On-campus students’ learning in asynchronous environments.

by

Philippa Gerbic, LLB, BA, MComLaw (ions)

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Deakin University
December 2006.
DEAKIN UNIVERSITY
CANDIDATE DECLARATION

I certify that the thesis entitled On-campus student’s learning in asynchronous environments

submitted for the degree of Doctor of Philosophy

is the result of my own work and that where reference is made to the work of others, due acknowledgment is given.

I also certify that any material in the thesis which has been accepted for a degree or diploma by any university or institution is identified in the text.

Full Name: Philippa Gerbic
Signed: [Signature]
Date: 15 June 2007
Acknowledgement

I would like to thank my family, my partner Chris and friends for their tolerance, support and encouragement during my long years of work on this research and thesis.

I would also like to thank my supervisor Associate Professor Elizabeth Stacey for her assistance and attention to my research study and development as a researcher. Over the years, she encouraged, inspired and challenged me and provided constructive critique of my work, writing and thesis.

I would also like to indicate my appreciation of the student participants who gave of their time and let me observe their learning. I wish to acknowledge the teachers who kindly allowed me access to their classes and supported my research through their comments, feedback and encouragement.

Lastly, I would like to thanks my colleagues, both academic and non-academic, who have worked with me over the years and have supported and enthused me and given me space when needed for this research.
**Table of Contents**

**Chapter 1 : Introduction**

1.1 Introduction to the thesis  
1.2 Origins of the study  
1.2.1 My practice as a teacher  
1.2.2 My practice as a curriculum designer  
1.2.3 Universities  
1.3 Purpose of the study  
1.4 Research assumptions and questions  
1.4.1 Research questions  
1.5 Theoretical perspectives of the study  
1.6 Structure of the thesis

**Chapter 2: Computer-mediated conferencing (CMC)**

2.1 Introduction to the background chapters  
2.2 Constructivist perspectives  
2.2.1 An overview of constructivism  
2.2.2 Social constructivism  
2.2.3 Constructivism in the instructional design and educational technology context  
2.2.4 Critiques of the constructivist philosophy  
2.2.5 Identification of areas for further research  
2.3 Computer-mediated conferencing (CMC) and its role in constructivist learning  
2.3.1 Characteristics of CMC  
2.3.2 Text-based nature  
2.3.3 Interaction  
2.3.4 Time independence  
2.3.4.1 Time flexibility  
2.3.4.2 Time for reflection and writing  
2.3.5 Identification of areas for further research

**Chapter 3 : Contextual factors**

3.1 Introduction  
3.2 The experience of learning literature  
3.2.1 Introduction to the experience of learning literature  
3.2.2 Deep and surface approaches to learning  
3.2.3 The context of learning for students  
3.2.3.1 The learning activity  
3.2.3.2 The role of the teacher in the CMC environment  
3.2.3.3 Assessment  
3.2.3.4 Departments and their policies and practices, including disciplines  
3.2.4 Critique of the experience of learning literature  
3.2.5 Identification of area of further research
3.3 Information communication technology (ICT) based learning in universities
   3.3.1 Flexible learning 52
   3.3.2 Blended learning 55
3.4 Students' perspectives of online discussions within a blended environment 60
3.5 Identification of areas for further research 64

Chapter 4: Context for the study 65
   4.1 Introduction 65
   4.2 The university 65
   4.3 The Bachelor of Business 67
   4.4 Summary 71

Chapter 5: The design and methodology of the study 72
   5.1 Purpose of the chapter 72
   5.2 Research in the online learning field 72
   5.3 Qualitative inquiry and research 73
   5.4 A case study strategy 75
      5.4.1 Definition 75
      5.4.2 Advantages of the design for this project 76
      5.4.3 Criticism of the case study design 79
   5.5 My position as an insider researcher 80
   5.6 Implementation of the study 81
      5.6.1 The case study sites 81
      5.6.2 Participants and ethical matters 83
         5.6.2.1 Participants in the project 83
         5.6.2.2 Ethical issues 83
   5.7. Data collection 84
      5.7.1 Overview 84
      5.7.2 Paper-based course documents and information from the online site 85
      5.7.3 Transcriptions from the online discussions 85
      5.7.4 Student interviews 86
      5.7.5 Other data 87
      5.7.6 Data quality 89
      5.7.7 Collection and analysis phases 88
   5.8 Data management and analysis 89
      5.8.1 Content analysis of the online discussions 89
      5.8.2 Analysis of the interview and other data 92
   5.9 Preliminary trial 93
   5.10 Establishing the trustworthiness of the findings 93
      5.10.1 Credibility 93
      5.10.2 Transferability 94
      5.10.3 Dependability and confirmability 95
   5.11 Summary 96

Chapter 6: Introduction to the case studies and the first case study: The small groups case 97
   6.1 Introduction to the four cases 97
   6.2 The first case: A case about small groups: The first case 97
      6.2.1 Introduction to the case 97
Chapter 10: Approaches and Actions for Learning in Online Discussions

10.2 The approach and cross case matrix 190
10.3 Approaches and actions for learning in online discussions 191
  10.3.1 Approaches to learning 191
  10.3.2 Participant activity 194
10.4 The influence of the CMC environment 196
  10.4.1 Overall 196
  10.4.2 The text-based communication mode 196
  10.4.3 Peer interaction 200
  10.4.4 Time flexibility and independence 202
    10.4.4.1 Time flexibility 202
    10.4.4.2 Time independence 205
10.5 The influence of the curriculum in online discussions 206
  10.5.1 Assessment 206
  10.5.2 The discussion activities 208
  10.5.3 Discussion group size 211
  10.5.4 The role of the teacher 212
  10.5.5 The influence of the discipline 213
10.6 The relationship of the online discussions to the face-to-face classes 214
  10.6.1 The relationship and its nature 215
  10.6.2 The blended environment 216
10.7 Perspectives about online discussions from Chinese students 220
10.8 Contemporary student and time pressures 222
10.9 Summary 224

Chapter 11: Conclusion 226

11.1 Introduction 226
11.2 Summary of the study process 227
11.3 What has been learned from this research 227
  11.3.1 How did undergraduate students learn in online discussions? What were their approaches and actions? 228
  11.3.2 What was the influence of the online discussion environment, especially its text based nature, peer interaction and time flexibility and independence? 229
  11.3.3 What was the influence of the curriculum design? 230
  11.3.4 Is there a relationship for student learning between the online discussion activities and face-to-face classes? 232
11.4 Significance of the study’s results 234
11.5 Limitations of the study 237
11.6 Recommendations for further study 238
Appendices

Appendix 1: Glossary of terms 240
Appendix 2: Plain language statement for students 242
Appendix 3: Interview guide 245
Appendix 4: Participants’ background questionnaire 246
Appendix 5: Content analysis framework 247
Appendix 6: NVivo node structure 252
Appendix 7: Weekly teaching program 255
Appendix 8: Guidelines for online discussions 256
Appendix 9: Cross case analysis matrix 257

References 258
## List of tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Advantages of the CMC environment</td>
<td>22</td>
</tr>
<tr>
<td>2.2</td>
<td>Disadvantages of the CMC environment</td>
<td>23</td>
</tr>
<tr>
<td>3.1</td>
<td>Defining features of deep and surface approaches to learning</td>
<td>41</td>
</tr>
<tr>
<td>3.2</td>
<td>Summary of the differences between face-to-face (class) and online discussions</td>
<td>57</td>
</tr>
<tr>
<td>5.1</td>
<td>Overview of the data</td>
<td>85</td>
</tr>
<tr>
<td>5.2</td>
<td>Data collection and analysis phases</td>
<td>89</td>
</tr>
<tr>
<td>5.3</td>
<td>Content analysis frameworks</td>
<td>90</td>
</tr>
<tr>
<td>6.1</td>
<td>Summary of the online discussion activity</td>
<td>100</td>
</tr>
<tr>
<td>6.2</td>
<td>Overview of the participants (anonymised)</td>
<td>102</td>
</tr>
<tr>
<td>6.3</td>
<td>Online discussion groups</td>
<td>105</td>
</tr>
<tr>
<td>6.4</td>
<td>Online systems data</td>
<td>106</td>
</tr>
<tr>
<td>6.5</td>
<td>Content analysis: Deep approaches to learning</td>
<td>112</td>
</tr>
<tr>
<td>6.6</td>
<td>Content analysis: Surface approaches to learning</td>
<td>112</td>
</tr>
<tr>
<td>7.1</td>
<td>Online discussion activity</td>
<td>124</td>
</tr>
<tr>
<td>7.2</td>
<td>Overview of participants (anonymised)</td>
<td>126</td>
</tr>
<tr>
<td>7.3</td>
<td>Summary of online systems information</td>
<td>128</td>
</tr>
<tr>
<td>7.4</td>
<td>Summary of the participants’ postings</td>
<td>128</td>
</tr>
<tr>
<td>8.1</td>
<td>Online discussion activity</td>
<td>140</td>
</tr>
<tr>
<td>8.2</td>
<td>Overview of participants - Kiwi students (anonymised)</td>
<td>142</td>
</tr>
<tr>
<td>8.3</td>
<td>Overview of Participants - Chinese students (anonymised)</td>
<td>143</td>
</tr>
<tr>
<td>8.4</td>
<td>Online discussion systems data</td>
<td>147</td>
</tr>
<tr>
<td>8.5</td>
<td>Content analysis: Deep approaches to learning</td>
<td>149</td>
</tr>
<tr>
<td>8.6</td>
<td>Content analysis: Surface approaches to learning</td>
<td>149</td>
</tr>
<tr>
<td>9.1</td>
<td>Overview of the participants (anonymised)</td>
<td>170</td>
</tr>
<tr>
<td>9.2</td>
<td>Posting levels of the participants</td>
<td>173</td>
</tr>
<tr>
<td>9.3</td>
<td>Content analysis: Deep approaches to learning</td>
<td>176</td>
</tr>
<tr>
<td>9.4</td>
<td>Content analysis: Surface approaches to learning</td>
<td>176</td>
</tr>
<tr>
<td>10.1</td>
<td>Participation by message postings</td>
<td>195</td>
</tr>
<tr>
<td>10.2</td>
<td>Time and place perceptions of the classroom and online discussions</td>
<td>204</td>
</tr>
<tr>
<td>10.3</td>
<td>Summary of the main differences between discussions in online and face-to-face (classroom) settings.</td>
<td>217</td>
</tr>
<tr>
<td>10.4</td>
<td>A complementary framework for blending online and face-to-face (classroom) discussions.</td>
<td>218</td>
</tr>
</tbody>
</table>
List of Figures

Figure 4.1 Student centred learning in the Faculty of Business 68
Figure 6.1 Illustration of the BOL site. 99
Figure 7.1 Illustration of the online site. 123
Figure 8.1 Illustration of the online site 139
Figure 9.1 Illustration of the course online site 168
Abstract

Asynchronous online discussions have the potential to improve learning in universities. This thesis reports an investigation into the ways in which undergraduates learned in online discussions when they were included within their face-to-face courses. Taking a student perspective, four case studies describe and explain the approaches to learning that were used by business undergraduates in online discussions, and examine the influence of the computer-mediated conferencing (CMC) medium and curriculum design on student learning.

The investigation took a qualitative approach where case studies were developed from multiple data sources. In each of the cases, a description of the setting of the online discussions introduced the learning environment. Further details of student learning behaviours in the online discussions were provided by an analysis of the systems data and a content analysis of the online discussion transcripts. In depth interpretation of interview data added student perspectives on the impact of CMC characteristics, the curriculum or learning design and the relationship between the online discussions and face-to-face classes. A comparative cross case analysis of the findings of the four cases identified and discussed general themes and broad principles arising from the cases.

The campus-based students acknowledged that online discussions helped them to learn and their message postings evidenced deep approaches to learning. The students recognised the value for learning of the text based nature of the CMC environment but peer interaction was more difficult to achieve. Asynchronicity created time flexibility and time for reflection but it also presented time management problems for many undergraduates. Assessment was the most influential aspect of the curriculum design. The cases also identified the importance of a dialogical activity and the absence of the teacher from the online discussions was not problematic. The research identified new perspectives on the relationship between online discussions and face-to-face classes. Students regarded these two media as complementary rather than oppositional and affirmed the importance of pedagogic
connections between them. A teaching and learning framework for online discussions was developed from these perspectives.

The significance of this study lies in improved knowledge of student learning processes in online discussions in blended learning environments. The cases indicated the potential value of the CMC environment for constructivist philosophies and affirm the significant role of curriculum design with new technologies. Findings relating to the complementary nature of online and face to face discussions provided a platform for building a teaching and learning framework for blended environments which can be used to inform and improve pedagogical design, teacher expertise and student learning outcomes in asynchronous online discussions.
1. Introduction

1.1 Introduction to the thesis

This thesis describes and explains the way in which undergraduate students learn in online discussions when they are included within a campus-based course of study. The four case studies that follow describe and explain the approaches to learning that students used in the online discussions and investigate the influence of the online medium on student approaches to learning and the influence of the curriculum on student approaches. The cases also analyse and describe the relationship between the online discussions and the campus based classes in the blended environment that is encompassed in the study. The aim of the study was to advance understanding of the way in which online discussion technology might be used to improve teaching and learning in higher education and to improve the graduate outcomes of undergraduate courses.

1.2 Origins of the study

1.2.1 My practice as a teacher

I came to teaching in the Business Faculty in 1981 as a practising lawyer who wanted a change of career. When I began teaching, I faced a challenge, which was that business students regarded my subject, Commercial Law, as irrelevant, difficult and boring. During these first years of my academic career, I planned teaching and learning strategies, implemented them, observed their impact, deliberated on them and enacted new iterations. My reflection enabled me to formulate my own theories about how undergraduate students learned and about what might help and motivate them in this endeavour.

I developed two important approaches. The first of these was engaging students in activities that required sustained in-depth thinking and I learned the value of purposeful curriculum design which focused on authentic materials and problems. My second approach took into account students’ ideas about learning in my subject.
so that I could create a relaxed and constructive atmosphere in my classes. However it was always a challenge to persuade students to give attention to their writing and thinking skills, especially writing which was the main way in which students were assessed. As others have theorised (Richardson, 1994), writing has dimensions other than recording and could be used as a basis for thinking, development and understanding, and this philosophy has underpinned my ideas about curriculum design and this research study.

1.2.2 My practice as a curriculum designer
For over a decade, I led program and curriculum development initiatives in a rapidly expanding undergraduate business degree program. These new program developments have had a graduate outcomes focus, that is, a qualitative descriptor of a graduate which becomes the goal and main driver of the curriculum development. The faculty’s educational philosophy has emphasized student-centred learning, interactivity in teaching and learning, collaboration and teamwork, as well as regular evaluation of practice and the encouragement of innovation.

One major innovation was the introduction of online learning in 1999, and in my faculty role of fostering online learning, and also as a teacher (Gerbic, 2001), I explored the strengths and weaknesses of the online medium, especially the use of asynchronous online discussions. The text-based nature of the medium and the opportunities for reflecting and thinking about ideas appealed to me because they appeared to offer different learning opportunities from those of traditional face-to-face courses and suggested to me that the current approaches to teaching and learning and graduate outcomes might be enhanced through the use of online discussions. These discussions offered a different form of learning engagement for students which was more communicative, was based on writing and was offering time and space for reflective thinking.

Online discussions may be synchronous - for example, online communication called “chat”, or asynchronous - for example, online interaction called “discussion forums” or “conferences”. Other terminologies have been introduced, for example, computer-mediated communication and computer-mediated conferencing, and these are discussed further in chapters 2 and 3. In order to assist with reading this thesis, all terms have been bolded on their first use and are defined in the Glossary in Appendix.
1. In this thesis I will be using the term ‘online discussion’ meaning text based, time flexible (asynchronous) interaction that is facilitated through electronic mediation (usually the Internet).

In my practice, online discussions have been an innovation in face-to-face settings, and this has raised concerns for teachers and students, especially about whether they would replace or compete with traditional face-to-face teaching and learning. When this research study was established, there was little depth of understanding about how such a technology might be included advantageously in face-to-face courses. Knowledge about both the new technology and student learning was needed in order to consider how a new learning culture which recognised the value of online discussions in face-to-face settings might be developed. The literature indicated that other campus-based universities had been considering similar issues, for example, Boddy (1999) reported on the introduction of online discussions into a campus based MBA course and the consequent difficulties because students’ expectations and behaviour were based on face-to-face teaching traditions.

1.2.3 Universities

Online discussions, or computer-mediated conferencing, were first introduced into undergraduate courses in the mid 1980s (Harasim, 2000). The special characteristics of the computer-mediated medium led early researchers (Kaye, 1989) to suggest that it could be used to improve learning. Some of the features that attracted researchers’ attention were time and place flexibility, the many-to-many communication ability, and the text based nature of this communication.

Harasim, Hiltz, Teles and Turoff (1995) provided an overview of computer-mediated learning and noted the important role of computer networks and the Internet in supporting online discussions. Initially, online discussions were introduced into distance education courses, for example, the British Open University and American Open University (Harasim et al, 1995), where their communication benefits were valued for reducing students’ isolation from their teachers and peers. Over the last ten years, online learning, including online discussions, has been included in campus-based university courses, in what are now commonly referred to as blended learning environments. Here, students experience a mix of the conventional physical
environment and an electronic (often Internet) environment (Aspden & Helm, 2004). A common rationale for this change has been the pragmatic need for increased flexibility by students, teachers and universities, but researchers have also focused on its ability to improve learning (Collis & Moonen, 2001).

In the business context, a further rationale for technology-based flexible learning has been advanced. Drucker’s (1993) vision of knowledge workers, with its emphasis on applying knowledge through innovation, has been influential and is associated with a view of technology as an avenue of competitive advantage, especially the use of ICT’s to operate globally and reach more customers. In speaking about this future for accountants, Howieson (2003, p.80) identified the emergence of the “gold collar worker”, who were elite business advisers with skills in working globally and adding value to their client’s businesses through (technology-based) innovation. There are now expectations of graduate outcomes in business degrees that include the ability to work successfully in the online environment with clients, customers and other workers (Albrecht & Sack, 2000). In New Zealand, the use of ICT-based learning in blended environments began in schools and universities in the mid 1990s. Early accounts were grounded in practice (Williamson, Hodder & Baker, 2001), and identified a need for in depth research about New Zealand conditions.

In considering the problem of improving learning where online discussions were included in campus-based settings, there were many avenues to explore in my research study. My reading indicated that little was known about the best use of the online discussion medium in face-to-face settings. Many of the reports in the literature, for example, Holley (2002), Molesworth (2004), often described unsatisfactory online discussions in undergraduate programs, which could be related to the characteristics of the medium, or the curriculum model. Another influential factor could have been the quality of the connection between online discussions and the traditional approaches to learning in campus-based courses which normally revolve around face-to-face settings like the lecture and the tutorial. There is a human tendency to consider innovations, such as online discussions, from the viewpoint of face-to-face teaching and learning norms, so the potential of online discussions to provide a different learning experience is not well understood. Many students might have had more experience of online discussions than teachers and they were,
therefore, a valuable source of information on this innovation. This study investigated the CMC medium from the perspective of the students within their blended learning environments and, consequently, to explore the ways in which students learned in online discussions.

1.3 Purpose of the study
This study focused on students and its purpose was to describe learning in online discussions in a blended environment, from their perspective. The aims of the study were:

- To investigate the influences of the online discussion medium itself on student learning.
- To examine the impact of the curriculum in a broader blended learning context on the development of student knowledge.
- To contribute new information and insights about online discussions for the field of tertiary learning which has the potential to inform pedagogic design and widen the use of a currently underutilised learning environment.
- To provide a student perspective of learning in online discussions, which was based on a constructivist perspective.

Merriam has observed that research which focused on “discovery, insight and understanding” (1998, p.1) of an issue from the viewpoint of the participants had the greatest potential for making a significant contribution to both knowledge and practice in education. This thesis adopts such an approach.

1.4 Research assumptions and questions
This study was based on several assumptions which have been foundational in the development of the research questions. I adopted a view of technology which was that of the ‘non stupid optimist’ (Taylor, Quadrelli & Lopez, 1996) where the learning potential (Dysthe, 2002) of online discussions was acknowledged and balanced with careful scrutiny of claims regarding its success and value. This research makes a contribution to this ongoing activity. The thesis was also based on other assumptions which flow from this position. These are that:
- Some characteristics of the online discussion medium may have the potential to benefit learning, particularly those of time and place flexibility, the use of writing as the communication medium and the possibilities for peer interaction. This study has examined whether or how this happened, if at all, for undergraduate students.

- The curriculum model was likely to be an influential factor. The course design is created by teachers and is a reflection of their philosophy and intent; however it may be experienced differently by students. This study sought to identify the aspects of the course design that impacted on learning from a student perspective.

- It was expected that the on-campus context would be significant. The long history of the face-to-face class gives this learning experience a legitimacy which innovations like online discussions lack, and creates expectations in students, especially with regard to the role of the teacher and valid learning activities and assessment. The study aimed to investigate the relationship between the online discussions and the face-to-face classes.

1.4.1 Research questions

The research questions for the study were:

1. How do undergraduate students learn in online discussions?
   - What approaches and actions do they carry out?
   - What is the influence of the online discussion environment, especially with regard to its text based nature, time flexibility and independence and opportunities for peer interaction?
   - What is the influence of the curriculum design, including the learning activity, assessment?

2. What is the relationship, if any, for student learning between the online discussion activities and face-to-face classes?
   - What is the nature of the connection?

These research questions were investigated in my own workplace and this study has been carried out as insider research. The implications of this are discussed in Chapter 5.
1.5 Theoretical perspectives of the study
This research is based on a constructivist viewpoint about the creation of knowledge, which is explored in two ways through this thesis. The first strand relates to student learning, which is viewed as an active rather than passive matter, where students develop their own knowledge frameworks of course concepts in an instructional setting that has been designed to support interactive dialogic knowledge development (Duffy & Cunningham, 1996). This perspective draws on the social learning theories of Vygotsky, who emphasized the role of interaction and also language, as a vehicle for both internal development through thinking processes, and external development through the communication, negotiation and discussion of ideas with other knowledgeable persons, including peers. Bruffee (1999) applied these ideas to undergraduate students in a face-to-face context through his concept of learning as a (social) process of acculturation through (language-based) conversational and dialogic processes. Constructivism has been very influential in the CMC literature, and there appears to be an affinity between these two areas because characteristics of the online discussion medium, like interaction and communication in writing, can support the kind of active and collaborative learning that stands at the centre of constructivism.

The second strand of constructivism in this thesis relates to the way in which knowledge creation occurs through the research process. Constructivist approaches are usually situated activities where the researcher observes volunteers in their natural settings to see how they make sense of their worlds. This study adopted, therefore, an interpretive, naturalistic approach which produced multiple representations and contextual descriptions, and which represented the students’ mental constructs of their reality (Lincoln & Guba, 1985). The place of the investigator as an insider researcher meant that findings were shaped, not only by the interactions between me as the researcher and the participants, but also by my depth of knowledge about the context.

There is also another way of viewing knowledge creation by students. Here, learning, as discussed in the experience of learning literature (Entwistle & Ramsden, 1983), is a relational activity where students determine whether to use deep or surface approaches, depending on their perceptions of the learning context. The role of the
learning environment, and that of the curriculum, may be influential. Although not if the course designer and students have different ideas about the nature of learning. The strength of this view of learning is that it provides descriptions of the student’s reality with regard to the learning context and how it influences their learning activity and knowledge construction.

In my reading of the CMC literature, much of the discussion focused on the role of the CMC environment in supporting constructivist learning processes, and any examination of the impact of the curriculum on student learning tends to occur in a piecemeal fashion and not within a coherent framework, unlike that explicit in the experience of learning literature. Conversely, while the experience of learning literature is now starting to be applied to blended learning settings, there is little consideration of the constructivist potential of CMC as part of the learning context for students. Both of these perspectives have potential to add new knowledge and insights into student learning in CMC, and one of the purposes of this research has been to draw on both learning perspectives and integrate them into a holistic picture of the students’ reality.

### 1.6 Structure of the thesis.

This introductory chapter has described the problem that has been investigated in this thesis, provided a rationale for the study and introduced the research questions that have framed the study. The next two chapters explain the background of the study, locate the research within the current literature and indicate areas where further research is needed. Chapter 2 discusses the literature in relation to constructivist perspectives on learning and reviews the research on the nature and characteristics of the CMC environment. Chapter 3 focuses on the broader context of the study and introduces the experience of learning literature and then examines the research on flexibility and blended learning environments, and the characteristics of contemporary undergraduate students.

In Chapter 4, the context for the study is introduced with a description of the university and business degree program within which the research was located. Chapter 5 describes the design of the study and provides a rationale for the choice of case study and its methods in relation to the research questions. It also outlines the
way in which the study was implemented, including the ethical issues that were considered, in particular as I was an insider researcher.

This is followed by Chapters 6 to 9, which provide details of the four case-studies which comprise this research study. They include descriptions of the courses, the student participants, the curriculum and the learning experiences and the students’ approaches to learning. The findings examine and explain how student learning is influenced by the characteristics of the online discussion medium and the curriculum. The chapters also describe and analyse the relationship between the online discussions and the face-to-face classes. These chapters concentrate on presenting the results of each of the four cases and a discussion of the main findings is reserved for Chapter 10.

Chapter 10 draws together the findings of the four cases by making a comparative analysis which is represented graphically in Appendix 9, and discussing the outcomes in terms of the literature. The main findings in relation to the research questions are presented and a model of a complementary approach to online discussions in blended learning environments is proposed. Chapter 11 presents the conclusions of this research, comments on the implications of the study, identifies limitations and makes suggestions for further research.
Constructivism and computer-mediated conferencing

2.1 Introduction to the background chapters
The next two chapters provide a background for this study by reviewing the literature which has informed the development of this research, by locating this research within the fields of constructivism, CMC and indicating where this research study will make a contribution.

As discussed in Section 1.5, there are two bodies of literature which relate to this study. The first is that of the constructivist philosophy which has informed CMC research and the second is that of the experience of learning literature which has been highly influential in establishing good models for tertiary teaching and learning, including curriculum development. These bodies of literature have contributed to this study by providing two different perspectives of students’ learning in online discussions. Constructivist perspectives provide insights into the way in which the CMC environment might be used to promote learning where students are active in building their knowledge of the subject. The experience of learning literature highlights the role of the broader learning context, and the way in which the curriculum influences students’ actions and approaches. Together these two literatures provide quite different ways of examining students’ learning, which are complementary, and their value lies in the way they can provide a full and rich account of students’ learning in online discussions.

In this chapter, the discussion of the constructivist philosophy draws on the educational technology literature (as opposed to other literatures, for example, the educational psychology literature) and is followed by a review of the research on the nature and characteristics of CMC. This research review focuses on three aspects of CMC which are the text-based nature of the medium, its interactive nature and the role of asynchronicity and these three characteristics will be examined for the way in which they can promote a constructivist philosophy in learning. Chapter 3 takes a more contextual approach and reviews the learner-centred model of Entwistle and Ramsden (1983), especially their focus on approaches to learning and the role of the
curriculum in influencing these approaches. The last part of Chapter 3 discusses the nature of contemporary on-campus university students and is drawn mostly from the blended learning literature.

The literature on andragogy has not been reviewed because many of the students in this research project were young, with modest amounts of work and life experience and andragogic principles did not seem to resonate well in their context. Ramsey (2003) observed that the concept of the adult learner did not fit well with her undergraduate student participants and her views of the value of constructivism as a more suitable learning philosophy are discussed below in 2.2.3.

2.2 Constructivist perspectives
Over the last 20 years, research in the field of online learning has invariably been grounded in a constructivist view of learning. This chapter of the thesis examines the key concepts of this perspective and then reviews the CMC literature concerning its role in learning. Because the influence of text-based communication, interaction and asynchronicity are important research questions for this study, the literature in these areas has been specifically examined from a constructivist perspective.

2.2.1 An Overview of constructivism
There is real difficulty in defining the term ‘constructivism’ as an explanation of the way in which people go about learning. Schwandt (2003) described the concept as ‘particularly elusive...with different meanings depending on the discourse in which it is used’ (2001, p.30). A similar view was expressed earlier by Candy (1991) who identified two common characteristics of constructivism which are: (1) a particular underlying ontology, ‘not a single theory, but a cluster of related perspectives that are united in their underlying view of the world’ (1991, p.254); and (2) an epistemology with an alternative way of looking at learning and knowledge which was very different from previous traditions, and not an extension of existing theoretical frameworks.

learning was regarded similarly to the process of building or construction (2001, p.23). He identified its strong connections to perception and memory theory and noted its position as ‘the most favoured current view of learning and teaching in the teacher education literature’ (2001, p.24). For him, the central claim of constructivism as a learning theory was the development of human knowledge through an active process as opposed to being innate or passively absorbed.

While constructivism is regarded as a contemporary concept, Candy (1991) noted its origins in Greek thinking in the 5th century BC. Like other writers, Candy (1991) acknowledged that constructivism is far more than a philosophy or psychology of learning but can also be linked to the ways that other disciplines like anthropology, sociology, literature and the arts make sense of experience and people’s understanding of the world. Philips (1995, p.6) argued for the impact of constructivism with its ‘range, complexity and symbolic force’ and illustrates his argument with examples including Kant’s concepts of knowledge development (1959, cited in Philips, 1995), and Alcoff and Potter’s feminist epistemologies (1993, cited in Philip, 1995).

In their discussion of learning models for business schools, Leidner and Jarvenpaa (1995) examined constructivism and its implications for teaching and learning. Ontologically, there was a ‘reality’ which is independent from individuals and their minds. Humans formed their own views of that reality and views could differ, but they were not exact replications or copies of that reality. Learning was about giving meaning to that external world through the development of abstract concepts, and reasoning. The pedagogic implications of this view of learning were the need for learner-centred activities, where students learned through discovery rather than instruction, and were able to investigate, question and reason. The role of the teacher was to design real world project-based activities which would support students in the development of their knowledge.

Leidner and Jarvenpaa (1995) contrasted the constructivist view with behavioural or objectivist models, which were based on a view of reality that was objective. The goal of learning was to replicate the external reality, so that the mind was a mirror rather than an interpreter of reality. Teaching focused on the effective transmission of knowledge from the teacher as the expert to the learner. Learning was mostly an
individual rather than collaborative activity and a common teaching method in universities under this model was the lecture.

2.2.2 Social constructivism

The literature reflects two broad notions of constructivism which are based on whether the major influences on learning are individual or more social in nature. The individual constructivist perspective, is best known through the work of Ernst von Glaserfeld (1995) and emphasised individual activity as the driver of learning. Candy (1991) described this as a process whereby humans developed their own personal constructs or schemata of the world, which may or may not correspond to reality and then went on to test them in a world of multiple and changing perspectives. Human learning and knowledge was about creating and adapting ‘representational models that become their reality, and this acts as guides for their actions’ (1991, p.265). In time, these representational schemas may take on the gloss of ‘truth’ when they became completely embedded within a person’s knowledge framework.

A social constructivist perspective regards knowledge as developed internally, but the process is more influenced by the social context of the learner. The most significant proponent of this view is Vygotsky (1978), whose studies of child development in Russia in the 1930s theorised learning as a socio-cultural process in which language was an essential developmental tool. His research showed that children first learn to speak the language of their community and initially used this as a communication device. In time, their speech became internalised as thought and became more sophisticated and children moved from somewhat egocentric conversations with themselves to more advanced reasoning. Learning and development as a process was explained by Vygotsky’s (1978) concept of the zone of proximal development (ZPD). This referred to the distance between the child’s actual ability as determined by their level of problem solving on their own and their potential ability as determined by ‘problem solving under adult guidance or in collaboration with more capable peers’ (1978, p.86).

In his discussion of Vygotskian thinking, Allen (2005) compared different approaches to the ZPD. Allen argued that Bruner (1966, cited in Allen, 2005) viewed
the ZPD as a scaffolding process where instruction sought to make the learner independent and began from the learner’s position and understanding. Allan contrasted Bruner’s view with that of Bigge & Shermis (1999, cited in Allen, 2005) who emphasized the idea of ‘intersubjectivity’ where two people began with different understandings but reached a newly constructed position. Allen compared these views with those Davydov and Markova (1983, cited in Allan, 2005) who adopted a cultural interpretation and described the ZPD as the distance between ‘understood knowledge as provided by instruction, and active knowledge, as owned by individuals’ (p.248).

Vygotsky’s (1978) view of learning confirmed the importance of the social environment as a source of development and as a prompt for internal reflection. His concepts have emphasized the role of language, and in writing about Vygotsky’s ideas, McLoughlin and Oliver (1998) described three roles of language in learning. Language was the connecting tool for the process, both in terms of mediating thought and communicating with the teacher or more capable peer. Language was the medium through which a shared conception was reached and the process of having to express one’s thoughts in language meant that learners could internalize their understandings (1998, p.128). Lastly, ‘learning is facilitated through purposeful dialogic exchange, verbalisation of thought processes, reciprocal understanding and negotiation of meaning, all of which are mediated by social interaction and language’ (1998, p.128).

Vygotsky’s emphasis on the social and cultural environment has been extended by Brown, Collins and Duguid’s (1989) concept of situated cognition and by Lave and Wenger’s (1991) concept of situated learning. These were both a reaction to an objectivist view of learning that placed abstract knowledge at the heart of learning, with the activity and context on the periphery. Brown, Collins and Duguid (1989) argued in reverse, that knowledge is situated, being a product of the activity, context and culture in which it is developed. For this reason, learning should be fundamentally situated, and focus on the use of the various conceptual tools according to the beliefs, values and practices of the particular community through ‘authentic activities,’ namely, activities that look at what the community does, how they do it and why they do it. The unsituated has not been ignored, with Collins (1997, cited in Smith, 2000) later restating the position ‘...powerful abstractions are
needed to organise the knowledge, but those abstractions must be grounded in real situations. Much of the expert’s learning is working out the mapping between situations and abstractions’. An important aspect of learning is the role of socialization, that is watching others and practising within a community. Such an approach been characterised as a cognitive apprenticeship, meaning ‘learning within the nexus of activity, tool and culture’ (Brown, Collins & Duguid, 1989, p.40). Lave and Wenger (1991) indicated that a problem with this concept in universities was that students might learn to use the conceptual tools, but the domain community was not evident and the dominant culture was that of the university and this influenced eventual outcomes.

Bruffee’s (1999) work on collaborative learning is an illuminating view of the way in which Vygotskian principles might work in the university context. Bruffee (1999, p.294) saw knowledge as ‘nonfoundational’, meaning that knowledge was not absolute and derived from a base (as was the case with foundational knowledge). Instead, it was highly contextual, and constructed by people working interdependently in social processes that were language-based. Such knowledge, therefore, resided in the community, not the individual, and learning was a process of acculturation.

Bruffee’s book provided a pedagogical model for this acculturation where collaboration by conversation (discussion) was a central feature. The role of the conversation was to enable the construction of knowledge through social processes which involved negotiation of meaning by the different parties and, like Vygotsky, Bruffee (1999) saw the main vehicle for this process as language. Bruffee endorsed students working in groups as an important collaborative activity because interaction raised the likelihood of peer critique and judgement which was motivational. Other forms of collaboration also included conversations in class with the teachers, across the campus with peers and other teachers and with members of professional communities. Bruffee (1999) emphasized the need for activities to be nonfoundational, and for him, this meant being capable of producing good peer discussion, and changing student-teacher relations. The role of the teacher was demanding, and as well as curriculum design and supporting students, also included acting as a representative of the knowledge community, and as a change agent, rather than as an expert and repository of knowledge.
2.2.3 Constructivism in the instructional design and educational technology context

Constructivism has been highly influential in the online learning context. In the educational technology literature, Duffy and Cunningham (1996) noted that despite the range of views on constructivism, there was commitment within the educational research theory and policy community to two central concepts: ‘(1) learning as an active process of constructing rather than acquiring knowledge and (2) instruction is a process of supporting that construction’ (1996, p.171). They provided seven grounding assumptions which were linked by them to other learning researchers and theorists. The resultant model for the teaching and learning process has a strong sociocultural focus:

- ‘All knowledge is constructed; all learning is a process of construction’ (p. 178). This is a semiotic process where language and culture play key roles in this construction, and Lave and Wenger’s (1991) legitimate peripheral participation characterises the learning process.

- ‘Many world views can be constructed; hence there will be multiple perspectives’, (p.178). Different views encourage debate. This endorses Rorty’s (1991, in Duffy & Cunningham, 1996) concept that where there is a consensus of beliefs, knowledge will result.

- ‘Knowledge is context dependent, so learning should occur in contexts in which it is relevant’ (p.179), thus endorsing the value of Brown, Collins and Duigard’s (1989) idea. However, Duffy and Cunningham acknowledged the learning paradox that arises (the transfer of learning that needs to occur from contextual understanding for knowledge to have value) and the need for further work there.

- ‘Learning is mediated by signs and tools’ (p.179). They adopted Vygotky’s (1978) concept of the role of mediational tools and signs, especially language, and viewed the computer as both a tool and a sign which has been developed to fulfil a need in culture but which also has the capacity to transform culture through its use.

- ‘Learning is a socio-dialogical activity’ (p.180). This endorses Vygotsky’s (1978) view of the central position of language in learning and as a ‘social, communicative and discursive process, inexorably grounded in talk’ (1996, p.181).
Learners are distributed, multidimensional participants in a sociocultural process (p.181). Learning is not a purely individualistic matter but a relationship between a person and their participation in a community (Lave & Wenger, 1991). This idea shifted the focus away from the internalisation of knowledge to learning through external dialogue, although it did not deny the importance of self agency.

- ‘Knowing how we know is the ultimate human accomplishment’ (p.181). This involved metacognition and self-awareness and the mechanism that was preferred by them was ‘reflexivity’ because of the strong connection back to the self, and their belief that this was a naturally occurring process where people made sense of the world everyday.

Duffy and Cunningham (1996) identified various strategies which would support a constructivist approach, including working within the zone of proximal development, and the use of scaffolding, with the teacher in the role of coach rather than instructor. In their view, computers had the potential to do more than act as a tool for more efficient learning and could provide new representations or views which would not otherwise be possible. They referred to the early work of Harasim (1989) where she described courses in which the Internet was used to support dialogic forms of learning through seminars, and discussions.

In a report on using a virtual learning environment for campus-based undergraduate business students, Ramsey (2003) offered a critique of andragogic approaches for such students. In her courses, andragogy was not useful because the students had little work experience, little interest in her compulsory subjects, and were resistant to self-directed activities. She considered that virtual environments could reshape learning by providing a new space for active, rather than passive, learning. Ramsey argued that Vygotskian theories of learning were far more effective for undergraduates than andragogie theories because, through the zone of proximal development, the emphasis was on learning through performance, rather than a stage of maturity. Drawing on Bruffee’s work, she reported on the role of teams in providing development opportunities for students that included less teacher direction and students arguing from the strength of their group. She endorsed Biggs’s (2003) concept of constructive alignment, particularly the way in which assessment could be
used to facilitate development and support more student ownership of learning and negotiation within zones of proximal development.

2.2.4 Critiques of the constructivist philosophy
Concerns have been expressed about the ubiquity and uncritical adoption of constructivism. Philips (1995, p.5) characterized constructivism as a ‘powerful folktale’ and a ‘secular and sectarian religion’ and criticized the tendency towards relativism and the abandonment of rational and substantial justification. Garrison (1995) referred to ‘naïve constructivism’ (1995, p.138) where, in the absence of teacher’s guidance, students would construct new understandings on their own.

Speaking from a somewhat individualist view of constructivism, Fox (2001) argued that constructivism had little that was different from previous theories of learning and that many of its principles were ‘implied by common sense, broadly empiricist accounts of learning’ (p.23). He provided a thought-provoking critique of what he regarded as the essential tenets of constructivism and in doing so, identified what the theory has to offer debates on education. Theoretically, Fox (2001) did not accept that all learning was an active process and highlighted the role of passive absorption of elements of experience. While Fox (2001) thought that sense making was an important aspect of learning, he regarded constructivism as a theory that offered ‘learning without tears’ (p.33) because it tended to ignore the problems and difficulties experienced by students and teachers. For learners, these were issues relating to understanding the rationale for the approach and adapting to different modes of learning. For teachers, there were issues related to understanding students’ needs in a constructivist curriculum.

Observing the prevalence of constructivism in the teaching and learning literature, Tenenbaum, Naidu, Jegede, and Austin, (2001) investigated the extent to which they were occurring in undergraduate classes in both on-campus and distance courses. Their research identified seven indicators of constructivism: (1) arguments, discussion, and debates, (2) conceptual conflict and dilemmas, (3) sharing ideas with others (4) materials and measures targeted towards solutions (5) reflections and concept investigation, (6) meeting student needs, and (7) making meaning, through real-life examples (p.103). Using data from students, teachers and course documentation, they found little evidence of constructivist pedagogies, based on
these seven factors. There was little agreement by teachers on what constructivist approaches might be, few characteristics of constructivist learning in tutorials, or in the course documentation, and students reported that they did not experience constructivist strategies or methods. The authors concluded that while constructivism is ‘an ascendant pedagogic philosophy’ (p.88), its practice was quite different. It was much more difficult to introduce such an approach than to ‘establish and theorise those principles’ (p.109). There is a need for more research that investigates and illustrates constructivist approaches in practice.

While their discussion was situated in the distance education context, Evans and Nation (2003) discussed the role of the new educational technologies in fostering dialogue and critique. They were concerned about the impoverished way in which constructivism was now being developed in education. There was a longstanding tradition in the social sciences, especially sociology, which emphasized the role of meaning-making and the social construction of knowledge, and they noted that ‘most of those espousing constructivism remain unwilling or unable to recognise the need for substantial analyses of the economic, political and social contexts within which teaching and learning occur, and even more so, they seem unable to grasp the rich potential of investigations from a range of related disciplines’ (2003, p.787).

Further critique of constructivism has been made by Laurillard (2002). In her highly influential text on the nature of learning at university, she argued that it was deficient as a learning theory because while it acknowledged an interactive process between learners and their worlds, it did not give specific attention to learners and what they need to do to learn. What was needed to advance curriculum design and teaching practice based on constructivism was further research ‘giving full representation to students as well as teacher conceptions of learning’ (p.77).

Laurillard also argued that the concept of situated cognition was not especially successful in the university context. Much academic learning was mediated learning or ‘second order knowledge’ (2002, p.21) because it was concerned with other people’s descriptions of the world through knowledge representations and structures. While second order knowledge was important to give students conceptual frameworks and procedures for future application, it was difficult for students to use in real world circumstances. However, learning that was entirely practice-focused
was unable to support the development of sufficient high level understanding to enable transfer to new circumstances. In Laurillard’s (2002) view, both forms of knowledge were needed and, therefore, learning was a dialectic process with the teacher playing a key mediating role in moving students from their first order experiences to learning through others’ experiences as well.

### 2.2.5 Identification of areas for further research

This section has reviewed the key principles of constructivism, particularly those which are based on a view that learning is significantly influenced by social as well as individual contexts. These theories regard learning as an active process of construction rather than one of accumulation of knowledge and emphasize the role of social relations and context where language plays an important mediating role in interaction and conversation.

The adoption of constructivism by educationalists is relatively recent and the literature indicates that there is a need for more research in several areas. These gaps are moving from theorizing about constructivism to its effective implementation in university courses, better understanding of learners and their needs, and more attention to the social and economic contexts in which learning occurs. The current research study has been designed to make a contribution in these areas.

### 2.3 Computer-mediated conferencing (CMC) and its role in constructivist learning

This section reviews the use of computer-mediated conferencing (CMC) for online discussions in the university context. It begins by describing the main features of CMC and then examines three of its features which are the focus of this research, being the text-based and asynchronous nature of the medium and its ability to support interaction. Until recently, much of the CMC research has been carried out in distance education, but given the newness of CMC as a learning tool, the findings still provide a platform for further research such as this study, even though it is not situated in the distance context.
2.3.1 Characteristics of CMC

Laurillard (2002) described CMC as a conferencing system which ‘supports an online discussion environment in which remote users send and receive text messages, usually reading and creating messages offline, and then connecting to the system to upload their messages and download new ones’ (2002, p.147). Her description suggested an asynchronous mode, being one where participants can send and receive messages at different times. This time flexible form of online discussions is widely used at universities (Harasim, Hiltz, Telles & Turoff, 1995), and is the context in which this research project is situated. Such online discussion facilities are generally contained within a university learning management system, where each course has its own electronic ‘space’, accessed through a password by students enrolled in that particular course. Generally, the software provides a structure for the discussions where messages can be grouped according to topics or ‘threads’ so as to allow concurrent and separate multiple discussions. Asynchronous online discussions are also referred to in the literature under other terms including computer conferencing (for example, Henri, 1991; Garrison & Anderson, 2003) and computer-mediated communication (Harasim, Hiltz, Telles & Turoff, 1995). However, in this thesis, I will be using the term ‘computer-mediated conferencing’.

According to Harasim (2000), CMC was invented in 1972 and was originally designed to support group communication for information exchange and problem solving purposes. Universities began to use CMC for educational purposes in the mid-1970s and the first online undergraduate courses were offered in 1984. The use of CMC for learning is therefore a relatively new field of research with the first journal publications about research into online discussions appearing in 1984 (Eastmond, 1994). Early publications recognised that the environment was qualitatively different from that of the traditional classroom, for example, in her ‘virtual classroom’, Hiltz (1986) found increased interaction amongst students and different modes of communication and argued that there should be no replication of traditional methods and the research agenda should focus on learning how to use CMC effectively.

Harasim (1989, 2000) called CMC a ‘new learning domain’ (2000, p.49) with five distinguishing characteristics being time independence, place independence, many-to-many communication ability, computer-mediated interaction and its text-based
nature, and these have provided a conceptual framework for practitioners and researchers in the design and evaluation of CMC. In a review of Harasim’s work, Stacey (1998, p.69-70) summarised the advantages and disadvantages of using CMC for learning and these are shown in Tables 2.1 and 2.2.

### TABLE 2.1 ADVANTAGES OF THE CMC ENVIRONMENT (Stacey, 1998, p.69)

<table>
<thead>
<tr>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Provides capability to interact, providing the potential for active and interactive participation.’</td>
</tr>
<tr>
<td>Enables focus on the message not the messenger makes it easier on shy students as gender race, physical appearance and body language are not visible.</td>
</tr>
<tr>
<td>Stereotyping can be minimised - women and minority groups not as obvious their opinions have more importance.</td>
</tr>
<tr>
<td>Provides a democratic medium as all participants can contribute.</td>
</tr>
<tr>
<td>Asynchronicity gives freedom from restraints of time-messages can be left at anytime not time dependent.</td>
</tr>
<tr>
<td>Not place dependent - teachers and students can be anywhere in the world.</td>
</tr>
<tr>
<td>Can provide the capability of equal participation for all students - particularly those not learning in their first language who can participate more equally with an interactive written electronic discourse.</td>
</tr>
<tr>
<td>Provides the capability of closer access to the teacher - increasing the opportunity to get advice and counselling.</td>
</tr>
<tr>
<td>The teacher is able to answer a query once instead of many times.</td>
</tr>
<tr>
<td>Students can contribute as much as they want, can take time to develop ideas, question others.</td>
</tr>
<tr>
<td>Provides the potential for collaborative learning.</td>
</tr>
<tr>
<td>Provides the possibility of mutual support among students.</td>
</tr>
<tr>
<td>Enables adult learners with expertise &amp; experience to be a resource to group.</td>
</tr>
<tr>
<td>Provides the capability of help and feedback to distance students - questions posted online can raise replies and suggestions from other students.</td>
</tr>
<tr>
<td>Capability for more reflective text-based communication which can be edited, saved and retrieved - comments written are available for later summary and reflection and revision.</td>
</tr>
<tr>
<td>Provides capability to practise the language and constructs of the discipline- to practice for assignments and exams.</td>
</tr>
<tr>
<td>Provides the possibility of more personal communication - conferencing can be serendipitous, seem intimate.</td>
</tr>
<tr>
<td>Can be a means of overcoming social isolation.</td>
</tr>
<tr>
<td>Can be cheaper than other communication technologies e.g. distance phone calls.</td>
</tr>
<tr>
<td>Is cheaper to organise and administer than a new building’</td>
</tr>
</tbody>
</table>
TABLE 2.2 DISADVANTAGES OF THE CMC ENVIRONMENT (Stacey, 1998, p.70)

<table>
<thead>
<tr>
<th>Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Must have access to hardware - it is used with most success in courses requiring computers already e.g. computer science, business management, maths.</td>
</tr>
<tr>
<td>- Cost of support CMC use.</td>
</tr>
<tr>
<td>- Inconvenience of increased online access.</td>
</tr>
<tr>
<td>- Orientation time taken - can take awhile for students to become active confident users.</td>
</tr>
<tr>
<td>- Shyness in exposing ideas and writing skills</td>
</tr>
<tr>
<td>- If CMC is a small part of required work in a course then students can leave it out.</td>
</tr>
<tr>
<td>- Information overload - need to structure conference so discussion easily followed.</td>
</tr>
<tr>
<td>- Dependence on good typing skills.</td>
</tr>
<tr>
<td>- Non participating lurkers.</td>
</tr>
<tr>
<td>- Weak contextualisation - no social or visual cues - can lead to ‘flaming’ (emotional outbursts and misunderstandings)</td>
</tr>
<tr>
<td>- Dominant personalities can be a problem</td>
</tr>
<tr>
<td>- Can be lack of immediate response - time delayed exchanges may be disjointed</td>
</tr>
<tr>
<td>- Communication cues are lost - can lead to misinterpretations, make irony and jokes constrained.</td>
</tr>
<tr>
<td>- Requires the retraining and adaptability of faculty.</td>
</tr>
<tr>
<td>- Requires teaching methods and communication which are different to on-campus teaching - facilitator, group organiser, consultant roles.</td>
</tr>
<tr>
<td>- Text environment may not be suitable for some disciplines though this is less problematic with the recent technological development’.</td>
</tr>
</tbody>
</table>

Pearson and Selinger (1999) have discussed the ways in which CMC can provide forums for academics, practising professionals and students, where discussion of problems and issues by all three supported the integration of practical and theoretical knowledge for undergraduates. However, in Laurillard’s (2002) view, while the undergraduate population now included significant numbers of mature, working and part-time students who would be best served by online Web-based learning, the pedagogical benefits of CMC were yet to be established.

CMC has received considerable acclaim as a new technology but technology does not necessarily have any special virtue and is not value neutral. Postman (1993) observed that each technology has an ideological basis and he asserted that technology will ‘break a four hundred year old truce between the gregariousness and openness fostered by orality and the introspection and isolation fostered by the printed word’ (1993, p.17). He considered that orality provided a strong foundation
for learning through its focus on group learning and co-operation whereas print emphasized individualism and autonomy. He believed that teachers had found a ‘pedagogical peace’ (1993, p.17) where the best facets of oral and written approaches worked together to create knowledge and learning. His view has been echoed by teachers in higher education who oppose online learning for on-campus settings because it may interfere with face to face learning relations (Taylor, Lopez & Quadrelli, 1996), although with the dominance of the lecture, it is sometimes difficult to see Postman’s value of orality in action.

2.3.2 Text-based nature.
A review of the CMC literature indicates that its text-based form has received less attention than its other features - such as its interactive qualities - and this may be so because of the early recognition of the potential value of CMC in distance education to provide opportunities for interaction. The emphasis on reading and writing in this text-based medium creates qualitatively different discussions from those in speech. Any discussion of the text-based nature of CMC in the literature inevitably involves comparison with speech.

