increase, the actual time available for learning is shrinking day by day due to social and cultural change and pressure.

In practice, students such as Momo bring to the new learning arrangement unique challenges to institutions. They may have one, more or all of the following characteristics: i) family and work commitments, ii) clear goals and keen interest for learning, iii) extended periods of absence from traditional schooling, and iv) remoteness from libraries and other educational resources. Awareness of the potential student profile is therefore one of the key factors in determining the successes of blended learning insofar as the provision of quality support is concerned.

To support students like Momo, higher education institutions will be required to provide integrated support mechanisms that take into consideration the fact that students like Momo require: i) easy re-entry into the learning culture, ii) flexibility in how to manage time in relation to various commitments, and iii) robust learning spaces to enable convenient access to learning resources. Many students studying through blended learning require support when re-entering the learning culture because some of them have left school for a long time before returning to learn. They also require support and guidance in managing their time and learning space, as there are many factors competing for their attention.
Given that students studying through blended learning are pressured by time demands, flexible and sustained support is critical. However, such supports are dependent upon supports for academics as they adapt to the needs and the varied learning styles of the new students. The next section will outline key support dimensions for academics and students.

4.3. SUPPORT DIMENSIONS FOR ACADEMICS AND STUDENTS

This section seeks to identify some key support indicators for both academics and students that might inform higher education institutions’ blended learning strategies. In this context, institutional support for academics and students means that higher education institutions are responsible for decisions about technologies, for the organization and implementation of both academics’ and students’ support strategies, and for making sure there are structures in place to provide training, technical support and customer service for both learners and academics.

The federal government of Australia has clearly articulated policies on the employment of technologies in schools and higher education institutions. These policy frameworks aim at ensuring leadership, research and professional development for teachers, and at ensuring access to technologies for all students (MCEETYA, 1999). Other documents released in 2005, entitled Pedagogy Statement and Professional Learning Strategy, outline important policies for the use of technologies in learning. Key themes that emerge from these two documents include: a) improve access, connectivity and associated infrastructure, b) create high quality, re-useable Australian online content, c) provide high quality professional development and support for teachers, d) improve the skills of teachers and students, e) increase and link research about computing technologies with teaching and learning, and
f) update regulations and policies that affect technology use such as intellectual property, security and privacy (MCEETYA, 2005). Other policy documents further state how these technologies might be used to affect specific areas such as: i) preparing students for the information economy (DEETYA, 2000; MCEETYA, 2005), ii) transforming teaching and learning (ACT DET, 2004), iii) enabling individual student learning plans (MCEETYA, 2005), iv) improving standard and students’ learning outcomes (Moyle, 2005), and v) providing a mechanism for improving global competitiveness (MCEETYA, 2005).

While it is encouraging to know that Australian universities have created a number of policies to address global standards and competitiveness in the use of technologies, preliminary findings of the current study indicate that little has been done at the micro-level, where individual academics and students might gain the necessary skills to align them with the aspirations of the federal government of Australia.

4.3.1. Support dimensions for academics

This section seeks to identify and discuss some key concerns about support for academics in relation to blended learning. Academics’ support needs can be grouped into intrinsic and extrinsic categories. Intrinsic are issues to do with skills related to technologies they will use for teaching. Extrinsic factors include cash incentives, promotions and recognition by higher education institutions for academics who take up blended learning (Maguire, 2005). With clear policies about blended learning, academics will be encouraged to develop positive attitudes toward using technologies for teaching.

An important issue that confronts academics who teach through blended learning is that of workload. The workload issue can also be stated as adequate ‘freedom’ for academics to
be able to prepare their lessons and at the same time to focus on research and on teaching face-to-face. Some university administrators in the USA have admitted, on the issue of academics’ workloads; that designing courses for online learning is extremely time consuming, and that many academics are working for less than the minimum wage (Care & Scanlan, 2001). Since designing online courses is labour intensive, higher education institutions will need to consider allocating release time to those academics involved in facilitating blended learning. Another alternative is to share the various responsibilities between special groups of technical experts in course management systems (Care & Scanlan, 2001).

To ease the pressure on academics who must combine teaching through face-to-face and online methods, higher education institutions will need to revise their policies to address promotion issues based on academics’ workloads and the degree of their involvement within blended learning (Oh & Park, 2009). Barone (2001) has argued that blended learning goals can only be realized if higher education institutions can demonstrate affirmative action through resource allocation and necessary policy formulation to support blended learning stakeholders. Lack of collaborative organizational structures and internal partnerships can also pose formidable barriers to blended learning initiatives (Dziuban, Hartman, Juge, Moskal & Song, 2005). There need to be significant cooperation through partnerships with students of blended learning, academics, instructional technology specialists and administrators (Twigg, 1999).

Paradoxically, according to Parisot (1997 cited in Maguire, 2005), while teaching via technologies is seen as a motivational factor on the one hand, it could, on the other hand,
become a fear factor. To many academics, the introduction of technologies into their teaching careers becomes an inhibiting factor for a number of reasons: i) views of online teaching as sacrificing quality, ii) absence of policies surrounding copyright issues, and iii) perceived threat of online courses and programs wholly replacing on-campus teaching roles (Errington, 2004). According to a study conducted by Errington (2004: 41), “teachers contemplating moves into more flexible forms of learning delivery also express fears about losing ownership of their learning materials when placed on the World Wide Web, the validity, and reliability of learning assessment, and the potential lack of ‘real’ contact with students”. Errington (2004: 40) suggests that “teacher dispositions appear to have a potentially significant impact on innovation by influencing what is possible, desirable and relevant from the teacher’s own governing perspectives”. The obvious implication is that blended learning delivery may mean different things to different people. However, from the perspective of this study, blended learning is fundamentally about a higher education institution’s course offerings being more accessible in a broader range of educational settings (such as on-campus, cross-campus, off-campus, and work, home and international settings) to a more diverse range of students.

As for academics’ skills, higher education institutions are responsible for the technical competence of academics and their knowledge about online pedagogy. Research indicates that lack of technological skills is a critical factor limiting effective technological applications by academics (Becker, 2000; Market Data Research, 2004). The institutions must assist academics to have access to technologies so that they may effectively facilitate students of blended learning. Low skill levels of either students or teaching staff are likely to hinder any meaningful online support initiatives. In other words, extensive professional
development by higher education institutions is necessary before academics can utilize internet-based interactions to adequately support their students. This study finds that a major form of support for academics is professional development, as it is critical in making connections between the use of technology and improvement in pedagogical framework.

According to Maguire (2005), professional development is significant because it contributes to the enhancement of academics’ skills. On the other hand, management needs to send the correct supportive messages via appropriate policies and strategies – ones that are clearly designed to facilitate flexible learning options rather than pay them lip service. Higher education institutions need to be clear about the kinds and degrees of flexible learning support they are willing and able to resource. Hartman and Truman-Davis (2001: 55) have stated that to “achieve consistency, quality and scalability, it is necessary to establish a central service coordination unit with sufficient resources to develop and apply standards and support the expanding volume of work that will result from increased faculty demand”. This means higher education institutions will be required to demonstrate transformational leadership in order to realize the full benefits and overcome the difficulties associated with blended learning in higher education institutions (Garrison & Kanuka, 2004). Where there are no cultures or pedagogical models of technological integration into teaching, universities are forced to make *ad hoc* decisions on academics’ preparations (Best, 2002).

According to Garrison and Kanuka, 2004 and Garrison and Vaughan 2008, factors that make blended learning effective, is its ability to facilitate a community of inquiry.
Expounding on the concept of community inquiry, Yuen (2011) proposed that there are three key elements to it, that is, “social presence, cognitive presence and teaching presence” (2011:6). He explained that the formal categories of social presence are open communication, cohesive responses, and affective connections. Cognitive presence is basic to the inquiry process in which inquiry includes the integration of reflective and interactive processes. Teaching presence on the other hand is essential to provide structure, facilitation, and direction for cohesive balance and progression of the inquiry process.

Yuen (2011) also compared the concept of community inquiry with Moore’s (1989) theory of the three types of interaction for effective blended learning. The three types of interactions are learner-content interaction, learner-instructor interaction and learner-learner interaction. Learner-content interaction defines a major part of blended learning process as it provides an opportunity for learners to intellectually interact with the course content. It also reinforces self-directed approach to study. Learner-instructor interaction on the other hand assists in maintaining students’ motivation, support and evaluation process. Finally, learner-learner interaction defines peer-peer learning process as part of social inquiry.

Brown (2006: 131) expresses concerns that

the need to re-educate the existing teaching force so that they can take full advantage of technological learning tools will require extensive professional development over many years...[T]oday, many new teachers entering the profession are inadequately prepared to use educational technologies effectively.

On that basis, higher education institutions will be required to provide the support necessary to enhance the quality of teaching and learning in an already ‘time constrained’
environment. Indeed, the transition from a face-to-face to an online or blended approach requires purposeful consideration with regard to organizational, technical and, not least, pedagogical arrangements (Dalsgaard & Mikkel, 2007). “It is possible that institutional strategies underpinning the planning and implementation of what might be termed the ‘efra-structure’ and the provision of timely and effective staff training could mitigate some of the uncertainties” (Davis & Fill, 2007: 823).

Professional development is critical as it helps connect the use of electronic infrastructure with the improvement of pedagogical frameworks. Thus some critical factors for embedding the culture of blended learning in higher education institutions should include:

a) Active involvement of senior management as a demonstration of institutional commitment.

b) An integrated curriculum approach: institutions undertaking an integrated approach to curriculum review instead of changing single modules. This also means recognition of blended learning as being similar to other approaches.

c) Funding, taking into account the prevailing workload concerns. Additional funding is necessary in order to employ extra teachers, to develop and tutor in blended learning, or to relieve existing staff from their teaching in order that they can spend time preparing blended activities.

d) Timely support when needed for both academics and students. “[I]n many universities, support for e-learning is a central service and however willing the staff may be they will have multiple conflicting undertakings” (Davis & Fill, 2007: 825).

e) Collaboration, which is about sharing development efforts and learning from
others’ activities. According to Davis and Fill (2007: 826), “working with colleagues from other schools and universities that we respected helped to cope with and move through the bad spots, and provided a common sense of purpose”.

Toohey (1999) points out that, while pressure generates the need for change, it is the degree of support that defines such change. Moreover, the various support mechanisms often come from a variety of sources such as institutional management, academics, colleagues and fellow students. From institutional perspectives, although blended learning and technology-based opportunities contribute to the reputation of the institution and provide cost-effectiveness, administrators are challenged by resistance to change, inadequate infrastructure, and instructors’ lack of technical competency (Ulbahar & Madran, 2009; Vaughan, 2007; Palloff & Pratt, 2001). As higher education institutions take advantage of the new learning space, they need to take into consideration the fact that these ‘classrooms’ also need to be managed well, and made accessible and convenient to students of flexible learning. This requires adequate and appropriate staffing and also technical assistance to support electronically offered programs. IT operations and support mechanisms need to be available ‘around the clock’, as both teachers and students become dependent on IT operations to perform their core duties.

**4.3.2. Support dimensions for students**

A focus of the liberalization of learning space has always been to provide educational opportunities for students previously marginalized by physical distance and/or social and economic constraints. Given that providing education opportunities to marginalized and
economically disadvantaged students is morally right; effective course delivery to such students is equally ethically appropriate. It is a moral obligation for higher education institutions and academics to support blended learning students who choose to combine study with work and family/community obligations.

Historically, and until the 1990s, students such as Momo were defined by being geographically distant from educating institutions. Today (2010), this is no longer the case as remote learners can adequately respond to higher education institutions’ initiatives toward blended learning: “not because it is the only alternative, but, rather, because it is the preferred alternative” (Underhill, 2004: 2). Just as the dynamics of the individual learner challenge higher education institutions, so do the dynamics of the blended learning delivery mode (Underhill, 2004). The influence of Internet connectivity brings with it radical changes in learners’ expectations with regard to accessing support and resources that may enrich their learning experiences.

Students studying through blended learning have support concerns similar to the academics who teach them. They require technical support, easy access to technologies (Spitzer, 2001; Palloff & Pratt, 1999), and motivational support (Palloff & Pratt, 1999; Roblyer & Ekhaml, 2003) to study online. There are a number of principles within which some of the support mechanisms already discussed could be implemented. For example, the learning environments of the students need to be robustly flexible in order to suit their time and space variances. According to Matheos and McCalla (2005: 57),

[a]n effective blended learning approach should begin with understanding the requirements for blended learning, learners’ preferences, available tools, choice of tools to support the blend, and the available learning support to supplement the blending process. We focus on pedagogy, technology and the
domain, and the circumstances in which students make choices within a variety of resources.

Indeed, the innovative use of blended learning has begun to blur the distinctions between face-to-face delivery mode and flexible learning mode (Miller & King, 2003; Osguthorpe & Graham, 2003).

Blended learning challenges higher education institutions and academics to change their vocabularies from passive to active and to involve learners in their own learning experiences by creating the necessary spaces in which they can analyze, critique, debate, create and discuss (Brown, 2005). Blended learning makes the convergence of face-to-face and online experience possible, via many different pedagogical frameworks which might find mutual expressions (Barone, 2005). Undoubtedly, these combinations are likely to collide with bureaucratic systems, and with cultural values of traditional campuses.

It is clear that some of our sacred cows, such as the lecture as a mesmerizing solo performance, “seat-time” in the classroom, [and] the academic calendar (which Milton Greenberg referred to as ‘a meaningless fiction’), may not be able to make the journey to the new context of teaching and learning successfully. (Barone, 2005: 5)

From the perspective of this study, there are at least two different forms of student support: i) support structures that are built into course materials, and ii) activities performed to support individual learners (Underhill, 2004). However, this study seeks to document some aspects of support mechanisms that relate to activities performed to support individual learners in their unique contexts. Individual support of this nature is necessary to motivate quality learning and to reduce unnecessary dropout (Underhill, 2004). “If the conversion to online systems is made in the name of greater access, we have to be reasonably sure that those gaining access stay with it” (Lloyd, 2000: 138). The implications of these support mechanisms are such that academics are required to review
their approaches to support strategy and structures to meet learners’ expectations. “It also requires us to think beyond doing things differently to doing different things” (Underhill, 2004: 4).

The various support mechanisms discussed are critical to learners’ convenience, but flexible access must be accompanied by a shift of responsibility to individual learners (Sanderland & Wills, 1996; Caudron, 1999). But because the issues of learners’ profiles and learning styles have not been adequately addressed by blended learning practitioners, Dringus (2002) warns that blended learning may not be able to sustain a momentum. Students must possess the skills for activity-based learning style and the effective management of the various technologies. One of these required skills would be computer literacy, at least insofar as being able to overcome basic technical problems (Ulbahar & Madran, 2009: 2).

From the perspective of the Commonwealth of Learning (2003) there are at least six key support dimensions if students studying through blended learning are to flourish in their learning experience, and these are: a) accessibility, b) flexibility, c) learner-centeredness, d) learning community, e) technical support, and f) evaluation and assessments.

a) Accessibility

The issue of accessibility in blended learning confronts barriers caused by physical, cultural, linguistic, geographic, sociological and economic factors. Using technologies has brought new ways of bridging education gaps and creating opportunities to overcome the various barriers. Accessibility means offering learning opportunities to people who might not be able to attend traditional classes due to social, structural and/or personal
circumstances. Learners may request the use of appropriate technologies via access and support mechanisms to enhance their process of learning, mastery of certain skills, interpersonal communication and social interactions, though according to Brown (2006: 129), “[d]espite considerable progress in providing computer access to students, it is widely accepted that for the most part, new technologies continue to contribute to the educational process in marginal rather than central or transformative ways”.

b) Flexibility

The blended learning arrangement means flexible access to learning resources, flexible admission procedures and flexible delivery of learning experiences. This also means flexibility to study at occasions and places that are convenient to the learners, as informed by their various circumstances. It is about giving learners the educational ‘freedom’ to study subjects or courses in sequences appropriate to their unique needs. The process may employ information communication technologies as a means of acquiring knowledge.

c) Student-centredness

Student-centeredness or learner-centeredness means providing learning opportunities that put learners’ needs, not institutional priorities, first. It is about the appropriateness of the learning experience in relation to learners’ circumstances, goals and learning styles. From an institutional point of view, it means an appropriate pedagogical approach, quality learning materials and appropriate, accessible media that support individual learners. According to Hannafin and Land (2000: 3), “student-centred learning environments (SCLEs) provide complimentary activities that enable individuals to address unique learning interests and needs. They invite learners’ engagement through relevant problem contexts and the availability of appropriate resources”.

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The emergence of Internet connectivity has influenced the growth of student-centred learning phenomena (Fetterman, 1998; Owston, 1997; Shotsberger, 1996). Through Internet connectivity it is possible for students to create their own multimedia resources and to connect to other electronic resources. Student-centred learning means that “individuals as well as groups can invite and pursue learning needs of their individual choosing, selecting resources they deem to be appropriate and relevant, adapting existing or contributing new resources and otherwise determining what to learn, how to learn and when learning needs have been satisfied” (Hannafin & Land, 2000: 4). Student-centred learning maximizes the capabilities of both the technologies and the students.

Student-centred learning environments (SCLEs) therefore differ from the traditional didactic instruction in that they support learning using fundamentally different teaching approaches. SCLEs activities include contextually-referenced problem statements and framing rather than explicit behavioural objectives and isolated instructional content, varied resources reflecting multiple perspectives and angling and scaffolding rather than the most “efficient” didactic approach…SCLEs also help students anchor their learning in everyday experience. (Hannafin & Land, 2000: 9)

SCLEs provide contexts for students to pursue their learning goals and to determine which issues and information are relevant to their learning needs. Through SCLEs, students are able to “direct their learning process, evaluating new information in light of current theories, questions or beliefs (Hannafin & Land, 2000: 19). SCLEs represent a shift in teaching and learning cultures away from the traditional didactic teaching mode. Hannafin and Land (2000: 20) have stated that “student-centred at their core, [SCLEs] emphasise both what is learned and who learns, not necessarily whether specific information is learned or the scores of collections of student across common content”.

SCLEs are characterized by two psychological approaches: social cognition and constructivism. According to Hannafin and Land,
Both approaches view the learner as an active constructor of meaning rather than a passive observer or recipient of information. Social cognitivists emphasise the socially mediated aspects of learning as well as the influence of social context of understanding. Constructivist foundations reflect situated view of cognition, that is, that knowledge and context are inextricably tied. (2000: 7)

Student-centred learning environments provide the means for students to meet the knowledge requirements of a rapidly expanding technological arena.

d) Learning community

Technology-mediated delivery is important as it enhances interaction between academics, students and other social groups. Appropriate interaction between academics and students and among students creates an important learning community. A learning community reinforces the significance of local contexts, and provides for extra learning opportunities. A social environment in a blended learning context encourages participation and collaboration among students (Brown, 2006). Scardamalia and Bereiter (1994: 265) advise that “[s]chools need to be restructured as communities in which the construction of knowledge is supported as a collective goal”. Research has established that a collaborative learning approach is capable of creating effective intellectual contexts that support knowledge construction and cognitive development (Driscoll, 2002; Scardamalia & Bereiter, 1994). Cradler et al. (2002: 47) claim that “evidence is mounting to support technology advocates’ claims that 21st Century information and communication tools, as well as more traditional computer-assisted instructional applications, can positively influence student learning and outcomes”. Computer-mediated learning environments are also capable of supporting academics’ performance, provided they have the appropriate technological skills.
e) **Technical support**

Technological proficiency is critical to effective support as computer-mediated learning requires special skills of students if they are to interact fully. If students are going to reap the full benefits of the technology-mediated learning experience, technical requirements need to be made clear prior to their enrolment. Reasonable efforts should be made to ascertain competencies among students regarding the use of technologies. Reasonable technological support should be made available to students in order to provide ease of access to learning resources. Higher education institutions offering blended learning might be required to provide students with technical support to enroll, learn and communicate effectively with other stakeholders.

Support for students and academics is a key component of blended learning. Voos (2003) emphasized that academics’ capacity-building strategies are central to the success of an institution’s blended learning stream. Such strategies include opportunities for academics to learn how to redesign courses, teach well online, and effectively use technologies to facilitate teaching (Garnham & Kaleta, 2002). Without adequate preparations, most academics will simply ‘smuggle’ their traditional face-to-face course materials online; as a result, blended learning goals will not be fully realized. Bangret (2006: 84) puts forward that

[w]hat must be emphasised here is that the pedagogy implicitly defined by the seven Principles of Effective Teaching will ultimately determine the quality of online teaching and not the technology associated with currently available course authorising tools...The Seven Principles framework offers solid, research-based guidance for the design and delivery of Internet-based courses.
f) Evaluation and assessment

Good assessments in the blended learning enterprise involve strategic evaluation of the learner based on the standardization of content, process, academics’ competence, and careful documentation throughout the learning experiences. Evaluation and assessment are part of students’ support, providing them with information about their learning and affirmation of their achievements.

Various learning principles that support interactions between academics and students, and among students, contribute to effective learning processes. Interactions between academics and students are also essential for feedback.

4.4. SUPPORT FACTORS FOR RESPONSIVE PEDAGOGY

Although modern technology has provided meaningful tools for education, it has nevertheless created unprecedented complexities for support mechanisms for blended learning practitioners. While we may celebrate the advent of new technologies for teaching and learning, Mills and Tait (1996: 48) have pointed out that “the challenge is less the adoption of a particular technology to learning than the management of organizational change, recognizing that technology is not a neutral tool but a value laden culture that must both be understood, and taken into account in an attempt to apply it to change in an organization”. It is therefore possible that future advancement in technological innovations may not necessarily lead to more effective teaching and learning in higher education institutions.

From the perspective of this study, pedagogic support means that blended learning course materials will allow for and promote effective interactivity. The design of blended
learning course materials differs from the usual practices of instructional design, because of the wide range of pedagogical and technological blending required for effective learning environment that serves diverse learners. According to Carlson, Downs, Repman and Clark (1998: 142), “rather than designing instruction that is intended to deliver information to the learner, it is necessary to design instruction which engages the learner in interactive activities”. This assertion reinforces two important learning theories already discussed in chapter three, that is, constructivist learning theory and activity-based learning theory. (Constructivist theory learning theory suggests that knowledge evolves through social interactions during which students might offer alternative views and build consensus in the process of their learning, whereas activity-based learning theory prepares students to take greater responsibilities for their learning, informed by appropriate feedback from academics.) Course materials for blended learning need to take into consideration “a thorough analysis and understanding of learners, the academic content to be learned and the media in which the content is to be delivered along with the appropriate learning support” (Matheos, Daniel & McCalla, 2005: 66). This statement underscores the significance of documenting students’ profiles as prerequisite for providing ‘appropriate learning support’.

Govindasamy (2001) has lamented that pedagogy is the most neglected aspect in any attempts to implement online learning, while Angel (2000) has expressed concerns that, although online learning is good for communicating facts, areas of complexity and feedback might be better left for human trainers. Dobbs (2000) has also maintained that much available off-the-shelf material lacks quality, inspiration or creativity, being little more than online textbooks. We can derive from the above discussions that: i) there is a
need for interactive course design to promote pedagogic success, ii) technologies alone are not, and will not be, an answer to all questions blended learning students are likely to raise, and iii) professional development is important because blended learning provides a learning experience different from the traditional classroom experience and the social dynamics of blended learning are also different.

Effective communication skills are critical to academics’ support of students in blended learning. Aspects of communication are academics’ ability to listen, to respond and to maintain contact with students, and their effective use of the media. Effective communication also means purposeful listening and the ability to respond to individual students appropriately (in either written or verbal messages), to identify communication barriers and to consider issues from students’ perspectives. The amount, timing, content and format of communication between academics and students are very crucial to the success of blended learning. However, due to time constraints and space variation on the part of students, academics will be required to devise flexible, skillful and purposeful communication with students in diverse circumstances.

The scope of the teaching role of academics teaching through blended learning far exceeds the responsibilities and skills expected of face-to-face academics. According to Heur and King (2004: 8), “the asynchronous nature of online instructions that permits anytime and anywhere computer-mediated communication calls on the instructor to develop strategies to manage 24/7 communication, maintain momentum of the dialogue overtime, and foster communities of learners”. Meanwhile, from the academic’s perspective, “being independent from time and place, providing technology-enhanced opportunities, and
increasing communication may be beneficial, but the extra time needed to design hybrid courses and acquire new teaching and technology skills as well as the experiences before, during, and after the course are the challenge” (Ulbahar & Madran, 2009: 3). Nevertheless, blended learning is capable of facilitating constructivist learning strategies like collaborative, self-governed, and active learning by allowing students increased time and opportunity for student–teacher (and student–student) interactions.

4.5. CONCLUSION

This chapter has explored support mechanisms in relation to blended learning. It has shown that awareness of the profiles of potential students of blended learning is a critical factor in determining the successes of blended learning insofar as the identification and delivery of quality support mechanisms are concerned. Awareness of the individual student’s goals for learning, his or her environments and unique learning styles provide an important basis for developing support strategies and improving learning outcomes. On the basis of these factors, data from the current research will be compared and contrasted using grounded theory analysis.

The next chapter aims to describe the various processes of undertaking grounded theory analysis. It will discuss the appropriateness and the various challenges for this particular study of analysis using grounded theory. It will also explain the processes of data collection for the present study, and some of the difficulties encountered during the exercise.
Chapter 5

RESEARCH METHODOLOGY

5.1. INTRODUCTION

The purpose of this chapter is first to present qualitative research as an appropriate research methodology for the current study. Second, the chapter will discuss some key characteristics of the case study approach as it anchors the present study to a local context. Third, the chapter will highlight some of the problems encountered in the process of accessing research participants for the study, and discuss the approaches used to gather the required data. Fourth, the chapter will explore and discuss the various dimensions and characteristics of grounded theory that will be employed to organize and analyze the research data collected from students and academics of a regional university in New South Wales, Australia. This involves discussion of the reasons why grounded theory is an appropriate tool for organizing and analyzing the data. Grounded theory in this context will assist the researcher to discern, examine, compare, contrast and interpret emerging themes in the research data. The aim of examining and comparing the emerging perspectives will be to determine the strengths and weaknesses of support mechanisms for practitioners of blended learning in this regional university.

The overarching goal of this study has been to document the experiences of students and academics of blended learning in relation to institutional, technological and academic support mechanisms. To adequately account for the experiences of the study's subjects, the following research questions were critical to the processes of gathering the research data:
1. Why is it critical for higher education institutions to provide effective and efficient support for students and academics of blended learning throughout their learning and teaching experiences?

2. What are some of the factors likely to create satisfaction for students and academics of blended learning?

3. How effective and efficient are the current support mechanisms being provided to the students and academics in a regional university in New South Wales in relation to blended learning, and how might they be improved?

In relation to these questions, both students and academics were required to express their opinions, suggestions and perceptions of difficulty regarding blended learning support mechanisms. Once the data gathered is presented, the objectives of the analysis will be to seek to make sense of the data, decide on emerging perspectives that support the current study, and accurately account for the data and methodology to avoid misinterpretations.

The research questions are not exclusive to the current study, but have the potential for being replicated at any higher education institution involved in similar blended learning arrangements.

5.2. THE CASE STUDY APPROACH AND ITS RELEVANCE

Strauss and Corbin (1998) argue that qualitative research methods are best applied when the purpose of the research is to understand events and experiences that people are going through. Qualitative research seeks to establish stories about peoples’ behaviours and their organizational functioning. It is a research method commonly used by social researchers who study issues related to human behaviour and the activities of organizations, groups or individuals in a given context.
Given that the focus of this study has been to gather stories and experiences from students and academics studying and teaching through blended learning, the case study methodology will anchor the present study to a local context. To understand people in real time and space, one has to study them in their context and the ways in which they interact with their environment (Gillham, 2000). And because the present study seeks to document and understand individuals’ life stories and behaviours in a local context, the qualitative research methodology becomes an appropriate methodology. Qualitative research methodology will be discussed in detail in the subsequent section entitled Approach to data collection.

By definition, the case study approach is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, addresses situations in which the boundaries between phenomenon and context are not clearly evident and uses multiple sources of evidence” (Yin, 1993: 59). Moreover, the philosophical premise of the case study, according to Gillham (2000: 11), is that “human behaviour, thought and feelings are partly determined by their context”. Also, the case study approach offers the ability to view a case ‘from the inside out’ – to see the scene from the perspectives of the participants (Gillham, 2000).

Although the purpose of a case study in this mode is to investigate personal accounts of individual experiences for the purpose of discovering how those individuals “impose order on the flow of experiences to make sense of events and actions in their lives” (Riessman, 1993: 2), as investigators we are often constrained by our lack of direct access to participants’ experiences, and the fact that their stories are oftentimes ambiguous. These
limitations will be taken into account. A case study approach is undertaken in this study in order to anchor it in an approach by which it’s able to investigate how the students and academics behave, feel and think, and in turn to attempt to understand their experiences and what they are trying to do in a particular context.

5.3. PROFILES OF RESEARCH PARTICIPANTS

The purpose of this section is to document the profiles of the research participants drawn from the various campuses of a regional university in New South Wales. There are a number of reasons that have led to a decision to undertake case study research in this particular university. First, the researcher lives within the vicinity of the university and understands the desires of many people for continued education. The researcher understands the potentials for blended learning in the region. Second, the university is situated in an area that could be described as a ‘working class’ region and therefore, although there is a hunger for further education, the need to retain financial income is also high. These scenarios define for us a general profile of the potential student of blended learning and suggest a rationale for effective and efficient support mechanisms as discussed in chapter one.

Following the approval of the ethics committee, yet prior to accessing the research participants, an advertisement was posted on the Internet site of a regional university, inviting students and academics to volunteer to participate in some focus group meetings and interviews. The advertisement on the university website was unsuccessful, particularly among students, therefore the researcher needed to devise a different method of accessing students by approaching individual academics who later invited their students to attend the
focus group meetings on their respective campuses. Participants were based on at least three campuses, here labeled as C#1, C#2 and C#3. These were the campuses where focus group meetings and interviews were conducted. The table below presents a summary of the demographics of the research participants.

<table>
<thead>
<tr>
<th>Participating campus</th>
<th>Students</th>
<th>Academics</th>
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<tbody>
<tr>
<td>Campus 1 (C#1)</td>
<td>8 (4 male, 4 female)</td>
<td>4 (1 male, 3 female)</td>
</tr>
<tr>
<td>Campus 2 (C#2)</td>
<td>18 (8 male, 10 female)</td>
<td>5 (2 male, 3 female)</td>
</tr>
<tr>
<td>Campus 3 (C#3)</td>
<td></td>
<td>2 (all female) – met twice</td>
</tr>
<tr>
<td>Interviews</td>
<td>6 (4 male, 2 female)</td>
<td>2 (all female)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32 (16 male, 16 female)</td>
<td>13 (3 male, 10 female)</td>
</tr>
</tbody>
</table>

Table 5-1 Summary profiles of research participants and their locations

C#1 (Academics)

The C#1 focus group meeting was attended by one participant from the School of Mathematics; one from the School of Computing and two from the School of Education.
C#1 (Students)

There were eight students from various schools who attended focus groups meetings at C#1 campus. There were four students from the School of Education, two from the School of Computing and two from the School of Mathematics.

C#2 (Academics)

The focus group meetings at C#2 were attended by five academics: two male and three female. All were drawn from the School of Education.

C#2 (Students)

The focus group meetings among students at C#2 were conducted in two different sessions: one among students from the Aboriginal Rural Education Program (AREP), and the other from the School of Sociology. There were six students who represented AREP and twelve from the School of Sociology.

C#3 (Academics)

The only group meeting at C#3 was with two academics. The meeting at C#3 was repeated after an interval of one year with the intention to compare and contrast if there were changes in how the participants perceived the existence, or non-existence, of support mechanisms for academics teaching blended learning.

Interviews

The researcher also conducted unstructured interviews with six students and two academics regarding the use of technologies in their study endeavours. It was encouraging
that individuals who attended the focus group meetings across the three campuses brought many rich experiences to our discussions.

Prior to the focus group sessions, participants were briefed on the purpose of the discussions: to elicit, as far as possible, fair perspectives about their experiences and understandings of the support mechanisms currently existing (or not existing) in relation to blended learning within their various schools. They were also informed of the theoretical frameworks for the exercise: to develop theoretical perspectives which will illuminate the strengths and weaknesses of support structures for students and academics associated with blended learning.

Each focus group session lasted for about forty five minutes, and all participants had robust discussions as they narrated their particular experiences about their ideals and their real circumstances. Participants were also required to keep notes during the discussions which were later collected and collated, forming an early stage of data collection and codification. In the context of the interviews, the collection and codification tasks involved working with the questions, answers, exchanges and arguments. As Riessman (1993) has articulated, at times we as researchers are constrained by the fact that some experiences of the research participants might be unpleasant for them to recount, and therefore we must develop certain skills to enable us move beyond times and spaces in order to construct relevant meaning from their stories. Fortunately, this was not the case with this project; participants were happy to share their stories and experiences concerning the institutional support mechanisms or lack thereof.
5.4. ETHICAL ISSUES

According to Bassey (1999: 73), ethical issues are about “respect for democracy, respect for truth and respect for persons”. Respect for democracy is about freedom to investigate and also to give and receive information. It is freedom to express personal ideas. Respect for truth places a responsibility on a researcher to be truthful in data collection, and to accurately report research findings. Respect for persons is to recognize the participants’ ownership of the data and to accord them dignity and privacy (Bassey, 1999).

This research explored the personal perspectives of students and academics in a regional university in relation to their experiences of blended learning arrangements. Ethical issues and preparation needed to address methods of accessing participants, collecting data, collating data, and reporting data. Prior to the commencement of focus group meetings and interviews, each participant was informed in writing that they were free to withdraw from the research process at any time. Throughout the research process, the participants’ dignity and privacy were respected and their anonymity protected through the use of pseudonyms.

5.5. THEORETICAL FRAMEWORK

Given the purpose of this study – to explore how academics and students involved in blended learning in a regional university have experienced support mechanisms in relation to the time and spaces available to them – the researcher has adopted an interpretive approach. To elicit personal perspectives on events, and experiences of the support mechanisms, and to gain understandings of these experiences, the epistemological framework of constructivism was applied. The case study methodology was used,
complementing both the study of epistemology and the theoretical perspectives. The two perspectives have enabled the researcher to develop an in-depth understanding of the support issues that academics and students face (Coleman & Briggs, 2002).

Table 5-2 presents an overview of the four elements which provide the theoretical framework of the current research design, and the subsequent text in this section will address each element in detail.

<table>
<thead>
<tr>
<th>Epistemology</th>
<th>Constructivism</th>
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<tbody>
<tr>
<td>Theoretical perspectives</td>
<td>Interpretivism/Symbolic interactionism</td>
</tr>
<tr>
<td>Research methodology</td>
<td>Case study</td>
</tr>
<tr>
<td>Data collection methods</td>
<td>Focus group meetings/interviews</td>
</tr>
</tbody>
</table>

**Table 5-2  Theoretical framework**

**5.5.1. Epistemology – Constructivism**

The concept of constructivism elucidates the process of how individuals make sense or meaning of their environments. It is about how individuals construct meaning from the events and the experiences they go through. Epistemology expresses “that meanings are constructed by human beings as they engage with the world they are interacting with” (Crotty, 1998: 43). These concepts are consistent with the view that “reality is constructed by individuals interacting with their social world” (Merriam, 1998: 6). Constructivism is
an important lens through which to understand the stories and experiences of the focus group participants (Rogers, 1995). Investigation of issues in the context of constructivism leads to an interpretivist approach (Merriam, 1998).

5.5.2. **Theoretical perspectives – Interpretivism / symbolic interactionism**

This research is undertaken within a context wherein “each of us, when we first see the world in [a] meaningful fashion…are inevitably viewing it through lenses bestowed upon us by our cultures” (Crotty, 1998: 54). Symbolic interactionism “seeks to find the common set of symbols and understandings that emerge to give meaning to people’s interactions…[P]eople create shared meanings through their interactions and those meanings become their realities” (Patton, 1990: 75).

5.5.3. **Research methodology – Case study and qualitative methodology**

This research adopted case study approach to explore issues and phenomena academics and students face in relation to support mechanisms within the blended learning environment. The major benefit of a case study approach is its use of multiple sources and techniques for the data collection process, which safeguard the validity and trustworthiness of the data (Gillham, 2000). Therefore a case study is an excellent method of research when the phenomenon under investigation is not immediately distinguishable from its context (Yin, 2003). By Yin’s (2003: 13-14) definition, a case study is:

> an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident…[It also] copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple courses of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical proposition to guide data collection and analysis.
This section will also discuss the strengths and limitations of a qualitative research methodology. By definition, qualitative research implies “any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification” (Strauss & Corbin, 1998: 17). Such findings, according to Strauss and Corbin, often refer to peoples’ lives, stories and behaviours, but also to their organizational functioning, social moments or international relationships.

The qualitative data will be analyzed through different perspectives which will be established to identify gaps in blended learning support mechanisms (Spradley, 1979). Subsequently, such knowledge should contribute to an understanding about the distribution of perspectives across the various themes. The qualitative research method fits the current study because the study seeks to gather evidence, and to explore some theories behind such evidence. Since evidence (or facts) are not always ‘perfect’, the study will seek to provide explanations for the stories gathered through the case study procedures by employing the grounded theory analysis.

5.5.4. Data collection – Focus groups and interviews

The study adopted a ‘focus group and interview’ methodology toward the collection of data throughout the research exercise. Within the case study approach, data are collected via interviews, documents, artifacts and focus group meetings (Gillham, 2000; Yin, 2003). These processes should elicit data with a view to gaining an understanding of, and contributing different perspectives on, prevailing problems (Glesne, 1999). These aspects of data collection are explored in detail in the following section.
5.6. APPROACH TO DATA COLLECTION

This section will discuss the approach taken toward collection of the research data for this study. There are many reasons why one chooses a particular research method for data collection. Some decisions are determined by a researcher’s own conviction, and others are influenced by specific areas of a discipline. But a more convincing reason for choosing a particular approach is to complement the nature of the precise research problems.

According to Strauss and Corbin (1998: 19), “some areas of study naturally lend themselves more to qualitative types of research, for instance, research that attempts to uncover the nature of persons’ experiences with phenomena like illness, religious conversion, or addiction”. Considering the focus of the current study, a qualitative research method is appropriate as it seeks to interrogate individuals’ stories, attitudes and experiences about support mechanisms in the context of blended learning.

Focus groups have been employed as research tools by market researchers since the 1950s (Goldman & McDonald, 1987) but, according to Morgan (1993), it was during the 1980s that social scientists began to take greater interest in the use of focus groups for their research initiatives. As Strauss and Corbin (1998) have documented, the choice of a particular research method depends on how the research questions are constructed. Although the current study had several methodological options such as surveys, interviews and focus groups, the method of focus group discussions was designed to account for the maximum amount of attitudes, motivations and experiences of students studying through blended learning.
Some distinguishing features of focus groups are that the group discussions can focus on particular topics, and that the groups’ dynamics contribute to the processes of gathering the data. Another distinguishing feature of focus groups is the explicit use of group interactions to produce research data (Morgan, 1993). According to Kitzinger (1994: 103), “focus groups are group discussions organized to explore a people’s [peoples’ views] views and experiences on a specific sets of issues”. Thus, focus groups can be seen as a way of listening to people and learning from them. It is a process of interactive communication between the groups’ members and a facilitator, as well as between the groups’ members themselves. The facilitator’s understanding of group dynamics is therefore one of the important variables in the success of focus group data collection.

In the context of the experiential process of gathering information for the present study, a number of advantages of focus groups relative to other types of research tools have emerged:

a) Focus groups generate data much more quickly and cheaply than if individuals were interviewed separately.

b) Participants can be assembled on much shorter notice than participants for an elaborate survey.

c) Focus groups provide flexible, direct interactions with participants, thereby creating opportunities for clarifications, follow-up questions and probing individuals’ responses.

d) Focus groups provide opportunities to gather a large and rich amount of data in participants’ own words for deeper levels of meaning and nuances.

e) Focus groups can build upon the responses of other group members, thereby providing
opportunities for cross-pollination of the different views held by group members (Morgan, 1993; Kitzinger, 1994; Goldman & McDonald, 1987).