Reading messages in online discussions has an observational character. In their research into learning through watching discussions, McKendree, Stenning, Mayes, Lee and Cox (1998) advocated that observation of dialogue played an important role. In some circumstances, watching a dialogue may be better than participating because of the ‘lower processing load, both emotional and cognitive’ (1998, p.117) and this could be advantageous for ESL students who are adapting to a different language and learning culture. In their research into online collaborative learning by law and management students, Parry and Dunn (2000) found that students liked the observational possibilities in CMC because of their benchmarking value, where students could compare their postings with those of other students. The authors suggested that benchmarking was important because it enabled students to make knowledge comparisons and to observe successful learning strategies, including deep approaches, for example, to observe other students applying theory, and providing reasons and evidence.

The value of reading for learning was developed further by Guzdial and Carroll (2002) in a small scale piece of research into participation in CMC. They suggested
three ways in which learning might occur when students were reading messages, irrespective of whether they contributed to the discussion. Students could learn: (1) vicariously, by reading the discussions and recognising their own personal understanding in the postings of other students; or (2) by reflecting on the message, even though they did not post; or (3) by relating the ideas in the online discussions to their class activities, general learning and assessment.

The role of writing in online discussions and its connection to learning is an important factor that deserves to receive greater attention in the CMC literature. In her discussion of the textual nature of CMC, Mason (1993) regarded CMC as a convergence of speech and writing which had created a unique form of communication with three distinctive features, that is, interaction through writing, between many people, who are geographically dispersed (1993, p.23). Mason (1993) differentiated writing from speech as a visual, rather than aural, phenomenon, where meaning was taken from the language itself, rather than from its immediate context and where its main functions were logical rather than interpersonal. CMC has fused together these differences and has moved writing from an individual and private activity to one which is interactive and public. The ability to develop and shape ideas, and to receive feedback, means that there is no closure, as in the case of an essay. Mason regarded this as one of the strengths of CMC, because it can support active and socially-based learning in a written format which imposes greater cognitive demands.

Mason (1993, p.27) also discussed Zuboff’s (1988) work in organisational settings and identified other aspects of textuality in CMC. These were: (1) the transformational effect of the permanent record on discussions which became more concrete; (2) the ‘psychological security’ that arose because people could make comments in their own time and away from ‘the pressures of face-to-face engagement’ and (3) the ‘the unusual combination of isolation and connectedness’ which encouraged people to speak their views honestly and to be more disclosing. In order to be able to learn in this new environment, Mason identified the need to develop new forms of written interaction which recognised the special characters of the CMC medium.
Some other writers have discussed the role of writing in CMC learning. Hammond (1998) discussed the nature of postings in terms of different metaphors. For him, the writing metaphor was the best because the main activity in contributing was best represented by writing than speaking. He rejected the essay metaphor because it implied a longer and more formal contribution, and also discarded the conversation metaphor because it implied frequent short and spontaneous messages. He argued for the recognition of a concept of online literacy to create some clarity for students about what was expected.

In her discussion of the development of academic literacy, Lea (1998) argued that writing should not be viewed from a deficit mode as the acquisition of skills, but should be regarded as a process of meaning-making which not only included knowledge representation, but also included a socio-cultural role of developing an understanding of the discipline values and practices. Later, Lea (2001) discussed the way in which CMC might support the development of disciplinary knowledge through written argument. Her research highlighted the value of the permanent texts, new opportunities for reflexivity, the depth of thought that came from writing and access to other students’ ideas.

In his research into the role of CMC for second language speakers, Warschauer (1997, 1999) took an explicitly constructivist approach in his consideration of the way in which the text-based character of CMC might help learning. He observed that, historically, the two main functions of language had always been separated. The first function was that of communication and interaction and, normally, this was done through speech. The second occurred when humans ascribed meaning to their experiences and here text was the preferred mode because its permanence facilitated interpretation and reflection. Warschauer (1997) argued that it was the intersection between this language-based interaction and reflection that was of critical importance for thinking and that CMC technology had enabled these two activities to be integrated. He argued that ‘the historical divide between speech and writing has been overcome with the interactional and reflective aspects of language merged in a single medium’ (1999, p.6). In his view, two further features enhanced this new text-based mode, namely the many-to-many and asynchronous communication features which added new dimensions to interaction which had not previously been available (for example) in print.
Warschauer (1997) drew on the work of Wells and Chang-Wells’ (1992) in the primary school context and their concept of cognitive amplification. Here learners developed their thinking by using written texts as learning devices. ‘By making a record of text of thought available for reflection, and if necessary, revision, a written text serves as a cognitive amplifier. . . allowing the reader or writer to bootstrap his or her own thinking in a more powerful manner than is normally possible in speech’ (p.122). In Warschauer’s (1997) view, the CMC environment was able to draw on the strengths of social constructivist concepts of both text mediated learning through reading and writing, and the development and refinement of understanding by iterative layers of reflection and interaction.

Attention has also been given to the text-based nature of the CMC environment by Garrison and Anderson (2003) who observed that while text had been used significantly for transmission purposes in universities, it had rarely been used for communication amongst students and teachers, where oral dialogue had been the standard mode. They were influenced by Feenberg’s (1999, in Garrison and Anderson, 2003) ideas and argued that text was ‘not a poor substitute for physical presence or speech, but another fundamental medium of expression with its own properties and powers’ and therefore a key to effective use of CMC in learning is a deep understanding of the differences between written and spoken communication.

In their view, there was now sufficient evidence to indicate that text had advantages over speech for ‘critical discourse and reflection’ which included the permanent record as opposed to the ephemeral nature of speech, and they observed that face-to-face conversation was ‘generally less systematic, more exploratory and less attentive to other’s views’ (2003, p.26). They argued that having to write down one’s thoughts and, therefore, moving from tacit understanding to explicit communication of one’s ideas, helped to improve the quality of students’ thinking and understanding of the subject. They theorised that the reflective and explicit nature of CMC could support a connection between text-based communication and higher order thinking.

Garrison and Anderson (2003) stated that the CMC environment meant a change in learning approaches. In traditional classes, the model focused around listening (for example, the lecture) and reading. While reading provided opportunities for
individual reflection, there was little opportunity for synthesis, apart from
assessment. In lecture based courses, there were limited opportunities for talking,
which reduced opportunities for meaning-making and collaboration. With CMC,
activities were based on reading and writing, which now occurred in a public forum,
and this meant that discussions could become a collaborative as well as individual
activity and writing as a communication was no longer a private activity but a public
event involving the whole class.

The text-based nature of CMC is not always positive and Feenberg (1989) noted that
the absence of body and facial expressions (phatic signals) and other tacit
information made communication more difficult, and raised the likelihood of
misunderstanding, message ambiguity and lack of clarity. Garrison and Anderson
(2003) regard social presence as equally important to teacher and cognitive presence
in online learning. This means ‘the ability of participants in a community of inquiry
to project themselves socially and emotionally as ‘real’ people, i.e. their full
personality’ (2003 , p. 29), and in the absence of non-verbal and contextual cues, this
can be problematic in the CMC environment. Stacey’ s (2002) research into online
collaborative learning by small groups confirmed the importance of social presence
when she found high rates of cognitive activity in association with clearly established
social presence. Much of the CMC research has been carried out in the distance
education context, and it may be that the addition of regular classroom meetings may
be able to ameliorate some of the social presence issues in blended learning
environments.

Another issue for some students is the perception of the medium as an act of
publishing, rather than an act of speech, with consequent anxiety and self-censorship
(Davie, 1989). More recently, Light and Light (1999) also found that undergraduate
students were worried that their peers might find their postings deficient in the
content and ideas, grammar or structure, and this suppressed argument and debate.
Other problems for students have been the lack of ability to read, write and type
(Eastmond, 1994), with time needed for editing and organising thoughts before
writing them (McCabe (1998).

In his research into CMC with undergraduate on-campus students, Thomas (2002)
found that the discussion metaphor was confusing for students because of the text-
based nature of the interaction which was normally used for transactional activities. Thomas (2002) thought that this confusion inhibited students’ interaction, and it may have been this confusion that underlaid Wegerif’s (1998) earlier findings about student anxiety regarding their writing. While the course guide explained CMC communication as a cross between writing and speech, students recognised that the discussion was structured differently and more densely, and the teacher’s suggestion of writing in a more casual and informal style was therefore confusing. These reports indicate issues of student understanding of the CMC medium which need to be addressed, and Thomas (2002) prioritises this for university teaching and research.

2.3.3 Interaction

Cunningham (1992, p.157) said that ‘one of the most distinguishing features of constructivism is its emphasis on argument, discussion and debate’ and for this reason, the CMC environment has often been idealised in the literature as one of the best media for this kind of activity. This implicit association is also indicated by the meaning of the term ‘confer’ which lies at the root of the CMC conferencing metaphor, being ‘to meet in order to deliberate together or compare views’ (Rourke & Anderson, 2002, p.2). The potential for interaction and dialogue in CMC has produced a large literature. Discussion of the entire field of CMC interaction is beyond the scope of this review, and in this thesis, my review has focused on the issue of different levels of interaction, because of their association with the learning potential of the text-based nature of the CMC environment.

An early explanation of the way in which the CMC environment might support constructivist approaches was described by Jonassen, Davidson, Collins, Campbell and Haag (1995). They identified four interrelated elements. There should be: (1) as much real world context as possible; (2) within that context, there should be an active process of articulation and reflection where learners can make their own meanings from their experiences; (3) there should be collaborative opportunities, so that learners can articulate their tacit knowledge, develop and test their different beliefs and build new understandings; and (4) there should be conversations because the meaning-making process is mediated by language. The nature of the CMC medium means that contributions can be read by everyone, and, in making a written contribution there is a need to make tacit concepts explicit because of the lack of physical cues. Articulation of ideas, exposure to new or different perspectives, the
ability and time to reflect and negotiate conflicts, all have the potential to develop new collaborative ‘mental models’. There is also a potential to reduce the presence of the teacher and to increase interaction between students.

Interaction has been endorsed as a fundamental requirement for university learning by many researchers, for example, Harasim (1989), Laurillard (2002), Biggs (2003), and Wallace (2003). However, the literature indicates that there are difficulties in developing high quality interaction in undergraduate settings. Laurillard (2002) provided one model in her ‘Conversational Framework’ based on reflective and discursive activities involving both teachers and students. While Laurillard acknowledged that the asynchronous character of CMC might make time for students to reflect, and the threaded nature of the discussions meant that a teacher could follow several discussion topics at once, she thought that ‘the pedagogical benefits of the medium rest entirely on how successfully it maintains a fruitful dialogue between the tutor and students, or between students’ (2002, p.148).

Research into online interaction has demonstrated that it is difficult to achieve in practice. Henri (1995) noted that researchers often equated CMC participation with interaction and learning, and investigated the relationship between these three factors in her research. Analysis of the CMC messages indicated that one third of them were genuinely interactive, and that there was less interaction in problem solving activities where students often made relevant postings but did not engage with other students. However, the participants said that the main source of their learning (apart from the course materials) was reading the postings because they could see how others had solved the problems (later identified in Parry and Dunn’s (2000) discussion of benchmarking) and this was not possible outside of CMC. Henri concluded that the CMC learning process needed to be reconceptualised as two distinct interactive processes: ‘(1) a learning process using CMC, characterised by individual endeavour supported by the groups’ exchanges and (2) a group work process using CMC, characterised by collective endeavour, directed towards the accomplishment of a task and reaching a shared objective’ (1995, p. 160).

Dysthe (2002) reported an investigation into levels of interaction in her postgraduate course in ethics. She viewed the written format of CMC as a new pedagogical tool for students which she described as ‘thinking devices in their personal and collective
creation of knowledge’ (2002, p.351) where learners thought about and worked with each other’s postings. Dysthe (2002) argued that texts could either be univocal (where the purpose is to accurately convey meaning, for example, the lecture) or dialogic (where the purpose is to generate new meanings), or a mixture of both. For Dysthe, when a text was operating dialogically, it had a multi-voiced character and, hence, its essential function is as a ‘thinking device’ (2002, p.342).

Based on this theoretical position, her research found a ‘high degree’ (no levels of measurement were supplied) of interaction which was characterised as dialogic activity. Many of the messages contained both univocal and dialogic passages and while she endorsed the value of students presenting their views (univocal communication), it was also important for students to understand the potential of using other students’ postings and of producing new ideas. What is interesting is that Dysthe’s (2002) primary reasons for this high degree of interaction were all attributed to facets of curriculum design, particularly the kind of discussion activity, and a low teacher presence within the online discussion (see 3.2.3.1 and 3.2.3.2) Two other facets of the CMC environment were also significant and these were its asynchronous nature and its ability to present multiple student voices in the discussion.

In contrast, in his research into CMC as a tool for promoting conversational modes of learning by undergraduates, Thomas (2002) critiqued the interactive potential of CMC. He argued that the research to date had not adequately recognised the highly technology-mediated nature of CMC and his research findings illustrate this. While students demonstrated high levels of cognitive engagement and critical thinking, he concluded that the CMC environment did not support conversational modes of learning because the threaded structure obstructed coherency, so no real accretion of knowledge was possible. This was evidenced by unread messages, ideas that were not pursued, repetitions and fragmented and disjointed contributions and he viewed the discussion as an ill-structured collection of messages with little interaction. There were two other factors that limited interaction. These were the conflict between the written form and oral function of CMC, as discussed above in 2.3.2 and the asynchronous nature of the environment, which is discussed next in 2.3.4. He concluded that CMC interaction was significantly impeded because it lacked the features of ‘normal discussion’ which were necessary for collaborative learning to take place. While Thomas regarded the constraints discussed above as arising from
the technology, it is worthwhile noting that many face-to-face group discussions have similar features (for example, fragmentation, ideas which are not pursued). This position minimises the CMC features which are different from the face-to-face environment and obstructs the consideration of how both media might work together in a blended learning environment.

More recently, in a study of a predominantly undergraduate course for campus-based students, Pena-Shaff and Nicolls (2004) found that while students were more reflective than they were in class, there was a low level of interactivity where half of the messages received no response and a further quarter of them received only one response. Content analysis by the researchers indicated that students had developed their ideas in a social context, but the discussion was characterised overall as ‘a reflective soliloquy-generating process’ (2004, p.260) because of its monologic, rather than dialogic, character. While the teachers developed an explicitly constructivist course design, they concluded that more attention was needed to integrate the CMC activity with the rest of the course.

Some writers and researchers have theorised interaction differently and have examined CMC from the collaborative learning perspective. In an ethnographic study, Stacey (1999) drew on Bruffee’s collaborative learning framework when investigating the way in which postgraduate distance students used CMC as part of their learning process. Her work illustrated the characteristics of a Vygotskian social learning process that could not occur when individuals were learning on their own and, hence she endorsed the value of collaborative groups. The main features of the collaboration were clarification of ideas, getting feedback from others in their group, receiving a range of ideas, sharing resources and new ideas, and receiving help from within the group. The group structure was also important because the students could practise the new language and learn in a safe environment, and could provide each other with socio-affective support, which was motivational. The way in which the groups developed ideas through extension and modification of individual contributions illustrated the operation of Vygotsky’s zone of proximal development in a group setting, as visualised by Bruffee (1999), but in a CMC environment.

There are two other bodies of literature which have constructivist foundations and examine CMC-based interaction and these need to be acknowledged although they do
not form part of the theoretical framework for this study. Wallace (2003) identified the conflation of collaboration with the concept of communities in online courses and argued that most definitions of community included some form of collaboration. There is also another body of literature on computer-supported collaborative learning (CSCL) that focuses on collaborative learning in computer supported environments and the development of computer tools to support collaborative learning. Roberts (2005) review of current work in this area illustrates a diversity of research and practice in the tertiary context.

2.3.4. Time independence
Harasim (2000) noted that the time-independent character of CMC provides unlimited access and that this had two dimensions. Firstly, students have flexibility to log into online discussions at any time, and secondly, they can respond immediately or pause to think and write before posting. The implications of these two facets of time independence will now be reviewed.

2.3.4.1. Time flexibility
The benefits of time flexibility for learning have been widely acclaimed in the academic and popular literature, but this flexibility is somewhat contradictory because it creates significant time management demands for students. Palloff and Pratt (2003) recognised the importance of time and commitment in devoting an entire chapter to this in their text on virtual students. Arguably, this is equally applicable to campus-based students. They drew attention to the need to accommodate online learning with other commitments to family, work and a social life and recommended that students set goals for their study, for example, their final grade, and then plan and prioritise. They provided a rubric to enable students to rank activities according to their importance and urgency and argued that last minute postings increased importance and urgency for students, but made it difficult for a learning community to develop.

There is some research about the ways in which students prioritize that has identified influential factors. Lockwood’s (1992) research in the distance education context found that the most significant cost for students was the time cost of study, followed by the intellectual and emotional costs of study. He found that learners constantly analysed the costs against various benefits of study which he described as course or
programme goals, self development and assessment. In weighing up the costs and benefits of any activity, other influential factors were the place of the activity in the course (beginning, middle or end), the availability of any frameworks and the amount of intellectual effort. Other factors such as the voluntary or required nature of the activity and the role of assessment, were significant and students made their decisions in pragmatic ways to meet various internal and external demands. The role of assessment is further discussed in 3.2.3.3.

A related issue concerns participation. The scholarly discussion about interaction or collaboration is founded on the assumption of student participation, however participation is a significant problem in CMC. Hammond’s (1999) case study research into participation in CMC by postgraduate students and academic staff for professional development provided insights into the constraints on participation. He found five factors that affected participation:

- Competing work and home demands and the challenge of prioritizing, which some learners viewed as a ‘zero sum game’.
- The extent of participants’ access to technology at work or home and their levels of skill in using it.
- The extent of participants’ commitment to the online discussions, including their value for learning, and becoming proficient with the online discussion process.
- The extent to which the text-based and asynchronous format supported communication. Some aspects were positive including the permanent record, the flexibility to respond when they wanted to, the time for thinking, and some aspects were negative, for example, anxiety about posting messages, having to keep up with the debate or opting out, and the time it took to write messages.
- The extent to which the online discussions were integrated into the course, for example, the use of peer assessment and the role of the teacher in the discussions.

Hammond (1999) concluded that participation did not come easily and that the medium was a paradoxical one that both encouraged and discouraged learners. More recently, Hammond (2005) suggested as good practice that university courses establish minimum participation requirements for online discussions, give credit or grades for them and adjust the students workload accordingly.
The other associated issue that has been discussed in the literature is whether participation should be optional or required. In her evaluative study of part-time undergraduate students, Holley (2002) found that two thirds of the students did not participate in her online seminar. The main reasons were associated with their high workload and subsequent prioritizing of assessment and technical issues for some students. A third of the students were resistant to the idea of online discussions and did not really understand their nature, with several of them asking at the campus for directions to ‘the virtual seminar’. Many researchers, for example Harasim et al (1995) and Laurillard (2002), have now argued that participation should be required and assessed, because that treatment endorses their importance and integrates them into the curriculum.

2.3.4.2 Time for reflection and writing

Time flexibility appears to offer several benefits for students, especially being able to take as long as they like to read, understand, think and write their contributions. This was identified early in a study by Berge (1994) of postgraduate students studying by distance. Participants commented that they were more reflective than they were in the classroom and the space to reflect helped them to craft better responses and connect with their peers and themselves. However, there were also disadvantages associated with asynchronicity and these were the pressure to regularly log on, the overload of information, the difficulty of synthesizing ideas and the loss of ‘contributive energy’, namely feeling disappointed with peers because of the progress of discussions.

There is some research that has identified the benefits of asynchronous communication for ESL students. Yildez and Bichelmeyer (2003) made a comparative study of participation in face-to-face and virtual classrooms by native and ESL speakers. They found that ESL students participated more in Web-based discussions because they did not have to worry about facets of face-to-face discussions like listening, understanding, making a comment on the spot, pronunciation and turn taking. However, they needed time to read and comprehend the postings, respond in English, and check grammar and spelling. The researchers concluded that while there was an improvement in participative equality, there were still linguistic and cultural barriers.
In Berge’s (1994), and later in Fabro and Garrison’s (1998) studies of higher order thinking in postgraduates, students also recognised that a benefit of asynchronicity was the better quality in their discussion. Garrison and Anderson (2003) noted the ability of CMC, with its asynchronous character, to achieve a better balance between reflection and discourse than would be possible with talking alone, which they said was biased towards a spontaneous and less reflective process (p.56). In her research, Henri (1995) considered that the ability to take time to analyse and think changed the quality of discussion because it was no longer driven by who was being heard, as in a face-to-face setting, but by the content and ideas of the postings. In her research, Dysthe (2002) supported this concept and noted the contribution of asynchronicity in creating the high level of dialogic postings. She considered that when the time factor was eliminated, students could express their ideas in relation to other entries and, hence, the multivoiced perspectives which were important for individual and collective meaning-making (2002, p.349). However, despite the emphasis on asynchronicity in both pieces of research, it is noteworthy that Henri (1995) found very little interaction and yet Dysthe (2002) reported high levels of interaction, as discussed previously. Dysthe ascribed this to the influence of the curriculum, but another possible explanation is improved Internet discussion technology and software which has increased access and navigation and student familiarity with such media.

In his research, Thomas (2002) was highly critical of the asynchronous character of CMC, which he considered created an ‘isolated mode of participation’ (2002, p.362). He argued that the students’ time and place separation created an level of abstraction where students were not interacting with each other, but with their writing or pieces of text. Their messages were not contributions to a collaborative effort but bits of data which might be selected by other students from the CMC database. Therefore, a limited number of student voices were heard and learning was highly individualistic, rather than interactive. In his view, the online discussion lacked the flow of an ongoing face-to-face dialogue, and this was due to the time and place independent character of the online discussion.

2.3.5 Identification of areas for further research
Given the rapid expansion of online learning, further research into students’ learning in a CMC environment is essential in a rapidly changing technological environment to provide perspectives that teachers and institutions can draw on for future
development. Owston (1997) identified three distinct advantages of the Internet which were flexibility, the superior quality of asynchronous interaction and the fact that the computer is now a natural part of a student’s world and argued that the way in which those aspects could be developed to improve teaching and learning should lie at the heart of the research agenda in this area.

Given the widespread application of constructivist principles in CMC, it is somewhat surprising that Vygotsky’s (1978) concept of language as a mediating tool has not been more widely investigated within the CMC medium. The CMC environment results in written texts now being used in a new fashion, where they provide the basis for dialogue, as opposed to previous uses where they have generally been concerned with one way transmission. In order to make best use of the CMC environment, research is needed to establish how this new genre, with its emphasis on reading and writing, helps or hinders undergraduate students’ learning. The literature illustrates theoretically new ways to view CMC contributions, for example, Dysthe’s (2002) idea of texts as thinking devices. This research project investigates the role and impact of the text-based environment and the connections between reading, writing, thinking and learning.

With regard to levels of interaction, the major issue arising in the literature relates to the circumstances in which the CMC environment might do more than operate as a communication device for students and teachers, and instead, support dialogue. Much of the research to date, for example Henri (1995), has illustrated the use of CMC to support individual learning rather than the more collaborative approaches. Thomas (2002) suggested that the lack of interaction arose from the technology-based features of the medium. However, other factors could be relevant, for example, the age, intellectual development and study mode of the students, In Stacey’s (1998) research, students were older and studying for an MBA by distance, and it is possible that undergraduate on-campus students might act differently. Dysthe (2002) identified curriculum features as highly influential and these need to be weighed against features of the CMC medium. More research is needed which examines these issues in a natural setting and this research was carried out to do so.

The literature indicates that the asynchronous nature of the CMC environment has created pragmatic time management issues for students and, likewise, more research
is needed to establish what influences participation. The predominant view in the literature is that time flexibility can improve the quality of discussions and widen participation, especially for ESL students. Thomas’s (2002) research with undergraduate students in a blended setting has suggested that technology may isolate students and impede interaction. His data did not include any student views and their perspectives are needed to further understanding of the way in which time flexibility affects on learning. This is especially so in a blended setting, where it is easy to have a face-to-face discussion with the teacher or other students. Wallace (2003) has suggested that the different campus-based contexts may be more important than the CMC medium itself.

Wallace (2003) concluded his literature review by noting that research into CMC was ‘in its infancy’ (2003, p.272) and he has identified seven areas for future research. These included ‘a better understanding of the mechanisms through which students learn in online [CMC] environments. . . .and of how it differs from face-to-face learning’ (p.274) This is especially important in blended settings where both environments are available and this research intends to provide a qualitative description of this process.
3. Contextual factors

3.1 Introduction
This chapter reviews a variety of contextual factors which are relevant to this research. The chapter begins by discussing another learning literature, that of the experience of learning literature, which has been influential in developing the scholarship of university teaching and learning. This literature has been developed from research in campus-based university settings and has been used in this research project to provide a framework for exploring the way in which the broader learning context for students, as represented by the curriculum, has influenced students’ learning in online discussions. This literature adds an additional perspective to that of constructivism by providing a framework for exploring the influence of the curriculum on learning and explicitly focusing on student perspectives.

The chapter proceeds to further describe the research context by reviewing the literature on flexible and blended learning, and then exploring some of the literature on the nature of contemporary campus-based university students and their perspectives on blended learning.

3.2 The Experience of Learning literature

3.2.1 Introduction to the experience of learning literature
The experience of learning literature comes from a field of research inquiry known as phenomenography, that is ‘the empirical study of a limited number of qualitatively different ways in which we experience, conceptualise, understand, perceive, apprehend etc. various phenomena in, and aspects of, the world around us’ (Prosser & Trigwell, 1999, p.57). From the 1970s research was conducted by cognitive psychologists into students’ learning using phenomenography and much of this work was on topics such as learning conceptions, and approaches to learning and is documented in The Experience of Learning (Marton, Hounsell & Entwistle, 1997). Laurillard (2002) critiqued constructivist approaches because teachers and teaching
had received attention but student perspectives, which were capable of generating an empirically-based learning theory, had been ignored. The value of the experience of learning research lay in identifying the importance of the students’ conceptions of learning and the learning context, particularly the course design and assessment. A large body of research has now accumulated which has been highly influential in professional and educational development programs that have sought to improve the quality of university teaching (Lindsay, 2004). The experience of learning literature is compatible with constructivism and its focus on the student experience of their learning context adds another dimension to knowledge of students’ learning which may assist with the implementation of constructivist approaches.

One area of the experience of learning literature has particularly underpinned this research, both conceptually and methodologically, and that is the research on student approaches to learning by Entwistle and Ramsden (1983). The addition of this concept has enabled this research study to engage with a broader range of ideas about learning (beyond constructivism), and to consider the impact of contextual matters like the curriculum or students. This is important because some CMC researchers are now looking beyond the influence of the CMC characteristics themselves to broader factors, such as the curriculum. However, this has not been theorised in any particular way, and the experience of learning literature has enabled an examination of the learning environment in a more cohesive and explanatory manner.

### 3.2.2. Deep and surface approaches to learning

The concept of deep and surface approaches to learning was developed from research studies led by Noel Entwistle in the UK. He criticised the educational research on determinants of academic performance because this quantitative, causality focused and laboratory-based approach failed to adequately consider the learning environment and what students were doing within it. He argued for an alternative research paradigm, based on ‘ecological validity — that is, theories must be derived from the settings to which they are to be applied’ (Entwistle, 1997, p.11). and one that was rooted in phenomenology and ‘sought an empathetic understanding’ (Entwistle, 1997, p. 13) of students’ learning derived from their descriptions of learning. For him, learning needed to be reconceptualised as an interaction between the student and the university’s learning experience, and this alternative approach was capable of
providing insights from students about learning issues that were puzzling for teachers, but which teachers might then act on to improve the quality of learning.

In a full description of their research, Entwistle and Ramsden (1983) presented ideas about students’ learning which reflected this paradigm. The most influential concept was that of, what are now widely known as, deep and surface approaches to learning. This categorisation of deep and surface approaches was developed in tandem with the work of researchers at Gothenburg University, for example, Marton and Saijo (1976a, 1976b) who identified the key characteristics of the approaches and the role of intention, and Svensson (1977) who established holistic and atomistic approaches to structuring information. Entwistle and Ramsden discussed their work with Biggs, who had identified similar factors in learning which were incorporated into the Approaches to Study Inventory (1983, p.38). The defining features of the different approaches are presented in Table 3.1. (Ramsden, 2003, p.46)

TABLE 3.1 DEFINING FEATURES OF DEEP AND SURFACE APPROACHES TO LEARNING (Ramsden, 2003, p.47).

<table>
<thead>
<tr>
<th>Deep Approach</th>
<th>Surface Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to understand.</td>
<td>Intention only to complete task requirements.</td>
</tr>
<tr>
<td>Student maintains structure of task</td>
<td>Student distorts structure of the task.</td>
</tr>
<tr>
<td>Focus on ‘what is signified’ (e.g. the author’s argument or the concepts applicable to solving the problem).</td>
<td>Focus on ‘the signs’ (for example the words and sentences of the text, or unthinkingly on the formula needed to solve the problem).</td>
</tr>
<tr>
<td>Relate previous knowledge to new knowledge.</td>
<td>Focus on unrelated parts of the task.</td>
</tr>
<tr>
<td>Relate knowledge from different courses.</td>
<td>Memorise information for assessments.</td>
</tr>
<tr>
<td>Relate theoretical ideas to everyday experience.</td>
<td>Associate facts and concepts unreflectively.</td>
</tr>
<tr>
<td>Relate and distinguish evidence and argument.</td>
<td>Fail to distinguish principles from examples.</td>
</tr>
<tr>
<td>Organise and structure content into a coherent whole.</td>
<td>Treat the task as an external imposition.</td>
</tr>
</tbody>
</table>

There is now a large body of research which empirically supports the incidence of deep and surface approaches as major differences in the way that students learn and Smith quotes Newstead (1992, in Smith, 2000) who confirmed that research based on
the ‘Approaches to Study Inventory’ has produced ‘almost universal agreement that
the meaning [deep] and reproducing [surface] orientations are robust and genuine
factors...’ (p.300).

The significance of deep and surface approaches as a learning heuristic lies in their
associations with the quality of learning outcomes. Ramsden (2003) has marshalled
research which has described these differences, which he argued have been found
irrespective of methodology or subject area. Deep approaches to learning are
associated with qualitatively better measures of understanding, final degree awards
and greater interest in the course, demonstrated by more time on task and greater
personal satisfaction from study. However, Ramsden (2003) has indicated that there
was a stronger connection between surface approaches and poor outcomes, than deep
approaches and effective learning, and the connection between approaches and
grades was not as strong as that between approaches and research measures of the
quality of understanding.

There is now a considerable body of experience of learning research in the face-to-
face context. Lizzio, Wilson and Simons (2002) found that there was a positive
relationship between the surface approaches of business students and their higher
academic performance. This was attributed not only to the career focus and
instrumental motivation of the students, but also to the learning context where
reproductive methods were used to assess factual and procedural knowledge. Surface
approaches were, therefore, a logical choice for students who wished to score well.
Research has also been carried out in the distance education context, with a
comparative analysis of the differences in student approaches to learning in face-to-
face and distance contexts carried out by Richardson (2000). He concluded that
distance students used different approaches to learning, but this was likely to arise
due to their age and maturity rather than to the mode of learning.

The experience of learning research has been used to investigate the perceptions of
campus-based students where ICT is a part of their course environment, for example,
Jelfs and Colburn (2002) investigated the relationships between approaches to
learning and perceptions of ICT in undergraduate students. The literature includes a
few studies which investigate particularly online discussions from this perspective.
One such study is that of Ellis and Calco (2004) who observed that the inclusion of
online discussions for campus-based students creates a more complex learning environment for them. Their research is discussed further in Section 3.4.

3.2.3 The context of learning for students

Entwistle and Ramsden’s (1983) research also investigated why students adopted deep or surface approaches. They found that the choice of approach was not a consequence of students’ characters or personalities but was intentional and represented students’ interpretations of what was required by the learning task. Students could use either or both approaches to learning. Their chosen approach depended on their perception of the learning activity and its general context — that is, their choice was ‘relational’ (Ramsden, 2003, p.49).

Entwistle and Ramsden (1983) grouped influential contextual features for students into four categories:

- The learning activity, and the student’s previous experience and interest in it.
- Assessment and workload.
- The teacher and teaching.
- The course or department (discipline) and its policies and practices.

In the second edition of his book, Ramsden (2003) briefly acknowledged information communications technology ICT) as part of the modern learning context and noted its potential for supporting deep approaches. Garrison and Anderson (2003) endorsed Entwistle and Ramsden’s (1983) emphasis on the importance of the learning context and argued for a central role for CMC, especially its text-based format. They did not accept that the CMC medium should be regarded simply as a communication carrier and argued that ‘what is learned is inseparable from how it is learned’ (2003, p.19), and, therefore, CMC was an important contextual influence.

Much of the literature on online discussion has focused on the impact of the characteristics of CMC on learning (as discussed in chapter 2.2) and less attention has been given to the influence of the learning context. Eastmond (1994) found that characteristics, such as interaction and reflection were commonly associated with, but not inherent in, the CMC medium. These characteristics occurred because they were designed into the learning context. In a review of the literature on online discussions, Hammond (2005) found that aspects of curriculum design were being investigated,
most commonly in relation to online groups and participation. Unfortunately, the extent to which his review covers campus-based settings is not stated. Next, the features of the learning context are discussed in more depth using Entwistle and Ramsden’s (1983) framework.

3.2.3.1 The learning activity
Discussion in educational settings has a long history (Winiecki, 2003) and has also been conceptualized in the literature as dialogue and conversation. In a synthesis of these three terms, Brookfield and Preskill (1999) have identified the purposes of discussion as

(1) to help participants reach a more critically informed understanding about the topic ... under consideration, (2) to enhance participants ‘self awareness and their capacity for self-critique, (3) to foster an appreciation among participants for the diversity of opinion that invariably emerges when viewpoints are exchanged openly and honestly, and (4) to act as a catalyst to helping people take informed action in the world’ (p. 7, 1999).

They made 15 arguments for the ways in which discussion can assist learning which included developing intellectual skills such as analysis and synthesis, dealing with ambiguity and complexity, and knowledge creation, and other skills such as empathy, respectful listening, clear communication and developing the habit of collaboration. Winiecki (2003) noted that discussion was especially appropriate for achieving higher order thinking goals because discussion comprised both divergent thinking (through multiple perspectives) and convergent thinking (through evaluation and synthesis) for the understanding of a topic.

There is strong theoretical support for the role of discussion in learning. From a Vygotskian (1978) perspective, dialogue with more knowledgeable people was the mechanism through which learning occurred. Bruffee (1999) emphasised the role of conversation in acculturating students and emphasised collaborative activity, especially the development opportunities which could arise through multiple conversations with peers. Laurillard (2002) extended this into educational media and developed a teaching strategy of ‘iterative dialogue’ (2002, p.77) comprising discursive, adaptive, interactive and reflective processes in what she has named a ‘Conversational Framework’.
In their discussion of authentic learning environments, Herrington and Herrington (2006) have identified critical characteristics of such an environment which are based on constructivist philosophy and situated learning concepts. Hence, discussion activities should ‘be complex and ill defined and echo the same complexity found in real world tasks’ (2006, p.5), and they should include multiple roles and perspectives, and opportunities for meaningful reflection. Also essential are spaces to articulate and present their work to their peers and assessment should be included within the activity.

The interactive learning potential of the CMC environment has underpinned much of the CMC research, but it is difficult to achieve genuine discussion or dialogue (as discussed in Section 2.3.3). Some researchers have started to consider what kind of activity is needed.

Sheny, Travalin and Billig (2000) identified the features of successful online discussion activities in high schools. Their research confirmed the value of an authentic context with an activity which allowed multiple perspectives to emerge and engaged students in the critique and synthesis of those stances. Also important was the need for the activity to require the display and articulation of thought processes, for example, differentiating between fact and opinion, and providing reasons. They suggested that the activity should be group-based rather than individual, for example, presenting a synthesis or making recommendations, in order to reduce information overload.

Dysthe (2002) found high levels of dialogue (see Section 2.3.3) and attributed these to the curriculum design, including the activity. The key characteristics of the activity which encouraged interaction were a provocative text, the absence of right and wrong answers, a complexity that required students to think first, a connection to the real world and ‘an interesting and challenging assignment, so there is a certain curiosity about the input from different voices’ (2002, p.346). This would appear to reflect Bruffee’s (1999) idea of an activity which developed nonfoundational knowledge, being knowledge which is highly contextual and constructed in an interdependent social process, as opposed to knowledge that is absolute and derived from a structure.
One issue that arises in the research is the difficulty of producing dissonance or disagreement in discussions. Such features are desirable because they support knowledge construction. McLouglin and Luca (1999) investigated an online undergraduate discussion forum where students were required to discuss the weekly topics online after the posting of a student-generated issues paper. There was little intervention by the teachers, and students were graded (30% of their final mark) on their weekly contributions. The researchers found social and participatory processes, and high levels of student satisfaction with the online discussions. However, most of the contributions were at the level of comparing and sharing information. There was very little cognitive conflict, challenge or revision of ideas.

Makitalo, Hakkinen Leinonen and Jarvela (2002) argued that, because of the absence of visual cues in online discussions, building common ground becomes very important. This was generally achieved through agreement, however an effect of agreement was often to stifle the conversation. The issue for undergraduates might lie in their skills rather than the nature of the activity. In their research, Light and Light (1999) found that undergraduate students were very reluctant to critique each other and could not distinguish between criticising ideas and criticising people.

3.2.3.2 The role of the teacher in the CMC environment

The presence, or otherwise, of the teacher in online discussions is one aspect of the learning context that has received a considerable amount of attention in the CMC literature. Salmon (2000) provided a five-stage model for teaching online in CMC, with the teacher’s role changing through a series of levels so that at the fifth stage, the student appears to be operating relatively independently. This is only one of the many models of CMC moderation that have been developed and further examples have been described in Wallace’s (2003) review of online interaction.

The dominant view of teacher involvement in online discussions seems to be that of close and active teacher moderation. For example, Laurillard (2002) argued that the success of CMC is ‘totally dependent on a good moderator. . . and that none of the studies suggests that this is the kind of medium where students can be left to work alone’ (2002, p.151). Garrison and Anderson (2003) had a similar view and thought that teacher presence was needed to ensure that the online discussions developed new understandings and knowledge.
Other research has investigated the impact of the teacher. An early study by Tagg and Dickenson (1995) found that increased teacher messages and prompt teacher responses did not increase the message activity of the postgraduate students. What were influential were student perceptions of a continued presence which could be achieved by acknowledgements, guidance and encouragement. In a recent evaluation of three different teacher moderation approaches and activities, Painter, Coffin and Hewings (2003) found that, irrespective of the role of the teacher, there was a supportive atmosphere, but very little robust debate. They concluded that interaction was improved by using suitable activities and sometimes, increasing teacher involvement.

Despite the predominance of constructivism, there are few studies which have considered CMC where there is little teacher involvement. One study, which has already been reviewed here, is that of Dysthe (2002) which attributed a high level of interaction, not only to the activity but also to the teacher role. This role was limited to monitoring the discussion, not intervening, and Dysthe (2002) argued that this created a symmetrical discussion where all of the participants were of equal status and power. This fostered dialogue because it gave each student’s contribution an equal authority, and students had to develop their own ideas and take responsibility for the discussion rather than wait for the teacher to intervene. Dysthe’s (2002) discussion about the absence of asymmetry and its relationship to dialogue is significant because previous classroom research identified a widespread IRE discourse pattern (Cazden, 1988) in traditional classrooms where the teacher initiates the discussion; this is followed by a response by a student, and then evaluative feedback by the teacher. Dysthe’s (2002) research suggests a different approach.

Rourke and Anderson (2002) reported their findings on a study of postgraduate students in a distance course where peers led the online discussions instead of the teacher. In their literature review, they noted that ‘one consistently cited issue is the authoritarian presence that the instructor brings to the discussion’ (2002, p.4). The benefits of freer discussion were described in the literature as both affective and cognitive, relating to increased student satisfaction as well as depth of understanding. Rourke and Anderson (2002) found that the students preferred the discussions which they led themselves and criticised their other teacher-led discussions for not being
sufficiently critical or challenging. The researchers thought this may have arisen because the peer based discussions were more interpretive (higher order thinking) whereas the earlier ones with the instructor were related to more technical (lower level) topics. This suggested that some kinds of course content may not be a suitable basis for an online discussion activity.

3.2.3.3 Assessment
Ramsden (2003) described assessment as one of the most central influences on students’ learning, and expressed the view that students’ behaviour was often not concerned with understanding a subject, but working out what the teacher wanted from them in the assessment. He endorsed Snyder’s (1971, in Ramsden, 2003) view of institutions where there was a formal curriculum, represented by the teachers and the published educational goals, and a hidden curriculum, which involved the way in which students perceived assessment, and their consequent actions in order to get good marks. It was through assessment, especially the activity and the marking criteria, that teachers demonstrated to students what they really valued. The other factor that influenced students’ approaches to assessment was workload and where students felt pressure due to too much work then they tended to adopt surface approaches.

Laurillard (2002) expressed similar views on the role of assessment. In her discussion of the impact of new technologies on assessment, she stated that they must be integrated into the curriculum otherwise students regard them as ‘peripheral and ignore them’ (2002, p.205). Dysthe’s (2002) research is an example of the way in which online discussion contributions are directly assessed. Lea (2001) described an indirect method of integration with assessment where postgraduate students were required to treat others’ postings as authoritative (like academic texts), and draw on them for an assessed essay.

Garrison and Anderson (2003) described assessment as an integrating mechanism where external measures of performance could be matched by students with their own internal perceptions of self-development. The authors identified motivational aspects of assessment; students valued its role in understanding the main ideas in the course or the activities themselves and the deadlines helped them to pace themselves and focus their attention. Like Laurillard (2002), they took a student perspective, and
advocated incorporating CMC into the assessment program on the basis that if online discussion is important and valued within the course, then participation must be rewarded because there was much competition for students’ time and any activity that was marginal or supplemental was unlikely to be prioritised. The role of prioritising by students has been discussed in Section 2.3.4.1.

Some research has been carried out into the impact of assessing online discussions. In a study of motivation in CMC, Bures, Abrami and Amundsen (2000) examined five distance courses (including one undergraduate course) where CMC participation was assessed with various weightings. They found that assessment was motivational and the allocation of grades did influence participation in both voluntary and graded discussions. Where participation was voluntary, or graded at less than 10%, there was less participation than in courses where participation was graded at 10% or more, that is, signalled as ‘important’.

3.2.3.3 Departments and their policies and practices, including disciplines
In their original research, Entwistle and Ramsden (1983) identified a wider influence of departments and their policies and practices. Underlying this factor were the department disciplines, which Entwistle and Ramsden (1983) divided into the two categories of sciences and humanities. This reflected Biglan’s (1973) classification of disciplines under the ‘shorthand label of hard-soft’ (1973, p.201) which was based on the existence of paradigms with their clearly delineated theory and methods (e.g. physical science). In business, some subjects, such as law might be regarded as ‘hard’ subjects and others, such as management would be classified soft’ disciplines. In a discussion about assessment in science and non science subjects, Yourke, Bridges and Woolf (2000) noted the differences between these two categories for learning as being about ‘a substantial amount of absolutism’ (2000, p.13) where there was a focus on being right or wrong and ‘inherent relativism’ where subjects were more discursive.

Ramsden and Entwistle’s (1983) research found that students were influenced by the different underlying discipline contexts. Drawing on Pask’s work (1976), they noted that science students tended to use operational approaches that involved mastering procedural details, whereas arts and humanities students tended to use more
comprehension and relational approaches focused on describing and connecting the subject to other relevant topics.

While there are many research reports that discuss the discipline as part of the context of the research, the influence of disciplines, and the nature of their epistemological demands, has received little attention in the CMC research. The main consideration has been in discussion of findings and their context, for example, O’Reilly and Newton’s (2002) suggestion that a social science course provided a good match between the distance student’s willingness to participate in the online discussion and the discursive nature of the subject.

3.2.4 Critique of the experience of learning literature
The influential nature of the experience of learning literature in both research and practice resulted in a large body of critique. Harris (1993) argued that more attention should be paid to the underlying value system of student approaches to learning as ‘an aesthetic connected to much wider cultural predispositions, a source of pleasure and power, a matter of social distinction, social solidarity and social reproduction’ (1993, p.199) which portrayed deep approaches as ‘good’ and the others as ‘bad’ . He urged more investigation into the social dimensions of the different approaches and the connections between ‘syllabus freedom’ and ‘the aristocratic disdain of the financially and culturally secure’ (1993, p.199).

In a review of Ramsden’s (2003) and Biggs’s (2003) new editions of their texts, Lindsay (2004) observed the close connection in time (in the 1980s) between the emergence of the educational development centres in the United Kingdom and cost-cutting measures in higher education. He strongly criticised the role of the experience of learning literature in providing a theoretical underpinning for this movement. In his view, this literature ignored other research, for example, that of cognitive psychology. It was not methodologically rigorous and the emphasis on meaning-making did not advance an understanding of learning. As a result, the focus of development was on learning how to learn rather than the acquisition of knowledge and this did not support good teaching.

In their review of the experience of learning literature, Case and Marshall (2004) commented that the deep and surface model could become reified and operate
prescriptively, rather than descriptively (2004, p.606). They identified research which indicated that deep and surface approaches might not represent the richness and variation in students’ learning and suggested that this phenomenon might be better viewed as a continuum rather than a dichotomy. The practice of other cultures was also acknowledged, for example, the memorising strategies of Chinese learners which, for whom these were associated with deep rather than surface approaches to learning. (See Section 3.4)

Case and Marshall (2004) observed that most research had proceeded on the basis that there were only deep and surface approaches and that there had been little research that looked for other approaches in the context of specific disciplines. The authors used a heavily discipline contextualised and data driven method to establish the approaches to learning of engineering students. Case and Marshall found a third approach that sat between the deep and surface types of approach which involved students working through problems using algorithms, which is an important learning activity in engineering. Where students worked with the calculations to understand the subject, this was closer to a deep approach, but where students worked with them to pass the exam, this was closer to a surface approach.

3.2.5 Identification of areas of further research

The experience of learning literature adds to constructivist perspectives on learning by emphasising a student dimension, that is, students may use deep or surface approaches to learning depending on their perceptions of the learning context. Deep approaches to learning are characterised by an intention to understand and a focus on making sense of material and are associated with better understanding, higher degree awards and increased student satisfaction. The main contextual features which influence students are the learning activity, the teacher and teaching, assessment and the nature of the discipline.

While research is now starting to emerge about aspects of campus-based students’ experience of learning which includes the CMC context, there is little substantive research which examines the way in which Entwistle and Ramsden’s contextual factors influence students’ actions in online discussions. Many of the CMC studies to date have focused on the special features of the medium, such as its text-based nature, and while researchers are now recognising the importance of the learning
context, this has not been examined in a systematic way or connected to a coherent literature like that of the experience of learning literature. In his recent review of the research on online discussions, Hammond (2005) has identified the need for further research to establish new and effective curriculum models, especially in settings outside of the teacher education and computing fields.

Given the potential of CMC to support dialogic learning, and the difficulty of achieving this, there is a need to understand better what kinds of discussion activities will support dialogue and interaction. The role of the teacher in on-campus settings is different from distance settings and there could be more scope for their having a reduced presence in online discussions. There has been little research which examines this kind of approach in an on-campus setting, especially with regard to undergraduates. More insight is needed into the influence of assessment in relation to CMC participation and the quality of discussions, and factors which determine prioritising behaviour. There is also a need to look beyond universities and identify social, cultural and economic factors that may influence students’ approaches to learning. In summary, further research is therefore needed into pedagogical factors, and taking a student perspective in this respect, as this research does, will provide another perspective on learning.

3.3 Information communications technology (ICT)-Based learning in universities

The impact of ICT on universities has been widely recognised in the literature, and in New Zealand, ICT is now a normal part of the learning environment for many undergraduates. This section of the chapter provides background information to the research project by reviewing the literature on flexible learning and discussing a more recent adaptation of this, being blended learning.

3.3.1 Flexible learning

In their text about flexible learning with ICT, Collis and Moonen (2001) believed that there was a ‘sense of inevitability’ (p.37) about the use of computers in education, as universities responded to various environmental influences such as ‘virtualisation (people becoming comfortable with Internet technology), life long learning, globalization, personalisation and internationalization’ (2001, p.30). Technology-
based flexibility was viewed as a desirable way to respond to these trends by universities. While there were economic and social reasons for developing flexible learning, universities regarded the absence of flexibility as a competitive disadvantage with regard to reputation and market position.

There are many definitions of flexible learning, and, conceptually, it is generally situated within the open learning field:

*The concept of open education is ill defined but has to do with matters relating to access, freedom from constraints of time and place, means, structure, dialogue and the presence of support services. Openness in terms of means would imply the presence of choice between distance and contiguous modes as well as choice between spec media. Most of these features relate to educational policy and philosophy rather than the modality of teaching.*  
  
  (Rumble, 1989, p.35)

As flexible learning moved into mainstream universities, the concept came to emphasize independent and learner-centred learning, for example, Hudson, Maslin-Prothero and Oates (1997) defined flexible learning as ‘essentially learner-centred learning. . . aimed at improving access, giving learners control and choice over what and how they learn, helping them to take responsibility for their learning and providing support appropriate to the individual’s needs’ (1997, p.13).

ICT is not a requirement for flexible learning, but there is now either an explicit or implicit recognition that ICT is a key enabler of flexibility. Taylor Lopez and Quadrelli (1996) included technology and a learning philosophy in their definition of flexibility:

*The term flexible ‘ is used to refer to practices which utilize the capacities for learner-learner and teacher-learner interaction, made possible through recent developments in communication and information technology, to provide increased ‘openness ‘ in both on and off-campus delivery of educational programs.*

  
  (1996, p.6)

At a university-wide level, Collis and Moonen (2001) provided another model of flexible learning that comprised an institutional framework, implementation and change strategies, an active pedagogy and appropriate technology and support. They defined flexibility in terms of continua, which were time, content, entry requirements, instructional approach, resources, delivery, logistics (2001, p.10) and which provided options for moving along the continua. They developed a flexible pedagogical model with strong constructivist characteristics, and based on the ideas of flexibility and
adaptability, where students are active in their knowledge and skills building and learn how to participate in and contribute to a community.

Privateer (1999) asserted that universities are at a ‘strategic academic crossroads’ (1999, p.8) and have to choose between using technology for improving course management and efficiency or using it to improve the learning experience for students and to produce more useful graduates. He argued against solely improving efficiency by keeping the ‘replication [transmission] model’ (1999, p.7) with its continued emphasis on content and the use of computers to automate learning. This approach could make universities and their qualifications increasingly irrelevant to the wider community, and he envisaged that technology could be used instead to support real world, constructivist, collaborative, problem solving learning.

The flexible learning concept has been influential in universities and has resulted in a convergence of on-campus and distance modes. Cookson (2002) referred to ‘the worldwide phenomenon of hybridisation’ which described the use of ICT by conventional universities to create new courses for distant students and enhance on-campus learning. Collis (1997) described two approaches for using technology in on-campus courses. The first was ‘pedagogical enrichment’, where little change was made to the course, but technology was used to increase flexibility (for example, Internet access), for enrichment (course materials and links) or to improve efficiency. The second was ‘pedagogical engineering’ where the course design was changed, for example, through the use of significant CMC to support collaboration.