However, like any other research tools, focus groups have their unique limitations and these include the fact that small groups may not represent the overall interests or views of larger groups. Further, because of the groups’ dynamics, independence of opinions can easily be compromised. Dominant members of the group are likely to influence the focus group’s research outcomes. Focus groups also provide to the researcher the temptation of drawing immediate conclusions from live interactions.

In addition, there are sometimes difficulties in organizing and analyzing large research data generated from focus group meetings. The process of data analysis requires closer engagement with one’s transcripts, to the purpose of discovering the emerging perspectives in the data. Thankfully, grounded theory is about providing to the researcher the ability to make sense of individual stories, and the role of grounded theory is to assist in identifying similarities in the stories and making decisions about forms, order and styles of presentation. The contribution of grounded theory to the current research has been to provide the applicable tool with which to organize and analyze the data collected through focus group meetings.

5.7. RATIONALE FOR A QUALITATIVE RESEARCH METHOD

This study employed a qualitative research technique. The significance of the application of a qualitative research technique is that it seeks to establish the various dimensions of perceived success through the relation of events and experiences of students and academics concerning blended learning support mechanisms (Merriam, 1988; Glesne,
Qualitative research engages participants in local context and allows the researcher to immerse themselves into the research process (Creswell, 2003; Glesne, 1999; Merriam, 1988). It views the research setting from an interpretive perspective, rather than through limited variables, as its focus is the stories and experiences of participants in their ‘natural’ context. Merriam (1988: 3) says that qualitative research “is hypothesis-generating”, rather than it aiming to test a hypothesis. A qualitative research technique is, therefore, an appropriate means by which to investigate the ‘why’ and ‘how’ research questions.

5.8. DATA ANALYSIS PROCEDURES

This section will discuss the various characteristics of the grounded theory approach to be applied to the data analysis, and explain its relevance and how it supports the current study. According to Strauss and Corbin (1998), grounded theory is an inductive research methodology in which the theory is developed from the data itself. Therefore, the primary objective of grounded theory is to expand on an explanation of a phenomenon by identifying the key perspectives of that phenomenon, thereby categorizing the relationships of those perspectives in the context and process of the research exercise (Strauss & Corbin, 1998). Grounded theory was first developed by Glaser and Strauss in the 1960s, and is now widely used by social scientists across various disciplines including education because of its relevance to the qualitative research method.

Priest, Roberts and Woods (2002), in discussing the general principles of grounded theory, described the various stages of the process as: breaking down the original data; examining it line by line and developing memos; conceptualizing it to produce a theory; and then sorting it into groups of similar or related phenomena based on their meaningfulness.
These processes are what Strauss and Corbin (1998) termed open coding, axial coding and selective coding.

Grounded theory applies methodical processes to placing text data into categories for analysis from which research theory is developed. Nevertheless, the theories must also be backed by meaningful theoretical frameworks (Strauss & Corbin, 1998). Grounded theory allows for the possibility of identifying the magnitude of the phenomena through the counting of numbers of particular occurrences, thus assisting with labeling categories and various perspectives. The phases of grounded theory analysis will now be considered.

5.8.1. Open coding

The first phase in the process of grounded theory analysis is to implement the strategy of ‘open coding’ (Strauss & Corbin, 1998), that is, to begin to identify key phenomena throughout the data. In the case of the present study, the process of open coding established the three research themes of time, space and pedagogy. This open coding process was undertaken through line-by-line analysis of the discussion transcripts (Strauss & Corbin, 1998), and was aided by collating the transcripts in order to distill the massive texts generated from the various focus group discussions into summary formats.

Open coding represents an initial stage of a researcher interrogating the data at hand in order to establish the emerging patterns which will eventually inform the formulation of research theories. Relevant concerns have to do with how a researcher perceives the data, conceives new ideas for possible follow-up interviews, identifies gaps in focus group discussions and interviews, and identifies data properties, conditions and connections to other categories. The open coding phase begins the process of grounded theory analysis by
first identifying concepts and developing assumptions about the data and how the emerging perspectives relate to one another. Therefore, a first step in the open coding phase includes writing memos about the data, a process that involves: i) thinking about the data, ii) conceiving new ideas for follow-up interviews, iii) identifying gaps in earlier discussions and interviews, iv) using qualitative codes as categories for analysis, and v) clarifying categories by defining them, identifying their properties, conditions, consequences and connections to other categories (Charmaz, 2001).

The second step of open coding is to organize the phenomena into preliminary categories and sub-categories based on clusters of phenomena with common meanings. This step of open coding aims to order the phenomena into meaningful classifications. Strauss and Corbin (1998: 19-21) termed this process “conceptual ordering”. Conceptual ordering relies on the researcher’s knowledge of and insights into the meanings embedded in the phenomena. For example, in the present study, the researcher was able to classify the research data under various categories such as technological support factors, academic support factors, institutional support factors and student–student support factors, which categories later formed the basis for describing blended learning support mechanisms for both students and academics (see chapters six and seven).

5.8.2. Axial coding

The second phase of grounded theory is axial coding. Axial coding is the rebuilding stage in which underlying concepts are ordered into categories and sub-categories, and examined and manipulated to develop an integrated theory of the structure and processes under the study (Strauss & Corbin, 1998). As phenomena are progressively grouped
together, commonalities and inherent variations between sets of phenomena will emerge so that different characteristics for the different sets will be established. For the current study, knowledge of axial coding meant that raw research data were meticulously categorized under the major research themes of time, space and pedagogy, from which academics’ and students’ support perspectives were drawn (see appendices 1A & 1B, 2A & 2B, 3A & 3B).

Axial coding comprises four major steps: i) laying out the concepts and dimensions of the phenomena within the category, ii) identifying the conditions, actions/interactions and consequences associated with the phenomena, iii) relating categories to sub-categories, and iv) noting ‘cues’ in the data to assist the development of linkages between the concepts (Strauss & Corbin, 1998: 126). Important objectives in axial coding are to determine the underlying meanings intended by the research participants, and to apply the researcher’s theoretical sensitivity when assigning meanings. According to Strauss and Corbin (1998: 114), “meaningfulness is part of the process of treating data in such a way to describe associations and concepts”. Dinham (1992) describes this process as the interrogation of research data for both similarities and contrasts.

5.8.3. Selective coding

The third and final phase of the grounded theory approach is selective coding. Selective coding is the process of interpreting and refining concepts to develop research theory. This is the stage of constructing a model of what Strauss & Corbin (1998: 146-147) refer to as the “concepts, actions/interactions and consequences” within the phenomena under study. Selective coding focuses on the identification of the central category (Strauss & Corbin,
interpretation of results through documenting “story lines” (Strauss & Corbin, 1998: 148) and creation of “the diagram” (Strauss & Corbin, 1998: 153). The central category, which is the main theme of the research, must satisfy the frequency of appearances in the data, but the researcher must also be able to show that all other categories relate to it. The central category must also present internal consistencies in the statements, and support the development of a theory for the research study. This model was used in the current study where information from the major themes of time, space, and pedagogy were further broken down into academics’ and students’ support perspectives, from which research theories were developed (see appendices 4A & 4B, 5A & 5B).

Grounded theory has been capable of providing clear pictures of implementation processes for support mechanisms in relation to the current study. Therefore, grounded theory is appropriate for the current study because of its robust nature in being able to interrogate and illuminate participants’ experiences (Strauss & Corbin, 1998) in a number of ways:

a) Grounded theory can provide valid descriptions of the experiences of students and academics involved in blended learning.

b) Grounded theory has the potential to assist developing theories through identifying concepts underlying the implementation processes of support mechanisms for students and academics involved in blended learning.

c) Grounded theory provides narrative devices which can represent the various voices in the focus group discussions and interviews.

The processes of asking questions and making comparisons critically inform and guide the analysis and facilitate theorizing. Therefore, what recommends grounded theory to the
current study is the fact that it can most effectively illuminate the research data by helping to unpack hidden meanings derived directly from research participants’ experiences. Grounded theory enabled the researcher to sift through the accumulated data in order to document and arrive at a reasonable interpretation. Grounded theory provides clear pictures of the implementation processes for support in specific contexts.

5.9. CHARACTERISTICS OF GROUNDED THEORY

In dealing with large amounts of data collected from focus groups, the benefits of applying grounded theory for analysis are numerous. The grounded theory process is best known for maintaining the groundedness of the approach. Additionally, the processes of grounded theory are grounded in the data itself, so that research outcomes are not manipulated by other pre-existing constructs (Strauss & Corbin, 1998). It can provide opportunities to increase the depth rather than necessarily the breadth of the enquiries. The choice of grounded theory for this particular study is informed by the fact that its processes will provide detailed and systematic procedures for data analysis and theorizing, but will also account for the quality of the perspectives that have emerged under the research themes of time, space and pedagogy.

Every research methodology has its unique challenges, and the challenges of grounded theory are presented here in light of the practical experiences gained in the processes of gathering and analyzing the research data. Grounded theory is oftentimes associated with the centrality of the data for analysis, where the outcome must reflect evidence in the data and the quality of such evidence depends on how well the focus group meetings and interview schedules were developed and conducted (Strauss & Corbin, 1998). Another
issue in undertaking grounded theory analysis has to do with how to cope with a large amount of research data. The efforts required to manage massive research data are considerably high and the organization of such data are labour intensive and time consuming.

Although the process of organizing and analyzing data through grounded theory is also confronted with limitations imposed by the fact that the information gathered is coming from the subjective perspectives of research participants, some of these challenges are greatly reduced if the research questions can be formulated in such a way as to remain open and general enough so that emergent perspectives will account for phenomena that are relevant to many or all participants. The implications of the application of grounded theory to the present study are that the analytical processes will take into account the common concepts, categories and perspectives expressed by the students and academics of blended learning. Nevertheless, grounded theory analysis is not just the activity of summarizing participants’ views, and it is not about taking sides or presenting quotations from interviews without ‘getting beyond’ the spoken words. Grounded theory analysis which draws its conclusions from shared beliefs alone (Strauss & Corbin, 1998) fails to measure up to this study’s expectations.

The process of grounded theory analysis presents researchers with the temptations of treating particular findings as if they were true representations of all categories. For any findings to follow the right principles of grounded theory, the researcher must seek to identify various themes emanating from the interview sessions and use them all for data display. Thus, grounded theory methods present us with enormous tensions between
generalization and the ‘unpacking’ of each storyline, and yet as researchers our ultimate
goals are to make theoretical claims through methods, and to learn about the general from
particular perspectives (Riessman, 1993). With all its tensions, however, grounded theory
does allow for systematic study of personal experiences, meanings and expressions, and
the subsequent more general extrapolation of theories.

While grounded theory does not pretend to be neutral against any researcher’s pre-existing
understandings, it seeks to engage these understandings and assumptions in order to
develop new theories based on precise research questions (Ezzy, 2002). Gadamer (1975
cited in Ezzy, 2002: 27) advised that “the important thing is to be aware of one’s own bias
so that the text can present itself in all its otherness and thus assert its own truth against
one’s own fore-meaning”. In other words, meaning is always negotiated between one’s
own pre-conceptions and that of others, “to ensure that the voice of the other is heard and
allowed to enter into dialogue with pre-existing understanding” (Ezzy, 2002: xiii). It is
important that a researcher adequately accounts for data at hand as s/he seeks to interpret
and explain the different perspectives emanating from the data, but the greatest temptation
of any research exercise is to try to promote what we expect to find prior to the research
outcome or exercise. Luckily, grounded theory is an interpretive approach that pays great
attention to the contexts from which the data have emerged (Ezzy, 2002). As Ezzy (2002:
xiv) has expressed, “at the heart of insightful qualitative research is a well established
dialogue between idea and observation, between theory and data, between interpretation
and action”. The truth of the matter is that grounded theory analysis is first and foremost
about tensions between one’s own perspectives and that of the participants. It is about
unpacking and rendering feasible the manifold discussions around a particular case.
5.10. THE RESEARCHER’S ROLE

In the context of the current study, the researcher is the primary investigator. According to Glesne (1999), there are two roles a researcher plays in relation to qualitative research technique; these are researcher as investigator, and researcher as learner. The role of an investigator is to collect data; in this case, through focus group meetings, semi-structured interviews and data analysis. Merriam (1988: 19) expressed that “the importance of the researcher in qualitative case study cannot be overemphasized. The researcher is the primary instrument for data collection and analysis. Data are mediated through this human instrument, the researcher, rather than through some inanimate inventory, questionnaire, or machines”. The role of researcher as learner includes a realization of self in the context of the study. According to Glesne (1999), a realization of the researcher’s pre-disposition helps the researcher to become a “curious student”. As a learner, the researcher must become a good listener and not an expert, allowing him or her to continually be open to new ideas and new ways of perceiving data. Further, Glesne (1999: 17) points out that researchers have their own “subjective relationships to the research topics”. In qualitative research, the attempt is not to keep the research exercise free from the researcher’s bias and subjectivity.

When you monitor your subjectivity, you increase your awareness of the ways it might distort, but you also increase your awareness of its virtuous capacity. You learn more about your own values, attitudes, beliefs, interests and needs. You learn that your subjectivity is the basis for the story that you are able to tell. It is the strength on which you build. It makes you who you are as a person and a researcher, equipping you with the perspectives and insights that shape all that you do as researcher, from the selection of the topic clear through to the emphasis you make in your writing. Seen as virtuous, the subjectivity is something to capitalize on rather than to exorcise. (Glesne, 1999: 109)
The researcher’s knowledge on a particular research subject helps facilitate the process of gathering rich data, analyzing the data and finding common themes and emerging variables. The researcher’s subjectivity also contributes towards the verification of participants’ stories and experiences (Glesne, 1999). One way to mitigate a researcher’s bias or subjectivity is to keep a journal of activities throughout the research process.

5.11. CONCLUSION

This chapter commenced by reiterating the research questions as they provide an important foundation for this study. These questions provide the basis for the interrogation of university students and academics’ experiences of support provision within the blended learning context of a regional university in New South Wales, in relation to support mechanisms. The chapter also presented the approaches to data collection such as interviews, focus groups, case study and quality research technique. The case study approach, for example, helped to situate the current research at a regional university in New South Wales, while focus groups provided the appropriate tools for gathering the research data. The chapter provided information about the research participants, their profiles, how they were accessed and the accompanying challenges of assembling them. It also provided an overview of the role of the researcher in the context of the research process.

Throughout this chapter the study has established, supported by appropriate literature, that grounded theory is a method that develops research theories inductively from data, and that benefits of grounded theory for this particular exercise include the reduction and management of massive data to enable the establishment of major research themes,
categories and various perspectives for their interrelationships. Through grounded theory, it has been possible for the researcher to successfully unpack the data. As participants’ areas of interest and patterns emerged, it became possible to craft the final interpretations of the research findings. The next chapter will seek to apply this theory to gain an understanding of both students’ and academics’ experiences and yield insights into the processes of blended learning in a regional university in New South Wales.
Chapter 6

STUDENTS’ PERSPECTIVES ON SUPPORT MECHANISMS FOR BLENDED LEARNING

6.1. INTRODUCTION

The purpose of this research is to explore issues around support mechanisms for students and academics in relation to the blended learning practice of a regional university in New South Wales. The aim of this chapter is to analyse and interpret students’ perspectives on the support structures available to them, based on their experiences of studying through blended learning. The interpretive approach offers the researcher access to understanding students’ constructions of events and experiences (Crotty, 1998). The major themes to emerge from the students are the three research themes of time, space and pedagogy. These themes were generated through data analysis using grounded theory, with a view to comparing and contrasting them with the information gained from the literature review. This chapter will first present, in graphs, the various perspectives that have emerged from the research themes, and subsequently discuss how they influence the learning experiences of the students studying through blended learning.

6.2. STUDENTS’ PERSPECTIVES ON THE THEMES OF TIME, SPACE AND PEDAGOGY

This section will present and discuss the various perspectives that were constructed from students’ responses in relation to support mechanisms and how these might affect their learning processes. In view of the present study, the concept of time entails the available opportunities for students to perform and discuss matters pertaining to their university courses. These opportunities are likely to arise when students are ‘freed’ from their work
and family obligations in order that they may turn their attention to studies. Freedom from the routines of work and family obligations also affects learning spaces. Such spaces are varied for students studying through blended learning as they include opportunities to attend classes through the traditional face-face learning mode, the computer-mediated mode and through social interactions as well as personal reflections. The concept of pedagogy, in the context of the present study, refers to the outcome of students’ learning experiences, informed by the effective and efficient applications of time and spaces conducive to students’ productivity.

Of the thirty two students who participated in the various focus group meetings, figure 6-1 below represents the percentages of the various perspectives that were distilled from the research data through grounded theory. These perspectives will be analyzed and interpreted, taking into consideration the contexts in which they were elicited, with a view to comparing and contrasting them with evidences from other literatures. Figure 6-1 shows the different aspects of time, and the percentages of technological factors, computer skills factors, academics support factors and institutional support factors, that students remarked upon. These support factors are referred to throughout this study as students’ perspectives.
Fig. 6-1  Students’ perspectives on support factors in relation to time  
(The higher the %, the greater the concerns)

In figure 6-1, the concept of time or ‘freedom from the routine of work and family obligations’ was explained by the thirty two students in terms of the effective and efficient application of technologies for learning, computer skills, the availability of academics when they are needed, and overall institutional support.

Fig. 6-2  Students’ perspectives on support factors in relation to space  
(The higher the %, the greater the concerns)

Figure 6-2 shows the percentages of the different support factors in relation to the theme of space. These represent the comments contributed by the students, which were later grouped into the four categories of technology support, institutional support, student–
student support and academics’ support. Each of these perspectives will be addressed in
detail in the next section. The discussions that will be undertaken about the perspectives
are intended to make connections as to how these perspectives might support ‘freedom’
for students studying through blended learning.

The availability of learning spaces for students studying through blended learning is
intrinsically tied up with the overall concept of anytime/anywhere learning. When students
expressed concerns about support mechanisms for learning space, it was about effective,
easy access and creative institutional support for the ‘new classrooms’. They also
expressed concerns about the effective use of technologies for learning, and the need to
create opportunities for collaborative learning among students themselves. The
Commonwealth of Learning (2003) states that there are at least six important student
support dimensions: accessibility, flexibility, learner-centeredness, learning community,
technical support, and evaluation and assessments. Flexibility for students to study at
occasions and places that suit their unique circumstances gives them the freedom to study
subjects or courses in sequences appropriate to their unique circumstances and learning
styles. Learning spaces for students studying through blended learning are not limited to
learning spaces provided by employers and families, but also include the traditional face-
to-face approach, social interactions among peers, and personal reflections.
Fig. 6-3 Students’ perspectives on support factors in relation to pedagogy  
(The higher the %, the greater the concerns)

Figure 6-3 provides a review of the perspectives that have emerged from the research theme of pedagogy (detailed discussion will be undertaken in the subsequent sections). The figure shows the different aspects of pedagogy and the percentages of concern over support factors that were constructed from the students’ data. For the thirty two students who took part in the focus groups and interviews, the successful outcomes of their learning experiences are influenced by the degree of support they are able to receive from the academics, the institution, their peers and the library support services (ref. fig. 6-3).

The study established that the pedagogical success of blended learning is dependent on the effective and efficient management of students’ time and learning spaces. The text that follows will address the various perspectives that were constructed from the major research themes of time, space and pedagogy together.
6.3. ANALYSIS AND INTERPRETATION OF STUDENTS’ PERSPECTIVES

Having established the various perspectives under the research themes of time, space and pedagogy (ref. figs. 6-1, 6-2 and 6-3), this section will present the different voices of the research participants with a view to comparing and contrasting them with information gained from the theoretical literature. The process of analysis and interpretation of the students’ perspectives will highlight the experiences of students in relation to blended learning. The research questions have invited an interpretive approach to data collected in focus group discussions and interviews. These methods allowed the researcher to gain an in-depth understanding of how students constructed events and experiences in relation to support mechanisms (Crotty, 1998).

Dealing with case study data means that the process of the analysis of this study moved from general observations to more specific perspectives (Creswell, 1998; Silverman, 2000). Data analysis for this study began informally during interviews and focus group discussions, and continued more formally during transcription when recurring patterns, categories and perspectives began to emerge. Data reduction included presentations in the form of percentages, tables and figures (Miles & Huberman, 1994).

For multiple case studies, as per the present study, each student may represent a different thematic finding, because of the differences in learning experiences among students. This presents the researcher with the opportunity to analyze and interpret each case in terms of a small number of perspectives and relevant themes that run throughout the data. The alternative to treating each case separately is to portray them as clustering perspectives (Merriam, 1998). This alternative method has been adopted for the process of analyzing
and interpreting the current research data. The clustering perspectives for the present data are: 1) technological and computer knowledge support factors, 2) academics and student–student support factors, and 3) institutional and library support factors (ref. figs. 6-1, 6-2 and 6-3).

6.3.1. **Technological and computer knowledge support factors**

The advent of Internet connectivity and its application to blended learning have opened wider opportunities for learning worldwide, but at the same time have created specific issues and problems relating to acquiring learning (Brown, 2005; Jankowaka & Altay, 2008). These changes have created a paradigm shift in educational delivery methods, from what is commonly known as face-to-face learning to fast-growing online delivery methods. The argument that technology enhances learning and teaching quality has been widely accepted over the last two decades. Current technologies are perceived to have “unique attributes that can be exploited as tools for learning (Surry & Land, 2000: 146). Although the literature suggests that technology improves the quality of learning (Osuguthorpe & Graham, 2003; Twigg, 2005), this study has found that this claim may not necessarily be true. Quality depends on the support structures available, and the level of computer skills students might possess. One male student, Silas, stated:

> I find the younger students are more upbeat on what they should be doing. It’s the mature age students; from my experience, the students who’ve finished school quite a long time prior to coming back into the education setting, they’re finding it very difficult to work with computers, [they’re] not just going onto the internet and downloading information from the internet...For them, it’s quite tough.

The above statement by Silas raises a number of issues. First, most of the students taking courses through blended learning are not “younger students”. They are “the mature age students” who require technological mentoring. Second, these are individuals who are re-
entering the learning culture, as they have left schooling a relatively long time ago. These situations justify the need for closer assistance to enable these students to settle into the education setting.

Although most of the so called digital native students are computer literate, students from other backgrounds, here called digital immigrants, often require substantial support. But what are these digital native and digital immigrant phenomena and what are their characteristics? According to Marc Prensky (2001a), the man who, for the first time coined these terms, define digital natives as those who have grown up using technologies, therefore they are ‘native speakers’ of electronic media. Major characteristics of digital native are that this generation is multi-tasks, work quickly and favour interactive learning processes (Prensky, 2001a, Tabscott, 1998).

Prensky (2004) laments that perhaps those who design and deliver education through blended learning have not fully come to terms with and appreciated the fact that today’s students have changed radically. He also said that today’s students think and process information fundamentally differently from the digital immigrants. Other terms applied to describe what Prensky (2001) described as digital natives are Net Gen, Generation Y, and the Millenian (Oblinger 2005; Taylor, 2007; Bennet, Maton, & Kervin, 2008; Prensky, 2001a; Tapscott, 1998).

Digital immigrants on the other hand are individuals who were not born into the digital culture, although at some points have adopted aspects of technology (Prensky, 2004). He categorized digital immigrants as individuals who grew up with a pen or pencil in their hands as main instruments for learning. Thus digital immigrants are challenged to adapt to
the digital environment, while at the same time retaining their ‘accents’, which is different from that of the digital natives. According to Prensky (2001a), digital immigrant accents express themselves in practices such as reading manuals for computer programs, instead of accessing the program directly from the computer. Another aspect is that digital immigrants tend to turn to internet for information as a secondary choice rather than firsts option. Other accents are expressed in printing emails to read and editing from printed copies instead of on the screen.

Critics of Prensky’s digital native and digital immigrant phenomena are quick to raise concerns, claiming a lack of empirical and theoretical evidence to both the digital native and digital immigrant debate. Bennet et. al., (2008) have expressed concern that Prensky and others have created what they termed academic “moral panic” by suggesting that there exists ‘neurological gap’ between academics and students.

A second criticism to the digital native and digital immigrant debate is that of accessibility and technical skill disparities as a result of socio-economic, gender, developmental and cultural differences. Unfortunately by homogenizing the entire generation, Prensky and others have failed to take into account the educational needs of the individual students, their environments, socio-economic status, and cultural differences (Bennet, et. al., 2008; Guo, R. X., Robin, T., and Petrina, S., 2008).

A third criticism also comes from Guo et. al., (2008). The authors have questioned whether the digital natives’ technology skills are superior to, or more advanced than that of the digital immigrants; when it is clear that in most cases, digital immigrants are the ones who have invented the forms of digital media currently being used by the so call digital natives.
A fourth criticism comes from a cognitive psychologist named Richard Mayor who doubted brain changes as a result of digital media stimuli as claimed by Prensky, (Landis, 2008). Richard Mayer, according to Landis (2008), advocates for the application of constructivist learning theory taught by authors such as Vygotsky, Piaget and Dewey, to the design of digital institutional tools. In effect, the debate on digital native and digital immigrant phenomena is that more research is needed to determine the effects digital media has on human brain and of there’s a difference in its effects on children and adults (Bennet, et. al., 2008; Guo, et. al., 2008; Wolf, 2008).

In response to some of the criticisms brought against his numerous researches, Prensky’s latest research admits that the dichotomy between his digital native and digital immigrant debate may no longer be relevant as nearly everyone is online in the 21st Century (Prensky, 2009b). Instead, he has coined another term, that is, digital wisdom, which he describes as “wisdom arising from the use of digital technologies to access cognitive power beyond our innate capacity and the wisdom in the prudent use of technology to enhance our capabilities” (Prensky, 2009, p.1). He argued that anyone who embraces these future technologies and maximizes their full potential is ‘digitally enhanced’ or a homo sapiens digital’. Prensky contends that digital wisdom is more than just the ability to apply digital tools, but the ability to make informed, wise decisions because of technology, and that such ability is not exclusively the domain of the net generation or digital natives. He therefore concludes by declaring that digital wisdom is a learned skill that must be taught to give students opportunities, context and guidance in using future digital technologies to effectively access learning.
Higher education institutions need to clearly articulate how learning spaces can be reallocated to students as a result of technology. Lack of computer skills on behalf of students can become a major source of academic impediment, thereby creating what has been referred to as transactional distance (Moore, 1993; Chen, 2001). Transactional distance exists in different forms such as geographic distance between academics and students, as well as the levels of social interactions between students and teachers and among students themselves. Transactional distance also exists in the levels of technological competence of both academics and students, and in how effectively they can both access teaching and learning materials online.

Unfortunately there have been some assumptions from the University that anyone who enrolls for courses here knows computer well. To this, one student said,

[B]ecause you’ve got to remember there’s people from other countries… And I missed out on computers at school because I was that before (?) generation so I never got to use computer but it was up to me whether to I learnt computers or not, so again it’s for mature age students whether they’ve actually used it themselves in their own countries”.

The present study has established that students need technical assistance, and that first time users of electronic services usually need help most. Technologies present formidable challenges to students studying through blended learning. The belief that technologies are the driving force in educational change has been described as “technological determinism” (Surry & Land, 2000: 146). This belief purports that providing access to technology will result in students automatically reaping its benefits. Contrary to the axiom that technology improves the quality of learning, one session participant, Simon, observed that,
there’s a tacit assumption that if you’re going to do this course, you have to be computer literate...which isn’t such a problem for the new generation but people 30-40, maybe it’s a wrong assumption.

Clark (1983: 445) suggests that those who argue that technologies make no significant difference to the learning process base their view on the premise that technology provides “mere vehicles that deliver instruction but do not influence students’ achievement anymore than the truck that delivers our groceries [influences] our nutrition”. For technologies to be able to make the difference in the context of blended learning, they must be applied in new and creative ways, not just to reinforce the face-to-face teaching model (Tong & Trinidad, 2005). Another participant, Samuel, lamented that

in terms of the actual online resources, nothing short of a complete overhaul can save it. Maybe not in terms of design, you know pretty that is not the problem, but content and navigation are badly designed and there is nothing in it. It’s not used as a resource, it’s a dumping ground.

Gains achieved through the use of technologies are linked to new learning theories and practice, instead of simply smuggling existing pre-technology support mechanisms into blended learning practice. The traditional learning style in universities is the instructional model (Barr & Tagg, 1995); a model described by Laurillard (2002), and Tagg (2003) as transmission model. The transmission or instructional model is characterized by “the lecture, the book, and marked assignment” (Laurillard, 2002: 140). To successfully move away from the trans-mission model of learning, higher education institutions will be required to increase their attention to learner support mechanisms and innovative design instead of focusing on providing technological infrastructure alone. They will be required to provide technological mechanisms conducive to the experiences of students who combine paid jobs and studies. And such mechanisms need to be crafted in such a way that academics do not simply rehash on-campus student support services via technology.
Blended learning is grounded in a constructivist approach, which has resulted in movement away from the transmission model (Lambert et al., 1997). The constructivist model is rooted in learning theory and cognitive development (Vygotsky, 1978) in which “knowledge is not a static body of information that is pressed on to learners but rather a process” (Lambert et al., 1997: 18). In other words, the constructivist model should not be driven by technology but should be grounded in theories of learning in which students construct knowledge, informed by “their previous knowledge, beliefs and experiences” (Lambert et al., 1997: 18).

Although the constructivist model is not determined by technology, higher education institutions have acknowledged the benefits of ICT in enabling students to engage in the processes of investigating issues and constructing knowledge individually and in groups (Cuban, 2001; Surry & Land, 2000). The provision of technological support is critical because a majority of students who are studying through blended learning fall into the category described by Silas as those “who’ve finished school quite a long time prior to coming back into the education setting”.

Another challenge many students must content with is that of sustainability of the internet as one participant, Jojo laments:

You don’t know whether the internet’s going to be down until you try to send it, so if you try to send it before the cut-off point on a particular day you’ve got to race to the post office and try to get there before the 5 p.m. cut-off.

Nevertheless, technologies can be successfully applied to deliver learning into individuals’ lounge rooms (for example) and workplaces, enabling a just-in-time learning experience. This study has been able to establish that not every student has the privilege of accessing the required support. Some might not possess the hardware and software completely,
while others may struggle with the level of appropriate skills needed to access learning resources electronically. Interestingly this concern was also highlighted by an academic, Sarah, who stated that

[t]here are also enormous difficulties...Most of the students live in remote locations...once you've passed [X], in particular, you don't get broadband; you're lucky to get dial up and in many cases people live in such poor circumstances...being mature aged, low income, if any income, people with a family. Any technology they have is outdated so there’s a real interfaced problem between whatever they have on their computer at home, or the local library if they don’t have one at home...whatever technology is there and what the university is offering [the] interface just isn’t there. So, in a nutshell, it’s these experiences like that.

The above scenarios underscore the need to develop robust support mechanisms for ‘typical’ students who are studying through blended learning. The concerns surrounding the remoteness of locations, lack of broadband for accessing electronic resources and low incomes of students must have psychological impact on academics and students as well. It is these kinds of experiences that should drive the support strategies of higher education institutions. These concerns also relate to the level of computer skills students might require to be able to access electronic resources with relative ease. As already mentioned, the level of computer skills has been identified as one of the predictors of transactional distance (Moore, 1993; Chen, 2001). Students require confidence in accessing electronic resources in order to use the services that are integral part of their study programs.

Lloyd broaches another dimension, that of the financial concerns of students who are pursuing their studies through blended learning. According to Lloyd (2000: 145), the experience of learning through blended learning is more costly compared to the traditional face-to-face learning mode, as it requires ownership of a range of technologies such as computers, printers, software, and robust Internet connectivity. This concern makes a
strong case for an integrated approach to education in which the future of blended learning lies – where new learning spaces and the traditional classroom delivery mode find mutual expression about how and why students should be supported to manage their learning time and space more effectively. Students studying through blended learning have support concerns similar to academics, who teach students as if they would require technical support and easy access to technologies (Spitzer, 2001; Palloff & Pratt, 1999). Like the academics, students will also require the motivational support to study online (Palloff & Pratt, 1999; Roblyer & Ekhaml, 2003). Where students struggle with slowness of computers, access problems, and lack of computer skills, the end result is a loss of students’ precious time. With all these impediments, students can become frustrated, and if assistance is not forthcoming, they are likely to give up.

Technical requirements should be made clear to students prior to their enrolment (minimum hardware, software and operating system requirements). IT operations and support structures need to be available around the clock, as both teachers and students become dependent on ICT operations to perform their core duties. The increasing reliance on electronic communications requires that universities provide support that guarantees that resources are readily available to students and staff, without imposing undue operational difficulties. Effective electronic resources underpin many of the blended learning support mechanisms delivered under the banner of flexible learning and teaching.

One of the best practices of blended learning is to make sure students can access appropriate support without traveling to the physical campus. Sometimes electronic resources fail to support students in the process of their learning. One session participant
named Sabuni proposed an alternative support mechanism, suggesting that instead of a reliance on Internet connectivity there needs to be another immediately accessible delivery mode.

Rather than just saying “well it’s all on computer now”, what happens if your computer crashes? Or you can’t access the Internet. That to me is ridiculous to just streamline all technology. There has to be other means of support.

The argument Sabuni has raised is that, while technologies provide easy access to information, students should not be entirely left at the mercy of these technologies. Therefore his questions suggest an alternative delivery method in addition to electronic delivery. Rosenberg (2001) has warned that it is easy to be seduced ‘techno-lust’ and to equate technical sophistication with learning success. The idea of an alternative delivery method is also supported by session participant Susu, who argued for the provision of paper-based study materials besides electronic distributions.

I don’t like putting things on a computer anyway, I don’t know why but if I’m sitting down trying to get my head around something I like looking at a hard copy. You can put marks on it, you can circle things and it jogs your memory where if you look on a computer…The hard copies are heaps better.

Despite the shortcomings of traditional correspondence education, when contrasted with the computer-mediated learning delivery method, it is evident that modern technologies tend to bind students to particular spaces where there is availability of resources such as electricity and Internet connectivity. Correspondence education is best known for its paper-based course materials which can actually be accessed anytime and anywhere. Nevertheless, the functionality of the Internet has made possible interactions one-to-one and one-to-many, regardless of time and space differences – although Rumble (2000) has observed that our ability to provide support services to students in today’s changing environment are often outstripped by a given system’s capacity to provide such services. If blended learning is to fulfill its promise to bridge the education gaps, it must clearly focus
on providing quality learner support services to meet the particular learning needs of its students. It must also acknowledge that the various support needs of the students will be compounded by an integrated medium of delivery, thereby requiring new instructional methods and technical skills (Farrell, 2001).

In addition to the technological challenges, there are also language problems, as one academics student participant noted:

But it’s also language barrier. The students we had were from ESL backgrounds so they weren’t Australian or English speaking students. English was their second language so that was why that was set up, to give that added support because the intensive Learning Skills Unit couldn’t cope with the number of students asking for support so that was why peer mentoring was set up.

Since students studying through blended learning have far greater technological challenges to overcome than campus-based students with access to computer labs, they require greater access to computers and software in order to effectively support their learning processes. Although print-based correspondence education can afford alternative (not space-bound) delivery modes for students by which they can interact with academics and peers, its failure to encompass the didactic characteristics of the current approach represented by computer-based technologies denigrates its efficiency and effectiveness in the contemporary experience.

### 6.3.2. Academic and student–student support factors

The general view in the literature is that the amount, timing, content and format of communication between academics and students studying through blended learning are critical to the successes of blended learning (Heur & King, 2004; Ulbahar & Madran, 2009).
Due to time constraints and competition for available spaces on the part of students, academics are challenged to adapt toward flexible, skilful and purposeful communication with their students. As one student, Simba, expressed:

Again I think it’s about services being quicker to respond and I think that’s across the board, so if I was to send an email to my tutor I would expect them to get back to me within a day or two, not a week later...so I think that time is the biggest factor, you know time response.

There are a number of factors that contribute to the success of any educational enterprise. An understanding of students’ learning goals, their learning environment/context, technologies and the provision of human support should help academics appreciate the limited time students might have, and encourage the creation of a conducive learning experience for them. Knowledge of potential students’ profiles also contributes to the provision of effective support in the context of blended learning. Good curricula may only be part of a success story; the successes of blended learning will mainly depend on the availability of the teachers to the students when they need them, and teachers’ abilities to respond to demands, informed by what the teachers know about the students’ learning contexts.

According to the present study, good principles to support students who are studying through blended learning should be informed by academics’ desire to offer guidelines, models and best practices to benefit the students. A study by Picciano (2010: 9) found that “while geographic distance was the initial incentive for colleges to offer online courses...time and convenience evolved as a major factor in the expansion of online learning”. This experience was evident among students of a regional university in New South Wales as demonstrated by the following statement from Susan:
I suppose availability, that’s the biggest issue – availability – that they’re there when we need to see them...and responding to emails.

The increasing reliance of students upon electronic communication requires that higher education institutions provide services that guarantee availability of resources to students, without imposing undue operational difficulties. Effective and efficient electronic support mechanisms underpin many of the electronic services delivered under the banner of blended learning teaching modes. It is about students getting the right support, at the right place, at the right time, and at the right cost. Another student, Sonia, comments:

Also, if you send them an email they often don’t get back to you or it may be too late by the time they actually reply. I think it’s important that it’s instilled in the tutors that we’re the students, we’re paying for the services and if someone has emailed you with a question pertaining to that subject they should respond and clarify anything.

Moreover, one major reason why many students of blended learning are increasingly interested in computer-based technologies is their potential for two-way communication (Farrell, 2001; Harding et al., 2005). Yet these technologies require transition from traditional face-to-face learning to completely a new paradigm of learning. The new paradigm will enable students to engage each other in discussions as they take advantage of virtual learning spaces and other social spaces. Supportive of this phenomenon, Sophia states:

I find a lot of things at university. It’s all word of mouth, that’s how you find out about things, by talking to other students. You actually find more from the students than you do from the lecturers.

Argyle and Dean (1965) raise another issue about how social spaces provide opportunities for learning. Social contexts provide for intimacy through which students gain access to each other and, by so doing, provide opportunities for the student–student learning model. This phenomenon was also raised by discussion participant Sergio: “so it’s good to know people in your course”; to which Soma added:
...and actually be quite diverse with friendship, because if you are stuck with the same group you are not learning anything new but if you switch between people and groups, networks, I suppose, that makes a big difference to how you interact in the university itself and what you learn.

These experiences of learning through social groups are reinforced by Moore’s (1993) theory of social presence – that less autonomous students tend to be more dependent on academics and their peers. Social presence is characterized by the communication medium and the appreciation that the student is communicating with a real person, rather than with mute technologies. However, Chen (2001) has argued that a number of factors could create what Moore (1993) has referred to as transactional distance, either between academics and students or between students and students.

Therefore, one of the impediments to communication between academics and students is the degree of asynchronous interactions. Chen’s study (2001) found that the skill levels of students using the Internet provoke transactional distance between students and academics. It also expressed that the level of support by academics for learners is another of the causes of transactional distance. Chen (2001) stated that transactional distance is occasioned by a number of factors such as the skill level of students in using the Internet, the degree of support, and the level of online asynchronous interactions. In other words, transactional distance is not just a geographic phenomenon, but populates all the various levels at which academics interact with the students.

Carefully designed, however, and with the appropriate support, technologies can allow higher education institutions to widen the scope of learning opportunities, and to improve the quality of learning (Twigg, 2005). But face-to-face interactions between learners and academics can only be substituted to a certain degree by online learning materials; there
are still some critical learning aspects that cannot adequately be met by the technologies, however interactive they might be. Simao lamented that,

with part time teachers, they’re not here as often as the full time, so if you have got a question, say you are on the campus and you want go and knock on their doors and find out, or try get a face-to-face answer from them, usually they are only here for the tutorial and lecture time and they are gone and often they don’t have an office.

The above comments by Simao raise issues for institutions to consider even as they continue to increase the number of casual staff to confront academics’ concerns over their increasing workloads. Since casual staffs are not full time employees, they may not be readily available at the time when students seek their support. It is evident that the growing opportunities for accessing support from casual staff through computer-based technologies could provide solutions to some of the concerns of students studying through blended learning. However, as has been raised by one of the study’s participants, the university in this study does not support the provision of broadband for academics to use in their homes, outside of their ‘working hours’, that is, 8:00 am – 5:00 pm, for example. In fact, even if such arrangements were possible, the issue of academics workload will still remain.