Garrison and Anderson (2000) thought that where technology was an ‘add-on’, it operated as an enhancement to existing practice and sustained the dominant forms of teaching and learning which they, like Privateer (1999), saw as transmissive. If new approaches to teaching and learning were adopted, they could be focused around ‘critical discourse and meaningful knowledge construction’ (2000, p.25), and this would enable universities to remain close to their traditional values and goals. In their consideration of the potential for change in a business education setting, Leidner and Jarvenpa (1995) observed there was more potential for change in moving from an objectivist to a constructivist stance than through technology.
CHAPTER 3

Business courses at universities have traditionally been vocational and there have always been calls for curriculum reform to ensure that graduates are able to maintain a competitive advantage in a world characterised by technology, global business models and changes in market power (Albrecht and Sack, 2000). The ability to successfully use ICT has been stressed for some time, for example, back in 1997 Atwong and Hugstead identified the competitive advantage for marketing graduates who could ‘operate deftly’ in a CMC environment. However, there may be a gap between industry needs and business school practice. In a report on the impact of virtual learning environments (VLEs) in business schools in the United Kingdom, Morris (2003) reported that, while VLEs have been extensively used in undergraduate courses, this had been mostly by way of supplements rather than replacement, and mostly for providing resources and communicating content and notices and rather than for the use of CMC, which was regarded by teachers as more suitable for discursive rather than quantitative subjects.

3.3.2 Blended learning

During the implementation of this CMC research project, a new term, blended learning, appeared in the literature and it has been rapidly applied to the on-campus context. However, so far, there has been little attempt to conceptually align the concept with that of flexible learning, for example, Graham (in Bonk and Graham, 2005) identified access and flexibility as one of the major reasons for blended learning, but did not explore the connection to flexible learning in any depth.

Blended learning is now used in the literature to describe a wide variety of teaching and learning approaches that generally involve technology. Its use has been described in many contexts, for example, the corporate sector (Thorne, 2003), distance education (Jelfs, Nathan & Barrett, 2004), and also for different kinds of learners, for example, in professional development (Vaughan & Garrison (2005), and foundation degrees (Dron, Seidel & Litten (2004). Many of the reports in the literature also describe conventional university settings where traditional campus-based activities have been mixed with online learning, and some of these are discussed in this chapter.
A major theme in the literature is the varied way in which blended learning is described conceptually. This diversity is acknowledged by Whitelock and Jelfs (2003) in their editorial for a special journal issue on the subject, and illustrated by wide ranging definitions and frameworks in the subsequent journal papers. In a review of the literature, Oliver and Trigwell (2005) identified seven different blends; mixing:

- E-learning with traditional learning.
- Online learning with face-to-face.
- Different media, for example, print, images and electronic materials.
- Different contexts, for example, work and study.
- Theories of learning, for example, behaviourism and constructivism.
- Learning objectives, for example, those concerning skills as opposed to knowledge
- Pedagogic approaches, for example, distance and campus-based learning.

Oliver and Trigwell regarded the field as ‘ill defined’ (2005, p.17) where ‘almost anything can be seen as blended learning and consequently, use of the term does not help us understand what is being discussed’ (2005, p.18). The term was often used in a very general way and reflected an aggregation of different circumstances, so there were no underlying principles from which to determine what might or might not be blended learning. They noted the corporate origins of the term and argued that, in industry, it was a compromise between entirely online and face-to-face training. Hence the concept was redundant in universities because of the widespread use of such approaches. They argued that it was an incomplete account of learning because it was very teacher-focused and ignored the experience of learning literature and did not include student perspectives of learning.

However, Oliver and Trigwell (2005) would not abandon the term, and suggested that it be reconstructed through the variation theory of learning. This was:

...based on the idea that for learning to occur, variation must be experienced by the learner. Without variation, there is no discernment, and without discernment, there is no learning. . . learning occurs when critical aspects of variation in the object of learning are discerned. Discernment is about the experience of difference

(2005, p.21).

It was not variation itself that was important, but the impact of the contrast and comparison that arose out of the variation. They argued that different teaching media
could be used to help students experience variation and that there was a role for blended approaches in creating this learning situation. As an example, they referred to Alexander and Cosgrove’s learning activities (1995, in Oliver and Trigwell, 2005), which combined texts, software and practical experiences to understand different aspects of an engineering topic. In a quantitative comparison between traditional face-to-face, blended (including CMC) and fully online courses, Rovai and Jordon (2004) found that the blended course created the strongest sense of community amongst students, as evidenced by higher connectedness and mean learning scores. The researchers acknowledged the different roles of the online and face-to-face dimensions in the course and what may underlie the success of blended learning in their research is variation theory.

In considering the application of variation theory in a blended learning context which includes CMC, it is important to acknowledge the differences between face-to-face and online communication. There is a continuous implicit or explicit comparison by students and teachers and the basis of this comparison was well described by Feenberg:

> In our culture, the face-to-face encounter is the ideal paradigm of the meeting of the minds, communication seems most complete and successful when the person is physically present ‘in’ the message. This physical presence is supposed to be a guarantee of authenticity: you can look your interlocutor in the eye and search for tacit signs of truthfulness or falsehood, where context and tone permit a subtler interpretation of the spoken word. (1989, p.22)

My survey of the literature identified 31 journal articles, beginning with Keisler Seigel and McGuire’s (1984) influential publication, which described comparative analysis of both environments. These reports differed from the other body of comparative literature (Russell, 2005) which examined general outcomes in the online and on-campus contexts. This literature review focused more narrowly on one aspect of online learning, being that of online discussions, and the main differences between these and face-to-face (class) discussions. A summary of the differences is presented in Table 3.2.
### TABLE 3.2 SUMMARY OF THE DIFFERENCES BETWEEN FACE-TO-FACE (CLASS) AND ONLINE DISCUSSIONS

<table>
<thead>
<tr>
<th><strong>Face-to-face environment</strong></th>
<th><strong>Online/CMC Environment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phatic (visual/aural signals) cues</strong></td>
<td><strong>Absence of phatic cues</strong></td>
</tr>
<tr>
<td>- High social presence through physical appearance, facial expressions, eye gaze, tones and other nonverbal signals e.g. body language.</td>
<td>- May make it difficult to understand message content.</td>
</tr>
<tr>
<td>- Required confidence to speak.</td>
<td>- Significantly reduced information about the identity and status of the message maker, which may impede understanding.</td>
</tr>
<tr>
<td>- Non verbal communication was important, especially in keeping a conversation going and developing a sense of community.</td>
<td>- More impersonal medium, so feelings of talking to a machine, or freer communication.</td>
</tr>
<tr>
<td>- Some people could be shut out because turn talking is competitive.</td>
<td>- Reduced phatic cues e.g. smiles, frowns which can be off-putting.</td>
</tr>
<tr>
<td>- People knew if their message has been heard.</td>
<td>- Possible anxiety about whether the message has been read by anyone.</td>
</tr>
<tr>
<td>- Could monitor reactions and make corrections if necessary.</td>
<td>- Can control and manipulate presentation of identity.</td>
</tr>
<tr>
<td>- Might inhibit critique and disagreement.</td>
<td>- More difficult to reach agreement.</td>
</tr>
<tr>
<td>- Was easier to make a mental map because of turn taking, linking and selection of ideas</td>
<td>- Easier for hostile behaviour to develop</td>
</tr>
<tr>
<td>- Better for developing affective outcomes, e.g. empathizing, because of the visual and aural cues.</td>
<td>- Difficult to socialize and get to know people.</td>
</tr>
<tr>
<td>- Was easier to get to know people.</td>
<td>- Harder to make a mental map because no turn taking, possible volume of messages and threaded structure.</td>
</tr>
<tr>
<td><strong>Synchronous</strong></td>
<td><strong>Asynchronous</strong></td>
</tr>
<tr>
<td>- Rapid speed.</td>
<td>- Contributions could be made at any time, and from any place.</td>
</tr>
<tr>
<td>- One stream of conversation and every contribution had to be relevant.</td>
<td>- Time expanded beyond the class.</td>
</tr>
<tr>
<td>- Instantaneous, intuitive, intense, reactive and spontaneous, and more serendipitous moments.</td>
<td>- An expectation of fast responsiveness and was often viewed as ‘slow’.</td>
</tr>
<tr>
<td>- The speed, competition and absence of research meant that discussion was often at a surface level.</td>
<td>- Delayed or no responses.</td>
</tr>
<tr>
<td>- Class discussion was for a finite time.</td>
<td>- Many different topics and more variety in contributions was possible.</td>
</tr>
<tr>
<td>- The opportunity to collaborate produced an energy which was often motivational.</td>
<td>- Anyone could enter the conversation, no turn taking needed.</td>
</tr>
<tr>
<td><strong>Speech Based</strong></td>
<td><strong>Text-based</strong></td>
</tr>
<tr>
<td>- Ephemeral nature, which can allow for flexibility of interpretation.</td>
<td>- Provided a new form of social memory</td>
</tr>
<tr>
<td>- Lots of comments, quick and easy to make a contribution.</td>
<td>- Through its record, which are available to students and the teacher.</td>
</tr>
<tr>
<td>- Everyone shared the responsibility for</td>
<td>- Wider information exchange.</td>
</tr>
<tr>
<td></td>
<td>- Little responsibility to keep the conversation</td>
</tr>
</tbody>
</table>
moving the conversation along and keeping it alive.
- Easy to rapidly build a rapport.
- Less Thoughtful.
- No record.

moving and alive
- Lurking identified as a somewhat negative behaviour.
- Viewed as an act of publishing, so concern about what others will think.
- Needed to be written correctly because of the permanent record, and need to avoid embarrassment.
- Fewer comments.
- Students wrote more seriously, like an essay
- Can compare and reform ideas through writing and develop the discipline jargon.
- Information overload could occur.
- Hard to keep track of the discussion.
- Took much more time to read the postings and then write one.

### Pedagogical Facets

- Teachers controlled the discussion.
- Most of the talking was done by the teacher, often in the inquiry, response and feedback pattern (the IRF pattern.)
- Students said less but talked informally in the classroom.
- More new ideas can be generated.
- Can create a foundation for online discussions.
- Can be used to generate multiple perspectives and indicate complexity.
- An effective classroom culture requires trust, sharing of experiences and contribution from an authentic self
- ‘Groupthink’ was more likely.
- Difficulty of arranging meeting times and places for student doing groupwork.

### Pedagogical Facets

- More difficult for the teacher to manage, because of size and complexity.
- Teacher can monitor the discussions.
- May be increased interaction in terms of quantity and quality.
- Students must be active i.e. reading and writing.
- More difficult to be passive or lazy because the record made it clear as to who was contributing and what they were contributing.
- Better critical thinking with more analysis and relational activity.
- Deeper thinking, which could include research.
- May be more student-centred due to increased participation, although the role of the teacher was still important.
- More difficult to establish an effective classroom culture because time and place flexibility can interfere and identity can be more easily manipulated.
- More difficult to provide adequate feedback and support in terms of quantity and quality.
- Can support better quality group decision making because of the record and absence of time and place pressures.
- May get wider views and more candid expression of them within a group
- Was difficult for groups to co-ordinate and clarify ideas and reach a consensus

The papers reviewed revealed that there were significant differences between the two environments and variation theory provides a new conceptual framework to investigate further blended learning environments. Oliver and Trigwell (2005) also argued that what was needed in future research was a shift away from manipulating
the blend by the teacher, to an in-depth analysis of the variation in experience for the student in the blended learning context (2005, p24). This study is designed to address these two issues.

3.4 Students’ perspectives of online discussions within a blended environment

This section of the chapter provides some background information about contemporary undergraduate students by reviewing some of the relevant literature about students, and concludes with a discussion of student perspectives about blended learning.

In 2003, Biggs (2003, p.2) highlighted the diversity of the student body, compared with its more homogeneous character in the 1980s. He observed that students paid more for their education and consequently adopted a more consumerist perspective. Many students did not attend university because of a love of learning, but enrolled to qualify for a well paid job. Biggs observed that such students might be less academically capable, and were often less committed to their study and intended to do just enough work to pass. Similarly, Ottewill (2003) commented that business students were highly instrumental in their learning, characterised by an intense focus on minimising work and assessment. Many teachers would regard these students as unmotivated, but Biggs (2003) argued that while this view might be true, it was not helpful and he advocated that a different approach was needed to increase student engagement. Drawing on both the experience of learning and constructivist literatures, he proposed ‘constructive alignment’ that is aligning curriculum activities to focus on the student and student activity as a way of encouraging deep approaches to learning.

While the undergraduate population has diversified to include more older students, many students were born in the 1980s and have grown up in an age of technology, and for this reason, Oblinger and Oblinger (2005) named such students as Net Gen students. They are digitally literate, highly mobile and always connected, and are prolific communicators (2005, para 2.6). In a review of the literature, the authors identified the implications for universities. Despite using technology to network and socialise, Net Geners expected their university experience to be focused around social and face-to-face interaction with their teachers and peers. Their learning
preferences were for interaction (for example, team projects), structure rather than ambiguity, instant rather than reflective approaches, and they found images more engaging than text. Prensky (2001) has referred to these students as ‘digital natives’. He highlighted a problem in universities where ‘our digital immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language’ (2001, p.2).

The New Zealand university student body reflects a worldwide trend of ethnic diversity and especially notable is the Chinese diaspora, with the most recent students coming from the People’s Republic of China. For such students, there are issues of language and adapting to new social and learning cultures while maintaining their own cultural values and perspectives (Gerbic, 2005). Biggs (1998) argued that much of the current literature on Chinese students has misinterpreted their actions and his research identified the paradox of the Chinese learner (1998), that is, Chinese students continuously outperform Western students even though they come from a learning culture which is characterised by large classes, didactic teachers, docile students, rote learning and exams. He argued that repetition and rote learning occurred in order to develop a deep understanding of the structure of knowledge and while teachers were highly authoritarian, they also used student-centred and constructivist discussion in class. The Chinese students’ preference for working collaboratively and cue seeking was a rational response to heavy study and assessment workloads.

Volet and Renshaw’s (1996) research with Chinese Singaporean and Australian students confirmed Biggs’s (1998) viewpoint. They found that Chinese students were influenced by their perceptions of the courses in much the same way as the local Australian students. They described the Chinese students as ‘deep achievers’ because of their use of a combination of deep and achieving strategies. One recent study of Chinese learners in the CMC environment by Smith, Coldwell, Smith and Murphy (2005) found that the Chinese students made fewer postings of an intellectual, as opposed to a social or organisational nature, and thought that this might be due to language constraints or the lack of culturally sensitive approaches by the teacher. Other, possibly influential, factors were the students’ anxiety about assessment requirements and their lack of confidence in the CMC environment.
The inclusion of CMC within many on-campus courses has illustrated the difficulties of moving to flexible or blended learning for conventional universities where students’ experiences of learning are very much based around a face-to-face tradition, and often with limited interaction. This issue is typified by an evaluation by Armatas, Holt and Rice (2003) who found that first year campus-based students in a course that had introduced online learning as an enhancement, were ‘still immersed in the classroom experience’ (2003, p. 56). This resulted in students being confused about online learning and not seeing the connections with their classes. The students were also resistant to independent learning and the researchers identified the need for more learning support for students and explicit linkage of online learning with objectives, assessment and the classroom, through better course design.

Ellis and Calco (2004) and Ellis, Calco, Levy and Tan (2004) investigated undergraduate student perspectives using the experience of learning literature as a framework. The third year engineering students’ understood the role of both face-to-face and online discussions in their course, used learning strategies that exemplified a deep approach and achieved higher levels of performance. However 69 % of the students did not connect either kind of discussion to the goals of the course and used discussion strategies that were consistent with a surface approach to learning. Like Dysthe (2002), the researchers recommended helping students to understand the role of discussions, and particularly in relation to the course outcomes.

Aspden and Helm (2004) undertook a small investigation of first year students’ perspectives of blended learning. They noted that many students felt isolated and disconnected from the academic life of the university, and that the physical presence of other students did not guarantee interaction or its quality. They found that students experienced a range of degrees of connectedness through the blend of physical and virtual environments. The value of the virtual environment, including CMC, lay in promoting continued connectedness for students who worked and studied part-time and those that were away from the university on work placements. This enabled students to maintain their engagement with their study by keeping up with the pace of the course, being better prepared for class and having more opportunities to reflect and discuss topics away from the class. Barriers to connection were mostly concerned with perceptions of the lack of commitment from others, for example, students not attending meetings, teachers not replying to emails or telephone calls, course
materials not being available and irrelevant material in lectures. The study demonstrated that value for students did not lie in any concepts about improving the quality of their learning but lay in the more pragmatic matter of connectedness or providing more time and place flexibility for their study.

Walker and Arnold (2004) provided an example of how student perspectives might be used to build a framework for blended learning. They investigated student perspectives from within two MBA finance courses, where students were participating in online discussions for the first time. After a face-to-face lecture, students collaborated in a group presentation which was then followed by class activities and online discussion and feedback. Sixty and seventy percent of the students endorsed the potential value of computers for management education, but with regard to their courses, only 40% of them regarded CMC positively. Given that this was their first experience of CMC, this might not be unexpected. Critics regarded the online discussions as ‘simply a shift in medium in the exchange of ideas with the class — a strange and unfamiliar way of conducting the learning process’ (2004, p.257). Based on their findings, the researchers presented a student-centred pedagogical framework for blended learning. Some of the main recommendations included establishing an explicit rationale for adding CMC to the course, linking the class and online activities so that they complemented each other, identifying the added value of the blend for their learning, assessing across the blend of media and socialising learners into the new concept.

Another research study that investigated student perspectives was that of Molesworth (2004), who examined senior undergraduate marketing students’ views of a blended or hybrid approach that included two CMC small group seminars. They were not assessed and 43% of the students did not contribute, or did so superficially, and there was little interaction in the postings. While students liked the idea of time and place flexibility, and recognised that the seminars ‘made you think’, most of them did not value the virtual seminars, and did not want them permanently in the course. A strong preference was expressed for class discussions, formal timetabled classes and teacher lead learning.

Molesworth (2004) observed that the students’ lack of participation was similar to that for any voluntary learning activity, and that the main benefits for students were
'the flexibility to ignore this mode of learning’ (2004, p.89). Students suggested more integration of CMC into the overall course, but speaking from a teacher’s viewpoint, Molesworth noted the considerable time involved with CMC and considered that it was more efficient for teachers to provide downloadable lecture notes and revision questions, which attracted much greater student satisfaction. It would appear that teachers as well as students engage in cost benefit analyses when considering how best to use their time.

3.5 Identification of areas for further research
Generally, flexible learning is a learner-centred educational philosophy that emphasizes access and interaction in learning, both of which are facilitated with ICT. Campus-based universities have used this concept to enrich traditional learning designs or to change them more extensively, for example, through the introduction of CMC.

A more recent concept that also includes ICT has arisen at campus-based universities and is known as blended learning. Oliver and Trigwell (2005) claim that the term is redundant at traditional universities but have suggested that it could be reconceptualised through variation theory; and that different media could play a role in providing the contrasts and comparisons that assist learning. The literature has indicated that there are significant differences between CMC and face-to-face environments. Oliver and Trigwell (2005) have identified the need for further research about the impact of variation in learning from a student perspective and this research study is designed to provide this perspective.

Contemporary undergraduate students are often regarded as highly instrumental and many of them have grown up in a culture of technology. Research into flexible and blended learning has indicated that students are strongly influenced by their face-to-face experiences and lack understanding about the role and benefits of CMC in campus-based learning. In his review of CMC interaction, Wallace (2003) makes the point that it could be the mixed mode that had far more impact than the CMC environment itself, and further research was needed into beneficial combinations of these two settings. This is coherent with a variation theory approach and forms part of the goals of this research project.
Context for the study

4.1 Introduction
This chapter provides a detailed description of the context for this study. It begins by describing the New Zealand university, the Auckland University of Technology (AUT) in which the research was undertaken, and then provides detailed descriptions about the faculty and the courses in which the students were enrolled.

4.2 The university.
AUT is one of the newer universities in New Zealand and is situated in a large city. Since its beginnings as a technical school at the end of the nineteenth century, the institution has undergone a series of transformations, the most recent of these being the conferment of university status in 1999. The institution has always had a vocational focus and this has remained so, with its current mission being excellence in vocational and professional education. The University has focused its development on innovative degree programs that are directed towards contemporary professions and roles, for example, communications, health promotion, information science, food technology, art and design and international business. AUT has close links with industry, and most of its degree programs include a work placement and it tends to attract students who want a professional or vocational qualification.

An important part of the university’s mission is learning and teaching, with a commitment to research-informed teaching. In 2000, at the start of this study, AUT comprised 12,000 equivalent full-time students and had a strategic objective for growth. The University offers a wide range of postgraduate and undergraduate degrees, mostly from its inner city campus. Programs are mostly campus-based, and recently, there has been an expansion of course offerings which include online learning.

At the development phase of this research, AUT, like other New Zealand universities, began to recognise the importance of online learning. New Zealand is distant from much of the world and has always relied on its exports for national wealth. However,
in an effort to diversify the economy, recent governments have emphasized innovation and entrepreneurship. Information and communications technology (ICT) and web-based learning were identified as national priorities to equip New Zealanders with the skills to be successful in world markets (Science and Innovation Advisory Council, 2002). The nation started to build a national e-Learning strategy that was to be student-centred and to foster e-Learning capability, especially in the areas of governance, teaching and learner support. The main objective was to enrich traditional face-to-face models and integrate learning with the broader community through collaborative efforts (E-learning Advisory Group, 2002).

The beginning of the twenty-first century saw significant development of e-Learning in the New Zealand tertiary sector. The Marshall Report (2005) provided an assessment of e-Learning capability in tertiary institutions. It found that while Learning Management Systems were widely used in universities, existing face-to-face pedagogic practices were being carried over into e-Learning. The report suggested improvements, such as, teachers reading the literature on e-learning and better use of review and evaluation processes. Wider access to good practice in departments through the use of exemplars, templates and guidelines would also support more transformational approaches to e-learning in tertiary institutions.

From 2000, the University engaged in an extensive technology driven development period as it embedded online learning within its strategic direction and developed its resources, capacity and infrastructure. In 2001, the strategic objective of ‘innovation and excellent modes of educational provision’, including online learning, was included within the university’s Teaching and Learning Development Plan (AUT, 2001). Professional development support was provided through the Centre for Professional Development and a Learning Technology Centre was established to provide curriculum development support. A contestable Learning Technology Fund was established to support innovative projects and a ‘visiting expert’ program sponsored a variety of international practitioners and researchers. In 2002, the university purchased a widely used proprietary online learning platform, Blackboard™ (2003), to provide a consistent experience for teachers and students across the university, and to develop efficiencies in support and development. The university also intensified its development by integrating the platform with other processes like enrolment and introduced a student portal.
The introduction of online learning was controversial in its early stages. Development varied across the university and, at the end of the data gathering for this study, namely 2004, approximately one third of the university’s teachers were using the online learning platform, and in the Faculty of Business, about two thirds of the degree courses included online learning. Most of the early online learning initiatives across the university focused on supplementing existing campus-based courses. However, within the Faculty of Business, some teachers were interested in a more intensive approach and this development is discussed next.

4.3 The Bachelor of Business.
The Bachelor of Business (BBus) is sited within the Faculty of Business. The Faculty offers undergraduate and postgraduate degrees in various business fields, including MBA and PhD studies. As this is my workplace, the description that follows is an insider’s view. I had responsibility for the business degree, particularly its graduate outcomes and the quality of the student learning experience. The goal of the business degree was to prepare graduates for the demands of business practice in a context characterised by change, technology and increasing globalisation. The educational philosophy of the program valued engagement with authentic business problems, the development of professional capabilities (e.g. critical thinking, teamwork and communication) and authentic learning and assessment.

Teachers in the program had strong industry connections which resulted in courses where theory and practice were blended together in the study of business problems. This approach matched students’ expectations of career relevance in their study, and students were also encouraged to integrate and mould their learning and development around their career interests, especially in their industry placement in their last semester of study. Regular formal and informal consultation with the business community in the development and review of programs also ensured that graduate outcomes were professionally and vocationally relevant.

In order to develop higher order thinking skills, the faculty had a philosophy of student-centred learning, which is described below in Figure 4.1. The model draws on Garrison and Anderson’s (2003) concept of the role of the teacher with learning as a partnership between the student and the teacher, which places both within the broader learning context of the department and university.
The other important educational philosophy was that of learning through interaction and the Faculty was committed to a **small class** teaching approach where there were no lectures and students learned in (tutorial) groups of twenty-five to thirty students. These small classes provided space for discussion, a factor that has been found to improve higher level cognitive skills (Raimondo, Esposito, & Gershenberg, 1990). Other benefits of small classes were the ease of including collaborative approaches to learning, of providing more individualised attention to students, of building commitment and of actively engaging students in class. Students might also feel more motivated because they are less likely to feel invisible or ignored in the class and it was easier for them to participate (Blatchford, 2003).
In order to develop self-responsibility, attendance at classes was entirely voluntary. Assessment within the degree was designed to promote learning and to measure and record performance. Assessment generally comprised one or two substantial pieces of work, for example projects, teamwork, and some smaller activities. Formative activity was encouraged, although students could be reluctant to do any work that was not assessed.

The market for business degrees in New Zealand is a highly competitive one, and students choose to enrol in this business degree program because of its professional focus, small classes and industry placement. In 2004, this business degree was one of the largest programs at the university with 2,100 students (Faculty of Business, 2003). There were more females (60%) than males enrolled in the program and 26% of students worked in full-time employment. There was a high level of computer ownership and Internet access amongst students and cell phones were commonplace.

Approximately half of the students were admitted with credit from prior study. As there were eleven business disciplines in which to specialise, students’ courses of study were quite varied and provided wide opportunities for networking, rather than the constancy of a cohort. This was reinforced by the high weekly working hours of many students who were enrolled in full-time study. Commonly, students worked 12-14 hours a week, either to support a lifestyle or to minimize the need to borrow money for fees and other study costs. In New Zealand, students graduate with a debt which is typically between NZ$20,000 and NZ$30,000. My contact with students indicated that the payment of fees had resulted in a consumerist approach to learning where some students regarded their progress through the course as a business transaction where the customer was always right.

Over the last ten years, students in classes have become increasingly multicultural. Māori (the indigenous people of New Zealand) students make up 12% of the student population and students with a Pacific Island heritage are increasingly choosing to study business (Faculty of Business, 2003). Close to one third of students indicate their ethnicity as Asian, and there has also been an increase in fee paying international students especially from mainland China. There is now a significant body of students for whom English is a second language (ESL), and associated with
this development is the issue of the different learning cultures and backgrounds of such students and its impact on their study in New Zealand.

In 1999, the Faculty decided to introduce online learning. Industry advice indicated that the ability to operate in an electronic environment, especially in the areas of communication, decision making and virtual teaming was becoming a key capability required for business. Equally importantly, the technology seemed to offer: new possibilities for improving learning and teaching by offering a wider range of learning experiences, the ability to respond to more diverse learner profiles, and increased flexibility of time and place, which was especially appealing to students.

Initially, the Faculty designed and implemented its own platform, Business On Line (BOL). The emphasis of BOL was on the provision of communication and interactive facilities, rather than content. Each course had both synchronous (chat) and asynchronous (the discussion forum) spaces, and a messaging system which supported groups with their own working and communication spaces. Resource options included course materials, readings, files, weblinks, bio-notes and photos of students and staff. At the time this study commenced, the university purchased a proprietary online platform, Blackboard TM, and the Faculty decided to stop using its own platform. The new platform provided a similar range of communication and content facilities but in a somewhat sophisticated manner and with many more options for teachers. This study is located within these two online learning systems. Most of the participants were familiar with both of them, and the change did not appear to have any discernible effect.

Online learning was introduced into the degree program in 2000 and the approach was that of enhancement, with the technology being used to extend, not replace, the good teacher (Collis, 1999) and to promote interactivity and learning away from the classroom. While most academic staff had never used an online platform before, their experience in interactive and collaborative learning in a face-to-face context provided a good foundation for online learning, and such a foundation has been recognised in the literature (Jonassen et al, 1995).

Some of the degree teachers wished to use online learning more extensively and a ‘flexible mode’ was developed. This was ‘pedagogical engineering’ (Collis, 1997)
where the course was restructured to include significant online activities. These were
grounded in the online communication and interaction tools, especially the
asynchronous discussion facilities and were supported by other online activities such
as research, reading and quizzes. Weekly face-to-face classes were reduced from
three to two hours a week to provide a reasonable workload for students and
academic staff All of the case studies in this research study were located within
courses that were offered in this flexible mode.

Online discussions were accessed by enrolled students using a password. The
discussions were organised in a threaded fashion, with postings clustered so that
interactions around messages or topics could be grouped together despite the date and
time of posting. The system notified students of new and unread messages and
students had various sorting options for the messages, for example, by name or date.
Every message also displayed the number of times it had been read and messages
could be saved or printed. The platform could be accessed over the Internet, from
home work or from within the university.

4.4 Summary
This chapter provided a detailed description of the broad context for this research.
The setting was an undergraduate business degree program within a New Zealand
university which provided professional and vocational education through its campus-
based programs, and had recently undergone a period of intense development in
online learning.

The Bachelor of Business included online learning within its courses in order to
improve the quality of graduate outcomes and learning and teaching. It also wanted
to be more responsive to the needs of its diverse student population, especially those
from different educational contexts and working students. A flexible mode of online
learning was developed that comprised weekly face-to-face classes of two hours and
significant online activity, which emphasised online communication and interaction
to support individual, group and class discussions and active and student-centred
approaches to learning. The four cases comprising this study were situated within this
business degree program and are discussed in Chapters 6 - 9.
The design and methodology of the study

5.1 Purpose of the chapter
The purpose of this chapter is to locate this study within contemporary research methodologies and to describe the design and methods used. The chapter begins by discussing the research approaches that had been taken in the field of online learning research to date and then provide a rationale for the choice of method in the study. Details of the implementation of the method will then be described.

5.2 Research in the online learning field
The Internet is now recognised as an established research context with issues of its own (Anderson & Kanuka, 2003). As an emergent field, there has been discussion about what research approaches might be most useful. Garrison and Anderson (2003) commented that technology is often seen as ‘abstract from social reality’ (p.116) but that, in fact, it is ‘inextricably intertwined’ (p.116). What was important to them was how technology was understood and used in learning, and they advocated for research into the curriculum with the emphasis on learning, rather than the technology. Sudweeks and Simoff (1999) had earlier observed that most of the research in the CMC field had been carried out in experimental conditions and, therefore, might not accurately represent the reality of the situation.

Windschitl (1998) commented, in relation to web-based learning, that rather than looking at increasing efficiency, we would be better to investigate the unique characteristics of the medium and focus on students and how they access information, use it and learn and describe what is happening. Windschitl argued for the value of qualitative approaches on the basis that quantitative approaches, with their focus on confirmation of hypotheses identification of theoretical positions, might ‘blind us to subtle but powerful patterns of behaviours that characterise social environments such as the classroom (real or virtual)’ (1998, p.1). For him, the qualitative tradition, with its emphasis on discovery, was also a better lens through which to examine learning as ‘a process of dialogue and negotiation of meaning from shared social
experiences’ (1998, p.31). There is an increasing number of qualitative studies in the literature, and in their text on e-Research, Anderson and Kanuka (2003) acknowledged the value of the qualitative approaches for investigating problems where there are multiple realities which are ‘subjective, value-laden, complex and context-bound’ (2003, p.34). I have chosen this approach because the qualitative paradigm is also one which comfortably reflects my own views of knowledge creation and reality, and I agree with Merriam’s (1998) perspective that researchers acknowledge their own orientations in their work. The next section of this chapter describes qualitative inquiry in more detail.

5.3 Qualitative inquiry and research

Qualitative inquiry, as an approach to the study of social activity, has its antecedents in anthropological and sociological fieldwork and has expanded into other human sciences as recently as the 1970s (Schwandt, 2003). Despite its relatively short existence in educational research, qualitative research has developed in a remarkably diverse and energetic way which makes its description challenging. Denzin and Lincoln have described it comprehensively:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self. At this level, qualitative research involves an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of or to interpret phenomena in terms of the meanings people bring to them.

(2000, p.3)

However, they noted the difficulty of imposing a ‘single umbrella-like paradigm’ (2000, p.xiv) and referred to tensions, contradictions and complexity which arose from a wide range of discipline, racial, cultural, gender and national differences. This produced multiple paradigms which Denzin and Lincoln (2003) identified as positivism, post-positivism, constructivism, critical theory and participatory action frameworks. Running alongside these were perspectives of critical race theory, feminism, queer theory and cultural studies. Diversity within the qualitative paradigm was further advanced through multiple methodologies which Denzin and Lincoln (2003, p.4) have called ‘bricolage’. Hence, they described the role of researchers, or
brocoleurs, as being like that of jazz improvisers or quilt makers as they pulled together the various strands of their inquiry and assumed multiple identities to do so.

Schwandt (2003, p.293) stated that the field of qualitative inquiry was a home for those who denied or rejected the scientific inquiry paradigm, where knowledge was created through scientific explanation (theory) and description (observation) and presented as a representation of an external reality. Cresswell (1994) described scientific inquiry as an experimental, empiricist or quantitative paradigm, where there was a single reality or truth, which was discovered through deductive and context free processes by a researcher who always remains objective. It would appear that the highly bifurcated approach of the past is declining with Patton (2002) observing that in its original form, logical positivism was not now widely practised in social science. He noted its far more moderate forms, logical empiricism and postpositivism, which were both more accommodating of the ontological and epistemological values of qualitative inquiry and this was reflected within Denzin and Lincoln’s (2003) paradigms above.

This research study was located within the concept of constructivist inquiry. The use of different and overlapping terminologies here make this a complex area to discuss. Swandt (2003) distinguished social constructionism from interpretivism where, in the case of the latter, meaning making was focused on understanding, that is, it was inherent in human activity and the role of the researcher was to establish the meaning. Can and Kemmis (1986) identified an interpretive approach where ‘the crucial character of social reality is that it possesses an intrinsic meaning structure’ (p.84) and research should focus on understanding that reality. Guba and Lincoln (1989) described their concept of a constructivist paradigm and noted that it could also be called an interpretive paradigm. It was their concept of constructivism which informed this study.

Lincoln and Guba’s (1985) concept of naturalistic inquiry was based on the idea of studying human actions in natural as opposed to experimental or contrived settings, with no manipulation or prediction of outcomes. In 1989, they renamed this approach as constructivist (Guba & Lincoln, 1989) because they came to see that its main characteristic was the notion that reality, as it exists for humans, was a mental
construct or activity. From an ontological perspective, this meant that reality was not some external phenomenon which was identified, but was instead a construction which people made based on their identity and experiences. The community and its values and norms were fundamental to the development of socially constructed knowledge, hence the importance of the setting for the research, in terms of understanding the facts and weighing the findings. These concepts underlie this study which has described students’ perspectives of their reality as learners and their notions or constructions of learning.

Naturalistic inquiry has been extended from a philosophical paradigm to a more practice focused research activity by Erlandson, Harris, Skipper and Allan (1993) in their text on natural inquiry where they discussed the use of particular methods which supported the key characteristics of naturalistic inquiry. Like Guba and Lincoln’s (1989) constructivist approach, Erlandson et al (1983) also viewed the creation of knowledge as a subjective matter which arose from findings generated from, and shaped by, interaction between the researcher and participants in a natural setting. The acknowledgement of this dimension of research indicates that the inquirer is very close to the setting and participants, and was reflected in this study in which I was researching from the inside of my organisation. This is discussed further in chapter 5.4.5.

The significant role of values has been identified under the constructivist paradigm and this has been influential in this study. Firstly, there was the influence of the participants’ community, that is, the students and the university. Secondly, there was my orientation and my values as the researcher. These have been translated into the research strategy which is discussed in the rest of this chapter.

5.4 A case study strategy

5.4.1 Definition
Case study is a strategy of inquiry that fits naturally within the constructivist paradigm and Lincoln and Guba (1985, p.1) argued that it is the reporting mode of choice for the naturalistic researcher. Cresswell (1998) identified the case study as one of the five major traditions within qualitative inquiry and describes its
distinguishing focus as ‘in depth analysis of a single case or multiples cases’ (1998, p.65). He agreed with Adelman, Kemmis and Jenkins’s view (1976, p.12) that case study deals with the singular and not aggregations, with the focus of the design being around ‘an instance in action’ or as a ‘bounded system’. Merriam (1998) identified three essential characteristics of a case study which were a focus on a particular situation or event, an outcome which included a ‘rich thick description of the phenomenon’ (1998, p.29) and ‘illumination’ (1998, p.30) about the phenomenon, for example, new meanings and insights. In educational research, Bassey (1999) described the role of case studies as providing interpretations of what happened in a particular situation and provided a definition:

An educational case study is an empirical inquiry which is:
- conducted within a localised boundary of space and time (ie a singularity);
- into interesting aspects of an educational activity...;
- mainly in its natural context and within an ethic of respect for persons;
- in order to inform the judgments and decisions of practitioners or policy makers;
- or of theoreticians who are working to these ends;
- in such a way that sufficient data are collected for the researcher to be able
  (a) to explore sign of the case,
  (b) to create plausible interpretations of what is found,
  (c) to test for the trustworthiness of these interpretations,
  (d) to construct a worthwhile argument or story,
  (e) to relate the argument or story to any relevant research in the literature,
  (f) to convey convincingly to an audience this argument or story
  (g) to provide an audit trail by which other researchers might validate or challenge the findings or construct alternative arguments.

(Inevitably, the terms ‘interesting’, ‘significant’, ‘plausible’, ‘worthwhile’ and ‘convincingly’ entail value judgements being made by the researcher)


5.4.2 Advantages of the Design for this Project
The case study design offered advantages which were of particular value to this research. In contrast to laboratory experiments, case studies were ‘strong in reality’ (Adelman, Kemmis & Jenkins, 1976 p. 149). In a review of the educational research on learning, Entwistle (1997) emphasized the importance of ‘ecological validity’ meaning that theory in this field should be derived from classrooms because they were the places in which such theory was applied. Schon (1983) has also drawn
Entwistle and Ramsden’s (1983) experience of learning research (see 2.3) is essentially a contextual one, so it seemed highly appropriate to carry out this investigation with a case study design. The introduction of technology into a setting changes the environment and the conditions for success and survival (Postman, 1993), so treating the research from an environmentalist perspective seemed to be a coherent approach. Recently, some online learning researchers have been portraying online learning as a new learning ecology, for example, Light and Light (1999) talked about an ‘ecology of student learning’ (p.176). Like Ramsden (1983), they viewed behaviour as an adaptation to context and stressed the need for contextual matters to be carefully investigated. Garrison and Anderson (2003) regarded e-Learning as not just an addition to current face-to-face practice but said it represented a ‘new learning ecology’ (2003, p.124).

Case study design provided an opportunity to investigate this learning ecology, to:

- Tackle situational complexity, to ‘probe deeply and analyse intensively the multifarious phenomena ‘(Cohen & Mannion, 1989, p.124);
- Recognise the ‘complexity and embeddedness’ of a situation and represent its ‘discrepancies and conflicts’ (Adelman, Kemmis & Jenkins, 1976, p.151)
- support in depth examination of issues that is, ‘complex, situated problematic relationships’ (Stake, 2003, p.440).
- Focus on processes. Merriam (1998) identified two ways in which case studies could explore processes and these were evaluative approaches and causal explanatory investigations.

These characteristics enabled me to take an ecological perspective within this study. The New Shorter English Oxford Dictionary (Brown, 1995) defines ‘ecology’ as ‘...the relations of living organisms to their surroundings’ (p.781) and refers to ‘the interaction of humans with their environment’ (p.781). Online discussions present a new learning space for students and the characteristics of this space (for example, text based, interactive) suggest that learning in this setting is different from face-to-
face learning. This study is designed to investigate what this new reality entailed for students and to develop descriptions of their learning from their perspective. It explored a blended environment where there was a mix of online discussions and face-to-face classes and examined such interdependency.

Another phenomenon of the new learning ecology that was investigated was the way the curriculum shaped students’ actions, for example, the online discussion activities, the role of the teacher and the assessment. In his review of case study research on online discussions, Hammond (2005) identified the need for further research into curriculum models and contexts beyond those of teacher education and computing and this research enables me to address these two areas.

Stake (1995) defined instrumental case studies as ones used to understand a broader issue or problem which is external to the case, as opposed to an intrinsic case study, where it is the situation itself which is the centre of attention. Learning by online discussions is an emergent area of practice and research. This suggested that an instrumental case study would make a valuable contribution to the field. Bassey (1999) named this a theory seeking case study because of its ability to develop new conceptual understanding of an issue. Where an issue, rather than a situation, is dominant, Stake (1995) suggested that a collective case study would be appropriate, meaning a selection of several cases would be appropriate to explore the issue. Cresswell (1998) indicated that, with multi-site cases, as the number of cases is increased, then the depth of each case and overall analysis is reduced and he suggested a maximum of four cases, and this is the number that I have investigated in a business context.

Miles and Huberman (1994) identified the benefit of cross case analysis for improving the strength and relevance of findings to other situations and did not regard this as inappropriate for qualitative studies. They identified a second benefit which was to deepen understanding and explanation by looking at similarities and differences across cases. This second benefit persuaded me to design this study around several cases, because it enabled me to investigate and compare different curriculum models. A comparative approach also provided a wider range of perspectives to support the purposive intent of an instrumental study. At the same
time, each case had its own intrinsic value and interest for me in that it enabled me to explore different learning ecologies. My strategy was to treat each case as an intrinsic case (see chapters 6 to 9) and then to examine them from an instrumental viewpoint using a cross-case analysis in relation to establishing broad principles about how students go about learning in online discussions (see Chapter 10).

The aim of this research was to carry out a case study that Merriam (1998) described as descriptive, that is, a detailed account of student learning in these circumstances, and interpretive, that is, using the data to theorize about learning in online discussions in blended environments. Stake (1995) has identified the central role that case studies play in creating new knowledge, namely identifying new relationships in a situation which ‘lead to a rethinking on the phenomena being studied” (p.57). Further knowledge development, which Stake calls ‘knowledge transfer from the researcher to the writer’ (2003, p.442) may occur when readers construct their own meanings, use findings to develop their own practice, or critically evaluate them through further research. In this way, case study knowledge can therefore be ‘step to action’ (Adelman, Kemmis and Jenkins (1976)1976, p.60) and reach audiences at many levels — including institutions, teachers and policy makers.

5.4.3 Criticisms of case study design
Some researchers have made criticisms and identified shortcomings of the case study design and it is good to be aware of these. Merriam (1998) noted that its strengths were also its weaknesses. The heavily contextual detail of case studies raised problems with generalisability, and rich thick data involved managing large amounts of often unwieldy material, which could take considerable time. However, in my view, the advent of software programs has made data management less of a chore. Another limitation was the emphasis on the integrity and sensitivity of the researcher and the need to avoid any bias, especially that which may arise through power relations within the case study context. In a widely quoted critique, Atkinson and Delamont (1985) identified several problems with case studies which were lack of rigour in design, especially in defining the case, a focus on the unique at the expense of theory and too much concern for ethics and democracy instead of method and theory. These comments were made in the context of evaluative case studies and may reflect the particular issues of that kind of case study. In this research, a number of
approaches will provide rigour in method and outcomes and these include an instrumental approach, the use of multiple cases and a comparative analysis and the implementation of qualitative procedures to ensure the trustworthiness of the research.

5.5 My position as an insider researcher

The case studies in this research were situated within my workplace and I viewed my position as an insider researcher. In a substantial study of insider research, Humphrey (1995) observed the prevalence of this form of research in the public sector, which was either in-house research or postgraduate students combining study and work. He commented that insider research had received little attention in the qualitative educational research literature and noted that such positions were often ignored in reports or treated purely as an issue of possible bias. He regarded the position of an insider researcher as one that was deeply context-bound, and therefore established and defined by the setting and its values, networks and power relationships. The researcher’s position within the organisation might not necessarily give them better access or data and could be imbued with the organisation’s culture and values. Unequal power structures could raise ethical issues, and the need to address different ideological and hierarchical positions could affect the validity of findings, and the ongoing position of the researcher within the organisation. Humphrey (1995) differentiated insider research from other researcher stances because of its existence before, during and after the research, and, therefore, advocated that the insider researcher be explicit about their position, locate herself within the setting and reflect on how this position will impact on the research.

The idea of the researcher being embedded within the research setting has long been recognised within qualitative inquiry, for example, through the tradition of participant observation. Insider research fitted well with this concept and also within the naturalistic inquiry and constructivist paradigms, where the researcher participant relationship was viewed as a close one in the sense that meaning was constructed and shaped through their interaction. The researcher’s values were not regarded as a problem of bias and, instead, their role was acknowledged within the design and its implementation. This suggested that, in a case study design, the depth and breadth of
insider knowledge might be an advantage in being able to provide further illumination.

However, Coghlan (2001) identified issues arising from role duality including conflicts between the two roles and balancing organisation relations whilst maintaining the integrity of the research project. A related issue for me was the influence of my tacit knowledge and assumptions which might underlie my interpretations of the students’ perspectives and make me closed to other interpretations, which I addressed through the trustworthiness criteria (see 5.9). At the beginning of this research, I identified issues regarding power relations with regard to both teachers and students, and in order to make the project manageable, I decided to focus predominantly on students. The remaining issues were addressed as part of my ethical protocol (see 5.6.2).

5.6 Implementation of the study

5.6.1 The case study sites
Merriam (1998) distinguished between multi site cases and those where there was a single case study with subcases embedded within it, and this best described the case study structure for this study. Here, the case study was broadly sited within a business degree program. This business degree site was chosen for several reasons. The study sought to investigate student learning in online discussions, and at the time of the early development of the study, online discussions were not widely used in universities and locating another similar university setting was unlikely. However, development of online learning had been proceeding within the Faculty in which I worked for a number of years and, in particular, online discussions had been included in some courses within the business degree. Part of my role included the development of flexible learning and, epistemologically speaking, I was quite comfortable with the concept of a research study from an insider perspective. There were also pragmatic advantages for the study, like ease of access and the benefits of insider knowledge and the study provided me with an opportunity to deepen my understanding of my professional context.
Within the boundaries of the business degree, I planned initially to select courses to investigate as case studies in their own right. Cresswell (1998) commented that it was important to select sites that were able to provide sufficient information. Preliminary inquiries indicated that online discussions were most commonly used in courses that were offered in flexible mode, so these were the focus of the selection process. Merriam (1998) and Patton (2002) both suggested a purposive sampling approach, where ‘cases are selected because they are information rich and illuminative’ (Patton, 2002, p.40). Stake (1995) advised that, with collective case studies, the cases should be chosen according to their ability to best address the research question and this may involve some pragmatic balancing across various representational factors. Merriam (1998) suggested developing selection criteria and mine were: stage of study (first, second and third year courses), spread of disciplines, and the level of experience and interest of the teacher. I was working on the assumption that all or most of the students in each course would agree to be participants and this would create a sufficient body of data from which to work.

When the study started, it was difficult to find sufficient student participants. Participants were gathered after requests to 12 classes in five different courses (about 360 students) over three semesters (eighteen months), before I had sufficient participants to establish the four cases in this study. These cases were located in four disciplines, with three of them relating to second year courses and one of them being a final year course. The teachers were predominantly experienced with online discussions and the numbers of students in each course varied from seven to thirty.

The resulting selection process was somewhat similar to what Merriam (1985) called convenience sampling, meaning selection of sites according to the availability of participants. Patton (2002) regards convenience sampling as the least desirable of all strategies because ‘it is neither purposeful nor strategic’ (2002, p.242). While this pragmatic approach was necessary, it was somewhat purposeful. The first selection criterion (first, second or third year of study) was not met and the other two (spread of discipline and levels of expertise of the teacher) were met to some extent. The inability to directly select cases according to all of the criteria must be regarded as a limitation of this study. It is difficult to know why students did not wish to participate and possible reasons include a ‘user pays’ attitude and the absence of any gratuity,
insufficient time or interest and lack of understanding about research (see Stacey & Gerbic, 2003).

5.6.2. Participants and Ethics Matters

5.6.2.1 Participants in the project
As the study is focused on students’ perceptions, data were only obtained from, and about, students. However, I would be looking at teachers’ courses, so I was very aware of being in their territory or space. The role of the teacher was twofold: to provide access to the course and, later, to verify my analysis of the online discussions. I wanted an open process and some reciprocity in the sense of benefits for teachers who chose to be involved, so if teachers wished to do so, they could read data summaries, make comments and collaborate on publications. The status of my role in the Faculty alerted me to the possibility that teachers might be apprehensive about the information that might arise during the study. I, therefore, approached teachers informally, developed an open process regarding information, documented their position and role in writing and critically reflected (personally) on the need for clear boundaries regarding the potential outcomes of my research. These protocols worked well.

5.6.2.2 Ethical issues
My role within Faculty regarding students raised potential ethical issues. While I was not assessing students’ work, issues regarding the balance of power needed to be considered. My concerns were, first, the issue of actual advantage or disadvantage when, for example, a student applied for special consideration. Secondly, there was the possibility that students might perceive it as an advantage or a disadvantage to be or not to be a participant. It was also important that students understood that their teacher was not a researcher in the project, and would not have access to any material given to me. In order to address these issues, during the period of the research, I:

1. explained my role in the project as a researcher and how this related to students, for example, I was not a course assessor,
2. drew the students’ attention to the timeline of the project, especially the positioning of the interviews which were after their final grades were approved, thereby not influencing any outcome,
3. discussed and illustrated the privacy and confidentiality provisions,
4. delegated decisions regarding special applications, for example, special passes,
5. explained that the teacher was not a co-researcher and would never know who was or was not participating, nor hear the audiotapes or see the transcripts, and
6. established a student liaison person, who was located outside the Faculty and available for student concerns.

Approval was obtained from the Ethics Committee at both Deakin University and my employing university. Permission was also obtained to carry out the research within the Faculty and to name the institution in any publications. After class presentations of the research project, students were given an Information Sheet (see Appendix 2) about the project and students who wished to participate consented in writing’.

**5.7 Data Collection**

5.7.1 Overview
Multiple sources of data are collected for case studies (Cresswell, 1998). Many different kinds of data are available within a case site, but the choice of what will be collected is determined by the objectives of the research (Merriam, 1998; Schwandt, 2001), and this is part of the way in which the researcher constructs and shapes the inquiry. Table 5.1 provides an overview of the kinds of data collected for this case study. These data sources were regarded as having the most potent descriptive ability to answer the research questions and are a mix of information which came directly from the students themselves, and also sources external to the students. This was done to obtain multiple viewpoints which provided triangulation of the evidence to establish the trustworthiness of the findings.
### TABLE 5.1 OVERVIEW OF THE DATA

<table>
<thead>
<tr>
<th>Data type</th>
<th>Purpose in relation to research questions</th>
</tr>
</thead>
</table>
| Paper based course documents and information from the online site | Information about:  
  - The course and online context.  
  - The curriculum, e.g. activities, assessment, the online discussions. |
| Transcripts of the online discussions          | Information about the content of the students’ contributions to the online discussions.                      |
| Systems data                                   | Information about student usage, e.g. types of activity and frequency.                                     |
| Interviews with students                       | Information about:  
  - student views of learning, experiences and perspectives about online discussions and their relationship to the classroom.  
  - How students took part in the online discussions.                                                      |
| Short questionnaire                            | Information about students (demographic)                                                                     |
| Academic histories of the students             | Information about students’ course of study and performance at the university.                             |

#### 5.7.2 Paper-based course documents and information from the online site.

Print and online documentation was available as course artefacts and was able to provide me, as the researcher, with a holistic overview of the course. Applying Merriam’s (1998) criteria, this information was valuable because it was easily accessible, had been produced independently of the study and was not subject to my influence as the researcher. These materials also provided another perspective of the context, being that of the university and the teacher. Print information included the course handbook which provided details about course outcomes, learning and assessment, and the weekly program. Where it was available, printed information about the online discussions, learning activities and assessment was also obtained. The online sites were organised to provide resources (for example, links, readings), activities (for example, case studies), announcements, course materials and communication (for example, online discussions, group areas).

#### 5.7.3 Transcriptions of the online discussions

In case study research, a more holistic interpretation is possible when observation is combined with document analysis and interviews (Merriam, 1998). Generally this involves some kind of fieldwork, but in the case of the online learning, new observational opportunities are available through the record of the online discussions. In this study, data from the online discussions complemented that of the interviews because they provided information from a natural setting about the students’ actions (contributions) as opposed to their thoughts and perspectives. These data were
therefore able to document what was actually posted online, as opposed to what students reported that they were doing. This strategy enabled some of the deficiencies of self reporting to be ameliorated as well as allowing the accumulation of a more comprehensive data set to provide multiple perspectives and validation of findings.

Including the online discussions meant that no decisions needed to be made about what to observe, so the record was a complete one. However, I was very much an onlooker or outsider, and the data was collected in a single event at the end of the course as a technical activity more concerned with data conversion and integrity than with the reflective process which characterises fieldwork. After the data were checked for completeness, they were then imported into NUD*IST Vivo (NVivo)™ for content analysis.

5.7.4 Student interviews
Interviews with the students were an important source of data. This technique is commonly used to find out things that cannot be observed, that are ‘inner perspectives’ (Patton, 1998, p.340) mostly related to student views about their learning, and of the online environment and the curriculum. The interviews also enabled descriptions to be constructed about the ways in which students went about their online discussions in terms of practical matters, such as, the time and place of their discussions and how they worked their way through reading the messages and writing their own messages.

Interviews were carried out with students individually. I anticipated that I would be dealing with tacit knowledge and I saw the interviews as an opportunity to maximize meaning making rather than one for the extraction of existing information from the heads of the students (Gubrium & Holstein, 2002). In order to achieve this and to mitigate any possible positional impact, I decided to use an in-depth interviewing approach that is a conversational approach with a focus on deep understanding of the students’ views (Minichiello, Aroni, Timewell, & Alexander, 1995). An interview guide was devised with questions relating to the participants’ views of learning, online and class discussions, participation in the online discussions, the relationship between the online discussions and their regular weekly classes, and about their course generally. (See Appendix 3 for the interview guide.) The guide ensured that
the same topics were covered with each participant, but was sufficiently flexible to allow the exploration of new ideas and perspectives. A recursive approach was used with regular rephrasing and probing because some of the questions (for example, ‘how do you like to learn?’) were difficult subjects for students to discuss. During the interview I attempted to stand back and reflect on its progress in terms of my research questions.

Interviews occurred after analysis of the course documentation and the online discussion transcripts. This meant that I was able to situate the interview discussions in the context of the course activities and explore some of the findings from my analysis of the online discussions. Because the interviews took place several months after the end of the course, Marland and Patching’s (1992) stimulated recall approach was adapted. The online discussions were available at the interviews on a laptop and the students had control of the mouse and were able to move freely around the discussions as they talked to me. This appeared to facilitate the interview process in that it acted as a memory prompt; the actual postings on the screen could be used as examples of the students’ points and the discussions around the laptop seemed to create a relaxed atmosphere and reduce some of the intensity of the interview.

Interviews lasted for forty-five to sixty minutes. At the end of each interview a summary was made using Miles and Huberman’s (1994, p.53) contact summary and this enabled me to monitor the progress against the research questions, note any new ideas for further exploration and any issues or defects. The interviews were then transcribed, using Poland’s (2002) strategies for maximising transcription and sent to the participants who were invited to make any comments or changes if they wished. The transcripts were also checked for accuracy by the researcher, before being imported into NVivo for analysis.

5.7.5 Other data
Three other kinds of data were gathered to provide wider perspectives about the students and these were:

1. Demographic information. In order to obtain some background data about the participants, a short questionnaire (See Appendix 4) was completed by students immediately prior to the interview.
2. Online systems data. This provided number and frequency of readings and postings, and date and time of postings. Because the data came from the two online platforms, absolute consistency of the information across the cases was not possible.

3. Academic history reports. Official records from the University provided information about the study history of the student, and grades.

5.7.6 Data quality.
The participants came from many ethnic backgrounds and some were ESL speakers and this may have resulted in less comprehensive interview data. During the interviews, communication issues arose occasionally when I and the student did not understand each other. This was not always a matter of language competence and sometimes arose with regard to our different cultural understandings. In these situations, my practice was to check my comprehension by paraphrasing. Some students were a little anxious and the interview process and their position within it seemed somewhat alien to them and at times, they may have agreed with me out of politeness. However, this was not always the case and other students were confident, open to a new experience of being involved with research, and willing to express negative viewpoints.

For this project, data has come from some and not all of the enrolled students in each course (see Chapters 6 - 9 for details) and for this reason, the findings cannot be regarded as representative of the BBus student body as a whole. Also, the participants generally expressed positive views about online discussions and there were fewer numbers of students who were ambivalent or negative and it may be that students with disapproving views chose not to participate. This needs to be taken into account when reading the findings. There were other data quality issues in each of the cases and these are discussed in the individual case reports.

5.7.7 Collection and analysis phases
For each of the cases, data collection and analysis was a layered process which was carried out around the academic program. This is illustrated in Table 5.2.


<table>
<thead>
<tr>
<th>Beginning of the semester</th>
<th>Class visits and talks to the students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Obtain consorts</td>
</tr>
<tr>
<td>Mid semester</td>
<td>Collect course documents and visit the online site</td>
</tr>
<tr>
<td></td>
<td>Analyse the information and build a picture of the course setting</td>
</tr>
<tr>
<td></td>
<td>And its activities, especially online discussions</td>
</tr>
<tr>
<td>After the end of the semester</td>
<td>Collect the data from the online discussions</td>
</tr>
<tr>
<td></td>
<td>Collect the online systems data</td>
</tr>
<tr>
<td>After final grades are approved</td>
<td>Analyse the transcripts of the online discussions</td>
</tr>
<tr>
<td></td>
<td>Collect academic histories</td>
</tr>
<tr>
<td>After the next semester starts</td>
<td>Interview students</td>
</tr>
<tr>
<td></td>
<td>Analyse interviews and other data</td>
</tr>
</tbody>
</table>

### 5.8 Data management and analysis

To make the data analysis manageable and ordered and to facilitate triangulation, NVivo was used, which is a software program that supports qualitative analysis by providing various data management facilities. The data were sorted into categories or ‘nodes’, which were arranged in a tree structure and could be data driven or theoretically driven. The nodes were then modified and reordered as new themes emerged from the data. They have provided evidence of, and illustrations of, the main themes in the research. The search tools in NVivo were also used to assist me to explore my hunches about the data. These tools provide further ‘completeness and reliability, both in examining the text and in the analysis’ (Gibbs, 2002, p.105). Other NVivo features were used to assist with trustworthiness (See Chapter 5.9).

#### 5.8.1 Content analysis of the online discussions

I decided to use content analysis, that is ‘textual analysis that involve[s] comparing, contrasting and categorising a corpus of data...both numeric and interpretive’ (Schwandt, 2001, p.34). Despite the fact that online discussion has been in written form since the outset of computer-mediated conferencing, the use of content analysis as a research tool has become only common in the last decade. There is now a considerable literature on the analysis methods, as illustrated by a 2006 special section of the journal, Computers and Education (Valcke & Martens, 2006).

Henri (1991) called for more qualitative approaches in content analysis of online discussions to provide new information about how students learn through the development and communication of their ideas in this medium. Still, content analysis
has generally been considered as a quantitative technique (Rourke, Anderson, Garrison & Archer, 2001) focusing on numeric counts of descriptors or indicators. However, the method can also be used qualitatively (Gerbic & Stacey, 2005) and this study used the method in this fashion; where the kinds of approaches that students used, and their respective character, were described from their participation in the discussion forums.

A fundamental issue for the use of content analysis is the decision made by the researcher about the framework for analysis. A survey of the research using content analysis (Gerbic & Stacey, 2005) identified a variety of approaches which are described in Table 5.3, and most researchers have developed new frameworks from other learning literatures. While this has the potential to enrich an emergent field of learning research, issues can arise due to the translocation of essentially face-to-face concepts into the virtual environment and this needs to be taken into account in the development of a framework and its implementation.

### TABLE 5.3 CONTENT ANALYSIS FRAMEWORKS

**Approaches to the development of analysis frameworks**

<table>
<thead>
<tr>
<th>Approaches to the development of analysis frameworks</th>
<th>Examples:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Working with existing online discussion content analysis frameworks.</td>
<td></td>
</tr>
<tr>
<td>(a) Replacing them in another context</td>
<td>Thomas (2002) used Henri’s (1991) 5 dimensional learning framework.</td>
</tr>
<tr>
<td>2. Development of a new framework by:</td>
<td></td>
</tr>
<tr>
<td>(a) Using a grounded theory approach</td>
<td>Stacey (1999) to investigate collaborative small group conferences</td>
</tr>
<tr>
<td>(b) Using a ‘clean slate’ approach i.e. conversion of an existing theory concept or model.</td>
<td>Bullen (1998) developed positive and negative indicators of critical thinking from the work of Norris and Ennis (1989, in Bullen, 1998).</td>
</tr>
</tbody>
</table>

One of the conceptual underpinnings of my study is Entwistle and Ramsden’s (1983) research which found that students’ approaches to learning are not always the same and will be influenced by their perceptions of the learning environment. As discussed in Section 3.2, these ideas have recently been applied in studies of blended learning settings. However, they have not been used for descriptive purposes in the CMC
environment and were chosen as a promising conceptual lens for analysis of the online discussion.

A framework for the analysis was constructed to see whether the discussions demonstrated deep and/or surface approaches to learning. Indicators for each of the main characteristics of deep and surface learning were taken from Entwistle and Ramsden’s Approaches to Study Inventory (1983), because it has been recognized as the most widely used investigative device in the approaches to learning studies (Richardson, 2000). The framework was assessed against Henri’s (1991) deep and surface processing indicators for sufficient adaptation for the CMC environment and further refinements were made using Newman Webb and Cochrane’s (1995) positive and negative indicators of critical thinking framework. The analytical framework is presented in Appendix 5. It was piloted and refined to differentiate the indicators and make them more applicable for the CMC context. The results of the content analysis for each of the cases are discussed individually in Chapters 6 - 9.

In each case study, after the discussion transcripts were imported into NVivo, they were coded according to the indicators in the framework and then used to establish the presence and characteristics of deep and surface approaches to learning. Murphy and Ciszewska-Carr (2005) have stated that, in content analysis of online discussion transcripts, the analytic unit was generally either a semantic one (the unit of meaning) or syntactic (a fixed or structural unit, for example, a sentence or paragraph). I decided to take a semantic approach because it seemed more capable of generating insights into the students’ learning. Hence, the unit of analysis was Henri’s (1991) unit of meaning, that is, the expression of an idea. This might comprise several sentences and a message might contain several units of meaning. Initially, I anticipated a large volume of data and planned to sample at key points of the discussion (Stacey & Gerbic, 2003). However, there were less data by volume than expected and, consequently, all of the participants’ contributions were analysed.

A sample of the transcript and coding was given to the teacher for verification. This was done because I was concerned about coding in discipline contexts that were not within my area of expertise. This also clarified the qualitative nature of the analysis, used for describing the deep and surface approaches, rather than measuring their quality in the student postings. The content analysis was then examined in the light of
the environmental setting (as described in the course documents) for possible relationships. Tentative interpretations were then referred back to teachers for comment. To check the consistency of coding across the four case studies, a form of inter-rater reliability checking was deployed. A one-third sample of coding from the first content analysis was recoded 12 months later, and then compared with the first coding. Ninety-six percent of the data were coded similarly to either deep or surface approaches to learning. There was a seventy percent similarity in the coding for the characteristics of deep and surface approaches. Where the coding was different, this generally occurred because a unit of meaning was coded to one, rather than two, indicators or to a similar characteristic.

5.8.2 Analysis of the interview and other data
Data from the interviews, questionnaires and academic histories were imported into NVivo. Initially coding reduced and categorized the data. Unlike the content analysis, the nodes for the interviews were not conceptually driven, because, as is often the case with constructivist approaches, I needed to develop a data-driven perspective and understanding. Initial nodes were established after several readings of the interviews and were based loosely on the interview topics and some ideas from the literature, for example, the possible role of reading and writing. New nodes were added as needed and there was a constant refinement of the nodes. In this way, the nodes coalesced into broader themes and became a way of conceptualizing what was in the text by reference to its essence. As Gibbs (2002, p. 131) asserts, modifying the node tree was therefore a form of analysis. Its final format is described in Appendix 6.

Following the initial coding, a matrix approach was used to further analyse the data. This included summarizing, using extracts and quotes, researcher explanations and ratings (Miles & Huberman, 1994) and NVivo supported this approach through its data retrieval and searching functions. At this stage, the matrix approach enabled me to move between the interview data, the content analysis and the course environment descriptor, and to make interpretations of what might be occurring. The matrices also enabled me to construct an overall picture of the participants, with space for widely-held and minority viewpoints. For each of the cases, several layers of matrix analysis were carried out in order to develop interpretations and conclusions.
5.9 Preliminary trial

The first class that I visited yielded only three participants, so I decided to use this as an opportunity to evaluate the general methods that I had planned. I was uncertain about the efficacy of the content analysis framework because it had been translated from a broader face-to-face context and might not be suitable for the online discussion environment. The results of this pilot have been included within the Priority case (Chapter 9) because the pilot was situated within the same course.

The review of this initial activity confirmed the general suitability of the content analysis framework. Some of the indicators were not identified in the online discussions because they were more likely to occur in the face-to-face elements. Others required some adaptation because of the interactive nature of the medium. The relational category was expanded to provide more detail of what was occurring in the discussion. The interview guide was also refined to make it more student-friendly. The data collection and analysis phases were developed to enable their use congruent with my approaches, the students’ study demands and ethical requirements.

5.10 Establishing the trustworthiness of the findings

Validity is a central issue in qualitative inquiry (Denzin and Lincoln, 2003). Lincoln and Guba’s (1995) concept of trustworthiness has provided one way for readers to establish the validity of research, and it is used in this study. There are four criteria and their application in this research is discussed next.

5.10.1 Credibility

Credibility or internal validity (see Merriam, 1998) are elements of Lincoln and Guba’s ‘truth value’ (1995, p.294) of the research. It relates to the extent to which the findings are an accurate representation of the reality or multiple realities of the participants. The techniques that I have used to establish credibility are as follows.

1. Prolonged and persistent engagement.

As an insider researcher, I have been immersed in the Faculty for over 10 years and have been able to draw on this breadth and depth of understanding of the setting, the curriculum and the students. Simultaneously, I have needed to be open minded and hence, I have adopted strategies to avoid early decision-making and ‘premature
closure’ (Lincoln & Guba, 1985, p.305) and have supported this approach with the ‘debriefer’ (Lincoln & Guba, 1985, p.283) strategy.

2. Peer debriefing.
Colleagues provided formative feedback and comment at the early design stage, at the end of the first case study and then for each of the individual cases. Approaches included discussions with my supervisor, with two of my colleagues, the doctoral colloquium process, which involved university researchers reviewing my research plans, and several informal presentations to my colleagues. Of particular value was the discussion and constructive critique of my findings and emerging concepts that have arisen from conference presentations. (Gerbic, 2003, 2004, 2005, Gerbic & Stacey, 2003, Stacey & Gerbic, 2003).

3. Member checks.
Data summaries and copies of conference papers were sent to all participants and comments were invited in order to test interpretations with participants. Few comments were received from students, probably due to their mobility after graduation, or it may indicate their acceptance, because they are usually quick to communicate their disagreement. Summaries and papers were also sent to teachers and they provided their comments.

4. Triangulation.
Using an inductive approach, the interviews provided descriptions of the students’ own thoughts and perspectives. Another view of the students’ learning was provided by content analysis of the online discussions using a deductive approach. The overall context was examined through course information which was essentially from a teachers’ and an institutional perspective.

5.10.2 Transferability
The issue of external validity, whether the findings can be applied to another context, or ‘generalisability’, is one of the more controversial aspects of qualitative research. For each of the four cases, a standardized process was used to collect and analyse the data and Merriam (1998) commented that this is a common approach for strengthening external validity in terms of traditional concepts. Lincoln and Guba (1985) said that applicability to another context is dependent on what the reader takes from the report; what is important is sufficient description to inform the reader. I have, therefore, provided the widest range of information that is practicable, shown
the interaction between the data, my analysis and interpretations, and provided information about myself so that my position and its impact on the research is established.

5.10.3 Dependability and confirmability

This is traditionally viewed as one of consistency or the ability to replicate the findings. With regard to case studies, Merriam (1998) said that ‘achieving reliability in the traditional sense is not only fanciful but impossible’ (1998, p.206). Lincoln and Guba (1985) emphasized the need for the research process to be logical, well documented and capable of being followed by someone else. Another issue here is avoiding researcher bias. Lincoln and Guba (1985) recast this as the issue of confirmability, that is, that the findings must be clearly derived from the data in demonstrable ways, rather than through the whim of the researcher. These issues have been addressed as follows:

1. An audit trail.

I made extensive file notes of the key issues during the design, implementation and individual case analysis phases. The use of NVivo to analyse the data provided a record that may be viewed by other researchers. Furthermore, the NVivo memo function operated at a micro level with the data and nodes, thus recording coding decisions, queries for further consideration (for example, in the interviews) or emerging ideas from the data. The NVivo journal enabled me to reflect at a macro level on larger issues, especially those to do with integration of the different kinds of data and emergent patterns, and to then record my position at the time. This enabled continuous reflection of the process and persistent observation of emergent issues. Notes were made on a wide variety of operational and analytic issues and, after every interview, a written summary and comments were made.

2. Reflection.

The writing I have just described not only provided a record but also became part of the analysis process through its focus on my observations, methods, theoretical issues and my personal route through all of this (Richardson, 1994).
5.11 Summary
This chapter has documented the design of my study and located it within the methodological landscape. It has described the case study approach, together with details of the data collection and analysis procedures, and provided a rationale for the steps taken. Details of the way in which trustworthiness has been addressed have also been provided and these procedures have contributed to the overall quality of the findings.
CHAPTER 6 THE SMALL GROUPS CASE

Introduction to the case studies and the first case study: The small groups case

6.1 Introduction to the four case studies
The next four chapters build on the broad context described in Chapter 4. The four cases were situated within a campus-based business degree in New Zealand that included online learning. Students were enrolled in courses that were offered in flexible mode, which meant that they had one hour less face-to-face class contact a week and substantial online activities, including online discussions. Four flexible mode courses were selected (see Chapter 5.5.1) to investigate the issue of how undergraduate on-campus students go about learning in online discussions.

Each case study was initially investigated for its intrinsic value and they have been presented in the thesis in the order in which they were analysed. I treated each of the settings as a unique and unexplored ecology and the interplay between the students and the online discussions in the course environment has presented a variety of pictures of students’ learning. The sequential nature of the analysis of the four cases means that, as the chapters progress, the results are an accretion of interpretations and reflections on the different aspects of the environment.

6.2 The first case: A case study about small groups (The Group case)
6.2.1 Introduction to the case study
This case study was set in a course where the participants were beginning their second year of degree study. After the weekly topic had been introduced in the face-to-face class, the students met online in groups to discuss that topic, thus creating new and different interaction opportunities. The text-based nature of the discussions and their group structure helped the students to learn and this was evidenced by their deep approaches to learning in their postings. The face-to-face classes provided a strong foundation to begin the online discussions, which occurred with little comment (posting) from the teacher.
This is the only case study where the students were using the Faculty’s own custom designed online platform, BOL (see Section 4.3). Due to the design of the online platform, I was able to obtain data about the message reading frequency of the participants. Ten students volunteered to be participants and during the balance of the semester, I intermittently observed the online discussions. I also familiarized myself with the context by examining the course’s aims, structure and teaching, learning and assessment activities and also analysed the online site. After the students’ final grades had been approved, and the online discussion completed, I gathered and analysed data as described in Chapter 5.6.7.

This chapter describes the course setting and then the participants are presented in an overview and individually. The actions and approaches of the students in the online discussions are next described, drawing primarily on the BOL systems data to provide information about posting activity and the content analysis of the discussion transcripts to describe the character of the students’ postings. The students’ interviews are the main basis for the following three sections which examined the influence of the CMC environment and the curriculum in the blended environment. Student views were integrated with the other data sources already discussed to provide a holistic picture of the students’ learning.

6.2.2 The course setting
The first case study was situated within a second year course in management. The aim of this course was:

for students to acquire knowledge and skills to enable them to understand and change their own behaviour, and to understand and influence the behaviour of others, individually and in groups, in organisational settings. Students are expected to become familiar with current theories and practice and be able to understand, criticize and apply research findings relevant to organisational behaviour issues.
(Course Handbook, 2003, p.2)

This course was required for the management major and included topics like motivation, personality, leadership, teams and teamwork. The course was generally regarded positively by students because the theory could be related to personal experience, as well as to the business world. It was also often thought provoking for students (personal communication with teacher, 10/12/04). The teacher was an early adopter of online learning and had three years’ teaching experience in the environment. The flexible mode of the class comprised a two hour face-to-face class
every week and one hour of equivalent online activity. The learning activities were
described thus:

_Through a series of questionnaires, exercises, role-plays, case studies, an on-line
reflective journal and a group presentation, students will explore the basis of their
own behaviour as they deepen their understanding of behaviour in organisations._
(Course Handbook, 2003)

The teacher advised students:

_Classes will usually be seminars or workshops using exercises and discussion to
illustrate and enrich the textbook and on-line material, supplemented by occasional
mini-lectures. While it is perfectly possible to learn enough to pass the paper
satisfactorily from the textbook alone, for full understanding (and enjoyment!)
attendance at class sessions is highly recommended._ (Course Handbook, 2003)

The online site provided course materials, content and communication support, and
an illustration of the online site, Business Online (BOL), showing the front page of
the discussion forum. (see Figure 6.1).

**FIGURE 6.1 ILLUSTRATION OF BOL.**
The different learning support facilities of the BOL site can be seen above in the left hand side bar. It comprised folders for: electronic materials available for students, biographical information, synchronous and asynchronous discussions, references and weblinks, a course organiser or scheduler, and a project management tool to support group activities.

The online discussion was called ‘Weekly Online and Reflective Journal’ where students were expected to go online and discuss the weekly topics in groups of five to seven students. Each group had its own discussion thread within the discussion forum, and the teacher emphasised students taking responsibility for managing their groups.

Half-way through the semester, the same group made a presentation on one of the topics that had been discussed online, thus connecting the teamwork theory in the course and the learning activities. The students’ contributions to the online discussions were assessed individually and contributed 30% of the students’ final grades. Students were required to make weekly contributions for 12 weeks, however they were given an opportunity to catch up at the end of the semester. Students received a detailed assessment description (three pages) which is summarized in Table 6.1.

<table>
<thead>
<tr>
<th>TABLE 6.1 SUMMARY OF THE ON LINE DISCUSSION ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The On Line Reflective Journal</strong></td>
</tr>
<tr>
<td><strong>The assessment task</strong></td>
</tr>
<tr>
<td>‘Record your reactions to and thoughts about each weekly topic, including insights and examples. Communicate your understanding of theory by critiquing it, assessing how well it explains events and situations in your own or others’ lives and attempting to apply it, or suggesting how it could be applied, especially in the workplace’.</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td>‘To encourage you to think about what you are learning each week. . . . It should be enjoyable rather than a chore’.</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
</tr>
<tr>
<td>Four examples of postings were provided including those that were acceptable and unacceptable.</td>
</tr>
<tr>
<td><strong>Guidelines</strong></td>
</tr>
<tr>
<td>‘Concise weekly contribution of 100-150 words. Read other postings and respond/link your comments to theirs i.e. an evolving discussion’</td>
</tr>
</tbody>
</table>
Treat this as an opportunity to explore your own process of learning as well as this subject’.

**Marking Criteria**

‘Content: Comments applied to practice and informed by theory, critical analysis of own and others’ views.

**Participation:** Adds own ideas and comments on others’ ideas on a weekly basis, leads discussion. Encourages participation of others, supportive of other comments, synthesis of others’ views, responds/links to other’s comments’.

### 6.2.3 The participants

Ten of the thirty-three students in the course chose to participate in the study. They are described initially as a whole group and details can be found below in Table 6.2. Pseudonyms have been used to protect the students’ identities and the ethnicity of two students has been omitted for the same reason. Each student is then described individually. Nine of the participants were beginning their second year of degree study, one was enrolled in a Graduate Diploma. There were six females and four males. The participants were predominantly New Zealanders with a European background. All of the students had experienced online discussions in their first year of study, but none had participated in them frequently. The students’ overall performance in the courses was better than the course average with eight students obtaining a B grade and two students obtaining an A grade.

Individual portraits of the students are provided next. The participants’ views about knowledge and how they preferred to learn influenced the ways in which they acted in the online discussions. This is, therefore, included as additional information. Overall, these students liked to learn with the teacher in class, but half of them also mentioned that learning by discussion and in groups were their preferred ways for them to learn.

**Val** was a second year, 20 year old full-time student, and worked for 20 hours a week. For her, the campus-based classroom was ‘quite a safe environment to learn in’. **Val** had little experience of online discussions and she did not like them. She could not see their value; they were very structured, rather boring and with no space for creativity. She liked to learn in groups and preferred the class discussion because you ‘feed off each other’s ideas’ with ‘lots of people from different backgrounds’
TABLE 6.2. OVERVIEW OF THE PARTICIPANTS (ANONYMISED)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Grade</th>
<th>Age</th>
<th>Course stage</th>
<th>Single or double major</th>
<th>Prior on-line learning experience **</th>
<th>Prior online discussion experience</th>
<th>Working hours (hrs per week)</th>
<th>Study – Full-time or part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Val</td>
<td>NZ*</td>
<td>B</td>
<td>20-24</td>
<td>2nd year</td>
<td>Double</td>
<td>Novice</td>
<td>Occasionally</td>
<td>11-20 hrs</td>
</tr>
<tr>
<td>Anne</td>
<td>NZ</td>
<td>B</td>
<td>&gt;40</td>
<td></td>
<td>Graduate Diploma</td>
<td>Graduated Diploma</td>
<td>Occasionally</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Bob</td>
<td>NZ</td>
<td>B</td>
<td>&lt;19</td>
<td>2nd year</td>
<td>Single</td>
<td>Experienced</td>
<td>Often</td>
<td>11-20 hrs</td>
</tr>
<tr>
<td>Claire</td>
<td>Not available</td>
<td>B</td>
<td>20-24</td>
<td>2nd year</td>
<td>Double</td>
<td>Novice</td>
<td>Occasionally</td>
<td>0</td>
</tr>
<tr>
<td>Jane</td>
<td>NZ</td>
<td>B</td>
<td>&lt;19</td>
<td>2nd year</td>
<td>Double</td>
<td>Experienced</td>
<td>Often</td>
<td>11-20 hrs</td>
</tr>
<tr>
<td>Joe</td>
<td>NZ</td>
<td>A</td>
<td>&lt;19</td>
<td>2nd year</td>
<td>Double</td>
<td>Novice</td>
<td>Often</td>
<td>11-20 hrs</td>
</tr>
<tr>
<td>John</td>
<td>NA</td>
<td>B</td>
<td>&gt;40</td>
<td>2nd year</td>
<td>Single</td>
<td>Novice</td>
<td>Often</td>
<td>&lt;10</td>
</tr>
<tr>
<td>May</td>
<td>Asian</td>
<td>A</td>
<td>20-24</td>
<td>2nd year</td>
<td>Single</td>
<td>Novice</td>
<td>Occasionally</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Sally</td>
<td>NZ</td>
<td>B</td>
<td>&lt;19</td>
<td>2nd year</td>
<td>Double</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>21-30 hrs</td>
</tr>
<tr>
<td>Sam</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>2nd year</td>
<td>Double</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

* NZ = New Zealanders with a European heritage

** Novice = 1–2 courses that included online discussions, experiences = 3–5 courses that included online discussion/
Anne was over 40 years old and who worked for 10 hours a week and was studying for a Diploma, so she chose papers that would help her with her family business. Anne liked to learn by reading and working on her own. She had little experience of online discussions but liked the flexibility because she could use her time better and fit her study around her family and work commitments.

Bob was a 19 year old second year full-time student, who worked for 16 hours a week. He was very career focused, and in his view, ‘Cs [grades] get degrees but Cs don’t get you the job’. He liked to learn by discussion because the feedback and interaction enabled him to monitor his own progress. He was experienced with online discussions and liked them because he, and not the teacher, was in charge, and dealing with other people’s views helped him to understand things for himself. He also liked the challenge of learning in groups.

Claire was a 22 year old second year full-time student, and one of the few students without a part-time job. She liked to learn in class with the teacher because ‘you get to SEE your lecturer, as opposed to things that just pop up’. She did not like online discussions much because there was no rapid feedback, but she did enjoy reading other students’ comments. She did not like learning in groups because they were costly in terms of time.

Jane was a full-time, 19 year old student in her second year of study. She worked for 22 hours a week at her part-time job, and liked the course because she could relate it to her work. She liked to learn in various ways: in the classroom on campus, on her own, and in groups. She felt more confident in her second year about the online discussions and said about the previous year ‘it was weird. . . not knowing everyone and having to put your ideas up’.

Joe was also 19 years old and in his second year of study. He worked 20 hours a week and the subject gave him insights into work issues. Learning for him was career-focused and he liked to learn through a mixture of listening to the teacher in class and group discussion. He was experienced with online discussions and liked them because ‘you don’t have to be there and you are not going to miss out’.
**John** was a mature student, over 40 years old, with a family, returning to study after many years of work. John liked to learn in small groups, however, direction from the teacher in class was also very important. Initially he was scared of computers, but now he saw them as advantageous to older people who could ‘do their housework... and then, come ten o’ clock at night and go into the computer and do your learning’.

**May** was a full-time student and aged 20 years, and in her second year of study. She did not work and was a New Zealander with a Chinese heritage. **May** valued learning that she could use in real life and she liked to learn through interaction, but it had to be teacher-driven and monitored, because ‘I just don’t think that other students have the knowledge. . . ‘. **May** was inexperienced with online discussions and was anxious about them.

**Sally** was a 19 year old full-time student in her second year of study and she worked for 24 hours a week. She liked to learn by attending class on the campus, hearing about the theory and then applying it, especially in discussions. **Sally** was relatively new to online discussions and liked them because ‘you could interact more with other students and say more than in class’.

**Sam** was a second year student, 21 years old, and worked for 10 hours a week. For him, knowledge was about skills development and he liked to learn by reading and writing. He preferred this to listening to the teacher unless the teacher added extra dimensions, like his or her experiences, to the textbook. **Sam** liked class discussions but preferred online ones because there was no ‘judgement factor. . . feeling you have everyone’ s eyes on you. . . and those uncomfortable silences’.

**6.2.4 Approaches and Actions.**

This section builds on the discussions of the context and the participants and begins the description of how the participants learned in the online discussions. The class was divided into six online discussions groups, with five to seven members and students were expected to contribute at least once online in the week after the class. The participants were in the groups shown in Table 6.3.
TABLE 6.3 ONLINE DISCUSSION GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Sally Jane Anne and three other students</td>
</tr>
<tr>
<td>Group 2</td>
<td>Val and Bob and four other students</td>
</tr>
<tr>
<td>Group 3</td>
<td>Sam, with four other students</td>
</tr>
<tr>
<td>Group 4</td>
<td>May with five other students</td>
</tr>
<tr>
<td>Group 5</td>
<td>Joe and four other students</td>
</tr>
<tr>
<td>Group 6</td>
<td>Claire and John and three other students</td>
</tr>
</tbody>
</table>

The online systems data in Table 6.4 provides some broad details of the students’ discussion activities in their groups. The ten participants posted a total of 98 messages and this represented 16% of the messages for the class as a whole. The data indicated that the participants were not good contributors, with seven of them making fewer postings than the average for their group and the class as a whole. The size of their postings (see the word count data above) indicated that when they did decide to make a contribution, it was substantial and this was also supported by the content analysis discussed later in this section. The data above indicate that participants read the messages several times because the number of message readings was much higher than the total messages for all participants except two. However, this may need to be qualified because the systems data related to message openings and also, the interviews indicated that some of this activity was skimming rather than reading the messages. Reading rates ranged from Val, who read messages 47 times, to Joe, who read the messages 272 times over twelve weeks.

Forty-six messages (47%) were responses to another student in the group, which is not surprising because the activity was styled as group discussion, so interaction was implicit within the concept. The activity descriptor (see 6.2.2) endorsed and clarified this by directing students to respond to others in the group and to link postings. The second marking criterion emphasized interaction by describing participation significantly in terms of responding to others and encouraging others to comment, rather than the number of postings.
TABLE 6.4. ONLINE SYSTEMS DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of message posted</th>
<th>Number of posted messages in the group</th>
<th>Average for the group across the semester</th>
<th>No of weeks in which messages posted</th>
<th>Words in total for the semester</th>
<th>No of messages read</th>
<th>No of logins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Val</td>
<td>4</td>
<td>73</td>
<td>12</td>
<td>3</td>
<td>867</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td>Anne</td>
<td>8</td>
<td>67</td>
<td>11</td>
<td>8</td>
<td>1472</td>
<td>261</td>
<td>78</td>
</tr>
<tr>
<td>Bob</td>
<td>14</td>
<td>73</td>
<td>12</td>
<td>7</td>
<td>2832</td>
<td>113</td>
<td>60</td>
</tr>
<tr>
<td>Claire</td>
<td>10</td>
<td>83</td>
<td>14</td>
<td>5</td>
<td>5206</td>
<td>214</td>
<td>300</td>
</tr>
<tr>
<td>Jane</td>
<td>7</td>
<td>67</td>
<td>11</td>
<td>6</td>
<td>1115</td>
<td>135</td>
<td>48</td>
</tr>
<tr>
<td>Joe</td>
<td>12</td>
<td>93</td>
<td>15</td>
<td>9</td>
<td>3181</td>
<td>272</td>
<td>105</td>
</tr>
<tr>
<td>John</td>
<td>9</td>
<td>83</td>
<td>14</td>
<td>5</td>
<td>2268</td>
<td>269</td>
<td>65</td>
</tr>
<tr>
<td>May</td>
<td>10</td>
<td>63</td>
<td>11</td>
<td>6</td>
<td>1113</td>
<td>50</td>
<td>119</td>
</tr>
<tr>
<td>Sally</td>
<td>14</td>
<td>67</td>
<td>11</td>
<td>5</td>
<td>2371</td>
<td>95</td>
<td>35</td>
</tr>
<tr>
<td>Sam</td>
<td>10</td>
<td>74</td>
<td>12</td>
<td>6</td>
<td>2771</td>
<td>96</td>
<td>36</td>
</tr>
</tbody>
</table>
Students described their posting activities, which fell into three phases:

**Reading the messages** - They concentrated on reading their group’s messages. First, they skimmed the messages, then they selected the ones they found interesting and read them again later. The high message reading supported this, although the frequency count gave no indication of the quality of the reading.

**Preparation** - Students commented that they then thought about the messages. Simultaneously, students reported activities like critiquing other postings, comparing their own thoughts with others, returning to their class notes, considering and applying the class theory and what they had found out through their further reading of their textbook and research. These relational and evaluative activities were well represented in the content analysis discussed below.

**Writing** - Seven of the students wrote their messages immediately in the discussion space, and while half of the ten students reported editing their messages before posting, for example, changing the structure, rewording for clarity, adding new ideas and deleting material. This writing process significantly influenced their thinking and learning, as is discussed in section 6.2.5.

Content analysis of all of the participants’ messages provided further description of the students’ approaches. The results of the analysis are provided in Tables 6.5 and table 6.6 below, and include only those indicators of the framework found in the online discussion transcripts. The coding exercise was implemented out for descriptive purposes and it, therefore, provided details of the kinds of approaches that the students were using, that is, deep or surface approaches, and the main characteristics of such approaches.

As evidenced in Tables 6.5 and 6.6, the students’ discussions were predominantly (93.5%) characterized by deep approaches to learning. Relational and coherency approaches were most common (46%). Here the students related their own experiences to other students’ or the teacher’s comments, and back to the course and the class, and connected ideas and theories to the real world. The other common approach was that of meaning making, where the analysis indicated that students were rarely off task, and focused on maximising their understanding, evaluation and critique and asking questions to understand. There was also some evidence of students justifying statements. These approaches to learning are next illustrated in **Joe’s** and **Jane’s** contributions below with the content analysis indicators of deep approaches being signalled in italic script.
Joe contributed 12 of the 93 messages in his group over nine weeks, comprising 3181 words. In the message below, Joe engaged in several kinds of relational activity. He connected the topic to previous and current courses, and to his workplace. He also related theoretical concepts to the business context, and he tried to apply the course ideas to a new situation and referred to the comments of other group members. Joe maximized his understanding by staying on topic, focusing on what was required in the discussion and evaluating and comparing the different theories. He provided examples and supported his views with a website reference.

I think with the ‘long stay employee’ issue that Sera brought up it is really dependent on the job and the employee’s satisfaction in the job. We discussed in a ZZZ class about Job Analysis. Maybe management could look at this to see how they could improve the job he/she has to make it more challenging and intrinsically rewarding so as to maintain the employees feeling of worth in the organisation. Surely f they’ve been in the job for 10 years or more, there must be something beneficial keeping them there? Does anyone have comments on this? With keeping people on, coming from an economical point of view and a bit off the topic, it would make costs for the business a great deal less as well instead of having to train a new employee. NetMBA (2003) ERG Theory [sic] http://www.netmba.com/mgmt/ob/motivation/erg

Jane, who was in a different group, contributed seven of the 67 messages for her group, comprising a smaller number of words, at 1115 words. Jane’s posting demonstrated that she had reviewed earlier course materials, had surveyed a selection of theories, evaluated them and applied one to her personal position and given reasons for her decision. These were all required activities and her informality and the nature of her disclosure indicated that she was enjoying the discussion.

While looking back over my notes, I read over the different motivation theories many people would have studied in the FYIP (i.e. ERG theory, Herzberg, Maslow etc.) I found that the theory most suited to myself was the ERG theory - I definitely have a need for physical wellbeing (playing Netball five times a week, I like to keep myself fit!); I find myself unhappy if I don’t get along with someone (whether it be at work or in a social atmosphere); and I am continually pushing myself to strive for better personal growth and at work I enjoy taking on challenges in order to increase my overall competence.
### TABLE 6.5 CONTENT ANALYSIS: DEEP APPROACHES TO LEARNING

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Looking for meaning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on the discussion (what was required)</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Focus on maximum understanding</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Active evaluation and critique</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Trying to understand difficult things</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Asking questions to understand</td>
<td>24</td>
<td>175</td>
</tr>
<tr>
<td><strong>2. Relating ideas and seeking coherency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relating ideas to other previous knowledge or courses</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Relating ideas/theories to the real world</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Relating material to other situations</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Looking around the subject area widely</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Using new information and generating new ideas</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Relating discussion to the class and course</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Relating to other students' or teachers' comments</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>Relating to own experience</td>
<td>64</td>
<td>239</td>
</tr>
<tr>
<td><strong>3. Use of evidence and logic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looking at things from another point of view</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Using logic to understand or progress</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Justifying e.g. with an example</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td><strong>4. Intrinsic motivation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Showing that the learning was exciting</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Enjoyment of the activity</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>An interest in furthering study</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>480</td>
<td>94%</td>
</tr>
</tbody>
</table>

### TABLE 6.6 CONTENT ANALYSIS: SURFACE APPROACHES TO LEARNING

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. A reproducing approach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall without any purpose</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>2. Stays within course boundaries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetition of comments</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>3. Unthinking approach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on unrelated material</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Jumps to conclusions with little evidence</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Confused statements</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Uncritical acceptance of ideas</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td><strong>4. Fear of failure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concern about making a poor CMC posting</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total surface approaches</strong></td>
<td>33</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total deep approaches</strong></td>
<td>480</td>
<td>94%</td>
</tr>
<tr>
<td><strong>Total approaches</strong></td>
<td>513</td>
<td>100%</td>
</tr>
</tbody>
</table>
Surface approaches to learning were not common (6.4%) and were widely dispersed in the messages of seven of the students. They tended to mostly be repetitions of other students’ comments and the uncritical acceptance of ideas. Here are examples from Sally and Sam, with the content analysis indicators of surface approaches being signalled in italic script.

Sally is responding to another student; however her statement is rather confused and uncritical. While she considers her own personal position, this is done with little direct consideration of the course materials or theories and concepts.

I too agree with you on the personality tests. Some of the questions became so similar I found I wasn’t paying as much attention as I started off doing and so the answers I received at the end were probably inaccurate as well as brief and so of course could relate to me and probably most of the population could also relate to the things stated. I was a B+ personality type. Meaning I am easy going and less competitive. I agree with this I do have an easy going personality and can easily talk to and get along with others.

In the quote below, Sam uncritically accepts another student’s point of view and does not provide any further reasons of his own.

I agree that the Power exercise that we did the other day did have practical merit. And yes, I feel that NZ would have the same political kaniving [sic] that Denmark has, Mara

The very high numbers of units showing deep approaches to learning (94%) appeared somewhat surprising, but the analysis was descriptive in the sense that it identified the nature of the postings and did not provide any measure of the quality of those postings. There would have been a range of quality in the postings when assessed by the teacher, for example, postings expressing content at an A, B and C grade, but the content analysis framework was not designed to measure in this way. The grades for the online discussions were not available but the final grades for the participants were all A or B grades and these were consistent with the high proportion of deep approaches to learning. Additionally, the subject was not considered by the teacher to be conceptually difficult and most of the participants regarded it as relevant to their future careers.

The documentation for the online journal activity indicated a close alignment between the descriptor of the activity, the marking criteria and some of the indicators
for deep and surface approaches. The activity was called a ‘Weekly On-Line Reflective Journal’ and the instructions for students were very explicit. Students were directed to think about each week’s topic/theory and to apply the theory, critique and evaluate it, giving examples from daily life and work, and to assess how well it worked in the real world. The assessment marking criteria included factors such as ‘applied to practice, informed by theory, critical analysis of own and others’ thoughts, synthesis of views, respond, links to others’ [postings]’. In the content analysis, five of the nine indicators which had the greatest numbers of units coded to them were directly reflected in the activity, for example, relating to own experience and relating theories to the real world. Other indicators, like using logic and examining material, had very few or no codes, and they were not represented in the assessment activity or the marking criteria.

This section identified and illustrated the actions and approaches of the students as they proceeded with their online discussions. High levels of reading activity and lower levels of posted messages were identified, which was, however, characterized by predominantly deep approaches to learning. The next section examines students’ perspectives of the CMC environment and the ways in which these features affected their learning.

6.2.5 Influence of the CMC environment
The students’ perspectives of the CMC environment and its role in their learning were analysed from the interviews and were compared with the content analysis and other descriptions of their actions. Eight of the participants considered that the online discussions helped them to learn and the main reasons for this related to the thinking that took place within the interactive nature of the process. Learning with the teacher in class was important, but, for these students, so were opportunities to learn through interaction and discussions. Despite the general inexperience of many of the students in the online environment, their classroom based conceptions of learning included discussion and, therefore, seemed to be broad enough to allow them to extend their learning activities into the CMC environment.

There was a general acknowledgement from most of the students of the value of the time and place flexibility. Anne chose her courses for this reason. Joe and Jane liked the fact that they did not have to spend time attending class on the campus, and
Claire liked the way she could work in her own time. The students reported spending between ten minutes to three hours a week on the discussions, with half of them spending an hour or more a week. Most of them liked to do this at home and only two of them had regularly scheduled days and/or times for doing so. While this flexibility was regarded as beneficial by students, this manifested itself in a lower rate of postings than that of others in their class. Claire commented on the problem of keeping up with the discussions and Bob said that, for some students, campus-based classes were attractive because there was a defined time and place. Hence, the benefit of time and place flexibility also appeared to be its weakness for some students.

While many of the students commented that making their contributions took time, the text-based nature of the environment helped them to learn. All of the students said that reading the group’s messages made them think. Claire and Bob described it thus:

You read things, then you have to summarize them so you have to ‘think’ what words should I use to make the summaries (Claire)

It [reading] definitely challenges your point of view, and you’re got to find out whether your point of view was right. (Bob)

Half of the students acknowledged the connections between writing and thinking and their ability to develop their ideas in depth. For John, this was a conversational process:

Well, as you are going through the motions of writing, and entering and posting, you go through and there is always another train of thought that comes into you, and then you say ‘oh, would I be correct to say this?’, or ‘would I be wrong to say this?’ and then I would go back to my little notes, and stick to the notes. And after . . . if I wanted to add some more, then I would.

The discussions were highly interactive as the systems data shows (46% of the messages were interactive) and the value of this was recognized by the students. It appeared that both the quantity and quality of the interaction with their peers was different from that of the classroom. Sally observed that

Even though you meet in class, doesn’t mean you are talking to them [students] or relating to them much in class.
The improved interaction was described in various ways. Sam and Jane both said that class discussions moved too quickly and it was easier to participate online. Joe said that class discussions did not fit the way he liked to learn:

> Just in class it’s always heavy for me to talk about things. Others are talking around you, so you don’t have time to talk about yourself and your situation... Like, if there are discussion questions in class, I tend to say out of it. I am not really a thinker on the spot kind of person. I need to go away and think about it in depth.

Sam said there was less small talk online, more meaningful comments, and ‘bold and novel writing’. Val thought that quiet people could ‘get their voice heard’.

The absence of physical presence online and its impact on interaction was viewed in two ways. For some students, it was problematic and they were anxious about misunderstandings and miscommunication. Other students said that the absence of physical presence was enabling because it was much easier to talk to their peers and this was evidenced by the disclosures and candid nature of some of the discussions. The absence of a physical presence may also be motivational in some respects. When asked why students were never off task in these online discussions as they can often be in the classroom, Joe said

> You want to look intellectual on the computer and not like you are wasting time.

The features discussed above were influential for the students’ learning and created a constructive atmosphere. The transcript analysis identified indicators of enjoyment of the online discussion and the general tone of the discussion was relaxed and informal and often enthusiastic and, from the researcher’s position, somewhat reminiscent of the teacher’s approach. The participants’ descriptions of the process illustrated students’ moving from the tacit to the explicit and dealing with the challenge of working out their own ideas and communicating them to their peers. The online discussion environment provided an external forum in which the students could test and validate their own internal understanding with their peers in a way that was not available in the classroom.

6.2.6 The influence of the curriculum

Analysis of the students’ perspectives identified the features of the curriculum that were motivational for them and their learning. The most outstanding factor that emerged was holding the online discussions in groups. Nine of the students indicated
a preference for small group discussions as opposed to online discussions where the whole class was involved. The reasons for this were mostly related to the small scale which made it easier for them to manage their learning and their online time for interaction. May and Val much preferred the small group size, with Val saying:

*If it were the whole class, you would be just reading, reading, reading and then where would you post? Where would you take your ideas from? There would just be too many.*

Sally and Sam liked the sense of commitment:

*It was the level of involvement of the other members. You wanted to contribute as much as they did... it was showing that you were going to pull your weight and that you weren’t the slacker in the group.*  
*(Sam)*

Anne found it easier to build relationships and Bob liked the common goals. What Jane liked was that everyone ‘knew what needed to be done’. Joe liked the fact that it was easy to get to know the others and work with them:

*You know what their thought patterns are and it doesn’t take long to see where they are coming from*  
*(Joe)*

The main importance of the group activity was that it encouraged online interaction and provided a context for more socially-based forms of learning. Given that team work was a learning outcome for the course, recognition of this feature by the students might not be surprising, especially as the online discussions were the precursor to class presentations by the groups.

The online discussion was designed on the basis that the students were responsible for managing their discussions themselves, so the teacher monitored the discussions but rarely made a posting. Seven of the students directly endorsed this approach. For Bob, the teacher’s absence supported their development:

*It was non interventionist, but he just sort of gave it [help] when required... It was good. You could show your maturity I guess, and show you had the discipline to do work away from an organized environment.*
Joe agreed and talked about the effect of a high teacher presence in another course:

*With the [other] course, our lecturer comes in and he talks too much. He sort of takes away the answers. He, like, gives comments and feedback, but gives his own opinions, and sort of gives the answer away and if you are coming in after he has made a posting, you have got nothing to talk about.*

This might appear to be an inconsistency for students who had said that they liked to learn with the teacher. However, in the weekly classes the students described activities by the teacher which supported what was happening in the online discussions. These included explaining the discussion requirements until everyone was clear about them, explaining his expectations, including models of what was and was not acceptable, grade expectations, making comments in class about the general progress of the discussions and the standard of the postings. The students all seemed to know that the teacher was monitoring the discussions and would intervene if they were going astray and that, if they had concerns, they could raise them in class or by email. For all of the students except two, this inter-relationship between class-based strategies and online interaction was sufficient to support the students and provide them with learning benefits in a space that was their own.

Despite the fact that the online discussions were assessed, this was mentioned as a motivational factor by only three students. However, the assessed nature may have been so deeply embedded in the activity that its importance was taken for granted or assumed by the students in a discussion about an innovative learning activity. What was probably more influential was the orientation of many of these students towards working in groups, which would have been developed in their first year of study in the degree. The online activity itself (reflecting and thinking about the class and weekly topic) was not directly identified as motivational. However, the class activities on which the reflection was based were identified by half of the students as motivational. This is discussed in the next section.

In order to get some broad impressions of their overall learning experience, students were invited to give their views about the curriculum. According to Ramsden’s principles of effective teaching (2003, p.96), students were:
- Clear about what would happen in the course, assessment and the teacher’s expectations. Their descriptions of the way in which the online discussions related to the weekly classes were coherent with the course documentation.
- Very positive about the teacher, who was highly influential in creating an energetic learning environment. The participants said that he was passionate, committed to the class, encouraged them to work and varied the class activities.
- Satisfied that the overall workload and the online discussion workload was reasonable.
- Satisfied that the number of course topics were reasonable.

Ramsden and Entwistle (1983) argue that these are the features of a learning environment that is capable of fostering deep approaches to learning.

6.2.7 The relationship between the online discussion and the face-to-face classes

The online discussions were perceived as a natural extension of campus-based class activities. Nine of the participants referred directly to the class activity, as the foundation for their thinking and writing in the online discussions. Sally described it thus:

_We learnt from the face-to-face sessions first, before the online and that gave us the foundation to go away and think about what we would write for the online discussions._

May, who was a little anxious about online discussions, had a slightly different approach:

_In class, I knew the online discussion was there, so I would have to make a contribution... so I might jot something down and say I could talk about this and then when I came to the discussion, I would have to think back and remember what we had talked about in class, or be prompted by my notes._

Jane, Claire, Anne and Val talked about the way the class sessions, especially the teamwork and power play activities, provoked them into reading more and thinking about what had happened as a prelude to the online discussions.