Contributing to an inventory of effective strategies for supporting students studying through blended learning, Harper, Oliver and Agostino (2001) are of the view that academics need to recognize the significance of building on students learning interests, if academics’ support mechanisms are to be relevant and effective. Academics will need to take account of students’ prior experience and knowledge, which is likely to influence their present experience. As blended learning provides an alternative mode of learning, academics will need to mobilize the will and desires of the students, and to develop their
emotional engagement with their course, the academics and their peers (Palloff & Pratt, 1999; Roblyer & Ekhaml, 2003). Providing students with a sense of urgency with respect to college activities supports an activity-based learning approach, one of the learning theories upon which blended learning is grounded (Sanderland & Wills, 1996; Caudron, 1999). Also, recognition by the academics that learning is a social act and may involve other learners reinforces the proposed theoretical framework (Davis & Fill, 2007).

6.3.3. Institutional and library support factors

As a response to the changing environment in which the educational sector currently operates and to the increasingly diverse student population, many universities are opting for flexible delivery of their courses. However, there is a tendency to focus too much on technology per se and not on learning processes.

An effective blended learning approach should begin with understanding the requirements for blended learning, learners’ preferences, available tools, choice of tools to support the blend, and the available learning support to supplement the blending process. We focus on pedagogy, technology and the domain, and the circumstances in which students make choices within a variety of resources. (Matheos & McCalla, 2005: 57)

Blended learning is a learner-centred approach to education, which is informed by constructivist theory (Piaget, 1977; Vygosky, 1978). Thus, a blended learning approach takes into consideration the learner’s context, his/her goals for learning, and that knowledge is acquired through negotiations and the viability of the learners’ understanding (Spiro, Feltovich, Jacobson & Coulson, 1992).

In the context of blended learning, processes of negotiations are aided by computer-based technologies to enable opportunities for activities and interactions between academics and
students. However, Sanderlands and Wills (1996) and Caudron (1999) have advised that a learner-centred approach must be accompanied by a shift of responsibilities to students studying through blended learning, which requires additional skills for activity-based learning styles. What is lacking throughout these changes, however, is the preparedness by higher education institutions to seek to understand individual student’s goals, context and the level of support required in relation to their application of technologies (Braimoh & Osiki, 2008).

The successes of blended learning can be found in the literature of adult education (Pena, 2004). It is the principle of adult education that informs our investigation of how the blended learning environment develops the role of students. The principles of adult education assume that adult learners tend to be self-motivated, socially oriented and practical in their approach (Pena, 2004).

The findings confirm adult learning principles that adults learn best in a safe, inclusive, comfortable environment where their opinions are respected, where their learning has practical application, where there are opportunities to share experiences, and which accommodates different levels of self-direction. (Pena, 2004: 8)

The principle also highlights the need for academics to adopt flexible attitudes in response to the needs of adult learners. A blended learning arrangement requires that academics change their previous assumptions which are informed by face-to-face learning practices. Students studying through blended learning should be allowed to choose when and where they want to learn. In this regard, the roles of academics are to match a student’s learning needs by means of negotiation. Creating conducive learning spaces is the responsibility of any institution that cares for the success of its programs. Therefore, as higher education institutions take advantage of the new learning spaces, they need to take into consideration
the fact that these ‘classrooms’ also need to be managed well and made accessible and convenient to students studying through blended learning. Regarding the need for effective electronic support structures one student, Sydney, stated:

It seems that the university’s electronic resource is something they have because “we’re a university, we have to have a website”, they’ve just completely neglected it. It was poorly designed from the first and then it’s been put aside, like “oh, we’ve got to do that too…we’ve got to update the website again”. So, yes, it’s not useful for anything.

Effective web service underpins many of the electronic services delivered under the banner of flexible learning and teaching. Increasing reliance on electronic communication by students requires that universities provide support that guarantees that resources are readily available to students. One of the best practices is to make sure students can access appropriate support services without traveling to the physical campus. IT support structures need to be available around the clock, as both teachers and students become dependent on IT operations to perform their core duties. Materials must be available online 24/7, supplemented by printed text where possible. With new technologies, not only are we witnessing a new access mode, but wholly experiencing new pedagogical phenomena and new learning cultures. From the perspective of this study, higher education institutions will do well to design and provide support mechanisms that will enable students and academics to make use of the new delivery methods provided for by new technologies. According to Brown (2005: 1),

[i]n order to best serve the educational enterprise, we must design learning spaces that optimise the convergence of the Net Generation, current learning theory, and information technology.

Students learning through blended learning need robust online support that covers both technical and academic issues. Institutional support factors also bear upon the ways in which blended learning materials are packaged and presented. One student, Summer,
highlighted the significance of effective designs for blended learning when he said that his blended learning course at a regional university was

a little mixed up and it was a bit all over the place, a bit disorganized. They were all over the place, not in a central position; one was on one page, another one was on another page. Not the same format. Needs to be organized better...Hard to find materials and the units...A lot of the people can’t find the stuff. To give you an idea of how bad the university website is, we didn’t bring it up because we just assumed everybody knows it!

Throughout this discussion, I have argued that the major question confronting higher education institutions is how they might assist students so that they are able to maximize the opportunities provided by the blended learning environment. Discussions with students have demonstrated that effective management of the new learning spaces become critical success factors for blended learning, although some of the support structures will be influenced by the capacity and resources available to particular higher education institutions.

Some of the new learning spaces are characterized by privacy, the use of multimedia for interaction and cooperative learning.

C-space (creative space) creates more room for exploration, experiencing and experimentation than a traditionally set classroom as it is easy to brainstorm, vote, re-evaluate ideas, reflect, and work on solutions in a flexible way. (Jankowaka & Altay, 2008: 277)

Otherwise, the most pervasive of the changes is the shift from a ‘provider focus’ to a ‘learner focus’ with its marketing strategies toward individualized learning systems. The implication of this approach is that learning necessitates students’ active participation in their learning processes, and that students are able to determine the processes and the outcomes of their learning experiences. According to the social constructivist approach, learning is considered an active, social process in which individuals actively construct
knowledge (Vygotsky, 1978; Brown, Collins & Duguid, 1989).

More importantly, the implication of this shift is that the capabilities of the Internet have overturned the traditional role of the higher education institution from that of research and knowledge creators to facilitators (Baker, 2002; Spiro, Feltovich, Jacobson & Coulson, 1992). Where university libraries are within the geographic reach of students studying through blended learning, the support mechanisms being provided by the staff have been recognized. It’s been noted that library services are doing a commendable job of addressing the fears and anxieties of most students for whom the IT skills and the accessibility of library resources are sources of both apprehension and frustration. One research participant, Samantha, stated:

Librarians run sessions explaining how to access the library system… how to search, what to search and how to download information. It’s not compulsory; students who have not done it miss out a lot and don’t know how to use the search function.

The increasing reliance on electronic communications requires that universities provide services that guarantee that resources are readily available to students and staff, without imposing undue operational difficulties. Also technical requirements should be made clear to students prior to their enrolment. Another student, Andrew, supports Samantha’s observation. “The library staffs are quite helpful, a lot of staff there are willing to help.” This is indeed good news for those students who are able to access library services, but for others who are confronted with the remoteness of their locations, IT issues and availability of library services continue to be sources of frustration.
6.4. CONCLUSION

Computer-based technologies have created new learning spaces for many people who, otherwise, would not have had the privileges of accessing regular further education. They have also increased efficiency in the distribution of information from one source to another. Although blended learning has created greater opportunities for academic–student interactions, and increased student engagement in learning, lack of robust support structures or deployment of adequate electronic resources still exists. Moreover, the new learning culture should emphasize the centrality of the learners as active participants fully engaged in their learning processes. Support structures that facilitate communication, participation and interactions between students are important factors that will contribute to the quality teaching and learning of the future.

This chapter has identified several key problem areas insofar as the implementation of blended learning in a regional university is concerned. Academics (who are often casual employees) are confronted with the issues of implementing blended learning support mechanisms to a growing body of students as higher education institutions aggressively broaden the scope of learning spaces for their courses, using Internet technologies as vehicles for delivering them. Working academics will be required to expand their communication skills and to develop new learning theories to support their students. These skills will empower academics in their desire to support the students academically and to enter into dialogues with them.

If students are going to reap the full benefits of support mechanisms via academics, reasonable efforts are required by various institutions to ensure a high level of staff
technical competency in order to offer quality support services. Similarly to the face-to-face delivery model, higher education institutions have a responsibility for the provision of continuing training focused on building academics’ proficiencies relating to the blended learning delivery model. This requires additional funding to support the technological infrastructure and demands for advanced learning technologies.

There are a number of lessons that can be derived from the above discussions. There is a need for interactive course design to contribute to a responsive pedagogic framework, and for the recognition that technologies alone are not, and cannot be, an answer to all issues blended learning students are likely to raise. The discussions have also raised the need for a broader articulation of official policies to direct the future success of blended learning.
Chapter 7

ACADEMICS’ PERSPECTIVES ON SUPPORT MECHANISMS FOR BLENDED LEARNING

7.1. INTRODUCTION

The purpose of this chapter is to undertake analysis of the research data under the themes of time, space and pedagogy, and to interpret the findings in relation to how they influence the outcomes of teaching in a regional university. These themes were constructed in relation to the experiences of the academics involved in teaching through blended learning. As already discussed in chapter five, the academics’ perspectives will be analyzed and interpreted taking into consideration the context in which they were raised, with the view to comparing and contrasting them with evidence from the literature. The research seeks to illuminate the ‘how’ and ‘why’ of events and experiences of academic support mechanisms in a regional university.

7.2. ACADEMICS’ PERSPECTIVES ON THE THEMES OF TIME, SPACE AND PEDAGOGY

This section will present and discuss the various perspectives of the academics in the study. These were constructed from their experiences in relation to support mechanisms and their teaching processes in the context of blended learning. As already discussed in chapter six, the concept of time represents release time from classroom teaching in order that academics can offer support to other students studying through the computer-mediated mode. Release time from classroom teaching also means that academics are able to maximize the available spaces, in order to design and be able to offer support to students beyond the classroom environments. The spaces outside the traditional face-to-
face delivery modes are varied, as they include opportunities to teach and support students via computer-mediated communication, either from home or within the campus.

From the perspectives of the academics who are involved in teaching through blended learning modes, the concept of time has been predominantly about the amount of time they must put into organizing their teaching in relation to physical classroom arrangements, and also through online arrangements. The concept of time was also interpreted to mean the additional workload that academics must take on because of the overall shortage of teaching staff at the regional university. Although any discussion about the apparent shortage of teaching staff at this university is beyond the scope of this study, it has some relevance to the academics involved, who must modify their teaching roles through the implementation of blended learning. This study has been able to establish that shortage of teaching staff means that the academics must spend extra time teaching at the classroom level and also in blended learning streams. In other words, teaching through blended learning imparts additional responsibilities to academics who are already overstretched.

The data from thirteen the academics who attended focus group meetings provided a number of sub-categories of the research themes of time, space and pedagogy. These were: 1) workload support factors, 2) technological support factors, 3) institutional and policy support factors, and 4) student–student support factors. These sub-categories are presented below, to show the frequency of occurrences of the various perspectives. The following discussions and interpretations of the academics’ perspectives will be informed by understandings gained from the literature in the field of blended learning and the
support structures already discussed in chapter four. Figures 7-1, 7-2 and 7-3 present an overview of academics’ sub-categories that were constructed from the research themes of space and pedagogy.

![Fig. 7-1 Academics’ perspectives on support factors in relation to time](image)

**Fig. 7-1  Academics’ perspectives on support factors in relation to time**  
*(The higher the %, the greater the concerns)*

Figure 7-1 shows a relationship between time and workload. According to the participants, workload means an additional time each academic must spend to teach through blended learning and this meant unequal distribution of tasks due to the lack of teaching staff and was described as the most single factor affecting the success of blended learning in the regional university. From the perspectives of the academics, the concept of time has been predominantly about how much they are called upon to accomplish in relation to blended learning. Therefore, the concept of time was translated to additional workload the academics have to shoulder due to the lack of teaching staff at the regional university. In other words, teaching through blended learning provides additional responsibilities to individuals who are already over stretched. In views of academics experience about the concept of *time*, there emerged a single perspective representing a major concern about teaching through blended learning and this perspective is represented by the figure below:
The above percentages were calculated from the overall comments participants contributed, and these comments were subsequently grouped under policy and technological support factors. The analytical process and discussions over the research theme of space will focus on the two perspectives of policy and technological support factors, as major concerns affecting the blended teaching experience in the regional university. When academics expressed their concerns over the learning spaces for blended learning, these revolved around the effective use of modern technologies for teaching and learning. They expressed concerns that blended learning lacked proper management, due to the absence of comprehensive policies for blended learning in relation to the overall institutional policies. Participants also expressed concerns that blended learning in the regional university required adequate and competent staffing to support its electronically distributed programs. These two factors are hereby referred to as academics’ perspectives, and they will be discussed in detail in the next section.
Fig. 7-3 Academics’ perspectives on support factors in relation to pedagogy
(The higher the %, the greater the concerns)

The pedagogical frameworks for blended learning were major concerns for academics teaching through blended learning. There was general consensus that teaching environments capable of supporting effective learning experiences were those that were grounded on the understanding that knowledge was constructed using a learner-centred approach (Duffy & Cunningham, 1996; Bostock, 1998). The learner-centred approach confronts the traditional lecture model, as detailed by Cunningham, Tapsal, Ryan, Stedman, Bagdon and Flew:

The growing acceptance of new educational philosophies and practices, such as constructivism and action learning during the 1980s, have challenged the valence of the didactic lecture/tutorial/textbook model common in higher education, promoted the notions of the academics role as a ‘guide on the side’ rather than the ‘sage on the stage’, and conceived of the student role as one of independent self-directed learner. (1998: 25)

The current educational philosophies require new support structures for academics in order that they can become an effective ‘guide on the side’ with the view to recognizing the potentials of the students as ‘independent self-directed learners’. However, the current study has established that there are a number of impediments to achieving the kind of pedagogical success every higher education institution desires for its academic staff. As one participant, Jeremiah, stated:
If we are really talking about transforming education…then it’s about looking beyond just taking lecture notes and putting them up for students. That offers them flexibility but I don’t believe that lecture notes actually enhance learning by themselves, they have to be in a learning context…what do they do with their lecture notes, it’s the doing part not just reading. That’s a professional view that I have…

In the next section, there will be an in-depth analytical discussion of the comments made by the participants in relation to the themes of time, space and pedagogy. These comments form a part of what is referred to throughout this study as academics’ perspectives.

7.3. ANALYSIS AND INTERPRETATION OF ACADEMICS’ PERSPECTIVES

The purpose of this section is to analyze and interpret the different perspectives of academics that emerged from the research themes of time, space and pedagogy, in relation to support mechanisms in a regional university in New South Wales. Glesne (1999: 130) writes that “[d]ata analysis involves organizing what you have seen, heard, and read so that you can make sense of what you have learned. Working with data, you describe, create explanations, pose hypotheses, develop themes, and link your story to other stories”. Since there are no fixed formulas for analyzing qualitative data, much depends on the researcher discerning the data, together with alternative interpretations and the presentation of the evidence (Yin, 2003). The applications of grounded theory, the case study approach and qualitative research techniques all contribute to the process of discerning the data, offering alternative interpretations, and advancing the trustworthiness of the research outcome (Strauss & Corbin, 1998; Creswell, 2003; Glesne, 1999; Merriam, 1988).

Yin (2003) recommends four principles for high quality data analysis: i) ability to account for all the evidence, alternative interpretations and opposing hypotheses, ii) ability to
address major rival interpretations, iii) ability to focus on important issues in the study, and iv) a researcher’s ability to use their own prior expertise or knowledge in the analysis. These principles were accounted for in this study through the use of grounded theory analysis, which has the ability to account for evidences in the research data and address rival interpretations.

The important issue in the current study was to explore support mechanisms for both students and academics in the regional university within the context of blended learning. Thus, the subsequent discussions will address the different sub-categories, taking into consideration the principles that contribute to the trustworthiness of the analytical processes and the interpretation of the research data.

7.3.1. Workload factors

Over the last two decades, the dominant debates among higher education institutions have been about how they might position themselves in relation to the process of change (Collis, 1998; Cunningham et al., 1998). Supporting this claim, Corderoy (1998: v) expressed that the fundamental change in Australian universities has been a “rush to embrace flexible and alternative teaching approaches and delivery methods”. From the perspective of the present study, teaching flexibly refers to an educational approach that meets the diverse needs of the students.

Although any discussions about the apparent shortage of teaching staff at a regional university is beyond the scope of this study, the concerns raised by research participants have implications and relevance to the success or failure of blended learning. Of the thirteen research participants who took part in the current study, the concern for the
availability of time was the greatest, as the academic participants were unanimous in their view that the most severe impediment to blended learning in the regional university is the workload factor. From their point of view, the additional workload for academics teaching through blended learning means that they do not have sufficient time to do quality work. This concern was highlighted by Daniel from the School of Education, who stated:

The academics are stretched as well. The academics have more on their plates than even two, three years ago. Everybody is really stretched. So as much as we can offer, we are still not getting as good turnouts as we would like, and that’s because they just don’t have time because we have [X] campuses. Some things we offer at each campus, other things we just offer at campus [Y], for example, because it’s central, and staff just cannot afford the travel time from one campus to another.

In other words, teaching through blended learning imparts additional responsibilities to academics that are already overstretched. From the perspective of the current study, workload means additional time that each academic must spend to prepare lessons and to teach through blended learning, besides conducting research and also undergoing training and skill development. These experiences represent unequal distribution of tasks due to lack of teaching staff. Ezekiel from the School of Education supports the above argument:

Look I would agree with you there, I would also say that the pool of people in flexible educational design, really good people, is very small. We recently recruited a new learning designer and we had some very experienced people apply but when you actually look at their knowledge of current learning theories in the learning environment and their ability to transcend that to practice, the pool is even smaller. You get some people who are operating from an instructional design perspective that is at least ten or fifteen years old and they’re not the people you need in the organization.

A study conducted in a university in the USA confirmed the existence of additional workload for teachers who are involved in teaching through blended learning, that designing courses for blended learning is time consuming, and that academics are working for less than they deserve (Care & Scanlan, 2001). This particular university has implemented what they term _release time_, to enable the academics meet the challenges of
workloads. Another alternative to ease the workload on academics is volunteer teachers, but they too have their limitations, according to Moses from the School of Mathematics.

[M]any of our staff are casuals because of the lack of staff and workload issues. Hard to get them access through the web...so there are some support issues there. There isn’t much room for flexibility...particularly with casual staff...because they usually work at four or five institutions.

In view of the discussions among research participants and the above literature review, academics involved in teaching through blended learning require adequate time allowance for planning and development, including designing learning programs and tools, and locating and customizing existing resources. They need time allowance for delivery and assessment, and one-to-one follow-up with students who might be experiencing learning difficulties. Errington (2004: 40) comments that teacher’s dispositions “appear to have potentially significant impact on innovation by influencing what is possible, desirable and relevant from the teacher’s own governing perspectives”. A study by Dziuban, Hartman, Juge, Moskal and Song (2005) has established that one of the factors that present a formidable barrier to the academics’ initiatives is lack of collaboration. Internal collaborations through partnerships among academics, technology specialists and administrators are critical to the reduction of the mounting pressures on academics as a result of their workloads.

7.3.2. Technology support factors

With the advent of computer-based technologies, higher education institutions are destined to experience an emergence of ‘new classrooms’ with a continuing transition from physical spaces to virtual spaces. In the ‘new’ learning space, higher education institutions will be required to provide participants with interactive tools to support them in their teaching processes. Whereas the emerging technologies have offered many advances to
the practice of blended learning, from the perspective of the academics there are a number of factors that need to be addressed. When participants expressed their concerns over the learning space for blended learning, they revolved around the effective use of technologies for teaching. They expressed concerns that the regional university currently under study has not adequately supported learning spaces for blended learning and they placed the blame on the absence of policies governing blended learning. Participants also expressed concerns that blended learning requires adequate and appropriate staffing as well as technical assistance to support its electronically distributed programs. According to Voos (2003 cited in Vaughan, 2007),

In terms of technology, many faculties initially needed to overcome their own fears and resistance through ‘hands-on’ experience with various tools and applications. In addition, faculty are also challenged to provide ‘front-line’ technical support for their students...Therefore to overcome these support issues, there needs to be an institutional professional development program for the development phases of blended learning course and ongoing institutional support during the initial delivery phases. (88)

The attitudes of the academics towards teaching through technologies also play major roles in motivating them towards the new approach. According to Parisot (1997 cited in Maguire, 2005), although teaching through technologies could be seen as a motivating factor, it could on the one hand, become an impediment. Reasons given for such impediments include the fear that blended learning is sacrificing quality. Joshua from the School of Education stated that

[by] a lot of staff...there’s a fear expressed that it’s about getting your lecture notes on – up there and therefore do you need to lecture? And seriously, do we end up just being hired casually at the beginning of the year to produce a whole load of web based materials? The uni buys it off us and “see you later till we need you again”.

As universities seek to adapt to the new teaching culture, they need to take into consideration the fact that the new ‘classrooms’ also need to be managed well and made
convenient to blended learning practitioners. They also require adequate and appropriate staffing as well as technical assistance to support electronically offered programs.

Blended learning practice requires adequate resources including the provision of adequate computer equipment to enable a range of delivery methods to enhance academics’ teaching. There’s a greater need for support for the academics to facilitate the application of technologies such as web design, database management, graphic design, and instructional design. According to Brown (2005: 1), “[i]n order to best serve the educational enterprise, we must design learning spaces that optimise the convergence of the Net Generation, the current learning theories, and information technologies”.

However, one participant, John, was fearful.

To be honest I do not think this university has seriously formulated how flexible and net-based working can work...All we’ve seen is the tools to maximize the work output from us but not what the students get out of it or how well it’s coordinated or supported...it’s just...“instead of a lecture we deliver this”...and that’s it.

This of course is a policy issue about the status of blended learning within the overall programs of a particular university. A fundamental concern for technological innovations would therefore be the fusion of: technologies, consideration of pedagogical factors, delivery of the curriculum, and meeting of academics’ support needs. According to Brown (2005: 4), blended learning design challenges academics by “moving [them] away from a transmission paradigm to a constructivist paradigm”. Blended learning is similar yet different from face-to-face learning, in that it requires new and radically different skills and strategies for effective educational output. According to Pena (2004: 8), “if a university is truly dedicated to online learning, it must provide faculty with online tools that are easy to learn and it must provide training in how to use these tools”. But at the
same time, good practices of teaching and learning depend on the academics’ disposition and motivation to teach through blended learning.

The implications of all these concerns are that individual universities will be required to consider environments outside their physical boundaries and to include in policy other factors that are likely to impact on the teaching experience. In other words, higher education institutions will be required to develop technological support mechanisms for academics that take care of their needs, both within and beyond the university compounds. Advancing blended learning within the socio-technological culture also requires new pedagogical approaches because, although learners demand convenience in accessing learning regardless of time and space, most academics come from the point of view of a traditional face-to-face delivery method of teaching. Academics need to be given the support and professional development time to acquire a range of computer competencies and successfully integrate ICT into their teaching practice. The ICT competencies need to be imbedded in teacher training qualifications where possible.

7.3.3. **Institutional and policy support factors**

In the last decade, at least, higher education institutions throughout Australia have experienced an unprecedented paradigm shift in the use of technologies for both teaching and learning (DEETYA, 2000; MCEETYA, 2005). This section aims to discuss and compare the experiences of the academics in relation to their needs for support in the context of blended learning. From the perspective of this study, institutional support means that higher education institutions are responsible for decisions about technologies, and the organization and implementation of academic support strategies.
As many universities begin to react to the new learning culture, assisted by computer-mediated technologies, they are now opting for the blended learning delivery mode (Corderoy, 1998; Nicoll, 1998). However, there is a tendency to focus too much on technologies and not on the learning processes, as revealed by some of the arguments made by the academics. Since one of the aims of blended learning is to broaden the scope of students’ learning opportunities, institutions need to provide a better mix of learning situations. Academics need to be equipped to develop new teaching methods which will empower them to explore various methods of interactions with their students. Indeed, the blended learning experience requires that academics are exposed to multiple approaches to teaching so that they are able to apply such knowledge appropriately. According to Jankowaka and Altay (2008: 272),

The idea of developing the C-space derived from the notion that delivering an applied curriculum in the context of an institution committed to widening participation and employability requires an alternative approach to teaching other than merely traditional lectures and seminars.

Meanwhile, the diverse delivery methods and students’ needs for flexible opportunities means that individual academics will have to develop working time arrangements that best meet local needs and circumstances. According to Maguire (2005), professional development of academics teaching through blended learning is critical as it contributes to the enhancement of their skills. While there was an affirmation from this study’s participants that generally, professional development of academics is taken seriously in a regional university, Isaiah from the School of Education expressed concerns in this regard.

See, it’s not so much – I think [they] fund too narrowly. I think the university has put in support services in the sense that there is training – where you can acquire the skills. But what is not put in place is a process that shifts the mode of teaching and learning for a whole degree or for a whole collection of subjects and that involves, not just time relief but the actual work to be done and, in addition to that, the marketing and engagement and selling it to the
students: making sure the students know why and working through in focus groups at what the students need.

Hartman and Truman-Davis (2001: 55) remark that in order for a higher education institution to “achieve consistency, quality and scalability, it is necessary to establish a central service coordination unit with sufficient resources to develop and apply standards and support the expanding volume of work that will result from increased faculty demand”. Indeed, the current approach means that higher education institutions will have to demonstrate transformational leadership in order to realize the full benefit of blended learning (Garrison & Kanuka, 2001). Helga, from the School of Education, believes that

[w]hen you have a shift...well you’ve got yourselves together in a kind of supportive social group and you all agreed that you’d make the curriculum run in this, um, blended mode. Then, in a way, what I think is where the university didn’t provide resources, is that there wasn’t some kind of major resource put forward into what you might call marketing the concept of students...[T]he thorough going process – a thorough going policy roll out would mean that you would take on board a degree, for example, Bachelor of Teaching (secondary), and you would say, okay every staff member in Bachelor of Teaching secondary – it’s not the professional development that they need because they can go and get the skills – it’s the time that’s involved in discussing the change in the mode in delivery and the time that would be involved in taking the existing curriculum and working on it so that it works better online and then polishing the online resource; not just popping the lectures up into the WebCT folder.

There are at least two approaches by which institutions may offer the much needed support to academics in blended learning programs. These are an academics’ guide to providing basic information about the expectations of the institutions, and the technical ‘know-how’. Higher education institutions need to develop learners’ profiles that identify the characteristics and the various situations of students aspiring to study through blended learning. The development of such profiles would inform policy and planning program development, course design and the development of appropriate materials and other relevant information necessary for quality education provision. This is what Chickering
and Gamson (1987) have referred to as the *high expectations*; we should seek to establish comprehensive expectations between learning and teaching goals and the criteria for demonstrating performance (Donald, 1999; Vye *et al.*, 1998). The principle of *high expectations* means that institutions will be expected to explain the performance expectations to the academics who are teaching through blended learning and to clearly articulate the criteria for their teaching. Academics will thereby gain insights about the expected teaching performance.

According to Davis and Fill (2007: 823), “[i]t is possible that institutional strategies underpinning the planning and implementation of what might be termed the ‘efra-structure’ and the provision of timely and effective staff training could mitigate some of the uncertainties”. This observation confirms that an electronic support structure is critical to supporting academics as to how they can effectively use their time, which in turn will benefit the students. Therefore, Davis and Fill (2007) recommend that in order that higher education institutions embed the culture of support for academics, there needs to be active involvement by senior management as a demonstration of institutional commitment. In addition, there needs to be an integrated curriculum approach, in order that blended learning becomes part of the overall curriculum. Higher education institutions will need more funding to recruit additional teachers to ease workloads and to relieve academics who are committed to teaching through blended learning.

In order to accomplish key support principles already discussed, higher education institutions will be required to promptly respond to the support needs of the academics involved in the blended learning enterprise. Also they will be required to provide ongoing
support including, but not limited to, technology, staffing and curriculum issues. Higher education institutions need to establish and communicate explicit roles and performance indicators to those engaged in teaching by blended learning. Indeed, the implication of the ‘new teaching zones’ is that higher education institutions will be challenged to review their approaches and structures in order to meet both academics’ and learners’ requests for support. They will also be required to engage in ‘value-added’ activities, for example advising and guiding learners during their learning experiences. Above all, higher education institutions will be required to develop plans and strategies beyond the campus to include collaboration with immediate communities. As Underhill (2004: 1) has pointed out,

The lack of coordination and collaboration with central services may lead to a marginalization of learners and lost opportunities for a new kind of institutional research focused on building and disseminating a shared body of knowledge with regard to best practices in providing support to distance learners.

Despite the pivotal role of the various support mechanisms for both academics and students of blended learning, it appears that most of the current initiatives are being approached and practiced in an ad-hoc manner, either implemented at the departmental level or teacher–learner relational level to meet immediate and specific needs. Under the current system, it is difficult for any institution to get a comprehensive picture of the magnitude of academics’ experiences in blended learning.

When coordination and collaboration with central services are practiced, the sorely needed support provision in higher education institutions will become more responsive to the learners in the changing higher education landscape. Therefore, one way to support both academics and students in their educational journeys is to provide increased access
through alternative integrated course delivery methods. Professor David Rich (2002) of the Centre for Flexible Learning at Macquarie University made an observation about the ICTs in teaching and learning, to the effect that Australia has a good international reputation in distance learning, flexible learning and e-learning, but that this reputation is endangered by insufficient support for the continuing development and implementation of improved methodologies in Australia, when compared with major investments in some other countries. As to the improved methodologies and investments to support blended learning, one academic participant, Job, stated that

> the other administrative thing that I was just thinking when you were saying [things] about working from home is that, you know [for] a long time we’ve had our dial up supported by the university so they paid for us to have dial in access from home and the reality is now that there’s no point in having dial in access because it’s so slow it’s useless. In fact, a lot of people now have broadband but the university won’t pay for our broadband and now they’re going to cut out their support for dial up and, you know, the expectation is that…we’re doing all the online things [and we’re] supposed to be responding to so many things within such a short period of time but there’s no support for people to actually have an Internet connection that would actually enable them to do their work.

Such sentiments support the argument that although technologies have provided meaningful tools for education, they have also presented higher education institutions with unprecedented complexities (Mills & Tait, 1996). One complexity presented by the ‘new teaching zone’ is that technologies are invading academics’ privacy. One participant, Matthew, observed that

> I think that electronic technology is making work more flexible but it’s invading your private space and invading your home space so that your home becomes an extension of the work place. So our homes become sites for doing work and I don’t think there are very many people who succeed in saying, “Oh well, I’ll only do my research and writing and read books at home”…It doesn’t work like that because students will email you and contact you at home, and you want to clear that…When I’m here I go from meeting to meeting or class to class, and then I go away and use all this technology.
This study also reveals that the amount, timing, content and format of communication between academics and students in the blended learning mode are very critical to the pedagogical successes of blended learning. Due to time constraints and space variation on the part of students, academics are challenged to devise flexible, skilful and purposeful communication with their students. Meanwhile, academics have recognized the power of technologies in providing meaningful tools for communications among students. This is demonstrated by Jessica when she says:

I think it’s good that students are saying that they’re working with their peers because that’s part of learning too, and it also mirrors the campus…mentoring program where you’re actually recognizing the value that peers can play in how people will learn. For example, if they’re going to be designing an e-learning environment or participating in an e-learning environment – if you’re a student then any questions that you have, sometimes the better venue for that to happen is with your peer so that you both benefit from the discussion and the outcomes from that.

Thus, communication as a social learning tool is about academics’ ability to identify communication barriers and to consider issues from the students’ perspectives, be these communications written or verbal. One participant, Philip, observed that

I think it’s good that students are saying that they’re working with their peers because that’s part of learning too, and it also mirrors the campus…mentoring program where you’re actually recognizing the value that peers can play in how people will learn. For example, if they’re going to be designing an e-learning environment or participating in an e-learning environment; if you’re a student then any questions that you have, sometimes the better venue for that to happen is with your peer so that you both benefit from the discussions and the outcomes from that.

The above sentiment supports the principle of cooperation amongst students put forward by Chickering and Gamson (1987), who believe that social interactions are capable of supporting the learning processes of students studying though blended learning. However, the current research has been able to establish that some assumptions have been made about the blended learning delivery mode insofar as providing robust support in learning
and teaching is concerned. Thus, the “Seven Principles for Good Practice in Undergraduate Education” by Chickering and Gamson (1987) have not been comprehensively applied to support the blended learning in the regional university under study. Otherwise, effective and efficient applications of the seven principles of student–academics contact, cooperation amongst students, active learning, prompt feedback, time on task, high expectations, and respect for diverse learning styles and capabilities can greatly enhance and contribute towards responsive pedagogical frameworks for blended learning. According to Niemiec and Otte (2009: 28),

Any viable blended learning initiative is going to have compelling reasons for coming into being. If it speaks to important goals, and it must, these need to be conveyed to the campus community. This means that the dissemination of information ought to be multi-level and multi-service. The initiative should have executive sponsorship from the highest level, but it can and should have champions among faculty, support staff, and even the students as well as administration. Once the initiative is begun, every effort should be made to put information and resources in the hands of those who can move it forward.

In other words, effective communication means purposeful listening to both academics and students, and the ability to respond to them whenever they need assistance. Such communication intends to create an environment where all academics and learners can flourish as their roles extend far beyond the responsibilities and skills expected of the face-to-face delivery mode.
7.4. CONCLUSION

Principles of good practice in blended learning mean that attention is given to the changing roles of academics and the demands that technologies place on them. As Farrell (2001: 92) rightly observed, “learners support in both online and off-campus situations is labour intensive, but the costs of not providing such services are even greater in terms of students’ frustration and failure, wastage of institutional resources and the immeasurable loss to any society of a citizenry lacking the education it desires”. The challenges to the institutions, therefore, are to provide the needed professional development for the academics, and to build students’ learning skills in today’s rapidly changing higher education environment.

As to the concept of space, the perspectives of the academics in this study revealed concerns about the effective management of technologies and also policy-related issues. They expressed concerns that blended learning in the regional university lacked proper management, placing the responsibilities on the absence of policies about blended learning in relation to the overall institutional policies. Participants also expressed concerns that blended learning required adequate and appropriate staffing as well as technical assistance to support its electronically distributed programs. The concept of pedagogy, on the other hand, entailed a belief that the effective use of an academic’s time and space would enrich the outcome of an academic’s teaching. The pedagogical success of blended learning was determined by the effective and efficient management of the available time and spaces by the academics. From the academics’ perspectives therefore, the pedagogical success of blended learning should be informed by how well they were prepared and equipped to take on the additional roles of teaching through a blended learning arrangement.
Blended learning also demands that higher education institutions transform their pedagogical approaches and support mechanisms in order to meet the demands and expectations of students during their studies as other responsibilities compete with their available time and spaces. In summary, the principles of quality support for academics teaching through blended learning demand creative and appropriate applications of technology and a research-based pedagogical approach to learning. It is important, therefore, that higher education institutions consider pedagogy as an important factor in blended learning in order to make sound technological decisions. Government policies on the use of technologies in higher education need to be cascaded to the level of individual academics and students. A potential area to explore in the future would be how higher education institutions might maximize the use of technologies for teaching and learning as Internet connectivity continues to expand and impact on institutions and to be integrated into face-to-face learning practice (Garrison & Kanuka, 2004; Smith, 2005).

To have significant learning outcome, it is critical that blended learning strategies address individual students’ learning goals and learning styles in the context of the time and spaces available to them. In this context, pedagogical support frameworks for academics must refer to issues that build the foundations for success in a blended learning environment and help provide successful teaching outcomes. Helping teachers cope with work pressures and any other circumstances that are likely to affect their teaching experiences is likely to minimize unnecessary frustrations to already overstretched blended learning practitioners.
8.1. PURPOSE OF THE STUDY

This study began by raising a fundamental question which has since guided the processes of the research exercise. The question sought to understand the nature and the depth of blended learning support needs of students and academics at a regional university in New South Wales. The objectives of the research exercise were: a) to elicit responses from both students and academics, b) to conduct a case study of one institution in order to compare and contrast its experience with the global academic support strategies necessary for effective learning and teaching in the context of a changing higher education landscape, c) to conduct focus group discussions in order to document the experiences of students and academics in relation to issues of time and learning spaces that impact on their teaching and learning experiences, and d) to analyze the students’ and academics’ data in order to describe whether or not the current support being provided by the regional university to students and academics is responsive to pedagogical frameworks.

The task of this study has therefore been to document the experiences of students and academics of a regional university in terms of how the use of their learning time and spaces contributed to responsive pedagogical frameworks in relation to blended learning. Blended learning has been considered in this study as providing the opportunity to learn and teach flexibly through the application of Internet delivery methods, so that students can access learning and academics can extend support to students beyond physical classroom situations. Through focus group meetings and interview sessions, the study has been able to explore and establish the ways in which academics teaching through blended
learning and students studying through blended learning tell their stories and how the use of time, learning spaces and pedagogical frameworks impact on their teaching and learning experiences.

8.2. RESEARCH DESIGN

The present study has defined time as an anytime opportunity that both students and academics might seize, be this real time or delayed, with the purpose of supporting their learning and teaching experiences. The anytime opportunities are considered to be moments that fall outside the time already allocated to employers and family commitments. On the other hand, learning spaces represent an anywhere opportunity, in spaces such as home, workplace, face-to-face classroom, library, online (technology-mediated), wireless space, collaborative space, social space, and individual (personal reflective) space. These, too, are learning spaces that are considered to be ‘free’ from employers’ or families’ demands. As discussed earlier in chapter three, some of these spaces offer real time interactions (synchronous), while others may be delayed (asynchronous) interactions.

The context of this research is that the spread and the availability of Internet connectivity have offered new possibilities and opportunities for interactivity, and that its applications that have created much interest in the use of technologies for both teaching and learning purposes. Ayala (2009: 277) confirms that “[a] newly emerging trend in higher education institutions is blended learning, the purposeful integration of traditional [i.e., face-to-face] and online learning in order to provide educational opportunities that maximize the benefits of each platform and thus more effectively facilitate student learning”. Students
and academics are the primary stakeholders in the blended learning arrangements, so much so that the effectiveness and the success of a program depends to a great extent on the quality of the support structures available to them. The current study has interpreted students’ support in blended learning to encompass all aspects of assistance provided by academics and higher education institutions, ranging from help-desks, to self-contained study materials, to any other inter-personal and intra-personal communication initiatives between academics and students, and amongst students.

8.3. SUMMARY OF FINDINGS

Technologies have created new learning spaces for many people who, otherwise, would not have had the privileges of accessing physical face-to-face classrooms on a regular basis. The present study has established that the new learning spaces demand adequate and appropriate staffing and technical assistance to support the electronically offered programs. Students too require confidence in accessing electronic resources and in using services which are an integral part of their study programs. While most of the so called digital native students are computer literate, students from other backgrounds, the digital immigrants, often require substantial support structures. One participant articulated this to suggest that:

Digital natives are those who don’t remember life before the Internet, they’ve grown up with it and they’re used to multi-tasking. They can have their phone with the SMS, or their wireless browser, they can have their computer on with their iPod in their ears, with their chat rooms on, plus doing a whole range of things on their computers. So they’re able to work more effectively and efficiently in a digital environment. Whereas the digital immigrants are those who have to learn about the new technologies and they have to become accustomed to the situation where more things are available digitally.

Creating conducive learning spaces is the responsibility of any higher education institution that is passionate about the success of its blended learning program. Convenience of both
learning and teaching time and spaces will greatly impact on the success of students’ and academics’ learning and teaching processes. As higher education institutions take advantage of the varied learning and teaching spaces, they need to take into consideration the fact that these spaces also need to be managed well and made accessible and convenient to all blended learning stakeholders. IT operations and support structures need to be available around the clock, as both teachers and students become dependent on IT operations to perform their core duties. The increasing reliance on electronic communications demands that higher education institutions provide services that guarantee resources are readily available to students and academics without imposing undue operational difficulties.

An effective web service underpins many of the electronic services delivered under the banner of blended learning. One of the best practices in blended learning, therefore, is to make sure students can access appropriate support services without traveling to the physical campuses. It also means making sure that materials are available online 24/7, supplemented by printed text where necessary, and making sure that students admitted to a program possess the minimum skills and equipment necessary to use its required learning technologies.