Half of the students also thought that the online discussions helped them to establish and deepen their own knowledge of the topic in a way that was not possible in the classroom. Closely associated with this was the way in which the online discussions
extended the students’ understanding beyond that of the classroom. Joe emphasized the value of the reflective process:

*Instead of going to a lecture and then basically forgetting it straight away afterwards, you were forced to go back to that situation and think about it....in a lot more depth than you usually do in class, because in class you basically just get the knowledge coming into you and you don ‘t have time to reflect.*

Anne talked about the influence of the forthcoming online discussion after a class and thought that it made her analyse the class session more. Bob thought the online discussions made him research more and challenge what he had heard in class.

There were more pragmatic ways in which the discussions deepened understanding. Val, Sam and John all used the discussions to check their understanding. John described this as:

*Well, if the teacher was going too fast. . . and then you would go back and reflect on it and you would say ‘did you understand that?’ ‘ And while you were sort of reading what the comments were that had been made online, you would say ‘Oh, so this is what he meant ‘. That really sort of got you to know what actually happened when you didn’t quite catch it in class*

The connection from the online discussions to the face-to-face class was discussed less often by the students. Half of the students mentioned the teacher encouraging them to participate and giving feedback in class on the quality, standard and content of the postings. Students had different memories of the regularity of this feedback. John remembered a regular ten minutes at the beginning of each class, but other students referred to more occasional comments in class.

**6.2.8 Conclusions about the Group Case.**

The key features of this case study are presented in Appendix 9. This case study has illustrated a blended learning ecology in which deep approaches to learning occurred in online discussions where students were somewhat teacher centred. The case study identifies the main factors that have contributed to this finding:

- The students had experience of, and positive attitudes to, learning by interaction, and especially discussion.
- The online discussion activity was assessed at 30% of the final grade
- The text-based nature of the discussion and particularly writing, prompted the students’ thinking.
- The absence of the teacher in the online discussions gave the students a space to create their own understandings, with learning support coming from the regular weekly classroom sessions.
- The group structure made the discussion manageable and comfortable and enabled a more socially based form of learning to occur.
- There were strong linkages between the online discussions and the face-to-face classes which tended to normalize or legitimize the online discussions.
- The classes were the foundation of the online discussions. Students regarded the online discussions as beneficial because they added value to the classes by offering a different learning experience which extended and deepened what happened in class.
The second case study: The participation case

7.1 Introduction to the case
The second case was sited in a course which was more technical and conceptually difficult. The evening class was generally attended by students who worked full time, or who had family responsibilities, both of which created significant demands on their time. The online discussions were optional and the activities were scaffolded from easy through to those which were more difficult in order to assist the development of students’ understanding. The teacher was very active in the online discussions, but there were low levels of participation by the students. This case described student perspectives of the online discussions and explored the relationships between low participation, and the CMC and curriculum context.

The online discussions in this case were held on the new university platform, University Online, as discussed in Chapter 4.2. While it was similar in terms of its online learning functions, the kinds of data that were available were not identical to those of the previous case. This course was one that was within my own discipline area and consequently, I had a deeper understanding of the teaching and learning issues. This familiarity raised the possibility that I might have overlooked or ignored something in the analysis and interpretations and to balance against this effect, several checks were made with the teacher.

7.2 The course setting
This case was situated within a second year law course which was compulsory for the commercial law major and/or meeting the professional accounting requirements. The aims of the course were:

*To introduce students to the various types of business organizations and trading arrangements, and the legal principles affecting each respective organization.*

*(Course Handbook, 2004a)*

The course introduced legal principles and their application in business. It was often regarded as difficult, with its emphasis on technical skills, such as reading statutes, legal reasoning and problem solving. At undergraduate level, the principles have to
be understood and applied correctly and precisely, using the language of the discipline. While discursive approaches are possible at this introductory level, they had to be based on a correct understanding of legal principles.

The teacher was one of the early users of the university’s new online learning system, and the use of online discussions was an innovation for the course. The course documentation described its flexible mode, which comprised face-to-face classes, online activities and independent study (See Appendix 7). Face-to-face classes were held in the evening, where the conceptual topics of the course were introduced in lectures. The online site provided course materials, content and communication support. An illustration of the online site, showing the front page of the discussion forum, is provided in Figure 7.1.

FIGURE 7.1 ILLUSTRATION OF THE ONLINE SITE.

The online discussion activities comprised three to four ‘exercises’ which were themed around the weekly topic and there was an expectation that students would participate. Each week, the teacher would start a new discussion and students would then post their responses. The online discussions were always held for the whole class and the teacher was very active in the discussions, providing feedback for the
students and raising further issues. Unlike the previous case, the online discussions in this course were not assessed, but space had been made for them within the course design by reducing the class contact hours from three to two hours per week. Further details of the online discussions are provided in Table 7.2.2.

**TABLE 7.1. ON LINE DISCUSSION ACTIVITY**

<table>
<thead>
<tr>
<th>On Line Activities. Exercises.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to provide for a variety of abilities, the discussion questions were carefully scaled in terms of d Analysis of the exercises indicated a progression from demonstrating understanding of fundamental concepts, analysis and addressing scenarios which required solutions. The exercises were always based on legal principles (statutes and case law), and required correct and precise use of the concepts and language.</td>
</tr>
</tbody>
</table>

**Examples**

(1) Define the term ‘internal governance’. [demonstrate understanding]

(2) Why would the members of a company choose not to have a separate constitution? Why would they decide that it was necessary to have a separate constitution? [analysis]

(3) Lia and Dan wish to form Liandan Co Ltd to carry out a food retailing business. They ask you to prepare the necessary documentation. In discussion you ascertain the following: both Lia and Dan would like the internal governance rules to provide that each is entitled to be a director of the company and cannot be removed against their wishes. They would also like to include a provision that all business decisions involving expenditure of more than $10,000 must be agreed to by both directors. Can they do so? [problem solving]

Students were provided with Guidelines for Online Discussion (see Appendix 8) and guidelines on legal problem solving.

The teacher regularly discussed expectations in class, including the benefits of a running conversation on the issues and encouraged students to participate in the online discussions.

Solutions to the exercises were posted on the website, and generally comprised an outline of the main points.

**7.3 The participants**

Seven of the students from a class of twenty seven students volunteered to be participants in the study and they are discussed first as a whole group (see Table 7.2 for overview) and then individually.

The participants were all in their early twenties or older, with all of them working, having work experience or looking after their families. Five of them were doing the course to meet the professional accounting requirements and they acknowledged its relevance for professional practice. The group was typical of accounting classes within the Faculty, with three students being Chinese and having English as a second
language, and three of the students describing themselves as New Zealanders. No one was previously experienced with online discussions. Apart from one of the students who was the top student in the class with an A grade, the overall final grades of the participants were lower than the course average with four of the participants getting a C grade.

All of the participants preferred to learn in class because they saw the teacher as the expert who was able to give rapid feedback which helped them understand the subject. Cath, Emma and Sandra had all come from China and now lived permanently in New Zealand. Cath and Emma were mature women with previous work experience and currently attending to family responsibilities. Sandra was a younger student, who was studying full time and was not working that semester. For all of them, the learning process was very different in New Zealand from China, and a further issue for them was their confidence in their language ability.

Cath regarded her study as improving her personal abilities and helping her to become an accountant in New Zealand. She enjoyed learning in group discussions but was not confident in these situations ‘my English is not good enough. I’m still, I’m too ashamed to say something wrong. I just, I’ve got ideas but I’m scared to speak up’. She had not taken part in online discussions before.

Emma preferred to learn with the teacher in the class ‘. . . because I can ask questions which have been confusing me. Also, collect knowledge about the topic, because the teacher knows a lot. Also learn a lot of skills’. She had come to like critical thinking and working in groups but really did not like discussions in class. Emma had taken one or two courses before with online learning support, but had not taken part in online discussions.

Sandra was apprehensive about class discussions because ‘sometimes I just quite afraid about discussion, because if my group member or other person sit beside me, they can speak very good English, but I can’t say [things] I just feel afraid’.
# TABLE 7.2. OVERVIEW OF THE PARTICIPANTS (WITH PSEUDONYMS)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Grade</th>
<th>Age</th>
<th>Course Stage</th>
<th>Single or double major</th>
<th>On line learning experience *1</th>
<th>On line discussion experience</th>
<th>Work</th>
<th>Study—Full time *2 or Part-time *3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucy</td>
<td>NZ</td>
<td>B</td>
<td>25-30</td>
<td>3&lt;sup&gt;RD&lt;/sup&gt;</td>
<td>Acc</td>
<td>Novice</td>
<td>No</td>
<td>&lt;10 hours</td>
</tr>
<tr>
<td>Alexa</td>
<td>Not available</td>
<td>C</td>
<td>20-24</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>Commercial law</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>FT</td>
</tr>
<tr>
<td>Jane</td>
<td>NZ</td>
<td>A</td>
<td>31-34</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>Graduate Diploma</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>PT</td>
</tr>
<tr>
<td>Paul</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>3&lt;sup&gt;RD&lt;/sup&gt;</td>
<td>Acc and IT</td>
<td>Novice</td>
<td>Occasionally</td>
<td>FT</td>
</tr>
<tr>
<td>Cath</td>
<td>Chinese</td>
<td>C</td>
<td>&gt;40</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>Acc</td>
<td>Experienced</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Emma</td>
<td>Chinese</td>
<td>C</td>
<td>&gt;40</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>Acc</td>
<td>Novice</td>
<td>Often</td>
<td>No</td>
</tr>
<tr>
<td>Sandra</td>
<td>Chinese</td>
<td>C</td>
<td>20-24</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>Acc</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>FT</td>
</tr>
</tbody>
</table>

*1 Novice = 1-2 previous courses, experienced = 3+ previous courses

*2 Full time = 4 courses per semester

*3 part-time = 1-2 courses per semester
Sandra was experienced in online learning and had occasional experience of online discussions.

Paul and Jane both worked full time, and for them learning was a mixture of developing conceptual understanding and gaining skills. They enjoyed structured classroom learning if the teacher went beyond the textbook or Powerpoint slides, for example, by including opportunities for discussion or giving examples. Jane really liked to learn by face-to-face discussions:

*I’m a social creature and it [learning] does involve sitting in the class and you know, you know, taking part in discussion and the sharing of ideas.*

For those reasons, she did not like online discussions. Paul also saw a role for discussion in his learning:

*I mean, in terms of what I am doing in accounting, there is the new standards that are coming out, now you can LEARN the standards out of the textbook which is fine, but if you are talking about how they are applied you have got to have some discussion, because not everyone is going to have the same interpretation of that text.*

Alexa and Lucy were both studying full-time after working for a few years. Alexa had significant family responsibilities. She did not like face-to-face discussions because ‘you never know what’s wrong and what’s right’, and neither did she like online discussions because ‘it feels like you’re talking to a computer’. Lucy was finishing her degree and, with a small part-time job, she had plenty of time to study. She did not enjoy any kinds of discussion and preferred to learn with the teacher because ‘its having someone there, actually explaining things. . . its a lot harder to sit there and read it’ . However, as the semester progressed, she grew to like the online discussions because they saved her travel time.

### 7.4 Actions anti approaches

This section examines the ways in which the participants acted in the online discussions. Data from the online discussions were analysed and are presented in Table 7.3.
TABLE 7.3 SUMMARY OF ONLINE SYSTEMS INFORMATION

- Discussion activities were held for 9/13 weeks, with 3 - 4 exercises per week.
- 19/27 (70%) of the students in the class posted messages.
- 207 messages posted for the whole class.
- 59 messages posted by the teacher (29%).
- 122 messages posted by students (average of 6 messages per posting student).
- 31 messages from the participants (average of 5 messages per posting participant).
- 1162 readings of the postings for the whole class.
- The postings were fairly evenly spread across the three kinds of exercises, and ranged from 62 - 71 postings.
- The maximum number of postings for any individual exercise was 10 and the greatest number of postings was made in the first two weeks of the discussion.
- In just over half of the exercises, 1-3 student messages were posted.

The teacher was very active in the online discussions, however, there were low levels of participation. Eight of the students in the class did not post, the number of messages per remaining student was low at an average of six for the semester. There were never more than ten postings for any single exercise. The total number of messages read was much higher than the number of postings, although, as previously, there was no indication of whether the messages were opened, or read. The students, however, acknowledged reading the messages in the interviews. A summary of the participants’ postings is presented in Table 7.4 and, with the exception of Lucy, it illustrated the low levels of participation.

TABLE 7.4. SUMMARY OF THE PARTICIPANTS’ POSTINGS

<table>
<thead>
<tr>
<th></th>
<th>Number of postings during the semester</th>
<th>Number of weeks in which postings were made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucy</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Alexa</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Paul</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Jane</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Emma</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cath</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sandra</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Only Lucy participated significantly more than the class average. Alexa’s level of participation was at the class average level and Paul, Jane, Emma and Cath were below average in terms of their participation. Sandra did not participate at all and in
a difficult subject, where students had a preference for learning in a teacher directed mode and not in student groups, this might not be surprising.

A content analysis, using the deep and surface approaches to learning framework (see Appendix 5), was used to analyse the students’ postings. This indicated a dominance of deep approaches, being 87% of the units of meaning being so coded. However, the results were based on a very small amount of data, with only 31 messages posted by six of the participants for the semester, with 15 of these messages (48%) coming from Lucy, who attained a B grade for the course. In the interviews, the students spoke about how they reproduced the textbook to complete the discussion exercises and, depending on how this was done, it may have decreased the incidence of deep approaches. For these reasons, caution should be taken in accepting the high level of deep approaches to learning in this case study. The importance of this case study lies in student perspectives of the online discussions and their behaviour as a response to the way in which they viewed the learning environment. These views are discussed next.

7.5 The influence of the CMC environment
The students’ perspectives were analysed to identify differences between their different levels of participation and, where these were found, they have been discussed. The main benefits of the online discussions were associated were reading the other messages. Alexa, Emma, Jane and Sandra all said that reading other postings enabled them to check their own understandings. Jane liked the way that good students would explain the concepts in simpler or more basic terms than the teacher. Emma talked about the importance of observing the discussion for her learning

... at first I was confused. ... Then I watched other students discussing and their opinions so that I could understand.

Sandra, who did not post during the semester, said that every week she mapped out the answers in her head and read the postings, especially if she was having difficulties. In a technically correct subject, reading other students’ postings could
provide valuable learning support by providing alternative modelling and feedback from that of the teacher.

Everyone except Paul could describe the benefits associated with writing, irrespective of their level of contribution. Many of these centred around increasing understanding, for example, embedding ideas, clarifying, or noting concise expressions of ideas, correctness, logic and focus. Also important was the communication of the idea, and this seemed to go beyond spelling and grammar. Despite the low levels of participation in the online discussions, the students recognized the way in which the written nature of the discussion could help their learning. However, with the exception of Lucy, due to their low participation, most of them were unable to take advantage of these text-based features for learning.

In terms of peer interaction, the students were always on task and not socialising in their online discussions, which contrasted with classroom discussions. Alexa and Emma said that, in the face of multiple demands on their time, they completed the tasks as fast as possible, whereas in class, they were there for the duration. Jane, Emma and Sandra also regarded the forum as a public venue which was not for personal matters. Lucy thought that people stayed on task because there were no distractions. Despite this attention to the discussion, the postings indicated that students used the online discussions as a noticeboard, rather than a forum for cognitive exchange and interaction. Consequently, students could derive few of the benefits that some of them had earlier recognized as arising from discussion, especially those connected with extending and developing their understanding through social interaction as opposed to individual thought.

Lucy, Alex Jane and Paul all preferred face-to-face discussions because of their immediacy. Online discussions were viewed as much slower and unsatisfactory for many reasons. Thoughts had to be retrieved and organized, and there was always a wait for a reply. There might not be any reply, and so, there might be no feedback on the points that had been made. If a response arrived, the issue might have been forgotten. However, Emma and Cath both said that they preferred online discussions because they could participate and interact more with other students than was possible in a face-to-face discussion in class. The text-based environment and the
record of messages were helpful. Reading and writing messages, instead of listening to fast language and trying to speak better, assisted their language confidence and ability. Associated with this was the unlimited time for participation.

*If we do online, I have more time….I can work out how to say and ah…..you can see what other people say because [of] what they write.....I can more understand than just talk.*

*Researcher. Because you can go back and read it again?*

*Yeah, yeah, yeah, yeah.*

*(Emma)*

The absence of physical presence meant that they did not need to manage the other students’ identities and styles, and they could focus on what they wanted to say.

*I don’t have to think about what the student is male or female, happy or unhappy, or personally talkative or less talkative person or maybe he is personality difference can just put my opinion.... No worry about actions...or do you like Chinese or not. You don’t worry about him. We are discussing topic, not each social difference, personality difference.* *(Cath)*

Emma and Cath’s endorsement of the absence of physical presence in their participation in online discussions identifies a potential value of this medium for ESL students. This case demonstrated that students recognized the benefits of reading and writing but this recognition was insufficient to persuade them to participate in online discussions. The next section looked at some of the other factors influencing student’s perceptions.

### 7.6 The influence of the curriculum

The reason for little or no participation that was given by everyone was the fact that the online discussions were not assessed, nor required for the course. *Sandra* acknowledged this directly and said she made no contributions because they were not required for the final grade. Some of the students also observed that the online discussions were available to everyone, regardless of whether they contributed or not and they did not think that was fair. The solutions for the exercises were also on the course website for everyone and these provided direct feedback for the discussion exercises.

For all of the students except *Lucy*, low participation was also closely associated with pressure of time. *Jane* worked full-time and talked about balancing work and
study, and the difficulty of completely closing off from work in order to participate. Paul also worked full-time, and had enrolled in four courses, rather than the usual two courses. All of his courses included online discussions which made huge time and logistical demands on him. Alexa described her family and community commitments. Emma and Cath both had parenting responsibilities, and Emma’s view was ‘we are busy, busy, busy so we just do what is urgent or important’. Lucy said she had plenty of time during the semester to join the online discussions and she was, therefore, the best contributor.

This issue with pressure of time illustrated one of the paradoxes about time flexibility for students. The course had been adjusted to make space for the online discussions by reducing the face-to-face class time from three hours to two hours per week, with students making their voluntary contributions when it suited them, but students were unable to allocate that time for the discussions and did not participate. In contrast, the weekly classes which were also voluntary, but prescribed in their time, were always well attended. This case illustrated that for many students time flexibility is somewhat problematic for their learning.

The other reason that emerged for non-participation was the nature of the discussion activities. The exercises had been carefully staged to scaffold students’ learning. However, the students regarded the activities as uninteresting because, in their view, they often seemed to have one right answer, and it seemed to be pointless to repeat this from the textbook or notes, or from another posting. Paul described this as regurgitation:

Instead of you going away and having to think about it....you could just take a paragraph straight out of the textbook

Jane thought the activity was like homework which was posted on a noticeboard:

Because there’s a question, you go and research it and you respond and that’s it...homeworks done... I don’t... necessarily read what other people have written, because everybody just answers with the same response. So its not really a sharing of ideas, its really an answer to a question . . . the only reason I read other people’s was to help me put my own together.

Cath felt that she had nothing to say and as so did Lucy (even though she was a good contributor):
So, there not really much else to add. And . . . then you kind of, I don’t know, always feel a bit useless after, you know, having to say... everyone else has already answered, you know, said what I want to say.

Alexa did not like the activities either, but that was because they were too complicated and meant she would have to go beyond her notes and look at the textbook. She could not draw on her experience, and because they were optional she elected not to do them.

For the students, the overall view was that the questions were incapable of supporting a genuine discussion. Analysis of the discussion exercises indicated that one third of them involved understanding at a recall level. The balance of them were based on technically right or wrong answers, but there was some room for discussion, and the students all demonstrated some awareness of this variety. There is some contradiction here, but what may underlie the students’ perspectives is their overall perception of the questions as individual exercises or homework rather than discussion-starter activities.

Regardless of their level of participation, all of the students except Alexa could say what made a genuine discussion activity for them. Lucy, Paul Emma and Cath all liked problems and Lucy and Paul emphasized the importance of substantial issues that required thought, interpretation and application. For Jane, Paul, Cath and Sandra genuine discussion meant multiple viewpoints, sharing of ideas, no right or wrong answers and space for disagreement and argument. Paul and Sandra both wanted activities that were linked to classroom activities and the opportunity to discuss issues in groups rather than as a whole class. From a student perspective, these were the characteristics of an activity that they said would have encouraged them to go online and interact with each other.

This case illustrated the issues that arise with discussions in a technical subject and where concepts had to be correctly understood and applied. Another issue which affected learning was that students rarely had any personal experience of the subject and did not read news reports in the area. In the absence of an online inquiry or problem-based approach, case studies are likely to be helpful in assisting students to apply and situate abstract legal principles. This research identified the need for fundamental concepts to be addressed other than in online discussions, perhaps
through online quizzes. It may be that multimedia simulations or games would be more motivational for students in this kind of subject.

Systems data indicated that the teacher was very active in the online discussions which was appreciated by the students. Lucy, Emma, Cath and Sandra all said that they knew if they were right or not and Lucy liked the extra points and questions from the teacher because they provoked her thinking. Emma said that, because the feedback was in writing, she could always go back to it. In contrast, Alexa did not like the extra questions, and only wanted direct and exact feedback on whether she was right or not. In terms of the overall course environment, the students thought that the teacher helped them to learn. The teacher was enthusiastic in class and gave lots of examples, the lectures were well organized and structured, and the students received prompt feedback and answers to queries.

The provision of feedback by the teacher to the students in a demanding subject was highly desirable and also demonstrated the teacher’s commitment to the online discussions. However, it did not influence the level of participation. This suggested a broader role for teachers which went beyond managing the online discussions themselves and instead embedding the online discussion more strongly within the course. A direct approach would mean giving a grade for the discussions or more indirectly, designing genuinely discursive activities that motivated interaction. The use of groups, rather than the whole class, might also be more motivating for students.

7.7 The relationship between the online discussions and the face-to-face classes

The relationships between the online discussions and the face-to-face classes were tenuous for most of the students. Because the online discussions were voluntary, Sandra, (no postings), saw them as separate from the weekly classes. However, everyone else identified these as the basis of the online discussions. Unlike the first case, this was not viewed as a positive foundation for the online discussions, possibly because of their non-discursive nature, as previously discussed. Everyone said that
the teacher regularly explained the value of the discussions and course expectations and encouraged the students to participate; but this did not create any sense of connection. Paul suggested that it would be a good idea to bring the online discussions back to the classroom. There was no sense of the online discussions extending the classroom activities or learning. Lucy, who posted most frequently, saw the online discussion questions as a reiteration of the class. Jane viewed the questions as annoying, but an indicator of what was important in the course.

While the weekly classes were optional, they were always well attended because students recognized their value. From the viewpoint of on-campus students, face-to-face classes have a tradition and consequent legitimacy. Therefore, any new form of learning needs to be well connected to the classes, and provide something additional to those classes. If this does not occur, then students, if they had a choice would ignore new technologies, as this case illustrated.

7.8 Summary

The main features and findings of this case are summarized in Appendix 9. This case has illustrated a blended learning ecology which was characterized by low participation and its value lies in the students’ views about why this occurred. The students were studying part-time and the subject was a technical one which required a correct understanding of its concepts. The case has identified the main factors which have contributed to this finding of low participation:

- Not many of the students liked to learn through discussion, so their conceptions of learning were not favourably inclined towards the online discussions. This may have been reinforced here because the subject was difficult.
- Participation was optional, the students received no marks for it and they were time pressed. While a space had been created in the course for the online discussions, students had difficulty managing this time flexibility in a way that helped them to learn.
- The activities were not regarded as genuinely discursive and did not enable the students to interact, or to take advantage of the medium.
- There was a tenuous connection with their regular classes.

This case has demonstrated that if students are not contributing, they may be learning through reading each others’ postings and checking their own understandings. While this is valuable, students are likely to learn more by writing about their understanding, and using the medium in a more interactive and constructive fashion. The case also illustrates two other benefits of online discussions. Unlike class discussions, where students can be easily distracted, it appears that in online discussions, students remain on task. Where students are not confident speakers of English, then the text-based and asynchronous nature of the medium may enable them to participate more in discussions with their peers.

This case also demonstrates some curriculum challenges for teachers, the main one being designing activities that result in participation. This might be achieved through assessment or through activities which are genuinely dialogic. In a blended learning environment, online discussions also need to complement the classroom.
CHAPTER 8
THE DEBATE CASE

The third case study: The debate case

8.1 Introduction
The third case study is situated in a compulsory course for all students enrolled in the business degree. The online discussion activity was styled as a debate and was assessed. There was something compelling about this activity because it seemed to produce high levels of student engagement, and, at times, passionate and heated online discussion. This case study focused on the role of the online debate in the students’ learning. What emerged is a description of the way in which the students’ personal responses to the debate topic, and the contesting of ideas in the online discussions, helped them to learn. As with the first case study, this study confirmed the importance of assessment and a close connection to the weekly classes for effective online interaction. The participants included both Kiwi and Chinese students and the case study has provided descriptions of learning from both viewpoints.

There were several practical challenges with this case study. Initially, it was difficult to obtain participants, and these were eventually drawn from six classes. This raised the issue of examining the participants as six separate cases or regarding them as a single cohort. I decided to analyse them as a single group because this seemed to be a less fragmented approach, and was likely to result in more coherent and rigorous findings. Another reason for combining the participants was the identical nature of the course structure across all classes, such as the handbook, the website, the weekly teaching program, and online activity and assessment. Also, the teachers in the course developed the course collaboratively and continued to operate as a team during the semester, thus ensuring a high degree of consistency. The other issue with this case study was that of the data quality from some of the Chinese students, which may have been less comprehensive due to communication issues (see Chapter 5.6.6.).

Throughout this case study, the data from both Kiwi and Chinese students was analysed in two ways. First, the research questions were addressed and secondly, a comparative approach was taken and where there were significant differences
between the Kiwi and Chinese students, these have been described and discussed (see also Gerbic, 2005).

8.2 The course setting
The setting was a compulsory second year course for all business degree students. About 300 students were enrolled in ten classes and each class contained students from different business fields, for example, accounting, marketing, information technology and international business, and it was regarded as a challenging one by the students. The aim of the course was to:

*Equip students with conceptual skills and knowledge to enable them to identify ethical problems, to make and evaluate judgements based on ethical models, and to critically analyse approaches to ethical behaviour in business.*

*(Course Handbook, 2004b)*

The subject was highly discursive in the sense that various positions could be taken on an issue; however, any position had to be supported with a correctly applied theory. The overall approach to the subject was described in the Course Handbook by the teaching team:

*Collaborative and participatory teaching methods will be emphasised. The key teaching strategy will be case discussion and analysis. Other teaching methods will include group and self-directed study, debates, discussion, videotape use and teacher-directed mini-lessons.*

*(Course Handbook, 2004b)*

Each week, students attended a two hour face-to-face class, where new topics were introduced and followed by discussion activities. As part of the flexible offering, the weekly class was followed by independent online activities, for example, readings, quizzes, and case studies. An illustration of the online site is provided in Figure 8.1 below.
Offering the course in flexible mode was a relatively new development for the teaching team, although some members were experienced with online learning and teaching. In order to assist students to learn within the flexible mode, the teaching team developed a six step strategy which integrated the different kinds of learning activities, Guidelines for Getting the Most out of the Program (Appendix 7) and the Guidelines for Online Discussions (Appendix 8) were also available.

Online discussions were included within the course in two ways:

1. The Learning Community space
   This was a single discussion space for all of the (300) students enrolled in the course. It was mostly used by students to clarify what they needed to do and to get assistance with the course and was well patronised at the beginning of the semester.

2. An Online Discussion on a Controversial Issue (the debate)
   This discussion was held for five weeks, including a two week course break (with no classes). It was assessed, with a weighting of 15% of the course grade and concerned a moral dilemma that was presented in a reading. Students had completed a prior assessment where they had critically reflected
on the ethical issues raised in the course and their own personal development.

The online discussion was described in a three page handout for students which is summarised below in Table 8.1.

### TABLE 8.1. ONLINE DISCUSSION ACTIVITY

<table>
<thead>
<tr>
<th><strong>The debate statement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>‘It is wrong to live well without giving substantial amounts of money to help people who are hungry, malnourished, or dying from easily treatable illnesses like diarrhoea’ (Singer, 2001, p.119)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Structure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) An initial response to the question, and</td>
</tr>
<tr>
<td>b) A reply to another student and</td>
</tr>
<tr>
<td>c) A final response which can be an additional comment or a reply to another student</td>
</tr>
<tr>
<td>d) Three postings of approximately 150 words (otherwise a grade of 0).</td>
</tr>
<tr>
<td>e) Postings to be submitted within the stipulated time frame (otherwise a grade of 0).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Guidelines</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• A critically reflective and informed response entails:</td>
</tr>
<tr>
<td>a. Thinking in depth about your initial and changing responses to the posted question and resulting discussion;</td>
</tr>
<tr>
<td>b. Relating your own personal experience and family beliefs and values to the issues raised by the question and any resulting discussion;</td>
</tr>
<tr>
<td>c. Relating your response to other reading, discussion and study done as part of this paper; and</td>
</tr>
<tr>
<td>d. Bringing together what you have learned into a series of three (3) thoughtful online responses.</td>
</tr>
<tr>
<td>• Each response requires reference to class readings, topical research from the e-library, media, and internet, and participation in class. APA referencing is required.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Marking</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The marking for Part B of this assessment will be allocated on a flat rate basis. Students will be given 15%, 10%, 5% or 0% for their submitted work.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Criteria</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Three responses of 100-150 words, including an initial response, a response to another student, and one other response, within the stipulated timeframe.</td>
</tr>
<tr>
<td>2. Recognition of multiple defensible positions about the issues.</td>
</tr>
<tr>
<td>3. Thoughtful and informed responses with clear reasons given for positions taken.</td>
</tr>
<tr>
<td>4. Accurate and appropriate reflection of course readings, classwork and online work.</td>
</tr>
<tr>
<td>5. Evidence that the student is beginning to engage at a more than superficial level with the issues raised by the posted question.</td>
</tr>
<tr>
<td>7. Referencing (where required) and competently done in APA style’.</td>
</tr>
</tbody>
</table>

(Course Handbook, 2004b)
8.3 The participants

8.3.1. An overview
Thirty four students (11% of the enrolled students) agreed to participate in the research study, however some of these students withdrew from the course, so data from the online discussions, systems and interviews is presented from twenty-four students, comprising fifteen Kiwi students and nine Chinese students. Information is provided about them in Tables 8.2 and 8.3 below. Many of the Chinese students had adopted Western names and were accordingly given Western pseudonyms.

Most of the Kiwi students were in their early twenties. However, a greater proportion of the Chinese students were older, with four of them in their mid to late thirties. All of the Chinese students were ESL students, and while the academic performance of the Kiwi students was better than that of the Chinese students, both groups had a higher pass rate than that of the whole course. Six of the Chinese students came from the People’s Republic of China (PRC) and three of the Chinese students were New Zealand residents or citizens, reflecting two common trends within the degree student body.

8.3.2 Further participant information
Further information is provided about the participants in the following sections, which includes their views of learning and their opinions about online discussions. Knowledge was perceived by most of the students, both Kiwi and Chinese, as a practical matter in the sense that it was knowledge and skills for the business world or related to their future careers. Most of the Kiwi students liked to learn through class discussions, but this was less valued by the Chinese students, who placed much more emphasis on direct instruction from the teacher. In order to provide some coherence, the students are grouped according to their study and work commitments.

8.3.2.1 The Kiwi students
Vicki, Si, Daisy and Joel all studied full-time and worked less than 10 hours a week. Daisy preferred to listen to the teacher in class because it was an easy way to learn, although she also liked class discussions and online discussions where she enjoyed reading the different viewpoints, especially those from other cultures. Vicki also
<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Grade</th>
<th>Age</th>
<th>Course Stage – year</th>
<th>Single/Double Major</th>
<th>Online Learning experience *2</th>
<th>Online discussion experience</th>
<th>Working hours per week</th>
<th>Study – full-time, part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clara</td>
<td>Maori</td>
<td>B</td>
<td>20-24</td>
<td>2ND</td>
<td>Experienced</td>
<td>Often</td>
<td>31+</td>
<td>FT</td>
</tr>
<tr>
<td>Daisy</td>
<td>NZ *1</td>
<td>B</td>
<td>25-30</td>
<td>2ND</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>&lt;10</td>
<td>PT</td>
</tr>
<tr>
<td>Fred</td>
<td>NZ</td>
<td>A</td>
<td>25-30</td>
<td>2ND</td>
<td>None</td>
<td>None</td>
<td>31+</td>
<td>PT</td>
</tr>
<tr>
<td>Gail</td>
<td>NZ</td>
<td>B</td>
<td>35-40</td>
<td>2ND</td>
<td>None</td>
<td>None</td>
<td>31+</td>
<td>PT</td>
</tr>
<tr>
<td>Jeremy</td>
<td>NZ Maori</td>
<td>C</td>
<td>20-24</td>
<td>3RD</td>
<td>International Business &amp; Management</td>
<td>Experienced</td>
<td>31+</td>
<td>FT</td>
</tr>
<tr>
<td>Jessy</td>
<td>NZ Maori</td>
<td>B</td>
<td>20-24</td>
<td>1ST</td>
<td>Management</td>
<td>Experienced</td>
<td>21-30</td>
<td>FT</td>
</tr>
<tr>
<td>Joel</td>
<td>NZ</td>
<td>A</td>
<td>20-24</td>
<td>3RD</td>
<td>Management</td>
<td>Experienced</td>
<td>&lt;10</td>
<td>FT</td>
</tr>
<tr>
<td>Jorg</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>2ND</td>
<td>Accounting</td>
<td>None</td>
<td>11-20</td>
<td>FT</td>
</tr>
<tr>
<td>Mavis</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>2ND</td>
<td>Marketing</td>
<td>Novice</td>
<td>21-30</td>
<td>FT</td>
</tr>
<tr>
<td>Molly</td>
<td>NZ</td>
<td>A</td>
<td>20-24</td>
<td>2ND</td>
<td>Marketing &amp; International Business</td>
<td>Experienced</td>
<td>31+</td>
<td>FT</td>
</tr>
<tr>
<td>Nicola</td>
<td>NZ</td>
<td>C</td>
<td>20-24</td>
<td>3RD</td>
<td>Advertising</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>31+ FT</td>
</tr>
<tr>
<td>Ronald</td>
<td>NZ</td>
<td>B</td>
<td>31-34</td>
<td>1ST</td>
<td>Accounting</td>
<td>None</td>
<td>None</td>
<td>31+ PT</td>
</tr>
<tr>
<td>Shelley</td>
<td>NZ</td>
<td>C</td>
<td>20-24</td>
<td>2ND</td>
<td>Tourism &amp; Management</td>
<td>Experienced</td>
<td>11-20</td>
<td>FT</td>
</tr>
<tr>
<td>Si</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>3RD</td>
<td>Management</td>
<td>Experienced</td>
<td>&lt;10</td>
<td>FT</td>
</tr>
<tr>
<td>Vicky</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>2ND</td>
<td>Marketing &amp; International Business</td>
<td>Experienced</td>
<td>&lt;10</td>
<td>FT</td>
</tr>
</tbody>
</table>

*1 NZ = New Zealander of European heritage
*2 Novice = 1-2 papers, experienced = 3-5 papers
### TABLE 8.3. OVERVIEW OF PARTICIPANTS - CHINESE STUDENTS (ANONYMISED, WITH WESTERN PSEUDONYMS).

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Grade</th>
<th>Age</th>
<th>Course Stage</th>
<th>Single/Double Major</th>
<th>Online Learning experience *2</th>
<th>Online discussion experience</th>
<th>Working hours</th>
<th>Study – full-time, part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cath China – Dom*</td>
<td>C</td>
<td>35-40</td>
<td>2ND</td>
<td>Accounting</td>
<td>None</td>
<td>Occasionally</td>
<td>None</td>
<td>FT</td>
</tr>
<tr>
<td>Fiona China – Intl**</td>
<td>B</td>
<td>20-24</td>
<td>2ND</td>
<td>Accounting &amp; International Business</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>None</td>
<td>FT</td>
</tr>
<tr>
<td>Fran Asian***. Intl</td>
<td>C</td>
<td>20-24</td>
<td>3RD</td>
<td>Advertising &amp; Information Technology</td>
<td>Experienced</td>
<td>Often</td>
<td>No data</td>
<td>FT</td>
</tr>
<tr>
<td>Ivan China - Intl</td>
<td>C</td>
<td>20-24</td>
<td>2ND</td>
<td>Advertising &amp; Information Technology</td>
<td>Novice</td>
<td>None</td>
<td>No data</td>
<td>FT</td>
</tr>
<tr>
<td>Lee China - Intl</td>
<td>C</td>
<td>25-30</td>
<td>3RD</td>
<td>Information Technology</td>
<td>Experienced</td>
<td>Often</td>
<td>No data</td>
<td>FT</td>
</tr>
<tr>
<td>Maya Asian – Dom</td>
<td>B</td>
<td>31-34</td>
<td>2ND</td>
<td>Accounting</td>
<td>Novice</td>
<td>Occasionally</td>
<td>31+</td>
<td>PT</td>
</tr>
<tr>
<td>Mike China – Intl</td>
<td>B</td>
<td>35-40</td>
<td>2ND</td>
<td>Accounting &amp; International Business</td>
<td>Novice</td>
<td>Often</td>
<td>No data</td>
<td>FT</td>
</tr>
<tr>
<td>Paula Asian – Intl</td>
<td>D</td>
<td>20-24</td>
<td>2ND</td>
<td>Marketing</td>
<td>Experienced</td>
<td>Often</td>
<td>No data</td>
<td>FT</td>
</tr>
<tr>
<td>Toni China - Dom</td>
<td>C</td>
<td>31-34</td>
<td>3RD</td>
<td>Accounting</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>None</td>
<td>FT</td>
</tr>
</tbody>
</table>

*Dom = domestic student (New Zealand resident or citizen)

**Intl = international full fee paying student ($18,000NZ per annum)

***Asian = student with Chinese heritage who is not from PRC, but from elsewhere in Asia

****2 Novice = 1-2 papers, experienced = 3-5 papers
liked the online discussions for the same reason. She enjoyed the face-to-face class because of the personal interaction and discussion, but did not regard listening to the teacher as stimulating. Joel’s preferred way of learning was through class discussion:

You get a whole bunch more of communication through non-verbal cues and ...you know, the way things are said as opposed to what’s said, and I find that you can get so much more of a message ... you can discuss an awful lot more in 10 minutes face-to-face than you can in 10 minutes online and... that richness and depth of information just isn’t the same...

Joel was ambivalent about online discussions and did not like the debate discussion because the strict word limits stifled the discussion. Si was neutral about online discussions and preferred to learn actively, especially by interacting with other students, rather than by listening to the teacher.

Shelley and Jorg were studying full-time and worked for 17 and 20 hours a week, respectively. Shelley liked learning in the class with the teacher or on her own and she found online discussions challenging because of their time management demands. Jorg also enjoyed learning in class because of the credibility and authority of the teacher, the way in which the teacher drew on professional experience, and the personal contact in the face-to-face sessions. Discussions with students were less important for him but he liked the flexibility of online discussions.

Mavis and Jessy were studying full-time and both worked for 21 hours a week. Mavis preferred to learn actively by doing projects and she also valued learning from teachers who could draw on their business experience. She liked the face-to-face class discussions and the online discussions, for their flexibility and access to her peers’ points of view. Jessy liked online discussions for the same reasons, but also because it was easier for her to participate. She preferred listening to the teacher in class and found speaking in class discussions ‘nerve wracking’.

Nicola, Molly, Jeremy and Clara were all enrolled as full-time students yet worked 31 or more hours a week. Nicola liked to learn through activities such as class discussions, because they ‘engaged her brain.’ She liked online discussions because there was less pressure and more disclosure. Molly did not agreed with the way in which online discussions were assessed and thought that making them voluntary would be more beneficial for learning. She preferred to learn on her own with the
‘backup’ of the class and liked discussions because of the multiple views, especially those of students from other cultures. **Jeremy** liked to work in groups and valued the constructive criticism and different perspectives that these discussions provided. Because of his long working hours, he liked the convenience of online discussions and being able to check that he was ‘on track’ by reading the other postings. Similarly, **Clara** liked the online discussions because of the flexibility they gave her with regard to her long working hours. She preferred to learn with the teacher because she was the authority and was less confident about learning on her own because there was no feedback. She liked face-to-face class discussions where she mostly listened to others’ opinions.

**Gail, Fred** and **Ronald** were all older students who worked full-time and this was their first experience of online discussions. **Gail** liked to learn by activities and by writing and liked class discussions because of all the different viewpoints that emerged. **Fred** preferred to learn with the teacher in classes which included learning activities and online discussions were ‘OK’. **Ronald** liked the structured approach of lectures and did not like discussions because it was too easy to get sidetracked.

### 8.3.2.2 The Chinese students

**Fiona, Cath** and **Toni** were all full-time students and were not working. They came from the PRC and **Toni** and **Cath** had recently become New Zealand citizens. **Fiona** liked the practical focus of the degree, whereas in China, university study was very theoretical. She had learned new ways of thinking, had come to like face-to-face class discussions and had adapted to online discussions. **Cath** was an older student with children. She valued the practical application and critical thinking because both activities would help her to become a better accountant. She preferred online to face-to-face discussions because it was easier for her to participate. **Toni** preferred to learn in the face-to-face class with the teacher where she could get lots of information and feedback, especially about assessment. She regarded discussions as a waste of time and this applied to online discussions because she could not always identify the teacher, and the information was not directly useful.

**Ivan** and **Fran** were enrolled as full-time international fee paying students. **Ivan** valued learning with the teacher in the face-to-face class because she was the expert,
and it was quicker and easier. He did not like class discussions because the students were not always correct. However, even though this was his first experience of online discussions, he enjoyed them because he could actively participate in them and do so from home. Online discussions were new to Fran and were a big challenge for her as she adapted to the high volumes of information and considered how to order her thoughts and make a posting. She now liked their time flexibility, but she preferred the face-to-face class because of the direct communication and feedback possibilities.

Mike, Lee and Paula were all full-time international students. Mike was an older student with a tertiary qualification and work experience in the PRC and was in New Zealand with his family, to study ‘Western culture’ and business. Learning was very different in New Zealand for him and he had to learn a lot on his own rather than following the teacher. He had come to value discussions because he could share ideas and appreciated being able to join the online discussions at home, because he was very busy. Lee liked to learn on his own and enjoyed the online discussions because they helped to improve his critical thinking. He also valued the face-to-face classes because the teachers were very knowledgeable. Paula was attempting this course for the second time and liked to learn by going to class and then working on her own. She was ambivalent about face-to-face class discussions but was quite experienced with online discussions and liked their flexibility.

Maya was an older Asian student, who was now a New Zealand citizen and she studied part-time. Maya liked the flexibility of the online discussions which enabled her to work full-time and study. She also considered that reading her peers’ opinions helped her to learn because of the range of ideas that were expressed.

### 8.4 Approaches and actions.

This section draws on systems data, transcripts of the online discussions and student interviews to describe activity in the online discussions.

Data from the online discussions were analysed and are presented in Table 8.4. The debate discussion ran for five weeks, including two weeks of the mid semester break, and each class had its own discussion space within the online learning environment.
TABLE 8.4 ONLINE DISCUSSION SYSTEMS DATA

- Each student made the required three postings of 150 words per posting.
- 80 - 100 postings per class were made.
- One - two postings per class were made by the teacher.
- The participants’ messages were read 6 - 121 times with 56% of them read 13 - 50 times.
- 67% of the participants’ postings were made in the last week, and 7 of the participants made all three of their postings in the last week.
- 29% of the postings were made in the mid semester break, especially by the Chinese students.
- 71% of the postings disagreed with the debate statement and 29% agreed with it.
- 37% of the participants posted responses which disagreed with other students.
- 55% of the Chinese responses disagreed with others and 26% of the Kiwi responses did likewise.
- 44% of the messages were interactive i.e. every student responded once to another student and 11 students made two responses.

The total number of postings reflected the student response to the assessment requirement (students had to post three messages in order to get any marks) as did the high levels of message reading, with many messages being read more than once. This was confirmed by the students who said they would go back and read messages again, because of the need to respond to someone, although students’ reported reading was generally a mixture of judicious skimming and more careful consideration. The high level of posting in the last week (67%) indicated that time to reflect over several weeks, as the activity was designed, was not that valued by them. The data also showed that students were more likely to disagree with the proposition than they were with other students, and their agreement with other students illustrated the tendency in these online discussions for students to agree with each other rather than contest each others’ views. A far higher proportion of the Chinese students disagreed with other students than did the Kiwi students. The high degree of interaction arose because students were required to respond to another student in order to get any marks.

The participation process that students used was similar to that of the Group case study (see Chapter 6) although here there was an extended preparatory phase.

Reading - One third of the students said they read all (80 - 100) of the postings, using selection strategies such as reading friends’ postings, choosing postings based on the writer’s class identity, interesting headings, and random choice. Skimming, and in depth reading were also reported.
Preparation - The main activity was to develop a position and a supporting argument. This was a complex and demanding task, and students repeatedly talked about the need for ‘making the best possible argument’ (Jorg), and the need to ‘back up your opinions’ (Jessy), ‘looking for evidence’ (Molly), and ‘if you didn’t have any [arguments] then going and finding them’ (Nicola). Making a contribution to the debate also required understanding the other postings, deciding one’s own position in the debate, and then communicating that position. Two supporting activities were reported: to research, with further reading and thinking, and to apply relevant theory.

Writing - Half the students reported doing this in MS Word and using the editing functions to structure and improve their ideas and the communication of them.

Examining the content of the messages further described the students’ actions in the discussions. The postings were characterised by a blend of conversational and formal approaches like complete sentences, structured ideas in paragraphs, and references. A content analysis of all of the participants’ messages found that 94% of the units of meaning coded to deep approaches and 6% of the units of meaning coded to surface approaches. Details of the content analysis can be found in Tables 8.5 and 8.6 below.

The data in the tables indicate that the main features of the deep approaches were maximising understanding and meaning, evaluation and critique, asking questions to understand, relating theory to the real world, relating the discussion to the course, relating to other students’ comments and justifying statements. Many of these characteristics of deep approaches were stated in the marking criteria (see Table 8.5) such as reflection, making an argument and justifying it, incorporating research and reading, and were therefore required as part of the activity.

Ivan’s posting is provided below. He was one of the Chinese students, and his posting illustrates some of the characteristics of deep approaches - staying on task, maximizing understanding, active evaluation, relating theory to the real world, relating to other students, and justifying his position. This posting demonstrates a different kind of language and communicative competence from that of face-to-face discussion for him.
TABLE 8.5 CONTENT ANALYSIS: DEEP APPROACHES TO LEARNING (Tables 8.5 and 8.6 include only those characteristics found in the transcripts. See Appendix 5 for entire framework)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Looking for meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on the discussion (what was required)</td>
<td>91</td>
<td>306 (43%)</td>
</tr>
<tr>
<td>Focus on maximum understanding</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Active evaluation and critique</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Trying to understand difficult things</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Asking questions to understand</td>
<td>74</td>
<td>306 (43%)</td>
</tr>
<tr>
<td>2. Relating ideas and seeking coherency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relating ideas to other previous knowledge or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Relating ideas/theories to the real world</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Using new information and generating new ideas</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Addressing ambiguity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Relating discussion to the class and course</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Relating to other students’ or teachers’ comments</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Relating to own experience</td>
<td>14</td>
<td>257 (36%)</td>
</tr>
<tr>
<td>3. Use of evidence and logic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looking at things from another point of view</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Using logic to understand or progress</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Examining material to see if there is sufficient</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Evidence</td>
<td>78</td>
<td>103 (14%)</td>
</tr>
<tr>
<td>Justifying e.g. with an example</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Intrinsic motivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enjoyment of the activity</td>
<td>7</td>
<td>7 (1%)</td>
</tr>
</tbody>
</table>

Totals                                                 | 673   | 673 (94%)         |

TABLE 8.6 CONTENT ANALYSIS: SURFACE APPROACHES TO LEARNING

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A reproducing approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Showing minimum of effort</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2. Stays within course boundaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetition of comments</td>
<td>21</td>
<td>31 (3%)</td>
</tr>
<tr>
<td>3. Unthinking approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jumps to conclusions with little evidence</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Confused statements</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Uncritical acceptance of ideas</td>
<td>9</td>
<td>21 (3%)</td>
</tr>
</tbody>
</table>

Total surface approaches                               | 43    | 6%    |

Total deep approaches                                  | 673   | 94 %  |

Total approaches                                       | 716   | 100%  |
I think the statement is wrong, student 5. I think your example of New Zealand is invalid. However I do not agree with Singer’s statement. My analysis is:

1. You did not count the third proposition for Utilitarianism: each person’s happiness counts the same. (Rachels, 2003, p102).
2. The happiness of 11 million children, who die from treatable causes, is far more than the happiness of 4 million New Zealanders (WHO, 2003).
3. Therefore, Singer is a great Utilitarianism.

Singer’s statement is the reflection that he is adopting John Rawls communitarian proposition... But I believe there is no point that we should give a substantial amount of money to people we have never met. I am adopting individualist Locke’s point of view that we all have the right of self-preservation and property.

A further example of a deep approach is illustrated by Fred, a Kiwi student, demonstrating relating theory to the real world, critique, justification and clear enjoyment of the activity.

Utilitarianism (as described by Singer) is a poetic conception that strives towards perfect equality for all. But sadly, perfection (in this case) is a whimsical dream that not only flies in the face of basic human instinct but also neglects reason, (which is the platform of morality). For example, is it reasonable to... work tirelessly for life unknown to us and thus living our lives for the continuation of others (aka slaves)? What kind of life would we live in this instance? I would suggest to Singer that we would be worse off than the so called ?needy?.

Singer’s theories are also so extreme that they disregard the fundamentals of Virtue Ethics. Aristotle said that we must practice being good by aiming for the mean between two excesses. Therefore we should provide for the needy, but definitely not everything that is a surplus to us. This notion is primarily achieved through the taxes taken from our government(s).

Surface approaches were most often characterised by repetition, uncritical acceptance of others’ comments and jumping to conclusions without evidence. None of the confused statements or unevidenced conclusions came from the Chinese students and most of the repetition (81%) and uncritical acceptance (62%) came from the Kiwi students. In her second posting, Daisy has just completed an example of a utilitarian approach and then makes this comment (concluding with little evidence):
Current Forum: Assessment 1 Read 2 7 times  
Date: Thu 9:57 am. Author: **Daisy**  
Subject: Additional comments  
Most westerners myself included are far more likely to agree with Locke and Nozick’s philosophy about rights. No one has a right to threaten or harm us, but we have no right to assistance either. (Singer, 1993, p226-7)

**Mavis** made all three of her postings in the last week of the debate, with the first one being posted at 8.53 am, and the second and third ones on the same day. Here she begins her third posting (at 10.12 pm) with an uncritical acceptance and confused statement:

Current Forum: Assessment 1. Read 12 times  
Date: Tue 10:12pm. Author: **Mavis**  
Subject: Re: Assessment 1  
I agree with stud 116 that we can not just look at this from the view of a utilitarian as if this is not the ethic base that we cling to then it would be stupid to view it in this way.  
(Mavis)

As with the other case studies, the coding did not measure the academic merit of the students’ approaches, and the teacher verification exercise indicated that postings coded to deep approaches varied in their quality. One strong explanation for the high level of deep approaches here is the influence of the very specific specifications of the assessment namely, to make three contributions and observe a set word limit which were supported by a marking policy where students would receive only 0%, or 5%, or 10% or 15%. Also, the description of what was required in the debate was very detailed (2 x A4 pages) as were the marking criteria, and the debate followed an earlier assessment which focused on building reflective skills.