Although in the traditional face-to-face or physical classroom learning experience students’ support comes directly from individual teachers, with the complexities brought about by the expansion of technologies and the liberalization of learning spaces, the roles of the academics are now shared among other professionals such as course developers, course designers, casual staff, and peer groups. This arrangement has also altered the way
in which students and academics use their time and learning spaces in order to achieve their educational goals.

With the increasingly diverse student population, occasioned by the changing teaching and learning environments, many higher education institutions are opting for flexible delivery of their courses by combining face-to-face and computer-mediated delivery modes. However, there is the tendency to focus too much on technologies, and not on the learning processes. Meanwhile, most educational technologies are still task-oriented rather than process-oriented and therefore are not capable of effectively supporting students and academics in their learning and teaching experiences in relation to time and the effective utilization of students’ learning spaces. What have previously been referred to as learner support services are systems-driven and not based on pedagogical and social frameworks. This is not the case with the current trends.

In summing up the comments of the academics in relation to the themes of time, space and pedagogy, it is evident that learning spaces have attracted greater concerns for support mechanisms compared to time and pedagogical frameworks (ref. fig. 8-1). Although direct assistance is particularly critical to the success of blended learning, a combination of both direct and indirect support services is able to deliver the best support mechanism for successful blended learning, taking into consideration the challenges of time and learning spaces for both students and academics. In order to promote successful learning and teaching experiences for students and academics, higher education institutions will have to pay greater attention to the development of integrated support structures. Also these support structures need to be crafted in such a way that the learning materials are capable
of offering robust means of engaging with the students *anytime* and *anywhere*, supported by effective Internet connectivity.

Subsequent discussions will summarize comments that have emerged from the research themes, about the students’ and academics’ experiences in relation to the challenges offered by the present and future of blended learning in the regional university. The two figures below represent the students’ and academics’ comments on the themes of time, space and pedagogy.

![Diagram](image)

**Fig. 8-1** *Frequencies of students’ views on the themes of time, space and pedagogy (The higher the %, the greater the concerns)*

Figure 8-1 shows that students learning spaces, in relation to blended learning, have not been effectively managed by the regional university, as students expressed dissatisfaction concerning the effective use of their time. These percentages were calculated from the overall comments students and academics contributed, which were further grouped under what has been referred to in the current study as students’ and academics’ perspectives. Subsequent discussions will consider the implications of the different factors for both students’ learning and academics’ teaching experiences.
Meanwhile, the figure below shows that academics have expressed concerns about support mechanisms and inadequate institutional support for blended learning in relation to time, space and pedagogical frameworks. Thus, the figure below shows the relationships among the research themes of time, space and pedagogy as reflected by the academics’ data.

**Fig. 8-2 Frequencies of academics’ views on the concepts of time, space and pedagogy**

*(The higher the %, the greater the concerns)*

Figure 8-2 shows the academics’ concerns about the lack of institutional support mechanisms for blended learning in relation to the effective management of teaching spaces, as compared to the time and the responsive pedagogical framework categories. From the academics’ experiences, the concept of time has been predominantly about how much they are called upon to accomplish in the context of blended learning. The concept of time was all about the additional workload the academics have to shoulder due to the overall lack of teaching staff at the regional university. In other words, teaching through blended learning provides additional responsibilities to individuals who are already overstretched. We will now consider comprehensive summaries of the comments made by the participants on the specific themes of time, space and pedagogy.
8.3.1. Time factors

The lack of time has been particularly consistent in the academics’ voices throughout the focus group discussions for the present study. From the experiences of the academics who took part in the study, lack of time is represented by the time required for training, skill development, research and lecture preparations. The time taken for the preparation of blended learning materials has been reported to be considerably higher than that for face-to-face teaching (Care & Scanlan, 2001). Although the time to develop materials for blended learning is considerably higher, the same academics are often expected to produce research publications as part of their own ‘growth’.

This scenario therefore creates conflicts which are not experienced to such a degree in the usual face-to-face teaching. The lack of time is also linked to the problem of workload as already expressed by the academics. In summary, the working definition for time insofar as the present study is concerned is that the concept of time constitutes the freeing of both academics and students from their routine activities such as paid jobs, family obligations, and physical classroom teaching, to give them sufficient opportunities to attend to online tasks as well.

As for students, the challenge of time presented itself in several perspectives, such as technological support perspectives, computer knowledge perspectives, academics’ support perspectives, and institutional support perspectives as already discussed in chapter six. Although it’s widely accepted that technologies improve the quality of learning (Osuguthorpe & Graham, 2003; Twigg, 2005), this study has established that much depends on the availability of support structures to both students and academics. The study
has also established that an improved quality of learning depends on the level of skills students and academics might have acquired, as the lack of such skills create what Moore (1993) refers to as “transactional distance”.

8.3.2. Space factors

Although the emerging technologies have offered many promises, there are a number of issues that need to be addressed: for example, problems with technologies themselves, with the role of administration, with delivery methods, with academics’ support and with students’ support in relation to the prevailing social, political and economic changes that also affect teaching and learning time, space and pedagogy. Technical support is defined by the availability of support staff present, to provide one-on-one support for both academics and students, be they struggling with hardware or software. Technical support is critical as it provides an environment that is conducive for using technology for teaching and learning. It also contributes towards maximization of time and increases efficiency and effectiveness of interactions between and among academics and students.

Students’ concerns for effective use of learning spaces consisted of a number of perspectives such as technological support perspectives, institutional support perspectives, student–student support perspectives, and academics support perspectives. Research by Covington, Petherbridge and Warren (2005) has established that inducting instructors into technology-mediated teaching experiences presents a new shift for higher education institutions. It is evident that the success of blended learning will not depend on technologies alone; instead, the new technological innovations will help facilitate the desired changes higher education institutions would like to embrace. Indeed, the success
of blended learning will be brought about by higher education institutions selecting the right combination of media that will open up a variety of learning opportunities.

Oftentimes the overall planning for blended learning is too much focused on technologies and delivery methods but not on student support mechanisms (Levy, 2003), and yet without adequate and meaningful support mechanisms, students are likely to delay completion or drop out altogether (Rumble 2000). The challenge, therefore, is for higher education institutions to offer online students accompanying support mechanisms similar to the ones enjoyed by those on campus. One of the ways of offering learning access would be for higher education institutions to work out systems so that all students studying through blended learning could acquire personal computers and Internet connectivity at home (Rumble, 2000).

Integration of learning technologies into the current learning culture demands substantial thinking and rethinking about pedagogic frameworks and educational practices, because learning technologies present significant challenges to academics charged with the task of making this transition during their careers (Wilson & Stacey, 2004). There are also issues that arise during the changeover processes from traditional delivery mechanisms (such as lectures) to activity-based educational models that give more responsibilities to students for their learning outcomes. These are skill-related issues that higher education institutions will need to address. To succeed, higher education institutions will need to select technologies for learning that draw from practical applications to facilitate complex tasks (Donnelly, 2009). It is therefore worth noting that while technology is the enabler, it may also be a barrier to the full realization of blended learning. Only when higher education
institutions address more fundamental issues of pedagogy, and learners’ responses to online learning; will these institutions be able to claim that online learning is making significant contributions to institutional learning goals.

With the abundant opportunities to utilize online contents comes the danger of an increased workload for academics. The utilization of online technology also necessitates that academics develop familiarities and comfort levels with technology-based delivery methods such as the Internet. It is apparent that academics, in particular, need to be offered professional development opportunities to enable them to understand how better to implement blended learning. Professional development and training is necessary on the premise that academics need to close the gaps between the use of technology and enriching learning outcomes. This can only be achieved if the academics’ skills are enhanced through relevant training (Rogers, 2003). Professional development and training of academics who work in facilitator and moderator capacities are critical to the success of blended learning, since most academics involved may not be well equipped with the necessary technological and pedagogical skills required by blended learning arrangements.

The provision of quality support to students studying through blended learning means academics will need to re-evaluate long-held cultural beliefs related to teaching and learning (Mills & Tait, 1996: 6). Moreover, academics will need to be assured by their higher education institutions that flexibility in learning does not mean compromising quality, but is instead a way of creating access and of inviting students to participate in the process of their learning (Mills & Tait, 1996).
Since blended learning practice is informed by constructivist theory, it means that the implementation of blended learning will encourage higher education institutions to move away from a relatively passive leadership to a “constantly changing environment that demands active, enlightened and sensitive leadership” (Barone, 2005: 9). By adopting the cultural values of the new teaching and learning paradigm, higher education institutions can develop a practice of shared governance that takes into consideration the challenges of time and space for their academics and students. According to Barone (2005: 10),

[s]pace in the new academy is designed to support learning and research goals, not to comply with artificial space utilization criteria, such as number of tablet armchairs per square foot, percentage of seat occupancy per hour of the day and day of the week, and so on.

Learning spaces such as wireless networks, small groups, and social spaces, according to Barone (2005), are also meant to support learning activities such as construction of knowledge, engagement in problem solving, and practical activities. The existence of some of these spaces are relatively unfamiliar to higher education institutions and academics, and therefore present formidable challenges as to how students might be supported to effectively make use of them. Although blended learning is associated with improved teaching and learning and also with cost savings, realizing these learning designs in higher education institutions presents enormous concerns. The institutions must create the necessary policy, human resources, and support mechanisms to ensure that blended learning succeeds (Garrison & Kanuka, 2004).

8.3.3. Pedagogical factors

The implications of the new shift for convenience in teaching and learning are such that students are individually required to actively engage in their learning processes. Higher education institutions are required by ‘the system’ to offer supportive technological and
social contexts for blended learning students. To successfully implement blended learning, higher education institutions will be required, not only to support such students, but also to attempt to ease some of the instructional burdens placed on the academics. An important question that will influence future directions for blended learning will therefore be: what can be done to help academics become more efficient and effective in teaching and managing the new learning space? As a recent phenomenon, it is important to understand the overall attitudes and motivational factors toward blended learning of academics in higher education. They will certainly be required to participate in delivering courses using computer-mediated delivery methods, in addition to the classroom experience (Errington, 2004). Such understandings, if achieved, are likely to lead to course designs that are both time and space friendly: designs that support students to study through blended learning.

In the new partnership, there are distinctive roles and responsibilities for both students and academics. “Further, the explosion of knowledge in the late twentieth century meant a greater emphasis on the process of learning rather than on the content which is, it is widely argued, rapidly superseded” (Farrell, 2001: 73). Moreover, according to Farrell, “the pedagogical theory of learner-centeredness coincides with another trend: the ‘commodification’ of education provision as a service industry and the emergence of for-profit educational organizations, with a consequent emphasis on students as clients and customers” (2001: 73). However, Farrell laments that “too often virtual education has been approached as a technical solution to distance, without considering that, for the student, the nature of the educational experience is a function of the opportunities for thinking and learning that the institution might provide” (2001: 75). It was not until late twentieth century when a new shift began, away from the teacher-centered model of education.
Clearly the move tended to favour the pedagogical and social theories for a new student-centered approach, thereby giving greater responsibilities to learners in their own learning experiences.

According to Niemiec and Otte (2009), there must be clear objectives for any blended learning to be successful. Unfortunately many higher education institutions have begun blended learning programs without adequate planning and without necessary support structures in place (Broskoske & Harvey, 2000; Katz, 2003; Levy, 2003). Thus, the contemporary academics appear to be at the crossroads of traditional education and information technology, attempting to balance many skills, roles and responsibilities in terms of teaching, and to undertake research at the same time. Fuelling this tension, the context in which academics are working is rapidly changing because of new educational philosophies and practices, some of which seek to respond to the uniqueness of blended learning students’ support needs.

In summing up the partnership among students, academics and higher education institutions, in the context of blended learning, Oh and Park (2009: 331-332) argue that:

For students, blended instruction provides active learning environments and flexibility in using time and resources. For faculty, the instructional method provides more time to spend with students individually and in smaller groups and improve quality of interactions with students. For the institutions, the blended learning approach increases flexibility in scheduling courses and improves the usage of blended resources such as classrooms and parking.

As already articulated in chapter three, the principles of good practice for blended learning must be guided by student–academic contact, cooperation amongst students, active learning, prompt feedback, time on task, high expectations, and respect for diverse learning styles and capabilities (Chickering & Gamson, 1987). It is expected that these
principles would be applied as a ‘package’ and with full cognizance of students’ time and learning spaces, so that the students can be responsive to the pedagogical frameworks for blended learning.

8.4. THE CASE FOR BLENDED LEARNING

Given the study’s findings that there is a substantial lack of support structures and commitment from management toward supporting blended learning, research studies are needed to build institutional development theories and best practice scenarios that can inform blended learning practitioners about how to obtain support and commitment from their institutions. The growing curricular demands and the desire to provide meaningful, engaging instructions have presented the academics and higher education institutions with the challenge to review and revise their styles of engagements with students. Many have viewed the assets of online learning as potential solutions to seemingly ever-increasing course content and competencies, without necessarily coming to terms with the limitations of the very technologies in use (Collopy & Arnold, 2009).

Although blended learning is perceived as widespread and effective, few models of practice exist to explain how academics might determine an ideal mix of the various delivery methods and thereby guide the practice of blended learning (Yoon & Lim, 2007). Successful implementations of blended learning will therefore require the following: a) understanding of the strengths of different mediums, b) understanding of how learners use information from different mediums, and c) understanding of how learners engage in this type of learning process. It is also about how academics can handle the demands of both
blended learning and the traditional face-to-face teaching methods simultaneously (Montera-Gutierrez, 2006).

According to Beyer and Apple (1998), “Today... public education is under a concerted attack from right wing forces that wish to substitute an ethic of private gain and an accountant’s profit and loss sheet for the public good” (1998: 4). They also lament that the top-down conceptualization of curriculum and increasing power and privileges of technology have resulted from “the language of efficiency, standards, competency assessment, cost effectiveness [that] impoverishes our imagination and limits our educational and political vision” (Beyer & Apple, 1998: 7). Apple’s analysis of the current political economy of the ‘call for technology’ for learning is that it will contribute to poverty among women in particular since women traditionally hold jobs that will be replaced by technology. He also considered the issue of race and class in his analysis to demonstrate the fact that it is often the privileged that stand to benefit from the use of technology for learning processes.

The claim that the introduction of technology is value free and objective and introduced for reasons of efficiency in universities are misrepresentation and are more often introduced to secure control over the workplace. Author such as Apple (1998) has made suggestions that technology has, in fact, been utilized to undermine the control academics have over their workplace and that initiatives for using technology has been developed to reduce influence of the academics. He also argued that technologies provide better surveillance and monitoring of workplace activities. He argues that the academics workplace and time have become contested terrains, while the learning environment
provides a place for conflict of interest for the industrial workplace, students, university administration and the community.

In other words, the introduction of technologies and blended learning delivery approach is viewed by some as an attempt to disciple new management in Australian universities to secure control over the academics workplace but also using market orthodoxy to reshape universities as commercial enterprise. Ironically, recent technologies have been associated with mass delivery of learning opportunities at low cost; although in reality, both remote and rural participation in Australia has not improved drastically over the last thirty years, according to the Bradley Higher Education Review (December, 2008).

Thus, many of the dysfunctional aspects identified and documented in this study can be seen in the context of the attempt by universities to run such programs as low cost options with minimal infrastructure. In many cases, the administrative and business systems of the universities and their regulations contradict the shift to technologies and impede its adoption for learning. Technologies in the higher education workplace therefore need to be considered in the context of the contested workplace in which initiatives by management are used to undermine and erode the authority of academics and students in their learning processes.

In spite of these numerous challenges and criticisms, technology has altered the way people think, work and learn, and if this premise holds true, then there’s a need to work out how we can support and teach using technology. According to Prensky (2004), our students have changed radically and most of them are ‘native speakers’ of digital language of computers, video games and the internet. But what should universities and academics
do to address and narrow the gap created by these two generational divide – digital native and digital immigrant? To do this with relative degree of success, we need to consider our methodology and the content of what needs to be taught.

1. Methodology: academics have to learn to communicate in the language and style of the digital natives. This is not about changing the meaning of what needs to be learned but going faster, less step by step, that is more random access and interactive.

2. Content: there are according to Prensky (2001) two kinds of content that needs to be taught to the digital natives, and these are: i) legacy (old system): legacy content refers to what is commonly regarded as the ‘traditional curriculum’ such as reading, writing, arithmetic, geography, history and logical thinking, ii) future content: future content consists of digital and technological curriculum such as software and hardware. Other contents digital natives might be interested in would include subjects such as ethics, politics, sociology and languages (Presnsky (2001).

The challenge therefore, is on how academics can teach both legacy and future content in the language of the digital natives. To do this with some degree of success, education institutions and academics must embark on translating and adopting relevant methodology and teaching styles, and this calls for new content and new thinking on the part of institutions and academics. Fundamentally, good communication between academics and students is critical as academics take time to understand each generation involved in the learning processes to be able to come up with strategies that will address generational, pedagogical and technological disparities. On the side of the curriculum for the blended learning approach, academics will need to develop good instructional plans that are
capable of promoting pedagogical practices that encourages or enhance interactive, problem-based and technology enhanced teaching and learning.

There’s also the issue of the colonization of academics home space due to the adoption of the blended learning approach by various institution. This was evident in the current study as academics complained about the lack of privacy as students have the liberty to contact them anytime/anywhere, as they take advantage of the open environment created by technologies. With that in view, academics need to assume more power over the design of the curriculum to mitigate the colonization of their home space and pedagogy through what Beyer & Apple (2008) considered the top-down conceptualization of curriculum. Academics need to develop assertiveness, and become less passive in the learning process. Students on their part need to invoke more power around consumer rights if the universities are going to push the orthodoxy of the market and the practice of corporate universities.

Moreover, to address the dysfunctional nature of support services identified in the current study, academics will need to come to terms with and embrace change and university administrators need to support skill development of the academics to enable them engage and challenge students through technology mediated learning processes (McGee, Dias, 2007). Secondly, academics need to understand when they can use the various electronic media to achieve their teaching goals. Thus academics need to develop knowledge skills to improve intellectual capabilities that supports interactive, and critical thinking when working in technology mediated environment. In an article by Moore, et. al., (2007), the title heading, Pedagogy First, Then Technology, the authors have suggested that
pedagogical practices for blended learning approach need to involve “interactive inquiry or problem-based technology enriched teaching and learning” (2007: 46). This calls for collaborative approach, so that is it not just the universities, not just employers, or some of the students studying through blended learning, and not just the academics, but it is collaborative learning processes where everyone is engaged in one way or another.

According to Kim, Bonk and Oh (2008: 14), “given many confusions and the unknowns about blended learning, it is important for human performance technology, training, and human resource development professionals to have a compass for navigating the uncharted waters of blended learning by understanding its future directions”. More importantly, it is expected that the blended learning of the future will be informed by clearly articulated institutional goals. Notwithstanding the challenges, blended learning platforms need to provide rich and diverse sets of resources to support students in finding solutions for potentially diverse sets of instructional problems. There is also a need to help students make decisions about what resources and tools to use for their own learning purposes.

8.5. RECOMMENDATIONS

Many universities in Australia and elsewhere in the world are opting for blended learning approach, and their decisions are mainly prompted by a number of reasons, among them: i) current education delivery systems are seen to be too rigid and limiting, ii) geographic spread and commitment of learners to multiple roles require liberal access and flexibility, iii) blended learning approach offers a more flexible and responsive avenue to learn and work.
Nevertheless, according to Harris, Connolly, Feeney, (2009), universities are challenged to adopt what he considers “an integrated, strategic, best practice approach to learning delivery is required to ensure that all clients, and staff are supported effectively irrespective of roles or geographic location” (2009:155-163). Current study has identified a number of factors that are likely to either negatively or positively affect or impact the educational outcomes of blended learning approach and these are: a) skill capacity, b) support strategy, c) implementation processes, d) technology, and e) human factors.

Skill capacity

The use of technology for education brings with it the challenge of skill levels require by both students and academics for interactive learning. According to Childs, Blenkinsopp, Hall and Watson, (2005), skill capacity for learners involves IT, e-learning study skills, time management and providing advice on organizing e-learning tasks.

Recommendation

Skill capacity is required to provide education output but also to raise the capacity of learners to effectively access blended learning content. In case of any skill-gaps, appropriate time and resources should be clearly spelt out.

Support strategy

One of the gaps identified by the current study is the significance of academic presence/absence in the blended learning approach. According to Garrison and Kanuka, (2004), development of critical thinking is “rarely accomplished by students in isolation” (2004:98). Meanwhile, Childs et al., (2005) have suggested that the presence of range of
skilled IT staff, design staff, trainers, support staff, administrators are critical to students support.

**Recommendation**

Like any other new learning approach, adequate support to students and academics should be made available when required; therefore the need for appropriately skilled personnel. Unambiguous and proactive communication therefore becomes an important factor in delivering such support.

**Implementation process**

Critical to the implementation processes of blended learning are factors such as human, financial and technological or technical resources (Garrison and Kanuka, 2004; Green, Weaver, Voegeli, Fitzsimmons, Knowles, Harrison, 2006). Blended learning implementation process is extremely demanding on academics, particularly in terms of the organisation of learning materials (Perreira, Pleguezuelos, Meri, Molina-Ros, Molina-Tomas, Masdeu (2007). It is imperative to set aside time to develop and evaluate course materials (Childs et al., 2005). Organisation of course materials also requires adequate time for research to avoid the temptation of what Transler (2002) termed ‘short-term fix’.

**Recommendation**

There’s a great need to set aside time to communicate with, to engage and to actively involve academics and students so they are fully aware of blended learning requirements. Thus, ‘short-term fix’ approach to course implementation processes should be avoided and instead adopt a strategic and an ongoing evaluative approach. More importantly, emphasis
of implementation of blended learning should be on learning processes and educational outcome instead of technology itself.

**Technology**

While face-to-face learning format remains an important sector of blended learning approach, the use of technology underpins any blended learning approach for program efficiency, acceptance and students’ satisfaction. Therefore, easy access to technology for both students and academics is critical for successful delivery of blended learning approach (Childs et al., 2005). Both the technology and the course content should be of the highest quality possible, although to be effective, emphasis should be on learning aspects, instead of technology (Mitchell, Honore, 2007; Sloman, 2007).

**Recommendation**

Focus on technology should not be to the expense of the process of teaching and the desired learning output. More importantly, universities and high institutions should account for limitations regarding and technology.

**Pedagogy**

As already mentioned, the blended learning approach should focus on the learning process, learning outcomes, and learning environment instead of technology as a tool often used for aiding such processes. Authors such as Green et al., 2006 and Bandura, 1997, suggest that a social and constructivist approach to learning best fits the blended learning initiative. Green et al., (2006) also recommends that blended learning approach should adopt interaction and discussion mode, to the learning processes.
According to (Adams, 2004; Mogey, 1999 as cited in Green et al., 2006), “by presenting information to students in a variety of ways it is suggested that a greater number of individual learning styles could be covered (2006:394).

**Recommendation**

One of the characteristics of effective instructional design concept is that it is problem or task-based and it is adult-centred. Individuals tasked with the responsibilities of designing courses for blended learning should avoid the assumption that the pedagogy of ‘yesterday’s course is applicable for blended learning approach. Therefore courses which are to be delivered through blended learning approach should be reviewed for different methods of delivery.

**Human factor**

When learners’ needs and expectations are not accounted for, the technology-push alone becomes inadequate (HEFC, 2005b; 2005a; Ennew and Fernandez-Young, 2006). Indeed, considering learner’s individual differences, personal characteristics and learning styles are critical for successful blended learning outcomes (Akkoyunlu and Yilmaz-Soylo, 2008). Thus, managing learner expectation, understanding and motivation are critically important (Bliuc, Goodyear and Ellis, 2007; Stewart, 2002). According to Mitchell et al., (2007), attitude and motivation of students are particularly important for blended learning approach.
**Recommendation**

Students’ needs, learning styles, expectations and motivations should be accounted for by both the administrators and academics. To get maximum ‘buy-in’, students need to be motivated enough to persevere under the blended learning approach. In other words, if students’ expectations are clearly articulated, it is likely to result into a positive effect on their experience and offer them additional motivation to engage further in pursuit of blended learning.

In summing up a variety of literature cited above, it is clear that before and during the development and implementation stages of blended learning approach, there is need to attend to variety of stakeholders perspectives. According to Harris et al., (2009), “failing to do so represents a significant risk” (2009:155-163).

Secondly, decision to blend specific courses and how best to deliver them, will depend to a large extent, on expert academics, but also a particular university’s education philosophy.

Thirdly, while technology is important for accessibility, interactions with the administrators, academics, students and the study materials are critically important.

Fourthly, in as far as pedagogy is concerned, individual characteristics of learners such as motivation, expectations and leaning styles must be adequately accounted for. Additionally, learning processes, learning outcomes and environmental factors should be taken into consideration.
Fifthly, before adopting blended learning approach, a number of important questions need to be raised in order to establish both the advantages and disadvantages of available approaches.

Finally, although it is clear that blended learning has the potential to provide quality education outcomes, it is imperative to recognize its limitations. It is therefore critical that time, resources and evaluation procedures are adequately attended to by both universities and the academics.

8.6. SUGGESTION FOR FUTURE RESEARCH

It appears many universities are driven by the desire to harness finances to fuel their growth. As a result many are focused in aggressive marketing of their degree courses that could be taken through blended learning approach.

With the emergence of blended learning opportunities, supported by easy access of the internet connectivity, we are also likely to see an increase on academic capitalism in education. As education assumes this characteristic, are universities not side-stepping quality and effectively locking out students from developing rewarding career? Could it be that as universities compete against each other to attract students that they forget their original mission, distorting their areas of academic excellence?

It’s possible that although the goal of some of these universities were to raise additional funds, and the students’ desire for lifelong learning, the processes are likely to alter the behavior of individuals and groups within and without the universities. In spite of universities successes in marketing their degree courses, a lingering question that requires
some clarifications, therefore, is to establish if such aggressive strategies by universities have not often taken priorities against quality teaching and research. Are students getting value for their time, space and money and what is the economy of blended learning in as far as blended learning approach is concerned? Do some of these universities have the capacity and the technological infrastructure that justifies students’ expenditure in the context of the blended learning approach?
References


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APPENDIX A

Information Sheet for Academics

Research Project
PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY

The changing higher education landscape is reshaping the idea of academic support services in universities. In this landscape the spaces in which teaching and learning occur are varied, the times flexible and the pedagogy increasingly student-centred and oriented towards lifelong learning goals. This project will explore the dynamics of these changes in terms of academic support through the experiences of students, and teachers in a range of schools and courses.

This research is being undertaken by me, Bernard Suwa, in partial fulfillment of a Doctoral study program. As part of this project, I would like you to consider volunteering and participating in group discussions exploring the following questions:

4. Why is it critical for higher education institutions to provide effective and efficient support for students and academics of blended learning throughout their learning and teaching experiences?

5. What are some of the factors likely to create satisfaction for students and academics of blended learning?

6. How effective and efficient are the current support mechanisms being provided to the students and academics in a regional university in New South Wales in relation to blended learning, and how might they be improved?

In these meetings, we will discuss your experiences as teachers in a rapidly changing higher education landscape. The focus group meetings will be held in seminar rooms located at various library facilities of UWS. Specific campus locations will be communicated to participants later. Each meeting is intended to last for 60-90 minutes, while follow-up individual interviews of randomly selected persons will run for 45-60 minutes and they will be conducted in individual offices by way of appointments.

In the group there will be people from the schools of Management, Computing, Education and Marketing in UWS. Your participation in this exercise will be anonymous unless you provide your contact address such as email to indicate that you would like to receive a report of the result. Thank you for assisting in this research project. If you would like more information about this survey, please don’t hesitate to contact me directly on (M) 0421831264 or, [15877967@uws.edu.au].
This study has been approved by the University of Western Sydney Human Research Ethics Committee. If you have any reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Research Ethics Officers (Tel: 02 47 360 883). Any issue you raise will be treated in confidence and investigated fully, and you will be informed on the outcome.
APPENDIX B

Information Sheet for Students

Research Project

PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY

The changing higher education landscape is reshaping the idea of academic support services in universities. In this landscape the spaces in which teaching and learning occurs are varied, the times flexible and the pedagogy increasingly student-centred and oriented towards lifelong learning goals. This project will explore the dynamics of these changes in terms of academic support through the experiences of students, in a range of schools and courses.

This research is being undertaken by me, Bernard Suwa, in partial fulfillment of a Doctoral study program. As part of this project, I would like you to consider volunteering and participating in group discussions exploring the following questions:

1. Why is it critical for higher education institutions to provide effective and efficient support for students and academics of blended learning throughout their learning and teaching experiences?
2. What are some of the factors likely to create satisfaction for students and academics of blended learning?
3. How effective and efficient are the current support mechanisms being provided to the students and academics in a regional university in New South Wales in relation to blended learning, and how might they be improved?

In these meetings, we will discuss your experiences as students in a rapidly changing higher education landscape. The focus group meetings will be held in seminar rooms located at various library facilities of UWS. Specific campus locations will be communicated to participants later. Each meeting is intended to last for 60-90 minutes, while follow-up individual interviews of randomly selected persons will run for 45-60 minutes and they will be conducted in the same venue as focus group meetings.

In the group there will be students from the schools of Management, Computing, Education and Marketing in UWS. Your participation in this exercise will be anonymous unless you provide your contact address such as email to indicate that you would like to receive a report of the result. Thank you for assisting in this research project. If you would like more information about this survey, please don’t hesitate to contact me directly on (M) 0421831264 or, [15877967@uws.edu.au].
This study has been approved by the University of Western Sydney Human Research Ethics Committee. If you have any reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Research Ethics Officers (Tel: 02 47 360 883). Any issue you raise will be treated in confidence and investigated fully, and you will be informed on the outcome.
APPENDIX C

Consent Form for Academics and Students

After you have read the attached information sheet, please fill in this form and return it to me using the self-addressed envelope provided. You do not need to return the Information Sheet, only the Consent Form. Once again, thank you for agreeing to take part in this project.

Project Title

PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY

Investigator (Student)

Bernard Suwa

Supervisors

Dr. Carol Reid & Associate Professor, Beth Southwell, Dr Katina Zammit

School/Division’s Name: □ Management □ Computing □ Education □ Marketing
Staff Role: □ Teaching □ Administrative □ Teaching & Administrative

Campus: _________________________________________________________________

I consent to be involved in this research project and I understand that:

• Participation is voluntary and non-coercive, and I can withdraw at any time from the project and withdraw any unprocessed data previously supplied at request.

• Individuals will be assigned a pseudonym to protect anonymity and, subject to legal limitations, ensure confidentiality.

• Participation in the project will involve discussions during focus group meetings and individual interviews.

• Publication of the materials emanating from this project is possible as long as I remain anonymous.

Signature: __________________________ Date __________________________
APPENDIX D

Academics’ Focus Group Discussion Questions

Introduction
This Focus Group will comprise of the teaching staff in a blended learning program of the University of Western Sydney. Participants will be drawn from the Schools of Management, Education, Computing and Marketing. The group’s task is to discuss current practices in the schools of Management, Computing, Education and Marketing in a rapidly changing higher education landscape. For the purpose of this research, ‘blended learning’ implies the fusion and amalgamation of technology-mediated or, non-face-to-face and face-to-face interactions in a changing time, space and pedagogy. In other words, the concept of blended learning defines the relationship between technology-mediated and face-to-face processes of learning activities; producing a new higher education landscape.

Problem Statement
The present lifestyle and work experiences of many people are creating new challenges to higher education as more and more people choose to combine work and study at the same time. The current trend means that the roles of students, and teachers in higher education are changing; as new technologies encourage easy access of education from home, workplaces, and other avenues, apart from classrooms. Also the new technologies have altered both the teaching and learning landscape and pedagogical approaches. Therefore, through a case study approach, and in the context of the changing landscape, my project seeks to develop an account of students, and teachers support experiences in these changing times, spaces and pedagogies.

The changing higher education landscape is reshaping the idea of academic support in universities. In this landscape the spaces in which teaching and learning occurs are varied, the times flexible and the pedagogy increasingly student-centred and oriented towards lifelong learning goals. This project will explore the dynamics of these changes in terms of academic support through the experiences of students, and teachers in a range of schools and courses.

The study aims to answer the following key questions:

1. Why is it critical for higher education institutions to provide effective and efficient support for students and academics involved in blended learning throughout their learning and teaching experiences? This question seeks to explore the significance of support mechanisms to both students and academics, as blended learning arrangements must be responsive to learning and teaching spaces that are different from the usual classroom or face-to-face learning experiences and require flexible timeframes. An understanding of the rationale for supporting both students and
academics in a blended learning environment is essential to developing an in-depth understanding of why higher education institutions are currently using technology for learning and teaching.

2. **What are some of the factors likely to create satisfaction for students and academics learning and teaching through blended learning?** Informed by available literature on the successes and constraints of blended learning, this question is intended to identify global experiences likely to contribute to the successes of blended learning and to compare them to those that are practiced at a regional university in New South Wales. The global experiences will be used to compare and contrast the local experience at a regional university (informed by the current research outcome).

3. **How effective and efficient are the current support mechanisms being provided in relation to blended learning and how might they be improved?** This question offers students and academics at a regional university the opportunity to share their own stories and assessments of the effectiveness and efficiency of the support mechanisms available to them. It seeks to understand students’ and academics’ explanations for the disparities identified in research question number one and two, insofar as the reasons for support and the operation of such support mechanisms are concerned. In other words, this question explores linkages between impediments to blended learning and its required support mechanisms. To elicit responses from both students and academics, I will:

a) conduct a case study of one institution in order to compare and contrast with identified global academic support strategies necessary for effective learning and teaching in the context of a changing higher education landscape;

b) conduct focus group discussions and interviews in order to document the experiences of students and academics in relation to issues of time and space that impact on their teaching and learning experiences; and

c) analyze these students’ and academics’ data in order to discern whether or not the current support being provided by the university administration to students and academics is effective and efficient.

The purpose of this research is to gain an understanding of the nature of support services to the teachers in a changing higher education landscape. This research is being undertaken by me, Bernard Suwa, in partial fulfillment of a Doctoral study program and the title of my thesis is; **PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY.**
Questions for Discussions

1. What are some of the areas you perceive as being a high priority to address within your work? For example, administrative structures, promotion, pay increment for staff, time and training.

2. What would you say are some of the challenges facing our modern universities, as they strive to provide education for all in a rapidly changing higher education landscape? For example: i) administration policies, ii) course design, iii) course delivery methods, iv) liberalization of learning spaces, v) student assessments, vi) library services, and vii) information communication technologies (ICT)?

3. Do you have any pedagogical concerns in as far as learning spaces and the use of technologies in education are concerned? For example: i) Change of roles and responsibilities for both teaching and administrative staff, ii) Use of technology, iii) Interaction with students and changes in interpersonal relations and iv) Assessments and feedbacks. What suggestions would you offer in order to enhance the efficiency and the effective course delivery in the new learning environment?

4. Does your school/division have any policy governing the Intellectual Property on blended learning materials? What are some of your fears and anxieties concerning the ownership of blended learning materials?

5. What do you perceive to be the new roles for teaching and administrative staff in a changing higher education landscape?

Thank you for assisting in this research project. We will share the result upon request. If you would like more information, please don’t hesitate to contact me directly at (02) 96797172 or, 0421831264 or, [bosuwa@gmail.com].
APPENDIX E

Students’ Focus Group Discussion Questions

Introduction

This Focus Group will comprise of current students (2006-2007) in a blended learning program of the University of Western Sydney. The students will be drawn from the Schools of Management, Education, Computing and Marketing. The group’s task is to discuss current practices in the schools of Management, Computing, Education and Marketing in a rapidly changing higher education landscape. For the purpose of this research, Blended Learning implies the fusion and amalgamation of technology-mediated or, non-face-to-face and face-to-face interactions in a changing time, space and pedagogy. In other words, the concept of blended learning defines the relationship between technology-mediated and face-to-face processes of learning activities; producing a new higher education landscape.

Problem Statement

The present lifestyle and work experiences of many people are creating new challenges to higher education as more and more people choose to combine work and study at the same time. The current trend means that the roles of students, teachers and administrative staff in higher education are changing; as new technologies encourage easy access of education from home, workplaces, and other avenues, apart from classrooms. Also the new technologies have altered both the teaching and learning landscape and pedagogical approaches. Therefore, through a case study approach, and in the context of the changing landscape, my project seeks to develop an account of students, and teachers support experiences in these changing times, spaces and pedagogies.

The changing higher education landscape is reshaping the idea of academic support in universities. In this landscape the spaces in which teaching and learning occurs are varied, the times flexible and the pedagogy increasingly student-centred and oriented towards lifelong learning goals. This project will explore the dynamics of these changes in terms of academic support through the experiences of students, teachers and administrative staff in a range of schools and courses.

The study aims to answer the following key questions:

4. **Why is it critical for higher education institutions to provide effective and efficient support for students and academics involved in blended learning throughout their learning and teaching experiences?** This question seeks to explore the significance of support mechanisms to both students and academics, as blended learning arrangements must be responsive to learning and teaching spaces that are different from the usual classroom or face-to-face learning experiences and require flexible timeframes. An understanding of the rationale for supporting both students and
academics in a blended learning environment is essential to developing an in-depth understanding of why higher education institutions are currently using technology for learning and teaching.

5. What are some of the factors likely to create satisfaction for students and academics learning and teaching through blended learning? Informed by available literature on the successes and constraints of blended learning, this question is intended to identify global experiences likely to contribute to the successes of blended learning and to compare them to those that are practiced at a regional university in New South Wales. The global experiences will be used to compare and contrast the local experience at a regional university (informed by the current research outcome).

6. How effective and efficient are the current support mechanisms being provided in relation to blended learning and how might they be improved? This question offers students and academics at a regional university the opportunity to share their own stories and assessments of the effectiveness and efficiency of the support mechanisms available to them. It seeks to understand students’ and academics’ explanations for the disparities identified in research question number one and two, insofar as the reasons for support and the operation of such support mechanisms are concerned. In other words, this question explores linkages between impediments to blended learning and its required support mechanisms. To elicit responses from both students and academics, I will:

   a) conduct a case study of one institution in order to compare and contrast with identified global academic support strategies necessary for effective learning and teaching in the context of a changing higher education landscape;

   b) conduct focus group discussions and interviews in order to document the experiences of students and academics in relation to issues of time and space that impact on their teaching and learning experiences; and

   c) analyze these students’ and academics’ data in order to discern whether or not the current support being provided by the university to students and academics is effective and efficient.

The purpose of this research is to gain an understanding of the nature of support services to the students in a changing higher education landscape. This research is being undertaken by me, Bernard Suwa, in partial fulfillment of a Doctoral study program and the title of my thesis is: PROVISION OF SUPPORT TO UNIVERSITY STUDENTS AND ACADEMICS IN BLENDED LEARNING – A CASE STUDY OF TIME, SPACE AND PEDAGOGY.
Questions for Discussions

1. How would you describe your experience in relation to the academic support you require from both the teaching and the administrative staff of your division or school?

2. What would you say are some of the challenges facing our universities, as they strive to provide education for you in a rapidly changing higher education landscape?

3. How much do the following aspects impact on your learning experiences? i) administration policies, ii) course design, iii) course delivery methods, iv) liberalization of learning spaces, v) student assessments, vi) library services, and vii) information communication technologies (ICT).

4. What suggestions would you offer in order to enhance efficiency and effective course delivery in a rapidly changing higher education landscape?

5. How can teachers motivate students to learn effectively in the new learning environments?

Thank you for assisting in this research project. We will share the result upon request. If you would like more information, please don’t hesitate to contact me directly at (02) 96797172 or, 0421831264 or, [bosuwa@gmail.com].
APPENDIX F

UWS HUMAN RESEARCH ETHICS COMMITTEE APPROVAL

8 November 2011

Associate Professor Carol Reid,
School of Education

Dear Carol,

I wish to formally advise you that the Human Research Ethics Committee has approved your research proposal H5145 “Provision of Support to university Students and Academics in Blended Learning: A case study of time, space and pedagogy”, until 30 December 2007 with the provision of a progress report annually and a final report on completion.

Please quote the project number and title as indicated above on all correspondence related to this project.

This protocol covers the following researchers:
Carol Reid, Bernard Suwa.

Yours sincerely

Dr Anne Abraham
Chair, UWS Human Research Ethics Committee