Other factors may have influenced the high levels of deep approaches. The participants’ grades were generally better than those for the class overall. Most of the Kiwi students liked learning by face-to-face discussion so their conceptions of learning already included interaction. The Chinese students were more ambivalent about the value of peer discussions; however they still demonstrated deep approaches to learning. This indicates that approaches to learning can be influenced by the learning environment and the next two sections explore this influence.
8.5 The influence of the CMC environment.

Twelve of the 15 Kiwi students and eight of the nine Chinese students said that the online discussions helped them to learn and many of the reasons were related to the CMC environment. This section examines these more closely.

Almost every student referred to the impact of the text-based environment on their learning and said that reading others’ messages and writing their own postings made them think. This included four students who did not consider that the online discussions helped them to learn. The main benefit of reading the postings was that it engaged the students and started their thinking about others’ and their own points of view.

*I tried to open my mind, and like, accept new opinions and read them and seeing where they were coming from and why they were saying what they were saying... and when I read someone, and you’re like, oohhh that’s a bunch of rubbish, but then, I kind of forced myself to read on a bit more and try and work out why.*

(Nicola, Kiwi)

*Other people’s points of view would send me down tangents, of opening my mind and get me thinking about different angles on a subject.*

(Fred, Kiwi)

*But after I read some other people’s stuff and I think, oohh probably that means that, or, that makes me think me widely, not concentrate on the narrow way.*

(Fiona, Chinese)

There were additional benefits of reading messages. *Daisy* and *Gail* valued the cross-cultural perspectives and *Jorg* liked the insights from others’ perspectives. *Jessy* and *Molly* both said that reading others’ opinions made them think more deeply and *Vickie* said that reading the postings helped her to clarify her thoughts. Reading was also used as a learning strategy. *Jeremy* read to check that he was on the right track and *Cath, Fran* and *Ivan* (the Chinese students) all talked about reading their peers’ postings and comparing the ideas and arguments with their own.

Students said that writing their postings was also highly beneficial for their learning. Most students described the way in which writing developed their understanding of the topic. This had various dimensions. Writing required students to commit to a position and this required moving from the implicit to the explicit, clarifying thoughts, reasoning and structuring.
It [writing] makes me think, ‘that what it’s about ‘this is what I think about It’... you don’t exactly think about it until you ‘refacing the situation... otherwise it just sits in the back of your head, because you’re not made to think about it because you don’t have the case study. (Si, Kiwi)

It [writing] makes you kind of get all your thoughts and condense them and actually realise what you think... cause I think very much, up in your brain it is all a big mess of thoughts and things... so actually condensing it and going ‘this is what I really think’ ... helps you to learn. (Mavis, Kiwi)

The second benefit of writing arose from the need for the students to communicate their position to their peers. Jorg described this:

So you might rephrase it just so people understand what you’re talking about a bit more, so obviously you want to create an argument, you want yours to be the strongest, so you’re got to get it, you know, as clear as possible. (Jorg, Kiwi)

The Chinese students acknowledged this also. Cath wanted to make a tight argument and, for Lee, writing enabled him to structure his ideas for the other students. Ivan agreed:

When we’re thinking, that’s only need to be understood by myself not others ...but while I was typing to let others know, I needed to, see how I could make others understand what I mean. (Ivan, Chinese)

Many students acknowledged the need for care in their writing. In some cases this was associated with assessment. For other students, anxiety about online communication was expressed and this was related to the permanent record of their posted comments and the absence of visual or aural cues. For Ron, his concerns originated from the classroom, where he had watched strong personalities and arguments, and he was apprehensive about the reception of his postings. Jeremy was worried about offending in a multi-racial class room. Daisy was worried about the lack of visual cues, but also more generally,

Oh man, am I going to be judged.... because I’ve written something that’s a bit sort of shallow or superficial.

Mavis was concerned that she would have to see the students she had opposed in class and felt this made her too’ vulnerable’ in class. This was more significant for the eight Kiwi students than the two Chinese students, possibly because communication is always a concern for ESL Chinese students, irrespective of the medium.

Normally, when students are writing as individuals, they do so in a private context, for example, in their own notes, or in an assignment which will only be seen by the
marker. The writing that happens in online discussions is different because it is public and will be read by all their peers. One of the benefits of online discussion is supposed to be that everyone can have a say in the discussion. However, it appears that the written record, as opposed to the more ephemeral nature of class room discussions, may be inhibiting for some students. This could reduce the learning potential of the CMC medium by shutting down discussion, but it may also, in time, develop better communication skills by undergraduates as they learn to use electronic media more confidently.

Peer interaction for the Chinese students was facilitated by the features of the CMC medium. They were able to join in the conversation more easily, because the written record meant they could read the postings many times and it was easier to write than speak. They had plenty of time to clarify their thoughts and write a message and it was easier to disagree on line. These features were motivational for the Chinese students and participation was more enjoyable for them than face-to-face discussions where they suffered communication anxiety because of their shyness and lack of language confidence.

Peer interaction for all of the students occurred in two ways. Students were reading and thinking about others’ postings, but the real potential value of the online debate lay in the students’ responses to others’ ideas and the way that that activity deepened their understanding. Responding occurred because of the debate requirements, and would have been much reduced if the debate had been voluntary. This illustrated that interaction is not inherent in the CMC environment and confirmed the important role of curriculum design in prompting students to go beyond their own internal conversations and start testing their ideas with their peers. This is discussed further in the next section.

For these students, time flexibility meant that they were able to access the debate at any time, thus fitting their learning into their already busy lives. The content analysis showed that students were always on task in the debate and the interviews indicated that, despite the reduced class contact hours, students regarded participation as occurring in their own time and wanted to use time as efficiently as possible. This was different from class, where students attended for a defined time, which they did
not regard as their time and, hence there was more temptation to chat and go off task. There was also a strong sense that online discussions were a learning space where it was inappropriate to socialize.

Overall, the students regarded the CMC environment as beneficial for their learning. The main advantage was the text-based nature of the debate which engaged students and required them to establish their position and communicate it to their peers. For half of the Kiwi students, the public forum, with its virtual character and written record, was a source of communication anxiety. This was not so for the Chinese students who found that those features, as well as the time delay, enabled them to participate more in discussions with their peers.

8.6 The influence of the curriculum

The students’ accounts of the online debate identified two aspects of the curriculum that were motivational for them. These were the assessed nature of the online discussion, and the debate activity itself. These are discussed in this section.

The debate was discussed extensively in class, there were detailed instructions and marking criteria and, by the time the debate started, everyone was clear about what was required of them. All of the students except for four of them indicated that the fact that the online discussion was being assessed influenced the way they approached the debate. There were two main benefits of this:

First, full participation: everyone made three postings and this created a substantial body of messages (80-100 over five weeks) to fuel the debate. As a result, everyone in the class was involved through expressions of their opinions and this seemed to create a sense of ownership of the debate. Joel (Kiwi) said of this:

\begin{quote}
I found this [debate] positive because everyone had to have an opinion. You couldn’t hide in the corner. A lot of students are, like, ‘I don’t want to have my say, cause its hard, or cause I’m scared I’ll get it wrong or something’. Whereas this, I found this good because you had to have an opinion and you couldn’t hide because it was assessable. . . .Because it was assessed, students were actually forced to examine the way they thought of things. To have their say, they were forced to make a rational argument… so they had to do some learning to get to this point. . . The interactive classroom environment is optional. It’s not assessable, it’s not compulsory, whereas this was assessable and compulsory. They had to do it.
\end{quote}
Secondly, students received clear messages about the importance of the online discussion. Because it was assessed, they responded by prioritizing the debate, and giving it their time and attention. Students thought more deeply, clarified their positions, made their arguments carefully and spent time preparing their postings. All of this attention by the students resulted in an online discussion that was superior to that of their classroom discussions. **Jorg (Kiwi)** described this effect:

> You’ve actually got to give your thought pattern. You’ve got to put it across, you know, concisely and logically, so it does help and people will take that little extra bit of time ... For the assessed ones, you do take that little bit more time and try to make it that wee bit better because you know that, OK, the lecturer is reading it and they’re gonna give you a mark at the end of this, so like everyone, they want to get the best possible mark they can get, so they go that little bit further, compared to when it being assessed. [Then] you don’t have to worry so much, you’re just trying to get your idea out there.

The debate activity was regarded very positively by the Kiwi students and was commonly described as enjoyable, motivational, thought provoking and relevant. One of the main reasons for this was the actual debate topic itself which the students liked because it was controversial and, therefore, truly discursive:

> The topic very much made people want to reply and kind of got people’s backs up about whether they should be giving or not.  
> (Mavis, Kiwi)

> It [the debate] really sparked everybody’s interest. . . how selfish some people can be and how unrealistic some suggestions were and it started up this big sort of argument thing.  
> (Molly, Kiwi)

**Gail** thought the topic was provocative, and therefore:

> Such an easily discussed topic, and there are so many different views on it whereas if I was doing something like this in 576553 paper, it would be bloody boring because there only one way of doing it isn’t there, so you’ve got to do it that way, so there nothing to discuss anyway.

Students also liked the debate because the activity was essentially an argument where everyone had to take up a position and justify and/or defend it.

> You actually had to look into the reasons why, and if you didn’t have any reasons why, you had to go out and find out what made you think that way and look for proof to back it up  
> (Nicola, Kiwi)

> It wasn’t just a wishy washy point of view you were coming up with. You had to say why, as a utilitarian or a cultural relativist, that it was relevant.  
> (Ronald, Kiwi)
Students were also required to respond to another student and either agree or disagree. Nine of the Kiwi students indicated that they liked receiving responses and sought them regularly. The received responses were often provocative:

Someone responded to one of mine and took it apart piece by piece and I was quite, quite stunned. . . because when you think you’ve got a point of view that you think is... fairly well arguable. . . but then you see their point of view and you think, good grief I’d never thought of that.  

(Ronald, Kiwi)

The requirement to respond may have prompted the significant reading activity noted earlier, and seven of the students said that the need to respond prompted evaluative activity as they considered postings to which they might respond. Nicola thought that responding was beneficial because:

it gets you out of your kind of like, comfort zone, because. . . you can sit there and talk all you want, and it doesn’t matter...but you know people are going to respond to you, and if you have to respond to someone else. . . you’re a bit more conscious of what you’re writing rather than just waffling on.

The Chinese students did not make many positive comments about the debate, although five of them found some value in responding, for example, Cath, Maya and Mike all said that creating a response helped their understanding.

Some of the Chinese students expressed concern about disagreeing with other students. This may be connected to their conceptions of learning, which were more teacher-centred. Paula (and Cath agreed with this as well) said that she found it difficult to disagree especially because there were many comments based on personal experience and it would be offensive to disagree with those. She and another Chinese student arranged in class to respond to each other to minimise any offence. In responding, Fiona and Fran chose not to disagree and, instead, developed and extended the student’s point. However, despite their discomfort with the debate concept, six of the nine Chinese students responded by disagreeing with other students. A much lower proportion (6/15) of the Kiwi students disagreed with other postings, which suggests they also felt discomfort in this activity.

In their responses, most of the students chose to agree rather than disagree with their peers, except the Chinese students, but this did not close down the debate. There was an enormously wide diversity of positions, the reasons for agreement or disagreement, and it could have been this that created and maintained the sense of
controversy and argument that students said they enjoyed. This illustrated the importance of ensuring that discussion topics are substantively discursive rather than ones which simply have a positive and negative aspect.

The size of the online discussion group played an important role in the success of the debate, namely a whole class rather than a group activity. This created a large pool of ideas, and indicated the benefits of a larger discussion size for collaborative learning. While some students may have preferred to work in small groups, the benefits of the wide range of ideas from the larger group would have been lost. It is often suggested that small groups support collaborative learning better in online discussions, but this case study indicated that for some kinds of activity, a larger discussion size has more overall benefits.

The teachers regularly monitored the discussions but rarely made a posting. They took this stance because the debate was being assessed and they wanted to avoid teacher influence, which could be inconsistent across the classes and unfair to the students (personal communication, 30/05/2005). Consequently, all ideas were equally contestable. Students displayed a strong sense of advocating and arguing for their positions and in this case study, it may have been the absence of the teacher that created this strong sense of ownership of the debate. The role of assessment cannot be overlooked and may have been equally responsible for creating a strongly student driven learning environment.

When asked what was de-motivating for them in the online debate, none of the students mentioned the absence of the teacher. All of the students, except one, were very positive about their teachers and their roles within the course overall. Students commended the clear explanations of the difficult course theories, and the teachers’ examples and personal experiences in the face-to-face classes. They liked the time for questions in class, the support and direction of the teachers and the way in which the teachers would start students thinking about the topics. This indicated that, within the course as a whole, all of the students accepted the debate as their own discussion space and were satisfied with the academic guidance of the teachers in the weekly classes. The way in which the teacher approached the weekly classes in this case study provides an example of an effective blended approach.
This section of the chapter has described the major curriculum influences for the students which was the assessed nature of the debate. This resulted in full participation and raised the quality of the postings. The Kiwi students were also highly motivated by the controversial topic with multiple viewpoints, the argument and the need to respond to other students. The Chinese students were somewhat ambivalent about the debate, especially its argument and the disagreement. The size of the debate as a whole class discussion generated many viewpoints. The absence of the teacher in the online discussions fitted comfortably into the overall course. This case study demonstrated the way in which the curriculum can play a significant role in a blended learning environment and the way in which students might respond to it.

8.7 The relationship between the online discussions and the face-to-face classes

The participants indicated that the online discussions were clearly embedded within the course, with 23 of them describing linkages between the online discussions and the weekly classes, where a portion of the class was focused on the online discussion.

There were several strong connections for the students. The weekly classes introduced the theoretical concepts and students linked the ensuing class discussions about these to the debate. Mavis and Mike said that the class discussions were motivational because they started their thinking and Maya said that they made her want to write something. She got to know people in class and could then see them online. Daisy, Jessy, Fiona, Maya and Joel all remembered class discussions about the debate article. Gail and Ron liked the group activities and Vickie and Paula found the case studies and application of theory very helpful for the debate. Jorg thought that being able to connect back to the classes made the debate more relevant.

The importance of the classes lay not only in content coverage but also in creating opportunities for students to build the skills needed for the debate, and to get to know each other better.

The teachers were also influential in connecting the online discussion to the face-to-face class. Ten of the Kiwi students and eight of the Chinese students referred to the teacher’s role in the class in this respect. Half the students said that the teacher kept
talking about the debate until everyone was clear about it. Mike and Ron thought the teacher made her expectations very clear. Vickie and Clara remembered the teacher encouraging everyone to go online and make their postings. Nicola, Fran, Ivan and Maya all remembered the teacher making comments and talking about the postings in class. The teachers’ consistent attention in class to the online debate seemed to have the effect of legitimizing the activity as a normal part of the course. Online discussions at undergraduate level often feature a strong online teacher presence and moderation. This case study illustrated an alternative approach where the teacher monitors the online discussion and provides support and feedback through the regular class, rather than online.

In much of the debate in universities about blended learning environments there is a sense of contest between face-to-face learning and online discussions. What has emerged from this case study is that many of students understood the complementary nature of these two different environments for learning. Nine of the students indicated that both environments had features that helped them to learn, and a further seven students identified additional benefits of the online environment for their learning. There were four students who had a clear preference for face-to-face communication and classes. However, there were contradictions in these students’ views, and while they may not have liked online discussions, they acknowledged that some facets of the CMC environment helped them to learn. Toni initially said that online discussions were a waste of her time and hard work, but she went on to say later that they improved her thinking and made it more logical. This kind of ambivalence may indicate that students are still adapting to a new and different learning environment.

The most important additional or complementary features of online discussions for all of the students in this course were:

1. The value of reading and writing for developing their thinking (see Section 8.5). The permanent record of the discussions was valuable because everyone could go back to it. For the Chinese students, reading and writing was an easier way of discussion and it was seen as a good balance to class where most of them listened rather than talked. This would indicate that online discussions have the ability to
complement passive listening behaviour in class with more active reading and writing behaviour online.

2. **The asynchronous nature of the online discussions gave the students more time in the discussion.** This meant that students had space to read and research, to think and carefully construct their argument and reasons. This improved the quality of discussion.

   > They [the discussions] had a little bit more thinking behind them as opposed to discussions in class which tend to be a bit more off the cuff and not as well thought out because you’re on the spot. (Ronald, Kiwi)

   **Joel** (who said that online discussions did not help him to learn) thought that class discussions were

   > more opinion based than fact based . . . and it’s a spur of the moment thing

   but with online discussions,

   > when you know more, you can argue your point easier and better that what you do when you’re, sort of trying to make things up in a face-to-face discussion (laughter).

   For the Chinese students, time to think coupled with the reading and writing mode of communication were valuable additions to the classroom. For **Ivan**, online was better because:

   > when you are talking about something it not necessarily thoughtful . . . because you have no time to do the research and think about it.

   **Cath** and **Toni** thought in Chinese first and **Lee**, an older male student, tried to think in English and this meant that the fast pace of class discussions was difficult for him. However, in online discussions,

   > You can spend as much time as you want on that, ahh, when you respond to a certain statement, you can think this very carefully, but face-to-face you know, in terms of times, you have to respond instantly. Instantly. We only have, you know, a short time to think I try to learn to think in English . . . online discussions give you more time to know those ideas . . . yes the time is very important, for understanding.

3. **The potential for everyone to have a say.** Participating in classroom discussions could be problematic for various reasons. Language issues were significant for the Chinese students. However, seven Kiwi students identified issues of shyness, lack of confidence in their ability to speak and anxiety about not being able to adequately defend their point. It was easier for them to write online. One of the benefits of
everyone contributing was the diversity of viewpoints, especially multicultural perspectives. This surprised many of the students and showed them a richness of perspective that they had not experienced in the classroom.

4. A virtual, as opposed to physical classroom presence, in the online discussions. Kiwi students said it was easier to say what they thought, or disagree when there was no one in front of them, because they did not have to deal with any reactions or offence. Jessie was shy and said:

> Having some faceless person to discuss things with is a bit easier . . . because [when] they’re there in front of you, you’re more interested in how they’re going to take what you say. . . because you can see their reaction. Online, you just put it down and wait for their response . . . and that makes it easier to give, like, your actual opinion rather than what people want to hear.

This aspect of the virtual environment also promoted disclosure and learning:

> You almost feel a little bit more open to say more, because in class you can feel kind of pressured by everyone else around you . . . whereas online you can stay kind of incognito from everyone else . . . You feel a bit freer to express your opinions about more and not be judged so harshly . . . I think it allows you to sort of see more sides of it because more people are willing to put slightly risky opinions forward.

(Nicola, Kiwi)

The impact of the differences between the virtual and physical environments on their learning was more difficult for the Chinese students to articulate. For Cath:

> Its easy to disagree with other people rather than face-to-face . . . because you face the computer you not face that guy

Interviewer
so why’s that easier?

> You don’t need to care about the response from the other people, right? . . . if the guy is angry or not . . . I don’t care about that. I just face the computer.

These comments about the value of the virtual environment do not deny the importance of face-to-face discussions which students liked for their faster pace, flow of ideas, teacher clarification and feedback, time efficiency, richness and depth of information, visual and aural cues, and immediacy of response. However, for many students, class discussions were dominated by a few confident speakers, and it was difficult for others to participate. It was also clear that these undergraduates lacked the skills to argue or disagree even though teachers try to develop these capabilities through small group discussions in class. This case study shows that online discussions can provide another opportunity for such development.
These views also endorsed the importance of a close relationship between online
discussion and face-to-face classes and illustrated some ways in which this might
occur. Here, the concept of a complementary relationship between online and face-
to-face discussion has also emerged. This student perspective is important for
learning in a blended environment and provides direction for future curriculum
development in this area and context.

8.8 The Chinese students

In analysing the data, there was a surprising degree of similarity between the
opinions expressed by the Chinese students and the Kiwi participants, and this has
been described throughout this chapter. There were some areas of difference and
these were:

- **Different conceptions of learning.** They much preferred to learn with the
teacher in class and did not favour activities, especially face-to-face
discussions. Some of this may be due to their Confucian heritage, with its
emphasis on respect for the teacher as an authority. However, a more pragmatic
reason emerged which was their lack of confidence to converse in the English
language.

- **Fewer surface approaches to learning** by these students, compared to the
Kiwi participants.

- **The debate activity.** The students did not like the debate activity and
expressed concerns about disagreeing. However, their postings indicate that
they posted ‘disagree’ responses far more often than the Kiwi students, and this
demonstrated their adaptability to new situations.

- **No evident communication anxiety.** They did not seem to be concerned
about other students reading their online postings.

- **Better discussion opportunities.** In the online discussions they had plenty of
time to read the postings, think in Chinese or English and then to write their
contributions.

The online discussions did not fit these students’ conceptions of learning. However,
the online mode did enable them to participate in discussions in a way that was not
possible in the classroom. This was due to the way in which the CMC environment
could support their English language confidence and ability. They were not
concerned that other students would read their postings because this was a better discussion medium for them. The findings here would suggest that there is a strong complementary relationship between online discussions and face-to-face discussions for Chinese, and possibly other ESL, speakers. Despite the students’ ideas about learning, they adapted to the demands of a new learning culture which included technology. This case study illustrated that Chinese students, like Kiwi students, acted according to their perceptions of the requirements of the learning task.

8.9 Summary

The key features and findings of this case study are presented in Appendix 9. This case study illustrated another blended learning ecology where the online activity was a debate. This compulsory course included both Kiwi and Chinese (ESL) students from a wide range of business subjects. The influential features of the learning context were:

- The assessed nature of the debate.
- An activity based on a debate where there was a controversial topic, and where students were required to respond to their peers.
- The CMC medium, where students communicated in an environment that was text-based, and virtual, with no visual or aural cues, but with time and place flexibility.
- A clear understanding by the students of the activity which was achieved by good documentation and the teacher explaining her expectations.
- A strong connection between the online debate and the classroom activities which was achieved by content links, skills development in class and the teacher regularly commenting on the debate proceedings in class.

The findings in this case study indicated that students’ perceptions of the task were positively influenced by their environment and while the case study indicated what the features of the environment were, it did not weigh or prioritise them in any way. What also emerged from this case study was the ways in which students view online discussions as complementary to face-to-face discussions when they were learning in a blended environment.
However, it was clear that the participants were attending university to qualify for a good job, rather than for enjoyment of learning. They were very busy, with significant time pressures through work and family responsibilities and also assessment focused. These student characteristics would suggest that they might have displayed surface approaches to learning in their online discussions. However, their perceptions of what was required for the debate in the CMC environment and their response to this, namely deep approaches to learning, showed that learning is relational for students and they are responsive to their learning environment as Entwistle and Ramsden’s (1983) research has demonstrated.
The fourth case: The priority case

9.1 Introduction

The last case study is situated in a senior level course of the business degree which students enjoyed because of its relevance and applied focus. The notable feature about the participants was their high combined work and study loads, with just over half of them enrolled in course loads that were greater than the recommended number of courses and others with very high work and study loads. This case study illustrated the impact of high work and study demands and some of the ways in which students responded to these. Much attention has been given to Entwistle and Ramsden’s (1983) idea that students respond to the learning environment as they perceive it. However, this case study illustrated that their own personal contexts also influenced their learning behaviours.

This case study also illustrated some of the practical difficulties that can arise in research. Some of the online discussion data were unavailable because the university was installing a new online learning system. Three of the students could not be contacted for an interview, and in several interviews, the students were tired and/or somewhat reticent. During the transcription of one of the interviews, the tape snapped and much of the interview was lost. The most significant issue was that of finding student participants. After visiting the first class in this subject, three students agreed to participate and my efforts over the next two semesters (one year) yielded a further fourteen students from five classes.

The issue for me was how to analyse the data in a coherent fashion. My concern was that the separate analyses of the five classes in this subject would result in fragmented outcomes and would not make a sound contribution to the research questions. I, therefore, sited this case study within the context of the class in which just over half of the participants were located. An examination of the course over three semesters (eighteen months) indicated that there had been few changes to the course outcomes and its activities and the two teachers had worked collaboratively to ensure cohesion across their classes.
9.2 The course setting

The course was a final year requirement for two of the majors in the business degree and related to an emergent area of business where existing business principles were applied to the Internet context. The aim of the course was:

\[ \text{to enable students to understand the unique nature of the subject through the critical application of the relevant marketing concepts and models, and through the development of a business plan.} \]  

(Course Handbook, 2003)

Despite the different discipline backgrounds of the students, they generally found the course contemporary, accessible and highly applied (personal communication with Co-ordinator, 17/10/04). Competence with technology was an important part of the course and included proficiency in using the Internet and databases, assessing websites and online communication and activities. The Course Handbook explained the role of the online mode in the development of appropriate skills for the business environment. The handbook also provided a weekly descriptor of the learning program which integrated the topics with readings, assessment and the face-to-face and online activities. Study advice (see Appendix 7) and Guidelines for Online Discussions (see Appendix 8) were also provided.

The course co-ordinator was experienced with online learning and was an early adopter of this new approach within the Faculty. The face-to-face class was supported by a website that included course information, materials, links, and readings and a discussion space. The teachers had customised the course site and an illustration of it is provided in Figure 9.1.
Over eleven of the thirteen weeks of the semester, a range of learning activities occurred, which were centred around weekly online discussions of the whole class. There was a choice of topics for students and they were directed to respond to others:

- **First topic: On vs Off**
  Should organizations use the same brand on and offline?

- **Second topic: Where is it important?**
  ‘Branding is as important in the online environment as it is in the offline marketplace.’ - agree or disagree?

Many of the discussion topics were highly applied and involved problem solving, analysis, evaluation and justification:

- **Select any organization you know of that is engaged in B2B eCommerce. Visit their website and identify the goals and strategies used by that organization in meeting the needs of their B2B market. Write a short overview of their activities. Identify what other opportunities they could incorporate.**
For two weeks, there was an online group discussion which was followed by a group presentation in class. One of the discussions was styles as a ‘News’ activity:

*Over the next 2-week period your task is to collect information that relates to marketing - i.e. current issues/developments that are taking place in the business environment. Collect the information from any resource available to you, POST it in this forum under your group, AND MAKE A COMMENT about the implications of resource indicated by another group member.*

Some of the discussions were directly related to assessment:

*You are each to provide an overview of the organization that you have selected for your assignment, …including target market and key competitors. THEN...you are to visit the competitor websites indicated by TWO OTHER STUDENTS and surf these sites - then posting FEEDBACK on your experience in navigating their chosen organizations. What did you like/dislike about the site? Was it easy to find your way round? What works really well? What could be improved?*

Participating in the online discussions was assessed, and was graded on ‘completion of tasks and level of effort’ (Course Handbook, 2004d p.12) and contributed 10% to the final grade for the course.

### 9.3 The participants

As discussed in the introduction to this chapter, the participants were drawn from five classes, with two teachers, over three consecutive semesters. Table 9.1 below provides an overview of the participants. Ten of the participants were female and four of them were male and ten of them were in their early twenties. Half of the participants were New Zealanders, with the balance of them being of Indian, Asian, Australian and African ethnicity, and there were two ESL speakers. Only four of the participants were experienced with online discussions.

A noticeable feature of the participants was the very high enrolled course load coupled with long working hours. Eight of the students were engaged in more than the recommended work and study load (*Henni, Holly, Jessica, Luke, Mary, Max, Peter* and *Tammi*), and this included all of the students who were enrolled in full time study (four courses per semester). A further four students (*Fred, Jo, Susan* and *Tess*), worked full time and were enrolled in the maximum recommended course load which was demanding. Only *Julie* and *Rebecca*, who both worked full time, were doing a moderate study load of one course in the semester.
TABLE 9.1 OVERVIEW OF THE PARTICIPANTS (ANONYMISED)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Grade</th>
<th>Age</th>
<th>Course Stage in Bachelor’s Degree</th>
<th>Single/Double Major</th>
<th>On Line Learning Experience.*</th>
<th>On Line Discussion Experience</th>
<th>Working Hours</th>
<th>Number of Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First semester class. Teacher A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary</td>
<td>NZ</td>
<td>A</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg** &amp; E-Business</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
<tr>
<td>Max</td>
<td>NZ</td>
<td>C</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>21-30</td>
</tr>
<tr>
<td>Second semester class. Teacher A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tammi</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Mktg &amp; Tourism</td>
<td>Novice</td>
<td>Often</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Tess</td>
<td>NZ</td>
<td>B</td>
<td>20-24</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
<tr>
<td>Third semester class. Teacher A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peter</td>
<td>Not provided</td>
<td>C</td>
<td>20-24</td>
<td>Graduate Diploma</td>
<td>E-Business</td>
<td>Novice</td>
<td>Occasionally</td>
<td>21-30</td>
</tr>
<tr>
<td>Third semester class Teacher B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Henni</td>
<td>Asian &amp; ESL</td>
<td>C</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>Experienced</td>
<td>Often</td>
<td>31+</td>
</tr>
<tr>
<td>Jessica</td>
<td>Indian</td>
<td>C</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Accounting &amp; E-Business</td>
<td>Experienced</td>
<td>Often</td>
<td>11-20</td>
</tr>
<tr>
<td>Third semester class Teacher B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fred</td>
<td>NZ</td>
<td>A</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>None</td>
<td>None</td>
<td>31+</td>
</tr>
<tr>
<td>Holly</td>
<td>Indian</td>
<td>B</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg &amp; Management</td>
<td>Experienced</td>
<td>None</td>
<td>11-20</td>
</tr>
<tr>
<td>Jo</td>
<td>Indian</td>
<td>With drawn</td>
<td>20-24</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
<tr>
<td>Julie</td>
<td>NZ</td>
<td>A</td>
<td>31+</td>
<td>Graduate Diploma</td>
<td>Mktg</td>
<td>Novice</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
<tr>
<td>Rebecca</td>
<td>NZ</td>
<td>A</td>
<td>25-30</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Mktg</td>
<td>Experienced</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
<tr>
<td>Susan</td>
<td>Australian</td>
<td>A</td>
<td>25-30</td>
<td>Graduate Diploma</td>
<td>Mktg</td>
<td>Novice</td>
<td>Occasionally</td>
<td>31+</td>
</tr>
</tbody>
</table>

*Novice = 1-2 papers, experienced = 3-5 papers. **Mktg = Marketing
Further information is now provided about the participants as individuals, including their views about learning. The classroom was important for all of these students, with eight of them emphasizing that they liked an interactive classroom. This had different meanings, for example, being able to ask a question and interacting with the teacher, working in a small group in class, watching a whole class discussion or, participating in a discussion. Eleven of the participants liked to learn through discussions.

Mary and Max were both full-time students in their early twenties. Mary liked discussions, ideally face-to-face, but she did like online discussions because they gave her lots of flexibility and independence in her learning. Unlike the classroom, where the teacher was in control, she could choose whose messages to read and when to make a contribution. For Max, learning was very much associated with the teacher in the classroom and the way in which she used her personal experiences to help him understand theory. He did not like discussions of any kind, online or face-to-face, because the other students knew nothing and he could not learn from them.

Tammi and Tess were both final year students in their early twenties. Tammi liked to learn on her own by reading and researching and she also enjoyed the free exchange of ideas in the classroom and its time-boundedness. For her, that same freedom with ideas was absent in online discussions because of the time delays and the difficulty she had in expressing herself. Tess much preferred teacher-directed learning because of the value of the teacher’s experience and the way in which it illustrated the theoretical principles for her. She also liked class discussions.

Peter, Jessica and Henni were all in their early twenties and enrolled in day classes. Peter did not have business experience, and he preferred the structured classes because of the way the teacher made theory relevant for him. Face-to-face discussions were important because they helped him to broaden his views and this was also the case study with the online discussions. Jessica did not like learning on her own and liked to learn with others in small classes and by listening in discussions. While she was experienced with online learning, she was somewhat ambivalent about online discussions. Henni enjoyed learning in lots of ways, including in groups and through discussions. English was her second language and
class could be difficult because she often missed spoken comments, but in online discussions, she could go at her own speed and this gave her confidence in her study.

**Holly** and **Luke** were both full-time students. **Holly** acknowledged the importance of the teacher for her learning, but she liked discussions because of the multiple views that arose, especially with students from different backgrounds. She was experienced with online discussions but regarded them as a chore and found it hard to make time for them. **Luke** was an older student with a technical background who had recently migrated to New Zealand. He preferred to learn on his own and used the class sessions to drive his own learning. Discussions were beneficial because they gave him other views which compensated for his lack of a business background.

**Fred, Julie, Susan** and **Jo** all worked full-time and were enrolled as part-time students. **Fred** liked to learn in the classroom if he was active and the teacher stimulated conversation and interaction. He did not like the online discussions in this course and likened them to homework, but he wanted an A grade, so he participated regularly. **Julie** had years of work experience and she respected teachers who related theory to a business context. She was happy to work on her own and liked classroom interaction and discussions, but had little previous experience with online discussions and was ambivalent about their value for her learning. **Susan** liked to learn through activity, especially by doing projects and she also enjoyed classroom discussions because she could broaden her outlook by listening to other views. Susan did not value the online discussions because there was little interaction, which she ascribed to their asynchronous character. **Jo** withdrew during the semester for work and family reasons, but agreed to be interviewed. She liked attending class if the teacher moved beyond the textbook and she liked online discussions because of all the new ideas. She had a little experience with online discussions and was positive about them, although she did not like time limits on making contributions.

### 9.4 Approaches and Actions

This section looks at the students’ actions in the online discussions and draws on some of the systems data and the students’ own descriptions of their participation.

The systems data about postings for one of the classes was unavailable and students were drawn from four other classes. To illustrate some of the posting and reading
activity, the data are presented from the evening class, which had the greatest number of participants. Students were expected to make at least one posting a week and these were written quite informally and conversationally. Message posting and reading data indicated that:

- 314 postings were made by 21 students in the class across the semester (average of 15 per student) over 11 weeks
- 154 contributions to the individual discussion topics over 8 weeks (average of 7 per student)
- 90 contributions to the assessment topics over two weeks (average of 4 per student)
- 58 contributions to the News topics (average of 3 per student)
- 31 contributions were made by members of the 6 groups for that activity
- The number of postings per week ranged from ten to 55
- The size of postings varied according to the activity and ranged from a few lines to several pages (News)
- In a class of 21 students, half of the participants’ messages were read 0-11 times, a quarter of them were read 12-21 times and the remaining quarter were read more than 22 times.
- The teacher rarely made postings
- 28% of the messages were responses to another student.

Data relating to the posting levels of the participants is presented below in Table 9.2 and they have been characterised as low, medium or high contributors.

**TABLE 9.2 POSTING LEVELS OF THE PARTICIPANTS**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Contributions</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td>9 contributions over 3 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Mary</td>
<td>28 contributions over 11 weeks</td>
<td>High</td>
</tr>
<tr>
<td>Tammi</td>
<td>No data</td>
<td></td>
</tr>
<tr>
<td>Tessa</td>
<td>No data</td>
<td></td>
</tr>
<tr>
<td>Peter</td>
<td>5 postings over 5 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Jessica</td>
<td>6 postings over 3 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Henni</td>
<td>35 postings over 9 weeks</td>
<td>High</td>
</tr>
<tr>
<td>Jo</td>
<td>3 contributions over 2 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Holly</td>
<td>6 contributions over 5 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Rebecca</td>
<td>9 contributions over 5 weeks</td>
<td>Low</td>
</tr>
<tr>
<td>Julie</td>
<td>17 contribution over 7 weeks</td>
<td>Moderate</td>
</tr>
<tr>
<td>Susan</td>
<td>20 contributions over 9 week</td>
<td>High</td>
</tr>
<tr>
<td>Luke</td>
<td>22 contributions over 9 weeks</td>
<td>High</td>
</tr>
<tr>
<td>Fred</td>
<td>21 contributions over 11 weeks</td>
<td>High</td>
</tr>
</tbody>
</table>

**Low** – up to 14 messages in 5 or less weeks  
**Moderate** – 15-29 messages in 6-8 weeks  
**High** – 20+ messages in 9-11 weeks

The data indicated that the participants were almost evenly split between low and high contributors, with six low contributors and five high contributors and one
moderate contributor. Unfortunately, there are no systems data about the participants’ reading activities and there are data available only for the number of times the participants’ postings were read by other students. The moderate level of interaction may have occurred because many of the activities required responding to other postings. The level of interaction may have been underestimated because it could be implicit within the statements and therefore not easily identified in the analysis. The low teacher presence in the online discussions was a course design decision based on the teachers’ beliefs in student self-governance and the value of feedback from other students as opposed to themselves as a good learning experience. The teachers considered that it was a better use of their time to bring the discussion points back to the class and it gave them an opportunity to integrate the discussions more formally with the learning outcomes (Teacher, personal communication 30/05/05).

Participation in the online discussions followed a similar pattern to the other cases.

**Reading.** Only three of the students said that they read all the messages, and for most weeks there were less than 20 messages. This aligns well with the low reading levels shown in the systems data and reflected lack of time or poor time-management skills.

**Preparation.** The most common preparatory activity was Internet based research, analysis and evaluation which well matched the requirements of the activities.

**Writing.** Six students first wrote their postings in MS Word and seven students wrote straight onto the screen and seven students reported editing and review prior to posting. Students reported spending from one half an hour to two hours a week doing their postings (including reading) with the two ESL students, Luke and Henni, spending longer on their contributions.

Because there were only three participants from the first semester, the content analysis framework was trialled with that data (see Section 5. 8 for more detail) The online discussions from the second semester could not be retrieved owing to data systems problems at the university. In the third semester, the transcripts of the twelve participants, comprising 168 messages (16% of the total number of messages), were analysed. Results are below in Tables 9.3 and 9.4.
The ratio of deep and surface approaches to learning was somewhat different in this case study from the other three cases. Sixty-one percent of the units of meaning were coded to deep approaches to learning and 39% were coded as surface approaches. Tables 9.4.2 and 9.4.3 below indicated that deep approaches were characterised by a very consistent task focus as well as maximising understanding, evaluation and critique, looking for coherency, relating the discussion to the class and the course and examining material. There was a good alignment between the deep approaches and the requirements of the activities and marking criteria, which required students to agree or disagree, research and evaluate websites, problem solve, respond or provide feedback to other students, and make recommendations. There was also alignment with student accounts of their preparatory activities and the use of Microsoft Word and editing activity may have also supported deep approaches as students structured their ideas and ensured that they communicated well with their peers.

An example of a deep approach is provided below with the indicators identified in italics next. Susan compared two different marketing concepts, referred to her peers’ ideas and asked a question to begin her discussion. She related marketing theory to a shopper’s experience, evaluated the marketing concept and provided reasons for her points and her light hearted approach indicated enjoyment.

Current Forum: Week Six (abridged)
Read 17 times. Date: Tue 10:34pm
Author: Susan
Subject: Is FARE relevant to the offline world?

My question is... Is FARE relevant to the offline world as are the 4P’s?
Let’s take a look...

FUNCTION is all about the usability of a website and the customer experience. It how you guide a person throughout the site, making it an intuitive process... It is also about the marketer encouraging the user to do what they want them to do (e.g. selling the toothbrush as well as the toothpaste).

Isn’t this the same in a physical store? You enter a store,... Strategic marketing has guided you down the path for you to choose the type of olives you desire, but along the way you also throw in a couple of carrots to complement your hummus dip. ...

In my opinion, it seems that FARE and the 4P’s have the same objectives. Although, maybe there should be an extra F in FARE for FLEXIBILITY as a truly functional website created by marketers who know customers wants and needs allow their target market more choice....

Maybe the olives are what some people want to buy first after all at 2am in the morning.
### TABLE 9.3 CONTENT ANALYSIS: DEEP APPROACHES TO LEARNING

<table>
<thead>
<tr>
<th>Deep approaches to learning</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Looking for meaning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on the discussion (what was required)</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>Focus on maximum understanding</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Active evaluation and critique</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Trying to understand difficult things</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Asking questions to understand</td>
<td>6</td>
<td>285 (28%)</td>
</tr>
<tr>
<td><strong>2. Relating ideas and seeking coherency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relating ideas/theories to the real world</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Relating material to other situations</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Using new information and generating new ideas</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Addressing ambiguity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Relating discussion to the class and course</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Relating to other students’ or teachers’ comments</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Relating to own experience</td>
<td>7</td>
<td>130 (12%)</td>
</tr>
<tr>
<td><strong>3. Use of evidence and logic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examining material carefully to see if there is sufficient evidence to justify it</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Justifying e.g. with an example</td>
<td>79</td>
<td>199 (41%)</td>
</tr>
<tr>
<td><strong>4. Intrinsic motivation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enjoyment of the activity</td>
<td>5</td>
<td>5 (%)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>619</td>
<td>61%</td>
</tr>
</tbody>
</table>

(Tables 9.3 and 9.4 include only those characteristics found in the transcripts. See Appendix 5 for entire framework)

### TABLE 9.4 CONTENT ANALYSIS: SURFACE APPROACHES TO LEARNING

<table>
<thead>
<tr>
<th>Surface approaches to learning</th>
<th>Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. A reproducing approach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall without any purpose</td>
<td>305</td>
<td>305 (30%)</td>
</tr>
<tr>
<td><strong>2. Stays within course boundaries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetition of comments</td>
<td>51</td>
<td>51 (5%)</td>
</tr>
<tr>
<td><strong>3. Unthinking approach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on unrelated material</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Confused statements</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Uncritical acceptance of ideas</td>
<td>10</td>
<td>45 (4%)</td>
</tr>
<tr>
<td><strong>Total surface approaches</strong></td>
<td>401</td>
<td>401 (39%)</td>
</tr>
<tr>
<td><strong>Total deep approaches</strong></td>
<td>619</td>
<td>61 %</td>
</tr>
<tr>
<td><strong>Total approaches</strong></td>
<td>1020</td>
<td>100%</td>
</tr>
</tbody>
</table>
A common discussion activity was based on website analysis and Rebecca’s posting below illustrated her deep approaches, where she examined and evaluated competitor websites, identified gaps, applied marketing principles and made some recommendations in a letter (indicators italicised).

Current Forum. Week Nine (abridged and businesses anonymised)
Read 6 times. Date: Wed 6:18pm
Author: Rebecca
Subject: Clothing

Dear Marketing Manager,
There are a wide range of competitors within such the broad industry definition of Clothing
As I have no information regarding segmentation, product lines etc. I have identified the following competitors within this ‘industry as being: F Store, H Store, J store, G store. . . . H Store and G store have no web-presence.

. . . J Store certainly promotes itself to its audience more proactively than F Store, although this could be due to its target audience, being younger and more net savvy. Both web-sites reflect their brand well and have captured the online brand elements well.

There is certainly room for improvement on behalf of competitors, this provides a gap for your organisation to fill. It could do this through online marketing providing an online newsletter, selling online, and making sales catalogues available online also.

Kind regards, Rebecca.

Thirty-nine percent of the units were coded to surface approaches, and three quarters of those (30%) coded to the indicator ‘recall without a purpose’ were made in response to the News activity (see Section 9.2 for a description). Most students perceived this task as cutting and pasting material from the Internet and 23 items were posted accordingly. Apart from that, the greatest number of units coded to surface approaches were from the two ESL students, who were amongst the highest contributors while Luke had never studied this area of business before. Here, Luke made a point that was not justified and then concluded with a confused statement (indicators italicised).

Current Forum: Week Three
Read 5 times. Date: Sat 3:56pm
Author: Luke
Subject: Re: Benefits to Stakeholders (Buyer/Seller)

. . . Sellers are using the Internet as a tool to increased productivity and profitability.
There is no winner. In the end, streamlining the process and keeping the customers happy benefits the stockholders through savings to the company. This is a win-win situation
Below, **Henni** has made a confused statement:

*Current Forum: Week Three*
*Read 11 times. Date: Sun 12:03pm*
*Author: Henni*
*Subject: Re: Decision Making Processes*

*It is~ e-marketing has a great impact on buyer behaviour, even e-marketing’s loyal has gone too far away, but it’s a great shift in behaviour. At this stage, e-marketer build a self image and good services (postpurchase/ secure payment/ member special/ return polices . . .) we will the greater things than now.*

The content analysis for the first semester trial was carried out on 33 (65%) of the participants’ messages. Ninety-one percent of the units of meaning were coded to deep approaches and 9% were coded to surface approaches to learning. The difference between the first and third semester ratios for deep and surface approaches would seem to arise because in the first semester, the News activity was perceived differently and characterised by summarising, evaluation and commentary rather than direct cutting and pasting from the Internet source. This highlights the importance of students’ perceptions of learning tasks and the impact this can have on their consequent approach.

The online discussions in this case study were characterised by low levels of reading and a range (from low to high) of message posting activity. There were six students who posted far less than the class average for the semester. Low participating students generally obtained lower grades than high participating students. The teachers did contribute online and made their comments in class. A greater proportion of surface approaches was found here than in the other cases, a fact which was linked to the students’ perceptions of the News activity. A differing perception of this activity by the first semester participants resulted in lower levels of surface approaches to learning. The next section looks at student perceptions of the impact of the CMC environment on their actions and attempts to ascertain the differences between those with low participation and those who participated regularly.

### 9.5 The influence of the CMC environment

The text-based nature of the environment demands that students read and write to participate in online discussions and here, the link between reading and thinking and especially writing and thinking was acknowledged by the students. This was also the case for those students who did not regard the online discussions as helping them to
learn and there did not appear to be any difference in perspective across the various levels of participation.

This case study showed that reading other postings acted as a prompt and started the thinking process as students considered all the different points of view. The limitations here were probably the time available for reading and the ability of the activity to produce divergent viewpoints. Nine of the students reported a link between reading and thinking. Julie (moderate contributor) described this.

*It was also having to read, you know, cause, you had to read what someone else had written, and then say whether you agreed with it and why you agreed with it. So you did have to sort that out in your head before you put it down... we had to review a few websites and I read what other people had, how they had reviewed the same sites as me, and some of them were saying, oh yeah, this was a really good site, and I looked at it and I just thought, this is a load of [rubbish] and I would never use it. And so I guess, it made me realise the amount of you know, different perceptions out there on the same thing. And you forget that sometimes until you actually see other peoples’ ideas and opinions.*

Writing also prompted the students to think and for thirteen students (half of them) the act of writing was more influential than reading in their thinking processes. Susan (high contributor) described her writing and thinking process.

*It [MS Word] just gave me time to reflect on what I was actually writing and then be able to edit it... it enables me to ask questions, more questions of myself about the particular topic.*

Max (low contributor) did not like online discussions but acknowledged the role of writing.

*I think its more difficult to blurb [be trivial] on writing, to say nothing online. Writing commits people to trying to make things succinct, because most people always read something before they actually DO post it, and I think that everyone always says 'does this really make sense, what am I on about?*

Rebecca (low contributor, but obtained an A grade) described what she did after reading the postings.

*You’d look at the textbook or go online and get a few ideas, and then you’d have to put your reference points in too, [develop] your articulation, and come up with your own opinion . . . and then you ‘d have to put it in such a way that you can communicate it to other people. So you actually have to be able to have a level of understanding to be able to talk about it . . . so there is some internalisation going on.*

The students’ descriptions indicated that the act of writing made them speak in their own voice and do so in a forum with their peers. The case study illustrated that this
required engagement as the students made sense of the information they had gathered so far, developed their own position and then focused on communicating it effectively. These internal and external foci which emerged with writing are well documented in the constructivist literature (see Section 2.3.2) as benefits of online discussions, and this case study indicated that they also encourage deep approaches to learning.

Communication anxiety was not a factor for the working students who had good skills in communication devices like email, but was acknowledged to be an issue for students with limited work experience, for example, buy, Jessica, Jo and Peter, all low contributors. It did not affect the two ESL students, Luke and Henni, who preferred online discussions to classroom ones because they relieved the pressures of face-to-face communication with the teacher and other students in class.

Across the semester, 72% of the messages were individual postings and 28% were responses to other students. Three-quarters of this peer interaction (21% of the messages posted) occurred in the whole class discussions and one quarter (7%) came from the small group discussions. Interaction in the groups was almost entirely centred on organising the presentation, rather than the substance of the activity. In the case of the whole class discussions, interaction mostly occurred when students read each other’s postings and posted feedback. Giving and receiving feedback was regarded as valuable by Julie, Jessica, Rebecca and Peter and its role in encouraging participation and interaction is discussed in the next section.

The other reason for lack of participation and interaction might have related to the mediated nature of the medium and the ways in which students had to adapt to this. Rebecca, Peter and Max did not like the virtual or asynchronous character of CMC because there was no ‘flow’ to it like there would be in a face-to-face discussion. Holly, Jessica, Jo and Peter, all low contributors, had various technical problems like logging on, accessing the discussion site, and the mechanisms of making postings. Familiarity with modern technology was not always helpful:

online things, we... associate it with, you know, MSN, going online, to chat with friends. (Jessica,)

These students also had to make other changes to their learning processes including fitting the online discussions into their weekly schedules and improving their
computer literacy. This time management demand was not easier for working
students:

you see it [online discussions] as being an interruption . . . its like getting petrol, you
have to stop what you’re doing, in your day and do it.  (Rebecca)

One of the great benefits often suggested in the literature for online discussions is
their time and place flexibility. Most of the students agreed with this, especially those
that were working full time. However, it was clear that many of the students were
under significant time pressure, as they sought to fit their study in with their work,
family and social lives and this was especially so for the eight students who had
enrolled in more than the recommended course load. Paradoxically, this time
flexibility may have created, rather than relieved, pressure for some students. High
contributing students like Luke, Mary and Henni seemed to have the motivation and
time management skills to deal with this. However, this was not the case for some of
the low contributors, for example, Holly, Peter, Jessica and Max. Online
discussions provide a new comparative lens for students when they assess the value
of classroom learning. Peter, Rebecca and Tammi all commented that one of things
they now liked about classroom learning was its time and place boundedness that
demanded their commitment.

The other aspect of the CMC environment that contributed to learning was its ability
to keep students on task. Like the other cases, the students’ comments confirmed that
the online discussion forum was regarded as a place for learning not socialising,
because it was a public forum that limited what might be said. Students were also
there in their own time and wanted to complete the task as soon as possible. There
was nothing to distract them, and, consequently, they were more focused.

The case study confirmed that the main benefit of the CMC environment was the way
in which the text-based discussion facilitated thinking and understanding of the
subject. Even though the students liked the feedback activities, they created a very
limited amount of paired interaction rather than dialogue. Low participating students
had difficulties with aspects of the CMC environment and this resulted in
communication anxiety, technical issues and the need for better time management
and planning.
9.6 The influence of the curriculum

The most motivational factor for the students was assessment, and this was indicated by nine of the participants. The online discussion activities were worth 10% of the final grade and marks were allocated for ‘completion and effort’. This was not sufficiently motivational for some students and the demands of the online discussions conflicted with their overall workload. The weekly nature of the postings was often too demanding for Mary, Jessica, Jo Rebecca and Tammi. There was an expectation by Holly, Susan and Rebecca, that the online discussions would take no longer than the reduced class contact of one hour per week. Susan said that she would have contributed more regularly but the tasks often took longer than an hour. She would look at a task, work out what was required and if it would take too long, she would not do the activity.

In order to address conflicting demands, some of the students engaged in prioritising activities by using a classic business cost benefit analysis. Here the costs of participating in terms of time and effort were analysed against the benefits which were grades and any other deadlines. Max regarded the online discussions as unhelpful and a competing assignment always received his attention. Julie said it was a common perception in the class that the time involved was not worth 10% of the final grade. She had changed her job during the semester and for three weeks was so overwhelmed that she contributed nothing. Rebecca (low contributor) also worked full time and talked about her workload approach and the prioritising strategies she used, which were somewhat extreme:

> The amount of effort that actually went into the online stuff really wasn’t reflected in the marks, and I think it was only about 10%... And it felt like a lot of work for 10%...I can live without 10 marks... its one hour less class, but its not, and you’ve got your reading to do, you’re got your assignments to do and you’ve got work and life and all that which shouldn’t come into it but it does, because I mean we are all human, and at the moment I don’t know if I’ve got anything to do online or not because I’ve got an assignment due on Tuesday and I can’t think about anything else.
>
> Interviewer
> And that’s all you’re going to do?
> Rebecca
> And I’m going to be sick on Monday.

Jessica (low contributor) talked about why she had not made a discussion contribution:

> I had the intention to.... I think I had so much going on that week...Normally, there’s things going on and I don’t have the time and I think, oh, my priority is my
Other students experienced the same kinds of demands on their time, but addressed these differently. Peter, Henni and Mary, who were all enrolled in more than the recommended study load, made time for their postings late at night and Tammi and Tess both developed weekly routines. Luke (also over enrolled) scheduled time when he came home after his part-time job. This also represented a type of prioritizing but of a more proactive rather than reactive kind.

The low level of contributions made by some students indicated that 10% was insufficient to encourage participation. Students’ goals for the course also played a part in the balancing act, with the high contributors all having goals of an A grade, most of the low contributors wanting a pass. This case study suggests that a 10% grade may be insufficient to encourage full participation in the absence of any other motivating factors. The focus on assessment and prioritising activity suggests a strategic approach to learning or alternatively, with its focus on assessment, a surface approach to learning (Entwistle & Ramsden, 1983). However, the time and work pressures on students are similar to those facing most people today, and it is difficult to see prioritising as anything other than a rational approach in a modern context.

Earlier analysis (see Section 9.3) indicated a close alignment between the students’ deep approaches to learning and the online discussion activities. Here, the students liked the applied nature of the activities, especially those connected with website analysis, because they reinforced the theory from class and matched their connection between learning and career goals. The two assignment milestone activities, which included feedback and website activity received favourable comment from five students, although two students didn’t like them because they were worried about other students copying their ideas. While the activities were generally favourably regarded by most of the participants, they did not appear to have been motivational in encouraging participation. This could be another reflection of time pressure, irrespective of whether students could manage this or not.

The feedback activities were identified by five students as valuable because of the thinking and challenge involved in providing constructive feedback. However, Fred said that the discussion activities did not ‘open people’s minds... and stimulate
discussion’ and thought that the online discussions were more of a noticeboard. Susan similarly regarded the activities as information-sharing and identified a lack of interaction which she attributed to the asynchronous nature of the forum, rather than the activities. Analysis of the activities indicated that not all of them were discursive in the sense that they allowed for multiple viewpoints. The instruction to students was to respond to ‘one other person’, and because the students were under time pressure, they did exactly that and rarely responded to further postings. Other activities asked students to post an analysis and then to provide feedback to another analysis posting, which gave the activity a paired quality and this, coupled with time pressure, might have had the effect of inhibiting interaction. Students with more time might carry on discussing the activities, but in this context, the activity needed to have a natural dialogical power or potential.

Half of the students also made positive comments about the small group discussion activity, endorsing the value of working in groups with their commitment, sharing, support and motivational qualities. This supported the value of collaborative learning for undergraduates, and may be a key to lessening communication anxiety and the fear of ‘speaking’ in public forums. However, in this case, participation in the group activity was still low and the nature of the activity here was insufficient to promote active participation.

This course was created on the basis that the online discussions were spaces for students and the teachers only commented on these in class. Most of the students were very positive about their teachers and applauded their business experience, knowledge, real world examples, ability to explain things, and their passion for the subject. Five of the participants (including two high and two low contributors) wanted more teacher discussion of the postings and online discussions. Given the low level of contributions of half the class, it is interesting to speculate as to whether that would have made any difference or whether workload pressure would still have been the most influential force.

In this setting, the major curriculum influence for the students was assessment. Pressure of time and completing their study tasks as well as work and family commitments were significant considerations for the students and they dealt with these by prioritizing tasks (reactive) and scheduling time (more proactive). While
deep approaches to learning were embedded in the learning activities, the students’ favourable views of many of the activities were not matched by their participation. The activities may not have been sufficiently dialogic, or perhaps it was again a matter of insufficient time. The students preferred small group discussions to those of the whole class and some students wanted more teacher involvement in the online discussions. There were no clear patterns in the case study of the high and low contributors. This case study illustrated that the benefits of carefully designed learning activities can be mitigated by conflicting demands on students’ time.

9.7 The relationship between the online discussions and the face-to-face classes

The students’ accounts of the face-to-face classes made it clear that these sessions were central to their learning experience, and that there was an expectation that the online discussions would be connected to them as well. Thirteen of the students identified links between the class content and the discussion activities which were described as extending, reinforcing or applying the theory that was introduced in the class.

_You had to know what you read, and then when its applied its... sometimes it changes according to the different company, then you had to go, OK, how did they get from this to that and what did I learn. So, its just making links between... different theories and seeing how it works when its applied in the real world, you had to think more when you were doing these._ 

(Jessica)

Other links were also important. Just over half the students remembered that time was set aside for the online discussions in class, but it was the kind of attention that the teachers gave to the online discussions in class that was important for creating links. Students mentioned reminders and encouragement, but the most valuable were commentaries in relation to the content and feedback on the postings because these helped students to learn. **Tess** said that the teacher introduced the next online activity in class, commented on the postings and gave feedback and that made her realise that she was on the right track or raised other issues that she should consider. When this kind of class activity did not occur, students viewed the online discussions as separate. For **Julie**, this ‘connecting the loop’ was important:

_We wouldn’t always go through what had been done online. .. we wouldn’t come back and talk about it afterwards... [it was] a bit disjointed. ..you didn’t really get any feedback from the tutor...I just felt it was often quite separate than what we were doing in class. It wasn’t really integral._
One activity that established a connection for students was the classroom presentations that were made after small groups investigated, analysed and discussed websites online. Surprisingly, this did not appear to be connected to any class or topic, and was like an independent small project that was entirely student-driven.

For these students, it appeared that in their face-to-face classes, there was a social learning climate based on various forms of interaction. Students were able to ask questions, respond to comments and questions from the teacher, watch the classroom action, participate in small group discussions or contribute to whole class discussions. Students strongly endorsed this classroom-based interactive learning environment and the value of discussions for their learning. This kind of interactive culture may have made the transition to online discussions easier for students, when compared to courses based on lectures. However in this kind of culture, other factors like workload can still have an impact, and adaptation and change will still be an issue for students who are new to this kind of learning.

Despite the fact that attendance at class was voluntary, students always prioritised this activity and this may have occurred because, along with assessment, in their view, this was where the real curriculum lay. While documentation of the course is important, it is the teacher’s interpretation in the classroom as a generally spontaneous and iterative activity and the resulting feedback to the student that takes precedence. Online discussions need to be included within this classroom process, especially if the teacher is silent in this electronic learning space. Course content connections are a natural first step but these can be extended to include discussion and feedback by the teacher in the classroom. Other researchers, for example, Walker and Arnold (2004), have talked about the need for adding value in a blended environment. Where a culture of interaction in the classroom already exists, as was the case here, this is more challenging. As in the third case study, students indicated that they were aware of the differences between online and face-to-face discussions, and often recognised that both were beneficial in different ways for their learning.

The most important additional benefits that students identified were:

1. The value of the different communication mode for their thinking and learning, namely, discussion by reading and writing rather than listening and talking.
This was discussed in section 9.4. Talking with people in class was recognized as a fast, flowing, often productive and pleasant form of human contact, but some disadvantages were identified. Henni, Luke, Mary and Rebecca said they often missed things in class, and Rebecca said she got easily distracted. For them, as well as Tammi, the record of the discussions meant they could go back to the different points and consider them at their leisure.

2. For many students, the ease of stating their views and having a say with honest disclosure.

There was a good understanding of the advantages and disadvantages of communicating in both the virtual and real world environments. Two factors were valued in face-to-face contact. The first of these related to the positive benefits of human contact with Holly, Julie, Mary, Max and Jessica acknowledging the ease of getting to know people, building networks and commitment, and sharing. The second benefit, easing communication, was more directly associated with the value of visual and aural cues with Henni, Jo, Max, Tammi, Julia and Susan describing watching faces, listening to voice tones, and body language. In direct contrast, students saw two main benefits of the virtual world. Regardless of whether students were confident to speak in class or not, it was easier to have a say in the virtual environment.

Online...you are... hidden and you can just put anything in there and whereas in class there is this whole thing about 'I don't know if I should say that because I don't know if I'm right' kind of thing

(Tess)

This was especially so if the student was shy or lacked confidence:

You can say what you want to say without anyone looking at you... online you are confident and you can write whatever you want to write knowing that nobody is peering at you or will shout you down.

(Luke)

The second benefit related to the development of more openness, disclosure and honesty in the expression of views. Fred thought that some people could communicate more freely because:

People can’t see their faces, don’t know who they are . . . they’re just a name on a computer screen. They can say what they want, say what they feel, and have, I personally believe, a more honest debate that would be more open and forthcoming with their views.

3. Being able to participate at the students’ own speed with plenty of time for thinking, which produced better quality discussions.
What some students liked about the face to face discussions was their speed (Julie, Rebecca, Susan and Tammi), and immediacy (Jessica, Luke and Max), which could create flowing discussions, immediate responses and feedback and this was good for developing ideas. However, students also identified disadvantages in that comments could be ‘reactionary’ (Holly), and ‘off-the-cuff’ (Tess) and far more opinion driven (Rebecca). Even Max, who preferred face-to-face discussions, acknowledged these factors and said online discussions were:

*A lot more intellectual, or like, a lot more theoretical, maybe. Probably that’s a better word for it, because people have thought more. In class, you get people blurting out anything or going off on some story.*

This view was quite widely supported by many of the students, who liked the time to think, to organise their thoughts, and do some research and this created a better quality discussion. Some of the students mentioned that they liked the extra control they had over their learning. **Luke, Henni** (both ESL students) and **Mary** all liked to work at their own speed and **Julie** liked to choose whose postings she would read. Both high and low participating students appreciated this dimension of time, making it difficult to assess the motivational value of this aspect of CMC.

In this case, the students confirmed that the classroom was central to their learning experience. Linkages with the online discussions were therefore important and these mostly occurred through the course content but also with time in class for the online discussions and the teacher’s comments and feedback. Despite the highly interactive classroom, the students still valued the online discussions because they created a different kind of discussion and added a different dimension to the learning environment. The main complementary features were: the different communication mode; the ease of having a say; more disclosure; being able to work at one’s own pace; time for thinking; and hence contributions which were often of a better quality than in the classroom.

### 9.8 Summary

The key features and findings of this last case study are presented in Appendix 9. This fourth case study has illustrated another blended learning ecology where students were under great time pressure. The online activities were applied, intellectually demanding and assessed, so students engaged in prioritising. Students who were high contributors were focused on high grades and used their time
management skills for success. Students who were low contributors were not grade focused and had issues with adapting to the demands of the CMC environment. The key features of the learning context were:

- The influential character of some of the CMC features. The text-based nature of the online discussions, especially writing, encouraged a more considered approach to the activities. Peer interaction was less significant, and it is likely that the main role of the CMC environment in the students’ learning was for building understanding at an individual rather than a collective level.

- Online discussions which were able to add value to the students’ learning in their face-to-face classes, by changing its quality and character.

- The strong connection between the online discussions and the face-to-face class, especially the regular time in class for teacher commentary and feedback.

Entwistle and Ramsden’s (1983) idea that students behave according to the way they perceive the learning environment, and the task, is still relevant in blended learning contexts. However, the environment today for students is now characterised by huge pressure of time as students try to balance study and learning with work. In order to do this, students will engage in rational approaches which involve weighing the calls on their time, including those that involve assessment and prioritizing. It is ironic that, in this kind of environment, where the flexibility of online discussions and learning look prima facie attractive, a new recognition by students of the value of the time and place bounded traditional classroom may be emerging.

Some limitations of these findings need to be considered. While the case study referred to a single course, the participants came from several classes in that course and there may have been some contextual variation. Systems data was not available for two of the students and there were some issues with the quality of the interview data with a tape breaking and the reticence of some of the students in interviews. This has reduced the comprehensiveness of the data on which these findings are based.
Comparative analysis and discussion of the case findings

10.1 Introduction
In reporting on how students learn online, my approach has been to regard each course as a new blended learning ecology where online discussions have been introduced to classroom-based courses. The case studies in the last four chapters described student perspectives of the interdependencies between the CMC environment and the broader learning context, where the curriculum was the mechanism through which virtual activities like online discussions were incorporated into the learning process in a blended learning course.

The case studies provided a detailed picture of students’ perceptions and actions in their learning environments, each of which had its own special history, values and culture. However, it is also beneficial to develop and discuss any broad themes and general principles arising from the cases. The purpose of this chapter is to present a comparative analysis of the findings that addresses the research questions. In their discussion of cross case analysis, Miles and Huberman’s (1994) identify the value of such analyses as deepening ‘understanding and explanation’ (p.173) but also identifying the dilemma inherent in cross case analysis.

We are faced with the tension between the particular and the universal: reconciling an individual case uniqueness with the need for more general understanding of generic processes which occur across cases. (1994, p. 173)

This chapter briefly outlines the approach taken for the comparative analysis, introduces the case matrix and then discusses the general principles and themes that arose from the comparative analysis of the cases. The chapter ends with a summary of the main outcomes of the analysis as a prelude to the concluding chapter.

10.2 The approach and cross case matrix
In order to facilitate a comparative approach, I analysed each case in a similar fashion as part of the study design and the findings of this analysis have been presented in a matrix in Appendix 9. Miles and Huberman (1994) discussed a variety of case based strategies for comparative analysis, and I chose the ‘meta-matrix’ approach (Miles &
Huberman, 1994, p.177), where the cases were ‘stacked’ to allow further comparison of similarities and differences. I then analysed the findings in the meta-matrix row by row, on a case by case basis. An unexpected advantage of this approach was the opportunity to refine and sharpen the individual case analyses, as issues arose in the meta-analysis which required further clarification from the individual cases.

I have adapted the strategy so that the rows of the matrix (see Appendix 9) represent the special contexts of each case, the participant characteristics and then the research topics. The balance of this chapter presents and discusses the analysis and emergent findings, using the short names of the cases for ease of identification, that is:

- The Group Case (see Chapter 6)
- The Participation Case (see Chapter 7)
- The Debate Case (see Chapter 8)
- The Priority Case (see Chapter 9).

10.3 Approaches and actions for learning in online discussions

10.3.1 Approaches to learning

In the Group and Debate cases, the students demonstrated high levels (94%) of deep approaches to learning and low levels (6%) of surface approaches to learning. In these two cases, as well as the Priority case, deep approaches, as described by Entwistle and Ramsden (1983), were illustrated in these business contexts by:

- Meaning making, where students stayed on task, maximized their understanding, and engaged in evaluation and critique.
- Relational activity, especially relating theory to the real world, relating the online discussion to the class, the course and their experience. In the Group and Debate cases, this included relating to each other’s comments.
- Evidence and logic, where students justified their position by referring to examples, theories and concepts and secondary materials.

Across the cases, surface approaches were most commonly characterised by:

- Uncritical acceptance of ideas.
- Repetition of material.
- Recall without a purpose in the Priority case.
The Group, Debate and Priority cases showed a close alignment between the main characteristics of the deep approaches (identified above), and the requirements of the activity and the marking criteria. The description of the activity was detailed and the activity was closely aligned with the marking criteria. This could indicate that when students perceive that a CMC activity requires deep approaches, then they will attempt to use these approaches. The Priority case also supported this point from the converse position. There, 40% of the units were coded to surface (categorized as recall without a purpose) approaches, and three quarters of these arose from the News activity, which was perceived by students as a ‘cut and paste’ activity, which required little depth of thinking. Students recognized that the other activities required evaluation, analysis and application and in those other activities, their responses resulted in deep approaches.

Apart from the nature of the activity and its assessment, the analysis indicated other influential curriculum features in the Group, Debate and Priority courses. These were the absence of the teacher in the online discussions, and a connection between the face-to-face classes and the online discussions. Examination of other contextual features indicated that the three courses were compulsory and they were all applied (rather than theoretical) courses and discursive in nature. The Group and Priority case course content was regarded as highly accessible for students because they could draw on their personal experiences in understanding the course concepts. The three courses were only offered in flexible mode, and the amount of face-to-face class contact was the same at two hours per week.

Across the three cases, three similar participant characteristics emerged. First, few participants (six of forty-eight students, 12%) had no experience of online discussions and a significant percentage (twenty of forty-eight students, 42%) described themselves as experienced with online discussions. Secondly, many participants (60%) recognised the value of learning by discussion and interaction, as well as learning in more structured and directed ways with a teacher in class. Thirdly, the students regarded the compulsory courses as relevant because they could see them as contributing towards their career development, which was their main reason for university study.
There were, therefore, many similarities between the Group, Debate and Priority cases that might account for the high level of deep approaches in these cases. The Participation case was different in that there were insufficient contributions from the students to support a valid analysis of the online discussions. There were several differences from the other three cases in the course context that might account for the low level of participation. The Participation course was more conceptual and technically demanding, and its emphasis on correct understanding of principles meant that discursive approaches required more intellectual effort and time. Other ways in which the course varied were the voluntary nature of the online activities, a teacher who was active in the online discussions, the availability of model solutions to the discussion activities and little connection to the face-to-face class. These factors are discussed later in Chapter 10.4.

There are some limitations to the overall findings of a high level of deep approaches. They may have been influenced methodologically by the unit of analysis that I chose for the content analysis. I used Henri’s (1991) unit of meaning (see Chapter 5.7.1), which has been widely used in other CMC research. However, the difficulty in content analysis of identifying suitable units of text that will produce reliable and valid results has been widely acknowledged as an issue in this methodology, for example, most recently by Murphy and Ciszewska-Carr (2005).

It is important to recognise that the content analysis provided findings about whether or not deep approaches were occurring and not details about their quality. By way of an example, two students might both exhibit deep approaches in their discussions, but one might receive an A grade and the other a C grade, so deep approaches were likely to be occurring across a continuum of competence. The analytic framework was not like some frameworks which were designed to indicate levels of activity, for example, Gunawardena Lowe and Anderson’s (1997) framework of five phases of knowledge construction, which began with an initial phase of sharing and comparing and then moved through four further more challenging phases resulting in newly constructed meanings. While the content analysis cannot provide information about the quality of the deep approaches, another indirect indicator of this was the student’s final grades for the course, where 71% of students in the Group, Debate and Priority cases received an A or B final grade.
Looking more broadly, it may be that other approaches to learning were present in the online discussions that have not been identified, for example, strategic approaches, which have been identified in some of the experience of learning research by Ramsden (1983) and others. At the time of the design of the analytic framework, I made a decision to exclude strategic approaches because they had less empirical support (Smith, 2000). The use of a deductive approach to analyse the online discussions has also meant that identifying new approaches to learning, has not been possible. An inductive approach, such as that used by Case and Marshall (2004) (see 3.2.4) might identify other approaches, especially those that take more account of the setting.

There is a body of research using questionnaire and interview methodologies that has demonstrated deep and surface approaches to learning. The content analysis of the online discussions in these cases has provided a new perspective on approaches to learning by describing them in a CMC environment. When students are using deep approaches to understand subjects, these cases show that such approaches are congruent with constructivist views of learning. Both constructive and deep approaches focus on meaning making, and engaging in various relational activities where students can situate their learning, and consider different points of view in a socio-dialogic process.

10.3.3 Participant activity

Participants in the Group, Debate and Priority cases showed a common participation pattern in the online discussions where reading messages was followed by preparation and then writing messages. Participants used similar approaches as discussed below:

1. **The reading phase.** This was an opportunistic activity and it was rare (one or two participants in each case) for students to schedule a time to read messages. In the two whole class discussions (the Debate and Priority cases), less than one third of the students read all the messages, but in the smaller discussions of the Group case, nine of the ten students read or skimmed all the messages. Students mostly reported random selection of postings for reading, although students were more likely to read a message from a friend or from ‘someone they could identify from the class.’

2. **The Preparation phase.** Activities were directly related to the students’ interpretations of the activity requirements and this included the teacher’s
expectations which were often discussed in class. The kinds of preparations thus described, for example, relating theory to real world issues, analysis and reasoning, were all indications of deep approaches to learning.

3. The writing phase. Approaches varied, with students often working on a draft in Microsoft Word and editing their writing in order to better structure and present their ideas. Unlike face-to-face discussions, the need to write to communicate appeared to prompt thinking, and the ability to work with drafts and edit messages was helpful in developing and deepening their understanding. This is discussed in the next section.

The amount of posting across the four cases varied and is presented below in Table 10.1. Apart from the Debate case, there was a pattern of low message posting.

### TABLE 10.1 PARTICIPATION BY MESSAGE POSTINGS

<table>
<thead>
<tr>
<th></th>
<th>HIGH PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Debate</strong></td>
<td>Full participation</td>
</tr>
<tr>
<td>(3 postings)</td>
<td></td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>7/14 participants &gt; class average</td>
</tr>
<tr>
<td>½ participants &gt; class average</td>
<td></td>
</tr>
<tr>
<td><strong>Group</strong></td>
<td>2/10 participants met class average</td>
</tr>
<tr>
<td>8/10 participants &lt; class average</td>
<td></td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>1/7 participants &gt; class average</td>
</tr>
<tr>
<td>6/7 &lt; class average</td>
<td></td>
</tr>
</tbody>
</table>

Comparison of the levels of reading activity was more difficult because systems data were only available in the Group case. In the other cases, systems data was available about the number of times each message was read (by members of the class) and self reports. Apart from the Priority case, students appeared to engage in more reading than posting activity, however self reporting indicated that much of the reading was skimming, with careful reading of messages occurring when feedback was required.

Participating in the online discussions in small groups of five to six students (the Group case) did not improve the number of postings. The literature (for example, Palloff and Pratt (2003), Tu (2004) and Wang (2006) indicates that this is an optimal group size for online discussions and identifies a variety of benefits including both learner comfort and a sufficient base for exchanging and critiquing knowledge and perspectives. However, the findings here indicate that, despite those benefits, an optimal group size on its own is not sufficient to increase participation.
It is difficult to reconcile the generally low message posting activity in the Priority and Group cases with the deep approaches used by students. However, they are not necessarily related and the cases illustrated that deep approaches could still be achieved with modest levels of message posting activity. It may indicate that students often did not contribute when pressed for time, but when they did contribute, their messages were well prepared and deep approaches were used.

This initial comparison identified the importance of the activity and its assessment in promoting deep approaches. However, other factors could also be relevant. Descriptions of the students’ CMC activities across the cases indicated that the text-based communication mode of CMC may also have been influential. There could be other aspects of the mode that promoted deep approaches. Comparative analysis on these aspects is presented in the next sections.

10.4 The influence of the CMC environment

10.4.1 Overall
Most (77%) of the students considered the online discussions helped them to learn, and, even when this was not their perspective, during the course of the interviews, many students recognised that reading other contributions and writing a posting helped them to learn.

10.4.2 The text-based communication mode
In all of the cases and regardless of the level of participation, students said that reading the other messages helped them to learn. The main benefits of reading that the students identified were: (a) seeing other points of view and accessing a new source of information; (b) prompting their engagement and own thinking on the topic; and (c) being able to check their understanding of the course content and the task.

The way in which students thought about their peers’ messages confirmed Dysthe’s (2002) concept of CMC messages as a new pedagogical tool, which she characterized as a thinking device. The students’ comments also illustrated Parry and Dunn’s (2000) concept of benchmarking (being able to compare their ideas and work with
those of other students), and Guzdial and Carroll’s (2002) view that in reading CMC messages, students can recognise their own understanding and think about the topic in a divergent fashion. Only a few students referred explicitly to being able to observe learning strategies, for example, deep approaches, through the way in which other students constructed their messages although my analysis indicated that this comparison may have been implicit in the students’ comments. The ability to benchmark demonstrated an important learning advantage of CMC and one way in which online discussions can offer a ZPD (Vygotsky, 1978) for students.

In all four cases it was the act of writing a posting that showed evidence of the development of students’ thinking which occurred at two levels. Initially, writing played an important part in clarifying the students’ own internal understanding as they examined and clarified their thoughts and ideas, related and applied such thoughts to theoretical concepts and supported them with evidence, that is, a deep approach (see Si and Mavis’ comments in Section 8.5). Students, particularly in the Debate case, recognized the way in which their writing enabled them to access tacit understanding and convert it into explicit and personal knowledge. The second level of learning arose when students communicated their new knowledge to their peers where the importance of expressing and structuring their ideas to ensure that they made sense to others required extra engagement and thinking (see Jorg and Ivan’s comments in Section 8.5). This was assisted by the on screen editing that many students carried out to improve the structure, coherence and quality of their message.

These findings across the cases illustrated Vygotskian (1978) theories of the mediational role of language in learning as applied to the CMC environment. Other researchers have used Vygotskian theories to explain aspects of learning in online discussions, for example, Stacey (1999) regarding collaborative learning as a social learning process, and Warschauer (1997) regarding language-based interaction in CMC discussions.

Reading and writing messages were both a developmental source for the students and a prompt for thinking. The two-level process which emerged from the students’ accounts (as described in the preceding paragraph) demonstrated the unifying and connecting role of language, both in terms of linking writing and thinking and communication to their peers. The impact of the social environment was difficult to
assess in Vygotskian terms because the students’ descriptions indicated that they regarded the message reading and writing process as one which was very much focused on their individual development, as Henri (1995) identified in her research into the role of interaction in CMC learning (see Chapter 2.3.3). This matched the widespread partiality of the students for teacher led activities. However, many students acknowledged the value of social interaction and discussion in learning, and expended effort to make quality contributions to the discussions. This kind of contradiction may be a normal characteristic of undergraduates because of their developmental stage as learners, perhaps best addressed through recognition of the need for a variety of approaches at this level of university study.

In theorising about the role of language, Vygotsky (1978) and later, Bruffee (1993), were mainly referring to speech rather than written language. Analysis of the students through these four cases has identified a relatively new learning medium for campus-based undergraduates through reading and writing CMC text. Other researchers, such as Warschauer (1997) have argued for the value of the CMC environment because of the close alignment of text-based interaction and reflection. Student accounts have provided illustrations of the role of text as a cognitive amplifier (Warschauer, 1997), where reading others’ writing, and revising their own messages. This activity enabled students to improve their thinking and understanding of the subject in a way that was not normally available through the class or their own private study. Warschauer (1997) described this happening through iterative layers of reflection and interaction. However, the cases in this study did not indicate sufficient interaction for such a conclusion. This is discussed in the next part of the chapter.

The incidence of deep approaches in the cases and the student expression of the connection between reading, writing and thinking indicated a relationship between these aspects. The act of writing the messages made students speak in their own voice and do so in a forum of their peers. The cases illustrated that this required internal active engagement as the students made sense of the different ideas in the messages and in other readings, developed their own understanding and positioned their ideas while concentrating externally on communicating this effectively. The internal and external foci which emerged with writing are well documented in the constructivist literature as benefits of online discussions. The evidence supported Garrison and Anderson’s (2000) notion that the text-based nature of CMC promotes higher order
and critical thinking and these cases suggested that this facet of CMC may also promote deep approaches to learning.

Normally, when students are writing as individuals, they do so in a private context, as with an assignment that will be seen only by the marker. However, online discussions are a new form of writing for students that is public and also permanent, where statements cannot easily be taken back or overlooked. For some students in this study, this proved motivational in the sense that they knew that their postings would be read by their peers and this spurred them to develop their writing skills. They might, for example, write in a way that would facilitate understanding, or avoid offence, especially in a multiracial classroom. For some students, especially Kiwi students, the public forum produced communication anxiety. This was also connected to the absence of visual cues in the online medium and was less noticeable amongst mature students who had adapted to this through using email at work. Communication anxiety has been recognised by other researchers, for example, Davie (1989), and Light and Light (1999). However, the CMC environment provides an opportunity for students to extend their communication skills and it would be helpful for this to be discussed in face-to-face classes where models of giving and receiving feedback could be provided and practised before going online.

Communication anxiety was expressed by ten of the twenty-five students in the Debate case and four (low contributing) of the fourteen students in the Priority case. This was not an issue for the Chinese students in the Debate case and was not raised in the Participation or Group cases, where concerns were about the problems of communicating in the absence of visual and aural cues. In contrast to this communication anxiety, there were always several students in each case (for example, Fred’s comment in Section 9.6), who identified the freedom they felt in participating in online discussions compared with face-to-face discussions in the classroom. It was clear from their comments, that while students liked the interactive face-to-face classroom, many of them, especially the Chinese students, were observers rather than participants and they were too shy or lacking in confidence to make a comment, whereas the CMC environment enabled them to make a contribution. For other students, the freedom arose because they could say what they actually thought, or could disagree with another student. These perceptions are illustrations of the notions of ‘psychological security’ and ‘isolation and
connectedness’ (Zuboff, 1988 in Mason, 1993, p.27) which the students said arose because they were in a virtual space and did not have to see, hear or interpret peoples’ reactions.

The students’ perceptions of the impact of the written communication mode on their thinking and the amount of preparation they required prior to writing their messages, indicated that online discussions can be influential in promoting deep approaches. Students recognised that face-to-face discussions did not result in the same quality or depth of discussion as the online discussions, and 60% of the students in the Group, Debate and Priority cases endorsed the role of online and face-to-face discussion modes in their learning. This suggests a further reason for adopting a complementary approach in blended environments, so that the strengths of both media can be used in developing learning.

10.4.3 Peer interaction.
Analysis of the cases illustrated the difficulty of promoting interaction in the CMC environment and confirmed other researchers’ findings in this area. In these cases, the students liked the interactive face-to-face classroom and were regular participants in class discussions, so low levels of interaction were somewhat surprising and suggested that factors apart from the learning culture of the course were influential, for example, the CMC environment itself or the curriculum. The cases illustrated three levels of interaction across a continuum from least to most active involvement; these being reading, posting a message and responding to other messages and these are discussed next.

1. Reading. Reading other students’ contributions occurred in all of the cases and was even carried out by students who did not make any or who made few postings. The value of such reading in online discussions has been discussed above in Chapter 10. 4.2.

2. Posting a message. In two of the cases, the postings were mostly at a monologic (rather than dialogic) level, where there was a statement of the student’s own position or ideas, with no evidence of consideration of other postings through replies. The Participation case was characterised by this level of interaction with there being only one response to another student by a participant, and responses were almost entirely
made by the teacher to the students. This could be explained by the fact that participation was voluntary and there was a culture of low participation. In the Priority case, 72% of the messages were single postings that did not receive a response and 28% of the messages were responding to, and considering, the ideas of other students. In these cases, some students considered that the discussion generally operated more like a notice board, being used for information sharing, rather than being truly interactive.

Similar postings were characterised by Pena-Shaff and Nicolls (2002) as monologic and as a ‘reflective soliloquy’. In her research, Henri (1995) also recognised this as a type of interaction involving individual learning supported by reading and thinking about the other participants’ messages. Dysthe (2002) characterised these messages as univocal (the purpose is to convey meaning) and while she acknowledged that they had a place in the discussion, she emphasised the importance of engaging with others’ views and producing dialogic text with the purpose of producing new meanings. She recommended that teachers work with students to develop an awareness of the role of dialogic as well as univocal processes in order to better use other students’ postings as thinking devices in learning.

Thomas (2002) suggested different reasons for the lack of interaction, which arose from the mediated nature of the CMC environment and the absence of features he referred to as ‘normal discussion’. He regarded the threaded structure as difficult for students because it tended to obstruct genuine interaction and students were often confused about the conflict between the oral and written forms of messages. A few students in this research, especially those in the Priority case, described their difficulties with aspects of the CMC environment, but generally the overall perception was one of complementarity (as discussed earlier), rather than confusion. One theme running through the CMC literature is the issue of recognising CMC as a new and different learning paradigm (for example, Harasim, 2000) and not judging it by the standards of the traditional face-to-face environment. However, in the current transition phase, Thomas (2002) identifies learner issues which need to be addressed.

3. Responding to other messages. This was the most active form of interaction with students reading messages, posting their own ideas, and responding to another student’s posting. The Group and Debate cases are both examples of this where 47%
and 44% respectively of the messages posted considered another student’s comments. The course design in both of these cases required students to interact. The activity was assessed and the participants liked and valued the activity, which appeared to have strong dialogic elements. These cases also showed the greatest degree of deep approaches to learning and indicated a connection between message responses and deep approaches to learning. The influence of course design is discussed further in the next part of this chapter.

Each of the three levels of interaction is capable of supporting constructivist approaches. Reading and thinking about other postings is a form of interaction that can support knowledge development. However, the greatest learning potential of CMC lies in moving beyond the first and second levels of interaction (reading and writing) to the third stage of responding to others’ ideas and engaging in the kind of dialogic thinking that Dysthe (2002) described, where messages become texts for thinking. This would be beneficial for average or below average performance students, and/or difficult subjects as represented in the Participation case.

This study confirms other research that the medium on its own does not promote interaction. The creation or inhibition of interaction may be related to particular aspects of the medium, or it may be an adaptation issue for students and teachers, especially in campus-based courses where there is still an expectation of a face-to-face learning model. A number of researchers have suggested that more attention should be paid to curriculum design. This is discussed in chapter 10.5.

10.4.4 Time flexibility and independence

10.4.4.1 Time flexibility
In all of the cases, students liked and understood the value of time flexibility provided in asynchronous online environments for their study, but in the Group, Participation and Priority cases, many of the participants said they still had problems with managing their time in order to be able to participate in the online discussions. While the students in the Participation case had significant work and study loads, there had no time management issues, because the online discussions were voluntary and they chose not to participate. In the Priority case, higher contributing participants were able to manage the demands on their time but lower contributing participants
reported being unable to do so. Across the cases, some students who were more experienced with online discussions reported getting better at managing this new dimension of their learning, namely, prioritising the online discussions along with work and family demands.

These findings add to those of other researchers by demonstrating the advantages and disadvantages of time flexibility for learning. Aspden and Helm (2004) found that the time as well as place flexibility of an online course enabled students enrolled in campus-based courses to remain connected to the university, especially if they were working. The value of flexibility for students was not in improving the quality of their learning but in the more pragmatic matter of providing flexible time for completing the tasks. These findings were reflected in the views of many students in the four cases, especially by those students who could address the time management issues. Molesworth (2004) had a negative view of this phenomenon and his interpretation of business undergraduates was that time flexibility was a flexibility to ignore online discussions or to put in a minimal effort. In the four cases, this similar underlying view was likely to be a factor for students who were low participators or indicated time management problems in the interviews.

The Participation case confirmed three of Hammond’s (1999) factors that influenced participation: the impact of competing demands on time, lack of student commitment to the online discussions and little integration of the online aspect with the rest of the course. The case also reflects Boddy’s (1999) and Holley’s (2002) findings in campus-based courses that, where online discussions were voluntary, there was minimal participation because other compulsory or assessed learning activities received priority. The voluntary status for online discussions communicated that involvement was not important and the consequent lack of participation provided an example in action of Entwistle and Ramsden’s (1983) relational concept of learning (that students acted according to their perceptions of their learning environment). However, in the context of the overall setting of these four cases, there was a curious contradiction: attendance at face-to-face classes was voluntary, but students always attended those classes. This suggested that other factors were operating as well and these may be associated with the newness of CMC in the learning environment, and its current lack of legitimacy.
It is noticeable that time management problems were rarely mentioned in the Debate case where there was also full participation. There were some differences as follows.

- The debate appeared to be a motivational activity which contained an inherent controversy which prompted students to respond.
- The assessed nature, which was acknowledged as motivational by the students.
- The extent of the effort. The debate lasted for six weeks including two weeks break and students were required to make three postings, whereas, in the other two cases, students were required to read, prepare and post messages for 13 weeks. For undergraduates, shorter, defined and structured online discussions may be easier for them to manage.
- A high mark loading (at 5%) for each individual posting. In the other cases, each effort was worth far less in terms of marks, and in the Priority case, there was evidence of students engaging in the kind of cost benefit analysis identified by Lockwood (1992) with the value to them for each online effort being far smaller.

In all of the cases, the students were never off task when online, and this arose because of the way in which students regarded the time (and place) flexibility of the CMC environment, which was quite different from their response to the classroom. For some students, the time and place boundedness of the face-to-face class meant that they were there for the duration of the class and could easily be distracted, but online time was their own time and they used it purposefully. For others, the CMC space was regarded as a learning and not a socialising space, and its public and permanent character meant that private classroom conversations about work, family and social events were impossible and regarded as inappropriate.

Analysis of these views across the cases illustrates a curious distinction between the face-to-face classroom and online discussion environment for many of the students which is presented in Table 10.2. This study indicated that online discussions provided a new comparative lens for students when they evaluated face-to-face classroom learning, and the cases indicated that there was a new recognition by participants of the value of absolute time and place of the classroom in determining priorities.
## 10.4.4.2 Time independence

Across the cases, but particularly in the Debate and Priority cases, students commented on the improved quality of the online discussion over that of face-to-face class interaction because online there was more time to think, to do research and reading and to structure responses. This was enhanced by the need to read and write and the effect of these activities on the students’ thinking. The Chinese students in the Debate case were one group of students who found the asynchronous character of the CMC environment very helpful. They were all ESL students and said that the slower speed of the online discussions meant that they could take as long as they liked to read and write their contributions. This meant that they could participate more actively than they could in a face-to-face class where discussions were often very fast and required personal and language confidence to participate. These views were also expressed by two of the three ESL students in the Participation case and the two ESL students in the Priority case. There were other differences for these students and they will be discussed further below (see Section 10.7).

Across the cases, there was some student support (one or two students in each case) for Thomas’s (2002) view that asynchronicity meant that the normal flow of face-to-face discussions was absent, but the dominant view of the students was that of seeing the differences between the two media as complementary rather than conflicting. Despite the absence of dialogic postings (Dysthe, 2002) in some of the cases (those capable of creating new understandings), it may be that one of the factors that contributed to the deep approaches was time independence and its impact on thinking. The ability to take time to think has been widely claimed as a benefit of CMC and both Berge’s (1994), and Fabro and Garrison’s (1998) studies confirmed this in postgraduate settings. I found that in this study undergraduate discussions can benefit in a similar way.
10.5. The influence of the curriculum

One of the issues in the CMC literature is whether the learning potential of the medium lies in the medium itself or whether responsive curriculum design is needed as well. The analysis of the findings of the four cases indicates the significance of curriculum design.

10.5.1 Assessment

In three of the cases, assessment emerged as the most influential factor for students learning through online discussions. The four key aspects were:

- The weighting of the assessment.
- The marking criteria relating to participation.
- The extent of the effort.
- The impact of other commitments like work and study commitments.

The Participation, Debate and Priority cases provided illustrations of interrelationships between these four factors and the ways in which students responded to them in different contexts.

In the Participation case, where the online discussions were not assessed, most of the students were under pressure of time and made few contributions for that reason. In contrast, there was full participation in the Debate case, where the online discussions were worth 15% of the final grade, and were held over six weeks. The postings were highly structured with a word limit, date deadlines and the students had to make three postings to get any marks. This meant that only full participation was valuable for marks and this may have influenced the student’s commitment to managing their time in order to make their postings.

In the Priority case, where many of the students were under considerable pressure of time, the online discussions were worth ten% of the final grade and were held over twelve weeks. While most students said assessment was influential, participation was variable. There was evidence of the kind of prioritising that Lockwood (1992) has described, where the costs of participating were weighed against the benefits, and the small reward of 10% of the final mark resulted in the online discussions losing
priority against competing work, family and other study demands. From a very pragmatic point of view, this would tend to support Bures Abrami and Amundsen’s (2000) finding that an allocation of 10% of the final grade is the minimum portion of that grade that will influence a student’s behaviour. However other students carried out a different cost benefit analysis and used good time management skills to ensure their participation.

In the Group case, the online discussions carried the greatest weighting at 30% of the final grade. However, only three students in this case mentioned that assessment was motivational, and they and four other students were low participants in the discussion. It is difficult to account for the lack of influence of assessment in the Group case, when it is compared with the other cases. The subject was very accessible and it may be that students were confident of passing the course. This view would be supported by the grades of the four lowest contributors, who all obtained a B grade for the course.

The cases showed that the time flexibility of online discussions added a new dimension to the prioritising that students engaged in while they were studying. In terms of Lockwood’s (1992) cost benefit analysis model, assessment was the most significant benefit that was weighed by the students when they were prioritising. While his research was carried out in the distance field and did not include online courses, the assessment factor has been identified as highly influential on student behaviour in conventional and online contexts, for example, Ramsden (2003), Laurillard (2003) and Garrison and Anderson (2003). This finding indicates the value of integrating assessment in CMC with the course, and developing clear activity descriptors and marking criteria. It may also explain the high level of deep approaches in the online discussions.

One other of Lockwood’s (1992) cost factors mitigated the influence of assessment and this was the intellectual effort required for the discussion. In the Group, Priority and Participation cases, the students described occasions where they evaluated what was required and if the activity was perceived as cognitively demanding, for example, it required Internet research, significant evaluation or analysis or indicated some complexity, then it was avoided or completed with minimum effort. The activities listed in the previous sentence are often regarded as desirable activities in a
CHAPTER 10

COMPARATIVE ANALYSIS AND DISCUSSION

constructivist learning environment; however, for some students, they were regarded
as a cost of learning. There was no evidence from the student interviews of
Lockwood’s (1992) emotional costs (for example, lack of confidence) unless this was
subsumed within communication anxiety. This was surprising because of the public
nature of the forum where there was a record of who made a posting and what they
said in that posting. It was also notable that, while almost every student endorsed the
relevance of the course for their career aspirations, this was rarely mentioned as one
of the benefits in the prioritizing process, although this may have been implicit.

The assessment focus of students is often regarded as instrumental and in some ways
as unworthy of university learning, for example, Ottewill (2003). However Duffy and
Cunningham (1996) observed that, in a constructivist context, the distinction between
learning and assessment may become blurred or nonexistent and this approach may
be a way of aligning student motivation with the benefits of learning by online
discussions, and these cases may provide some insights into how this might occur.

10.5.2 The activities

While there is widespread recognition by constructivist researchers of the value of
socio-dialogic activity for learning (Duffy and Cunningham, 1996), less is known
about what activities create a good online discussion. Analysis of the four cases has
identified some components and these are discussed next.

All of the cases identified the need for online discussion activities that are truly
discursive. The students in the Participation case described the characteristics of a
discursive activity which were discussions about topics that included opportunities
for interpretation and room for multiple viewpoints. The Group, Debate and Priority
cases provided examples of such discussions. In comparing these three cases, the
most motivational activity from the students’ point of view, was the debate and this
was so for two reasons. First, the subject of the debate was a controversial topic
which created space for multiple viewpoints which might be theoretically, culturally,
politically or pragmatically based. Secondly, the debate as a discussion structure
created dissonance because it was based on the concept of an argument where
everyone had to take a position, agree or disagree and support their position with
evidence. Furthermore, every student was required to respond to another student’s
position, by agreeing or disagreeing, on a reasoned basis. The CMC environment
enhanced such discursive features of the activity by providing a public and permanent record of the different views, and together, all of these factors seemed to create passion and a commitment to the activity itself.

The success of the debate suggested that for undergraduates, an (assessed) activity based on an inherently interactive and dissonant topic and process was likely to result in high levels of interest, participation and interaction. The role of controversy and dissonance has been recognised in the CMC context, by Gunawardena et al (1997) who placed it at the second stage of a five level knowledge construction model. Garrison and Anderson (2003) also included it within their model of cognitive presence as a starting point for cognitive activity. The debate was also an example of Bruffee’s (1993) non-foundational activity where knowledge was developed by students working together in a social context (here, CMC) through the medium of conversation. The discursive nature of the activity resulted in dialogic interaction which provided the capability between learners for a ZPD (Vygotsky, 1978) which would increase learning beyond the reading of the messages.

The debate was similar to Dysthe’s (2002) discussion activity (which also resulted in interaction) with its provocative text, complexity, real world application, challenge and room for multiple viewpoints. However, Dysthe’s activity was not a debate and it may be that this degree of structure is not required for postgraduate students to be highly interactive. Like Light and Light’s (1999) undergraduates, the students in these cases were apprehensive about disagreement and the possibility that it might cause offence and this point highlights the need for students to learn about giving and receiving feedback to gain the full benefits of learning through dissonance.

The activities in the Priority case required the application of theories to business practice, but these kinds of activities did not create the same interest or interaction and this may be because they were perceived by some students as not being truly discursive. There was no structured dissonance within the activity, as was the case with the debate and the direction to provide feedback did not seem to create the same kind of intensity. The nature of the subject could be influential, but if debates are not suitable for some courses, then there are other activities which can profitably make use of the elements of controversy and structured dissonance. Multi-stakeholder
scenarios which examine social, business or economic problems for an organisation or a community are such an example.

One of the things students liked about the activities in the Group, Debate and Priority cases was the chance to apply the theories learned in class and make them relevant through online discussion of real world circumstances, that is, to situate their learning (Brown, Collins & Duigard, 1989). The multiplicity of views expressed in the online discussions helped the students to understand the role of different contexts, and the ambiguity and complexity of reality. The extent of the different viewpoints was revelational for many students and highly valued and, therefore, provided some motivation for reading the messages. The opportunities for application in the Participation case were ignored by the students, possibly because of their perceptions that all of the online discussions required regurgitation of the textbook and right and wrong answers and this may have been endorsed by the availability of model answers on the website.

These cases indicated that students valued one of Duffy and Cunningham’s (1996) central principles of constructivist learning activity, that knowledge is context dependent. Business courses, which are generally vocational, provide plenty of opportunities to include such authentic activities. In the Group, Debate and Priority cases, many students were easily able to draw on their personal and work experiences in their discussion of theoretical points whereas, because of the nature of the subject, this was quite rare in the Participation case and this affected student motivation.

Another important feature, which the Group, Debate and Priority cases shared, was that the activities were all well-structured and well-documented with significant description of the activities and marking criteria on paper, online and also through the face-to-face class discussions.

The dialogic power or potential of the activity was a critical factor in designing online discussions, dependent upon the ability of an activity to promote interaction in the particular course context. Debate is one example. However in all of these cases, it was rare for students to move beyond a dyad (a message and a single response) pattern of interaction, so there was a need for activities to foster more extended interactions. Some of the Chinese students did not like the inherent conflict within
the debate activity, but they adapted and worked successfully, and there is a case to be made for the benefits of learning through dissonance, both in terms of the development of intellectual abilities and work/life skills.

10.5.3 Discussion group size

Another way to create an inherently interactive mechanism is through the use of discussion groups rather than whole class discussions. This was very successful in the Group Case, where the students identified the group structure as highly motivational for them in terms of the high level of comfort and commitment from the students. The group structure was also associated with higher levels of interaction, with 48% of the postings being interactive. However, the group discussions in the Group case were not sufficient to produce a high level of participation, with many of the students contributing below the class average. The group structure will not always suit every activity, and in the Debate case, the whole class structure created a large pool of new ideas requiring intellectual effort to understand and order that was enjoyed by the students.

The Group case demonstrated many of benefits of Bruffee’s (1999) model of collaborative learning for undergraduates. The small size of the group and the consequent comfort of group members in expressing their thoughts encouraged collaboration because students were committed to working together in the absence of the teacher. The discussions were characterised by informality, humour and self disclosure and demonstrated the kind of social presence that Stacey (2002) found accompanied high rates of cognitive activity. There was also critique of each others’ views and it may be that smaller online groups (as opposed to larger structures) are an easier environment in which to start building the ability to positively critique peers. The groups were comprised of six members, and this size provided the benefits of small scale discussion, with enough messages being posted to create the possibility for learners of a ZPD (Vygotsky, 1978) through the presentation of viewpoints by knowledgeable peers. However, an issue for groups operating in this way is that sufficient contributions are needed to ensure that such a zone can provide cognitive development opportunities and this may be a challenge in groups where there is reduced participation.
The students’ attempts to understand the theoretical concepts through a discussion of their experiences and the application of theory to everyday events in a chatty and informal style illustrated the way Bruffee (1999) saw students using their own language, that is, ‘learning by their own verbal bootstraps’ (1999, p.77). The written mode of this contribution provided a form of cognitive amplification (Warschauer, 1997) and showed one way in which CMC discussion can extend Bruffee’s (1999) benefits of (oral) conversation. The value of the group structure has also been endorsed by Stacey’s (1999) research with postgraduate distance students, particularly, the way in which a zone of proximal development may develop through small group collaboration in learning. The current study has illustrated that there are similar benefits for undergraduate and campus-based students.

10.5.4 The role of the teacher in the online discussions
In the Group, Debate and Priority cases, the teachers rarely entered the online discussions. This absence was part of the course design and was introduced to create a more student-centred discussion space, where the students knew that the discussions were monitored by their teachers, with linking and feedback strategies carried out in the face-to-face classes. This design was generally accepted by students, although in the Priority case, some students wanted more teacher involvement online. By contrast, the teacher in the Participation case made regular postings with feedback to students in a pattern that was somewhat reminiscent of the classic classroom discourse pattern (Cazden, 1998) namely, initiation by the teacher, a response by students and evaluation by the teacher. Hillman (1999) has also identified a similar pattern in CMC, but in the Participation case, it was not regarded as motivational by the students, which was surprising considering it was a demanding subject with a student preference for teacher directed learning.

The presence of deep approaches in the Group, Debate and Priority cases illustrated a positive influence for reduced teacher involvement in some purposefully designed online discussions and this is confirmed by Dysthe’s (2002) view that the absence of the teacher created a more symmetrical discussion. This absence, as well as the activity, may have fostered dialogue because students were removed from the direct expertise of the teacher and felt freer to comment, or alternatively, from a more pragmatic position, students had to take responsibility for the discussion because the teacher was not going to intervene. The influence of assessment has to be
acknowledged in this undergraduate context, and this is somewhat different from Dysthe’s (2002) research, where the students were postgraduate part-time students and the online discussion was not assessed.

The teachers’ reduced involvement in the online discussions contrasts with much of the literature. For example, Laurillard (2003) argued for strong moderation, and Garrison and Anderson (2003) identified the problematic ‘pathological politeness’ (p.50) that characterises many online discussions and have advocated for the role of the teacher online in balancing between ‘an intellectually challenging, yet respectful, and a personal yet focused, community of inquiry’ (p.50). However, in the blended learning environment of this study, there were many opportunities for the teacher to address the issue of rigorous online discussions in the face-to-face classes. This research study shows that such practice is highly desirable because of its value in integrating online discussions with face-to-face class activities and influencing students’ perceptions of the CMC learning environment.

The absence of teacher involvement in the online discussions themselves still leaves a significant role for teachers in the design, communication and integration of online discussions within the course overall, which in some respects may be more fundamental in this mode of learning than a moderation role. The current research demonstrates that where the activity is designed as genuinely discursive, relevant through its real world connection and well structured and documented, then deep approaches to learning can occur where there is a low teacher presence. As such, this may be a model for constructivist CMC learning environments, and the lesson lies in paying more attention to the relationship between the activity and the presence of the teacher. The more structured, relevant and discursive the activity, the less the teacher’s involvement may be needed, and vice versa, especially when learning frameworks for students and feedback can be provided in the face-to-face classroom.

10.5.5 Influence of the discipline.

In the Group, Debate and Participation cases, the discipline outcomes demonstrated Biglan’s (1973) concept of a ‘soft’ subject, where knowledge structures were less paradigmatic than the sciences and their fluidity allowed for more interpretation. Consequently, in these disciplines, discursive approaches were encouraged and this provided a natural coherency between the subject and the online discussion activities.
By contrast, the Participation case resembled Biglan’s (1973) concept of a ‘hard’ subject because its knowledge structure and techniques had to be correctly understood and applied. The traditional discipline approach to the subject at undergraduate level involved lots of exercises to develop competence, and then moved to problem solving that drew on the understanding developed through the exercises. Students carried out these exercise and scenario activities in independent study and answers were supplied, so that students could establish whether they understood the course content. The Participation case illustrated that the need for accurate discipline knowledge made it difficult to develop online discussions which the students regarded as valuable. Discursive approaches were possible in the Participation case, but they were based on a correct understanding of the subject’s principles and techniques, and students found this prior acquisition intellectually challenging. Another barrier to discursive approaches in the Participation case was that most of the students had no business or personal experience relating to the course topics so they found it difficult to relate to, and discuss course issues.

The Participation case indicates that there are issues for subjects which demonstrate ‘hard’ discipline characteristics when they wish to move into the CMC environment. There was little explicit discussion in the literature of the problem of developing online discussions for students in such subjects. Rourke and Anderson (2002) suggested that a factor in students’ enjoyment of discussions was whether the discussions involved ‘interpretive’ or ‘higher level thinking’ as opposed to technical or lower level topics. The Participation case provides evidence of students’ lack of interest in online discussions revolving around lower level activities such as recall. This may mean that in ‘hard’ subjects, online discussions have limited learning value, and it may be that other online learning tools are more useful, for example, multimedia-based games and simulations. Alternatively, the Participation case shows that, for some disciplines, more careful attention is needed in the design of activities that are genuinely discursive.

10.6. The relationship of the online discussions to the face-to-face classes

The concept of a blended learning environment in the literature is one which is a suitable mix of virtual and physical learning spaces. The four cases indicated that for
students, a good blend of teaching and learning approaches is one where there is a strong connection between their face-to-face classes and online discussions.

10.6.1 The relationship and its nature
While the online discussions were situated within the overall course and its documentation, it was the face classes that were central to the students’ learning experience and what emerged from all of the cases was an expectation by students that there would be a connection between the online discussions and the face-to-face classes. The need for explicit linkages between these two aspects of the learning environment has also been identified in the literature by other researchers, for example, Armatas, Holt and Rice (2003) researching first year undergraduates’ online experiences. The students’ endorsement of the value of the connection between the online and face-to-face components of their course may indicate that there is a need to balance the time and place flexibility provided by CMC with a connection to the more time and place bounded weekly classes. Much of the literature about flexibility has focused on providing choices for students, but this research indicates that more attention is needed in order to create more connections for undergraduates between different parts of their learning experience.

The cases provided undergraduate insights into how the online and face-to-face elements of a blended environment might best support students’ learning. The Group, Debate and Priority cases are all examples of courses where the students thought that there was a positive relationship between the online and face-to-face elements of the blended environment which occurred in three different ways.

1. All students identified the connections through the weekly topics or course content.
2. The role of the teacher was very important. Students identified activities like the teacher’s clarifying requirements and expectations, explaining benefits and encouraging participation. A more important role for the teacher was providing feedback on the discussion progress, including the message standards and the quality of the content of the messages.
3. The class activities could develop knowledge and skills which were needed for the online discussion, for example, in the Debate case, students practised applying theoretical concepts in case studies.
In the Participation case, there was no sense of connection for the students between the online discussions and the classes except for the weekly topic. The teacher explained the benefits of the online discussions, and expectations and regularly reminded students about them, but this was insufficient to make any valid connection for the students.

These cases studies indicate that for on-campus students, the best connections occur when online discussions and face-to-face classes are linked in a way that is directly concerned with learning and/or assessment, and not through factors like reminders to participate or explanations of their rationale in the course. These last two matters are important, but this research indicates that they do not create a sense of connection for students. There are two other circumstances where connections in a face-to-face class are especially important: where the teacher is not a regular participant in the online discussions; and where the online discussions are not assessed. Here, a connection to the face-to-face class is essential in order to give the online discussions legitimacy through attention in the classroom by the teacher. Despite the fact that attendance at the face-to-face classes was voluntary, students always prioritised attending class, and it may be that along with assessment, the real curriculum in blended environments lies in the face-to-face classroom with the teacher. While course documentation is important, it is its interpretation in the classroom by the teacher as a generally spontaneous and iterative activity that students also value. Online discussions need to be incorporated into the classroom so that they can be legitimized though this process.

10.6.2 The blended environment
Research about blended learning environments has indicated that online activities must add value to campus- based students’ learning experiences (Walker & Arnold, 2004). The four case studies illustrate what constitutes enhancement for undergraduate students. Where lectures are part of a course, then CMC can add value by providing more opportunities for interaction, but where there is already a culture of campus- based classroom interaction, as there was in these cases, then providing added value is more challenging. One way in which this might occur is through the provision of different kinds of discussions to partner face-to-face classroom interaction, involving a qualitative rather than a quantitative change to learning.
The differences between the face-to-face (in class) and online discussions were well articulated by the students in the cases and are summarised in Table 10.3. Many of these differences are reflected in the literature, (see Chapter 3.3.2). However, here they are presented from student viewpoints, from participants who generally had far more experience of CMC than their teachers.

### TABLE 10.3 SUMMARY OF THE MAIN DIFFERENCES BETWEEN DISCUSSIONS IN ONLINE AND FACE-TO-FACE (CLASSROOM) SETTINGS

<table>
<thead>
<tr>
<th>Characteristics of face-to-face discussion (in class)</th>
<th>Characteristics of online discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication mode (listening and talking)</strong></td>
<td></td>
</tr>
<tr>
<td>Pleasant and familiar.</td>
<td>Takes longer.</td>
</tr>
<tr>
<td>Easier to share and develop ideas through listening and talking.</td>
<td>Requires effort for reading, thinking and writing.</td>
</tr>
<tr>
<td>Not much thought and comments often reactive and opinion based.</td>
<td>Reading and writing procedures deeper thinking and better expressed ideas.</td>
</tr>
<tr>
<td>Ephemeral – ideas get lost or forgotten.</td>
<td>Produces a record of the points which students can go back to and read again or use as a resource.</td>
</tr>
<tr>
<td></td>
<td>Easier for ESL students to read and write rather than listen and talk.</td>
</tr>
<tr>
<td><strong>Physical character</strong></td>
<td></td>
</tr>
<tr>
<td>Visual and aural cues were helpful for some students i.e. richness and depth of information.</td>
<td>Absence of cues made it difficult to gauge impact of comments.</td>
</tr>
<tr>
<td>Easier to meet and get to know people, to share and network.</td>
<td>Absence of visual and aural feedback helps some students to speak out, e.g. ESL and shy students.</td>
</tr>
<tr>
<td>Sometimes made ideas easier to remember.</td>
<td>Easier for a student to be honest, to say what she or he really thinks, to be disclosing and to disagree.</td>
</tr>
<tr>
<td>Dominated by competent speakers and needed confidence to speak out.</td>
<td>Always on task – was a public space and not for socialising and student were there in their own time.</td>
</tr>
<tr>
<td>Easy to get distracted e.g. by private conversations</td>
<td></td>
</tr>
<tr>
<td>There for the duration of the class.</td>
<td></td>
</tr>
<tr>
<td><strong>Timing – synchronous</strong></td>
<td></td>
</tr>
<tr>
<td>Instantaneous communication with faster pace, and flow of ideas.</td>
<td>Delayed communication which could be discouraging.</td>
</tr>
<tr>
<td>Rapid feedback and interaction made it more productive and better for idea development.</td>
<td>Plenty of time to read, think, write which produced better discussion points</td>
</tr>
<tr>
<td>Comments could be reactive and not well thought out.</td>
<td>Can go at student’s own pace, which was especially helpful for ESL students.</td>
</tr>
<tr>
<td>No choice or control by students, interaction generally managed by the teacher in (time bounded) class.</td>
<td>Choice of time for participating, but time management issues for many students.</td>
</tr>
<tr>
<td></td>
<td>Can choose with whom to interact.</td>
</tr>
</tbody>
</table>

Many students perceived the two environments as complementary. This supported and illustrated Oliver and Trigwell’s (2005) variation theory of learning, where learning occurred when students experienced difference, and had to work with the
consequent contrast and comparison. It was not the difference _per se_, that was important, but the way the curriculum might take advantage of the difference for learning.

Drawing on the main findings of the cases, a new complementary model for blended environments is presented below in Table 10.4. The model emphasizes students’ perspectives of the differences between the two environments, their complementary nature, and Oliver and Trigwell’s (2005) variation theory. Some researchers have begun to offer frameworks for blended learning environments for entire courses, for example, Ellis and Calco (2004), but the framework in Table 10.4 focuses specifically on the relationship between online and face-to-face (classroom) discussions.

This complementary framework focuses on the strengths of the different media and their value for students’ learning, as opposed to the time flexibility benefits that students identified. It also attempts to build connection and integration between the two different environments. A further purpose of the framework is to enable teachers to design curricula which work to the strengths of each medium, and is to ensure connection between the two modes. This framework could also be given to students in a modified form to introduce the idea of dialogic learning (Dysthe, 2002) to students. The framework is based on the assumption that somewhere within a university course, there will be a space for face-to-face discussions, for example, in small, group tutorials. However, it may also be capable of being adapted for larger gatherings, such as lectures, as well. This framework is draws on the main findings from the cases and student perspectives and there are other strategies which teachers may wish to include, for example, the use of critique and debate.

### TABLE 10.4  A COMPLEMENTARY FRAMEWORK FOR BLENDINGS 
ONLINE AND FACE-TO-FACE (CLASSROOM) DISCUSSIONS.

<table>
<thead>
<tr>
<th>For the face-to-face classroom</th>
<th>For online discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the beginning of the course</strong></td>
<td></td>
</tr>
<tr>
<td>Use class time to:</td>
<td></td>
</tr>
<tr>
<td>Discuss the value of dialogic learning.</td>
<td></td>
</tr>
<tr>
<td>Explain how this happens.</td>
<td></td>
</tr>
<tr>
<td>Enable students to practice in class and provide feedback on their efforts.</td>
<td></td>
</tr>
<tr>
<td><strong>Include activities which</strong></td>
<td><strong>Devise activities which</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Act as ‘icebreakers’ i.e. that facilitate building familiarity and comfort amongst students. Focus on oral and presentation skills. Focus on the development of ideas, getting started and brainstorming. Take advantage of the spontaneity and flexibility of real time and physical contact. Draw on the strengths of reading, writing and time for thinking. Are discursive. Include controversy and dissonance to promote interaction. Require research. Apply and connect or extend theoretical concepts discussed in class to the real world and practice. Use for activities which include critique, analysis, evaluation and synthesis. Require students to give feedback to their peers (this can improve skills, are relevant for work and have cognitive benefits as well as increasing interaction). Can help students to understand difficult or complex concepts. Are structured, and provide plenty of written information.

Use the face-to-face class to:
Introduce, continue or conclude an activity, and vary this during the semester. Include sessions on giving and receiving feedback, model this and provide low risk practice opportunities for students. Engage in activities which prepare students for the online discussion e.g. topics or skills. Make sure that students understand what it requires for the online activities.

Groups.
Include small group discussions to build speaking confidence and rapid identification of some other students in the class to assist the development of social presence online.

Have a regular slot in the class for referring to the online discussion and:
Explain and encourage participation. Provide feedback on the online discussion topics e.g. if possible, access them in class and make comments. Summarize or synthesize discussions or ask students to do this in class. Introduce the next discussion activity.

Groups.
Build on class small groups and continue discussions online and/or include small group activities to build confidence, and comfort and social presence. Use the online space for student groups to prepare class presentations or seminars.

Online
Use the online discussions to prepare for class or as a follow up to class. Monitor rather than moderate the online discussions and let students know this is occurring. Make participation an assessed requirement worth 10% or more of the final grade so that everyone becomes an active learner, including shy and ESL students.

In much of the debate in universities about blended learning, there is a sense of contest between face-to-face learning and online discussions. What emerges from these four case studies is that students understand the complementary nature of these two environments, and it is now timely for teachers to consider how such a framework might support constructivist learning. The case studies have indicated that
deep approaches are a response to student perceptions of a learning context that included the CMC environment. However, the use of frameworks like the one described above could anchor online discussions more firmly within blended learning environments, delivering more influential message to all students, especially those who are reluctant to participate in online discussion.

10.7 Perspectives about online discussions from Chinese students
The Debate case provided insights into the ways in which Chinese students with a Confucian heritage go about learning in online discussions. The students in this case were all ESL students and were generally unfamiliar with the Kiwi learning culture. However, there was a surprising degree of similarity between the Chinese and the Kiwi participants (see Chapter 8.8 for details).

The Chinese students liked the CMC environment because it helped them to interact with their peers. In particular, they could join in the online conversations, whereas they often felt excluded from face-to-face discussions because their rapid speed made it difficult for the Chinese students to think immediately about the topic and to compose a response. Also, many of the Chinese students were shy because they lacked confidence in their language skills. In the CMC environment, reading and writing were easier for them than listening and speaking and the permanent record meant that they could revisit comments. The virtual environment meant that it was a person’s ideas and not their identity that was important, and other people’s reactions, especially negative ones, were not visible to the receiver. The slower speed meant that the students had plenty of time to think, construct their arguments, make use of a dictionary if needed and then write their posting.

These perspectives are similar to those of the ESL students in Yildez and Bichelmeyer’s (2003) research. There, the researchers regarded the extra time that students took in their participation as a linguistic barrier, but the Debate case findings indicated that against this time cost to students, there were benefits for them of increased involvement with their peers. This research study indicated that there were two other major benefits for the Chinese students. The first of these related to the way in which the CMC environment was able, through its differences, to provide
another and complementary learning environment which mitigated language issues for ESL students in the face-to-face environment. There were also plenty of opportunities for the kinds of learning that Bruffee (1993) referred to as verbal bootstrapping where the Chinese students were able to discuss course concepts by using the subject language as they currently understood it. This kind of discussion could help to ameliorate language issues for students as they developed competence in using the jargon and concept language of their course. The second benefit relates to the ability of the Chinese students to benchmark, namely to compare their postings with those of other students. This concept has been discussed earlier (see Section 10.4.2), and may be especially valuable for students who are new to the university and its learning culture. Many of the Chinese students were unfamiliar with activities like critical thinking, and the ability to look at other students’ contributions as examples, may have been especially helpful.

Despite the fact that the Chinese students were uncertain about the value of learning by discussion and showed a clear preference for learning with the teacher, they demonstrated a high level of deep approaches to learning and fewer surface approaches than their Kiwi counterparts. The Chinese students were ambivalent about the debate as a learning activity and about the absence of the teacher in the online discussions. Putting to one side the positive role of the CMC environment in promoting deep approaches to learning, these factors demonstrate that the Chinese students, like the Kiwi students, acted on their perceptions of what was expected, that is, their learning was relational (Entwistle & Ramsden, 1983). The findings confirm Volet and Renshaw’s (1996) research which found that Chinese students, are highly responsive to new learning contexts, and will engage in deep approaches if they perceive that such approaches are required by the course. Like Biggs (1999), Volet and Renshaw (1996) argued against the negative stereotyping of Chinese students and identified additionally their strong drive to achieve and their adaptability. Many aspects of the debate, including the CMC environment, were quite novel to the Chinese students and their responses, particularly the evidence of few surface approaches, demonstrated their adaptability.

The high level of deep approaches was different to the findings of Smith et al’s (2005) research into Chinese learners in a CMC environment. Although they were investigating different issues, there were some similarities in that the online
discussions were assessed and the teacher did not enter the discussions. Smith et al. (2005) found that the Chinese students made fewer postings of an intellectual nature and they ascribed this to the language demands of CMC which resulted in cognitively less sophisticated postings. This interpretation is different from the perspective presented by the Chinese students in the Debate case, who said that the CMC environment helped them to address the English language demands of the course by providing an easier communication environment for them. The deep approaches that were demonstrated by the Chinese students were a response to their perception of the course learning context and it may be that in Smith et al.’s (2005) research, there were other factors which resulted in fewer intellectual postings.

The perspectives of the Chinese students illustrated the difficulties that students from other learning cultures encounter when they come to study at Western universities and the way in which the CMC environment might provide an alternative learning environment. These findings could also be relevant for ESL students and students from other cultures as well.

10.8 Contemporary students and time pressures
One of the themes running throughout this research has been the issue of time pressures for students and the way in which they attempt to address these issues, including the use of CMC. The overall picture is one of multiple perspectives and contradictions.

Throughout the interviews, many students described time pressures that arose from conflict between their personal, work, and family commitments and their study, and this was highlighted in the Priority study. Students liked time flexibility in principle, but many had time management problems and some preferred the regimentation of the weekly class. The time and place flexibility which was provided by the CMC environment was contradicted by the clearly expressed need for connection between the online discussion and the face-to-face classroom. Students recognized that time independence gave them time to think and it improved the quality of the discussions. However, many of the students valued instantaneous communication and found the slowness of online discussions irksome. In the face of multiple demands on them, the major cost factor in prioritizing for students was the time cost of study. It was clear
that time issues were most important for these undergraduates, regardless of their age and generation, employment, culture, or family responsibilities.

The case studies illustrated a strong focus by students on each task and its requirements and the demands of assessment. Students were studying in order to get a qualification so that they might obtain a good job, and knowledge was regarded as a bundle of relevant information and skills that would assist future careers. These approaches and views are somewhat at odds with the deep approaches that were demonstrated in the online discussions. One possible explanation was that the online discussion activities were examples of Biggs’s (2003) concept of constructive alignment, where the learning context was designed to focus on student activity and there was alignment between its different aspects, for example, the learning activities, assessment, the role of the teacher and the physical and virtual spaces.

Reflecting on the idea of deep and surface approaches to learning, this principle was associated with a time when fewer people went to university and those that did were more affluent and had the time to value learning for its own sake, rather than for vocational reasons (Harris, 1993). Since that time, the emergence of factors like globalisation, technology and rapid change have altered the social and economic context for many students. Wyn and Dwyer (2000) have identified far more complex and multidimensional life patterns for young people that include working and studying, deferring career commitments for economic reasons, and particularly for women, balancing private family arrangements with public demands, for example, work and study. The different student responses to the issue of time, described above, are illustrations of their approach to managing the complexity of work, study and family and balancing these competing demands. Their focus on relevant skills and a qualification are a strategy to develop economic security in a volatile employment market. These are all rational and competent responses from students to the world as they see it. While Wyn and Dyer (2000) focused on young people, many of the older students demonstrated similar life patterns, and pressure of time and work life balance are, today, acknowledged more widely as significant contemporary issues for most people.

While the students’ viewpoints do not preclude deep approaches, as the cases have demonstrated, I would suggest that some aspects of deep and surface approaches
need to be reviewed or recast to accommodate the contemporary context for students. There is an implied value judgement in the idea of deep and surface approaches that may belong to the context and times in which they were developed. Harris (1993) has previously argued for more consideration of the social, economic and political assumptions that regard deep approaches as ‘good’ and all others as ‘bad’.

Some aspects of student behaviour could possibly be reinterpreted as strategic approaches to learning and this concept might be able to accommodate modern life patterns. This third approach to learning has been far less influential because there is less empirical support for its existence. Another way to reposition the approaches would be to regard deep approaches as an ideal in learning and to reposition or develop other approaches which are a more accurate reflection of reality. A more fundamental way to revise deep and surface approaches would be to take an approach like that of Case and Marshall (2004) and to use a data driven method that would take into account the life patterns of today’s students.

10.8 Summary
This chapter has, in a comparative analysis, discussed the similarities and differences of the Group, Participation, Debate and Priority cases. The case studies have demonstrated that students will adopt deep or surface approaches according to their perceptions of what is required. Some CMC features were influential. The text-based environment, with its requirement for written communication encouraged students to think more deeply. The cases illustrated different levels of peer interaction. However, the interaction was rarely able to support the kind of dialogic approaches that are regarded as valuable for learning. Time flexibility was regarded as beneficial in principle, although students often had time management problems. Many students recognised that the asynchronous character of the environment improved the quality of the discussions, and Chinese and other ESL students were able to participate more easily for this reason.

The cases indicated that the most influential feature of the curriculum was assessment. Also emerging from the four cases, is the importance of a genuinely discursive activity and the value of its application to real world issues. Other influential curriculum factors that were identified were the low presence of the
teacher in the online component of the blended environment, the use of small groups and the impact of subject discipline values and pedagogies. Strong connections between the online discussion and the weekly class were also recognised as important, with the most desirable linkages being regular feedback from the teacher about the online discussion and activities which helped students prepare for the online discussions. Students understood the differences between face-to-face and online discussions and regarded the two modes as complementary. Also emerging from the analysis was an illustration of the pressures of time for students as they balanced family and work with study and the ways they addressed that, especially prioritizing learning activities in a blended environment.
Conclusions

11.1 Introduction
In my thesis, I have reported on the ways in which undergraduate students learn in online discussions. The findings of my study show deep approaches to learning by business students in campus-based degree courses that had been redesigned to include significant online discussion activities and reduced face-to-face class contact. I also described and explained the influence of the CMC environment and that of the curriculum design on students’ learning in the online discussions.

The research identified and described the impact of the text-based environment on students’ learning, as well as the potential for interaction and the role of asynchronicity in students’ learning. The thesis identifies key curriculum factors that affected the students’ online involvement and these were the role of assessment, the nature of the discussion activity, the role of the teacher, the size of the discussion group and the influence of subject discipline values. The research explored the relationships between face-to-face and online learning and established the importance of a pedagogical connection between these two aspects of the blended environment. On the basis of students’ views about the complementarity of the two different learning environments, a framework was developed for making the best use of the differences between the two environments.

A fundamental aim of this research was to present student perspectives on learning in online discussions. I have documented these views in four different course settings, and a picture has emerged of the different factors that influenced their learning in terms of the CMC environment, the broader learning context and the balancing of work and family demands with their study.

The use of online discussions in campus-based courses was, at the time of this study, an innovative teaching strategy and there was a challenge to establish the value and relevance of online discussions for students who had expectations of face-to-face learning experiences at universities. My thesis has provided insights into student
views about online discussions and a framework for complementarity, both of which are relevant and timely for universities today.

11.2 Summary of the study process
This research study investigated the experiences of undergraduate business students who were enrolled in compulsory courses in a business degree. I used a case study approach and investigated four case studies over three semesters where second and third/final year students were enrolled in a range of business disciplines. Different data sources provided multiple perspectives on students’ learning. Analysis of the course documentation and the online environment provided a description of the course setting. Content analysis of the online discussions provided a further layer of description about the character of the students’ online postings. Substantial interpretation of the students’ experiences was added through interviews. Systems data provided further description of posting activity. Each of the four case studies illustrated a particular learning ecology and I characterised and named them according to their most notable feature. After completion of the case studies, I carried out a comparative cross case analysis to ascertain if there were any broad principles arising from the four case studies in relation to the research questions.

11.3 What has been learned from this research?
The campus-based students in this study acknowledged that online discussions helped them to learn. This was directly acknowledged by some students who described the benefits of CMC, while for others, this reflection emerged later in the course of their discussion on how they went about contributing to online discussions. Evidence of such learning was found in the analysis of the online discussions which indicated predominantly deep approaches, with fewer surface approaches to learning.

The real value of this research study lies in identifying how features of the CMC environment influence students’ learning and in exploring the impact of the broader learning context, including the curriculum and the blend of real and virtual environments. The individual case studies illustrated these facets in particular settings, and the cross case comparison has drawn out some general principles. The main findings of this study, which emerge from the comparative analysis have been
summarised in response to the research questions first presented in Chapter one of this thesis.

11.3.1  How did undergraduate students learn in online discussions?
What were their approaches and actions?

Comparison across the case studies indicated that students adopted deep approaches to learning (for example, the Debate and Group case studies) and surface approaches to learning (for example, the Priority case study) where they perceived that this was required by the discussion activity. The activity descriptors and the marking criteria in these case studies indicated that depth of understanding, research, application of theory, analysis, evaluation and critique were required. The influence of students’ perceptions was also illustrated inversely in the Participation case study, when online discussions were optional and this resulted in a significantly lower level of participation, especially message posting frequency.

The case studies revealed a common three stage pattern of participation in the online discussions. This comprised a reading phase that involved selection of some messages, followed by a preparatory phase that was closely related to the student’s perception of the activity, and finally, a writing phase where students communicated their understanding or point of view to their peers. Students appeared to engage in more reading of messages than posting of messages, and the low level of postings is somewhat contradictory to the deep approaches that were documented.

These case studies illustrated Ramsden and Entwistle’s (1983) experience of learning research where students’ approaches to learning are relational, that is, they carry out learning activities according to their perceptions of what is required. The findings also extend the concept to a new context where content analysis has produced an illustration of deep and surface approaches in the CMC environment. Such approaches are highly coherent with a constructivist philosophy where the emphasis in learning is on meaning making and developing understanding through active language based interaction.
11.3.2 What was the influence of the online discussion environment, especially its text-based nature, peer interaction and time flexibility and independence?

Text-based environment
Part of the students’ perceptions of what was required related to the way in which they viewed the CMC environment. One of the strongest findings across the four case studies was the value of the text-based environment for the student’s learning. Students identified several benefits of reading others’ messages and these included accessing a pool of information and new perspectives, using the messages to start their own thinking and to check their understanding. Being able to benchmark learning by observing other students’ posted messages, is an important learning advantage of CMC which may encourage deep approaches or constructivist learning. It was the act of writing which mainly developed students’ understanding and this occurred at two levels. Initially there was an internal focus where students engaged in making their own meaning and some students recognised the way in which their tacit knowledge became more explicit. Next, the focus became external, and this often involved students clarifying, reasoning and structuring their ideas in order to best communicate with their peers. This illustrated Vygotsky’s (1978) theories of the role of language in its written form, and demonstrated the way in which working with text in the CMC context could act as a cognitive amplifier in the learning process.

The permanent record and public nature of the CMC environment resulted in communication anxiety for some students, although this was less so for ESL students, who regarded classroom discussions as far more difficult because of their lack of language competence and confidence. By contrast, many students enjoyed the freedom of the text-based online environment to say what they thought.

Peer Interaction
The four case studies illuminated the difficulties of moving students through different levels of interaction, that is from observing by reading others’ messages, to participation though making a posting of their views (unilogic messages or soliloquies), through to interacting in a dialogic fashion, where texts were used as thinking devices. Each of these three levels is capable of supporting constructivist learning, but the greatest potential lies in developing dialogic interaction that moves
beyond individual development as Henri described (1995). The findings confirm other research that the CMC medium itself does not create interaction and the Group and Debate case studies, with their greater levels of interaction, illustrate how curriculum design might assist.

**Time Flexibility**

Most student regarded time flexibility as beneficial, but where participation was voluntary, prioritizing by time pressured students resulted in minimal participation. The Debate case study illustrated one method of getting students’ attention and obtaining full participation. The time management issues raised by online discussions had resulted in a new perception of the value of the time and place boundedness of face-to-face classes by some students.

Many students recognised that time independence resulted in a better quality of discussion, and this was especially valued by the Chinese ESL students who were able to participate more substantially in the online discussions. The association of these features of the CMC environment with deep approaches to learning suggested a positive relationship between these aspects in undergraduate students’ learning.

The case studies illustrated the benefits of a text-based and time independent CMC environment for learning and demonstrated the difficulties of achieving a more socially based form of learning, particularly where many students are familiar with discussion as part of the learning culture. The findings provided a new dimension to Entwistle and Ramsden’s (1983) relational concept of learning by providing insights into the ways in which undergraduate students perceive the text-based, interactive and time flexible features of the CMC environment.

**11.3.3 What was the influence of the curriculum design?**

There was a close alignment of the main characteristics of deep approaches to learning in the online discussions to the activity descriptor and assessment criteria, and the influence of both of these factors was confirmed by the students.

**Assessment**

All of the four case studies demonstrated the influence of assessment on student perceptions and their consequent actions in the CMC environment. The case studies,
especially the Priority case study, also illustrated a prioritizing process where students carried out a cost benefit analysis. They weighed the benefits of the marks to be obtained against the time and effort costs arising from their work and family demands, and full or over-enrolled study loads. The assessed nature of the online discussions may also explain the deep approaches taken by students and this indicated the importance of integrating assessment with the course activities.

The activity
The online discussion itself was also a significant curriculum factor, and all of the case studies identified the importance of the dialogic power or potential of the activity. This meant that the activity had to be truly discursive, that is, capable of multiple viewpoint points and interpretations. The Debate case study illustrated the value of controversy and dissonance and the way in which such case studies can assist in the creation of nonfoundational knowledge (Bruffee, 1993), and potentially create a zone of proximal development (Vygotsky, 1978) for learning. Two other important factors were identified, namely the need for real world activities to create motivation and assist with situating knowledge (Brown et al, 1989), and structured documented activities.

The discussion group size
The case studies illustrated the importance of considering the size of the online discussion groups. In the Debate case study, the whole class was the right size for the discussion because it provided a large pool of ideas that students found interesting. The Group case study illustrated the ways in which a smaller group, rather than a larger class, might assist undergraduates, by keeping the discussion to a small scale. The ensuing comfort of the group and the informality of the conversation seemed to facilitate interaction, critique, sharing of personal experiences and supported collaboration. It demonstrated Bruffee’s (1993) role of groups in supporting collaborative learning by undergraduates and Stacey’s (1999) finding of the role in learning of collaborative groups online.

The role of the teacher
In three of the case studies, the teachers rarely entered the online discussions although they were active in the face-to-face classroom. This may have resulted in more interaction and dialogue due to the symmetry of the discussion where students
had freedom to comment and had complete responsibility for the discussion. This is an alternative view of the role of the teacher as much of the literature advocates for strong online teacher moderation. However, in a blended environment, this support may be provided in the face-to-face classroom. This research suggests that a more constructivist approach may occur if the activity is inherently dialogic (as discussed above) and the teacher is less active in the online discussion, but more active in the classroom in terms of feedback and providing learning frameworks for students.

The subject discipline
The Participation case study was set in a discipline whose nature and traditions of teaching meant that discursive approaches were harder to achieve, and this may have been a factor in the low participation in the online discussions. Successful online discussions in these kinds of discipline may be more difficult to accomplish, and this may be a limitation of the CMC environment.

As well as the students’ perceptions of the CMC environment, this research shows that facets of the curriculum also play an important role for students as they learn in online discussions. The most influential factor was assessment, but this research has also identified the importance of a dialogic activity, the role of dissonance and a real world focus. The case studies have presented an alternative view of the role of the teacher in a blended learning environment. To achieve a more constructivist approach may require a teacher to have a reduced online presence and to give the online discussion more attention in class. The research has also identified two other contextual factors which were influential in the online discussions and these were the size of the discussion group and the influence of the discipline and its pedagogical culture.

11.3.4 Is there a relationship for students’ learning between the online discussion activities and face-to-face classes?

The pedagogic connection
Despite the students’ liking for time and place flexibility, the case studies endorsed the need for a strong integrative relationship and good pedagogic connections between online discussions and the face-to-face classes. Three main kinds of connection were identified and these were:
- The weekly topic,
- The role of the teacher in providing feedback on the progress of the discussion, and, less importantly, advocating for and encouraging participation.
- Class activities which helped students to develop the necessary knowledge and skills for the online activities.

The attention given to online discussions in the face-to-face class by the teacher provided an important message for students of its importance and such actions will in time build the legitimacy of the CMC medium. The identification of the need for this kind of connection adds a further element to the learning context for blended environments that needs to be considered in curriculum design.

**A complementary connection**

Students identified major differences between the face-to-face and online environments which related to the verbal and text-based communication modes, their physical and virtual character, and their synchronous and asynchronous character. What emerged from the students’ discussions was an understanding of the strengths and weaknesses of each discussion mode. For many students, it was not a contest between one or the other, rather each mode was regarded as complementary in relation to learning. The research study provided an illustration of the role of variation theory (Oliver & Trigwell, 2005) where learning is supported by the contrasts that arise from the use of different approaches or media. A complementary framework has been developed that offers pedagogical strategies based on the differences between the two discussion environments.

**Time**

The students’ response to time pressure emerged as one of the main themes of the research, as students were often highly task and assessment focused. Student views about learning often demonstrated the characteristics of surface approaches and as, such, contradicted the deep approaches that they adopted in the online discussions. However, this may be indicative of a curriculum design which exemplifies Biggs’s (2003) principle of constructive alignment. Alternatively, it may be timely to revise aspects of deep and surface approaches to learning to ensure a more accurate
representation of student’s views of contemporary social and economic contexts and life patterns.

**Chinese students**

The perspectives of the Chinese students in the Debate case study provided new insights into the role of online discussions for their learning. The text-based nature of the CMC environment, and its virtual and asynchronous character minimized language barriers for the Chinese students and made it easier for them to participate in the discussions with their peers. There were also plenty of opportunities to improve their use of the discipline language and to benchmark standards of participation, which was important because they were not familiar with the Western learning culture.

The Chinese students demonstrated their adaptability to a less teacher directed learning environment which used a debate activity about which they were ambivalent. They demonstrated a level of deep approaches similar to the Kiwi students, and less surface approaches. This confirms other research (Volet & Renshaw, 1996) that found that Chinese students, like Kiwi students, are responsive to their learning context and act according to their perceptions of what is required.

**11.4 Significance of the study’s results**

Online learning is now part of most universities’ learning environments and access to course materials and resources is a widespread practice, which campus-based students endorse because of its ease and convenience. Online discussions are not so frequently part of the students’ learning experience and often do not sit well with undergraduate expectations of a campus-based education. The learning potential of online discussions has been widely canvassed in the literature, but there are barriers to its more widespread use and some of these are the lack of knowledge about the nature of the CMC medium, the needs of undergraduate students and the best ways to include online discussions within a blended environment.

This research has identified the value of features of the CMC environment for supporting learning in a constructivist sense. The text-based nature of the environment has received less attention than other CMC features and my research has
illustrated the way in which reading and writing makes undergraduate students more active in their learning. In particular, this study found that the act of writing makes undergraduate students engage with the course content, and deepens thinking both internally, as students make sense of the topic, and externally, as they communicate their own position to their peers in a public forum. This research indicates that one of the values of the CMC environment lies in the way it provides a place for undergraduates to read, write and think in an active fashion that is not available in face-to-face campus-based activities. However, it is not the features of the CMC environment alone that support constructivist approaches and this research has identified other influential factors.

The role of the learning context, for example, assessment, the activity, and the role of the teacher, have been analysed in terms of promoting deep approaches, as well as participation and peer interaction. The impact of the curriculum in CMC learning has received some attention in the literature, but it has not been situated within a learning theory or perspective. The research reported here has examined the relationship between this influential factor and the CMC environment and has interpreted students’ perceptions using a coherent theoretical perspective.

My reading indicates that there has been little research in blended learning settings that has substantially examined CMC from the position of the experience of learning literature. In this thesis, a new perspective of the CMC environment has been developed that is additional to a constructivist viewpoint, and this has added new knowledge about learning, based on students’ perceptions, and of the broad learning context. The ways in which deep approaches to learning can occur in CMC have been documented as a response to the students’ perceptions of their learning environment.

When considering student perceptions of the learning context in a blended setting, one further element can now be added, and that is the connection or integration of CMC with the course, but especially with the face-to-face classes. The student perceptions that have been documented in this research are now available to inform pedagogical development in this area.
This study has provided new information about the way in which Chinese students learn in online discussions and their similarity in many respects with Kiwi students may help to dispel the stereotype of the passive rote learner that has emerged from some of the prior literature. The value of the CMC environment for the Chinese students arose from its ability to ameliorate their language issues and enabled them to participate in discussions with their peers in a far more enjoyable manner than in the classroom. The modern global environment of universities means that many students today are ESL speakers and are often unfamiliar with more active and student-centred learning activities. The insights from this research about Chinese students may be applied more broadly to other contexts where language or adaptation to a learning culture is an issue for students.

It is probably more challenging to convince students (and teachers) of the value of online discussions in a blended learning environment, and this study provides insights into the ways in which students regard the differences between CMC and face-to-face (class) discussions and their complementary role in their learning. These findings exemplify and illustrate variation theory (Oliver & Trigwell, 2005) and have been applied to the development of a complementary framework for use in blended settings. This may promote better curriculum design and extend campus-based students’ perceptions of CMC beyond time and place flexibility, to assisting their learning.

The value of this thesis lies in presenting student perspectives about blended learning and one strong finding to emerge has been the impact of time and time pressure on students, despite the flexibility of CMC. Students valued the pragmatic ability of online learning to facilitate their progress through life, work and study, but its benefits were eroded by time management issues and the need for prioritizing, and there was little explicit recognition of its value for learning. Many of the students in this research displayed characteristics of surface approaches to learning, but were still able to use deep approaches in the online discussion activities. While this demonstrated the positive influence of the learning context, it also suggests that, as Harris (1993) has argued, the idea of deep and surface approaches needs some revision to take into account the contemporary life patterns of contemporary students.
11.5 Limitations of the study

The courses that were investigated in this study were located in a program that has a small class philosophy where students attended weekly classes of 25 to 35 students, rather than lectures and tutorials. The small classes allowed considerable flexibility, increased interaction in a face-to-face setting, and whole class as well as small group discussions and activities. There was an intimacy in the small classes which arose from the ease with which the teacher and students were able to get to know each other and this often resulted in questions and comments and a learning experience that was more responsive to student interests. These kinds of features were recognized and discussed by the participants and institutional research (Venture Research, 2003) has indicated that small interactive classes are one of the main attractions of this program for prospective students. The extent to which this facet of the case study setting might have influenced the findings needs to be considered when reading this thesis.

The findings of this research are grounded in the context of this study and apart from the small classes, some other special features of the context need to be noted. The use of CMC was much greater than an enhancement of the face-to-face activities, and the student perspectives are based on teachers who were experienced in the use of CMC and who may have been better informed about the nature of CMC, who may be better curriculum designers or may have more constructivist concepts of learning. All of the courses were part of a business degree with a highly applied learning culture, and they were all compulsory and mostly set in disciplines which were strongly discursive in their pedagogical approach. The participants were all engaged in undergraduate study and they were all second or third year, and not first year, students.

Even though this thesis has produced some overall findings in relation to the research questions, these findings may not be generalized to other groups of students or contexts, although they may well be relevant. The value of my research lies in the way in which the case study methodology has enabled me to investigate a problem in a real and authentic setting, to document different learning ecologies and curriculum models and to establish some general principles from the cross case analysis which are still tethered to those contexts. Readers may gain insights and consider the
relevance of the findings for their own students and what will be important will be the degree of similarity between this context and that of the readers. My intention has been to provide a sufficiently detailed account of the research to assist readers in their consideration of their own contexts and whether the outcomes may be transferred.

Some methodological limitations have been raised within the body of the thesis. Chapter 10.2.1 has discussed limitations of the content analysis that described, rather than measured, the extent to which deep approaches were occurring. I have reflected on the extent to which my position within the degree program may have positively or negatively influenced students in the interviews, and I have concluded that this was unlikely and I observed that, after an initial period of uncertainty or politeness, students often became relaxed and disclosing in the interviews. I would attribute this to the presence of the laptop (displaying the online discussions) that seemed to reduce the intensity of one on one conversation about online discussions. One reservation I have about the data is that of the ESL students, already discussed in Chapter 8.1.

11.6 Recommendations for further study
This thesis has reported on the particular issues in relating to the way in which campus-based students learn in online discussions. Many further questions have arisen in the course of this study and I now make some recommendations for further research regarding online discussions.

1. The role of reading postings and benchmarking opportunities, with regard to observing the learning strategies of others.

2. The ways in which texts might be used as ‘thinking devices’ (Dysthe, 2003) and the kinds of curriculum features needed to support this activity.

3. The development of online discussion activities that apply constructivist principles or develop deep approaches to learning.

4. The relationships between student-centred CMC activities, low teacher presence in the online discussions, and attention to the online discussions in the classroom.

5. The influence of discipline values and pedagogies on online discussions.
6. In blended settings, the implementation of the complementary framework that might be carried out as a piece of action research.

7. The role of newer technologies in supporting online discussions, for example, social networking spaces, IP telephony, mobile phone technology and blogs
Glossary of Terms

**Asynchronous** - Communication which occurs at different times, for example, email, asynchronous online discussions, or computer mediated conferencing (CMC). Can be contrasted with synchronous communication (see below).

**Blackboard** TM Blackboard Inc 2003, Blackboard Learning System TM (Release 6).

**Blended learning** - “A blend of physical and virtual learning environments . . . where appropriate use is made of technology to complement campus-based learning activity” (Aspden & Helm, 2004, p.246)

**Business on Line (BOL)** - The faculty online learning platform, which was used in the Group Case (Chapter six).

**Campus-based** - Courses or students who are enrolled in courses which are located within the physical environment of the university as opposed to off-campus courses (see below).

**Chinese students** - Students who have a Chinese Confucian background or values, of any nationality and either domestic or fee paying international students and often ESL students.

**Computer-mediated communication** - All forms of computer based communication, both synchronous and asynchronous, for example, email, chat, and online discussions.

**Computer-mediated conferencing (CMC)** - Commonly used term for asynchronous online discussions, for example, Salmon (2003) and used in this thesis in this sense, as opposed to its other meaning which is computer mediated communication (see above).

**Course** - Units of study within a programme, for example, courses in accounting within a business degree.

**Curriculum** - The design for the course, including learning activities, assessment, the role of the teacher, and resources.

**ESL (English as a second language)** - The term widely used to describe students for whom English is a second language.

**Face-to-face** - Teaching and learning located within a “bricks and mortar” campus where teachers and students are physically, as opposed to virtually present, including activities like lectures, tutorials, laboratory and practical activities.
APPENDICES

APPENDIX 1

Flexible mode - Courses which had reduced class contact (from three to two hours a week) and significant online activity, including online discussions.

Kiwi - An informal term for New Zealand citizens and used internationally in this way, but also widely used at New Zealand universities by international (ESL) students to refer to their New Zealand peers in class.

NVivo - NUD*IST Vivo (Non numerical unstructured data indexing searching and theorising). A qualitative software analysis program [http://www.qsrinternational.com](http://www.qsrinternational.com)

Off-campus - Refers to courses or students who are enrolled in courses which are not located within the physical environment of the university and who learn away from the university.

Online discussions - Interaction that is facilitated through electronic mediation and is text based, with many to many communication and place flexibility. May occur at the same time (synchronous) or at different times (asynchronous).

Online learning - Learning that is facilitated by various electronic mediation technologies. Commonly refers to access to course content and communication using computers and the Internet. Also known as e-learning, tele-learning, and web-based learning.

Program - Qualification or award granted by a university, for example, a bachelor’s degree in business.

Small classes - Classes of 25 to 35 students, which were held weekly and included a mixture of structured teaching, face-to-face interaction and applied activities.

Synchronous - Communication which occurs contemporaneously, for example, in online discussions (often known as ‘chat’), telephone conversations.
Plain Language Statement for Students

(Abridged)

You are invited to take part in the research project. This is a project I am undertaking in a doctoral programme at Deakin University, Australia.

Purpose of the Study

This project is going to investigate the learning strategies of undergraduate business students when they use computer-mediated conferencing (CMC) as part of their on campus study. It will be looking at some of the special features of the Business Online (BOL) Discussion Forum ie time and place flexibility and text based rather than spoken discussion. This study also investigates the relationships between BOL and face-to-face activities in relation to student learning.

Invitation

All students in this class are invited to take part in this project. If you would like to join the study, then please complete a consent form (attached) and return it to me, Philippa Gerbic, Faculty of Business.

If you decide that you will not join this study, you don’t have to explain your decision. I will be looking at the Discussion Forum during the semester, and there is a possibility that I might read your contribution, but it will not be included in any analysis. I will not be teaching or marking in the module and the teacher will not know who is or isn’t participating in the project.

Research Procedures

Initially I will ask you to complete a short questionnaire about your experience with CMC and approaches to learning.

During the semester I will establish a thread in the BOL Discussion forum for comments, questions etc., look into the BOL Discussion Forum from time to time and select portions of it for further analysis. I will not be joining any of your on line discussions or class activities.

At the end of the semester/after results are approved by Exam Board

- I will interview selected students individually and/or in groups. These interviews will last for 1 hour approximately and will be audio taped and then put into written form. Questions will not be of a personally sensitive or intrusive nature and will focus on how you learn in BOL and the relationships between this and your face-to-face learning.

- From the Faculty BOL records, I will obtain information about your usage, eg how long you spend on BOL, and when you do this, at what times and when.
I will also look at your student module feedback. I may also look at the final grades that you receive for the module. This information will be used to build a picture of learning by on campus students when it includes both face to face and CMC learning activities.

The teacher of this module is not a researcher in this project. S/he will be checking my analysis of the CMC discussion by reading it and looking to see that I have accurately identified the approaches to learning that you are using when you are on line. After Exam Board has approved the results for the module, I will give anonymised data summaries and reports to the teacher who can then choose to give some feedback.

It may occur to you that participation in this project may seem to be associated with some kind of advantage or that non participation may be associated with some kind of disadvantage. The teacher will not know who has consented to take part in the project. Your work will be marked using the BBus standard procedures and I will not be involved with any marking. While I am working with this module, if a matter arises in relation to your course of study then I will delegate the matter to another person.

Privacy

Your privacy will be protected in a number of ways:

- No one apart from me will know who is participating in the project
- No one else apart from me will have access to the interview tapes and transcriptions
- The information that I obtain from the CMC discussion and the interviews will be anonymised for analysis and students will only be subsequently identified for interviews.
- Tapes, transcribed materials and other confidential data will be stored in locked cabinets or secure password protected computer files under my control at AUT.
- When the data is summarised or reported, you will not be identified in any way.
- The data will be stored for 6 years from the date of publication at AUT premises and then destroyed.

Withdrawal

You are quite free to participate to any extent and to withdraw at any time. If you decide to withdraw from the project, then your participation will stop immediately and information gathered from you will not be used and will be destroyed if you so request.
APPENDIX 2

Findings

You will receive a summary of the research findings, and may wish to make a comment. This research project will be reported as my doctoral thesis. Findings will also be presented at conferences and in professional and academic journals and magazines.

Opportunity to consider invitation

You are being given this invitation now. You will have a week in which to decide whether you wish to participate.

Participant Concerns

I am always available to discuss any issues or concerns that you may have regarding the project. My phone number, address and email are at the end of this information sheet.

Alternatively, any issues or concerns may be referred to

- the Student Liaison Person for this project...
- the project supervisor...
- the Executive Secretary, AUTEC
- the Secretary, Ethics Committee, Research Services, Deakin University.
APPENDIX 3

Interview Guide

Q.1. What is learning and how do you like to learn? What is your preferred way? What activities? With whom?

Q.2. What did you want to get out of this course at the end of the semester?

Q.3. Did the online discussions help you to learn? Why? Why not? Was it the reading? The writing? The thinking? Other factors?

Q.4. (With the student sitting in front of the online discussions) How did you usually go about participating in these discussions? Take me through step by step... Were there any other patterns or habits that you developed to successfully participate in the discussions? What motivated you or blocked you?

Q.5. (If relevant) What was it like doing the online discussions in groups?

Q.6. Were the online discussions different from face-to-face discussions in class? Did they work in different way for your learning? What about reading versus writing, physical versus virtual presence, time to reflect, having a say, why did you always stay on topic?

Q.7. Were you clear about what was happening in the course? Was the workload OK? Was the amount of course content manageable? Did the teacher help you to learn? Did you have choices in the course?

Q.8. Did the online and face-to-face parts of the course fit together? For you, how did the online discussions relate to the course as a whole? What did you do in class? How did it relate to the online discussions?
## Participants’ background questionnaire

**Learning in Asynchronous Environments for On Campus Students**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name</td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td></td>
</tr>
<tr>
<td>3. Gender Male / Female</td>
<td></td>
</tr>
<tr>
<td>4. Ethnicity</td>
<td></td>
</tr>
<tr>
<td>5. How many more papers do you have to do to complete your BBus?</td>
<td></td>
</tr>
<tr>
<td>6. Do you work in paid employment? Yes / No</td>
<td></td>
</tr>
<tr>
<td>6.1 If yes, please state the numbers of hours you work each week.</td>
<td></td>
</tr>
<tr>
<td>7. Do you have family or other community responsibilities? Yes / No</td>
<td></td>
</tr>
<tr>
<td>7.1 If yes, briefly describe</td>
<td></td>
</tr>
<tr>
<td>8. Have you used an online learning platform before? Yes / No</td>
<td></td>
</tr>
<tr>
<td>8.1 If yes, please state the number of papers in which you used the platform</td>
<td></td>
</tr>
<tr>
<td>9. Have you participated in Internet based discussion groups before?</td>
<td></td>
</tr>
<tr>
<td>• Chatrooms</td>
<td>Never / Occasionally / Often</td>
</tr>
<tr>
<td>• Email Lists</td>
<td>Never / Occasionally / Often</td>
</tr>
<tr>
<td>• Computer mediated conferencing, like the BOL Discussion Forum</td>
<td>Never / Occasionally / Often</td>
</tr>
</tbody>
</table>

(PTO if necessary)

Thank you, Philippa Gerbic.
## APPENDIX 5

### Content analysis framework with descriptors from NVivo

Deep approaches to learning

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Indicated by or exemplified By:</th>
<th>NVivo descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Looking for meaning</strong></td>
<td>Focus on the discussion, i.e., what is required</td>
<td>Concerning on the exact issue, or the previous point made and not using the discussion for trivial, unrelated or social matters.</td>
</tr>
<tr>
<td></td>
<td>Focus on maximum understanding</td>
<td>Including synthesising own thoughts and understanding, comparing and contrasting, and generally identifying and examining implications, benefits, consequences, problems, and suggesting changes.</td>
</tr>
<tr>
<td></td>
<td>Active evaluation and critique</td>
<td>Appraisal or assessment activity, e.g. from the textbook, the class, or other students’ comments.</td>
</tr>
<tr>
<td><strong>Relating ideas and seeking coherency</strong></td>
<td>Try Trying to understand difficult things</td>
<td>Grappling with something hard, including reconciling conflicting or different things.</td>
</tr>
<tr>
<td></td>
<td>Asking questions to understand</td>
<td>Queries which advance the discussion, but not those related to group or class cohesion e.g. ‘what does everyone think?’</td>
</tr>
<tr>
<td></td>
<td>Relating ideas to other/previous knowledge/subjects or courses</td>
<td>Drawing on previous courses or study.</td>
</tr>
<tr>
<td></td>
<td>Relating ideas/theories to the real world</td>
<td>Applying theory generally to business practice, talking about concepts in relation to one's own work or job, relating theoretical principles to problems.</td>
</tr>
<tr>
<td></td>
<td>Looking around the subject/area widely</td>
<td>Looking beyond the course content and more broadly and could include current courses..</td>
</tr>
</tbody>
</table>
## APPENDIX 5

<table>
<thead>
<tr>
<th><strong>Use of evidence and logic</strong></th>
<th><strong>Looking at …from another point of view.</strong></th>
<th><strong>Presenting a different perspective</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caution in drawing conclusions unless they are well supported by evidence</strong></td>
<td><strong>Comments which indicated uncertainty or caution in a point of view</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Using logic to understand or progress</strong></td>
<td><strong>Demonstrating a reasoning process to move through an issue</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Examining material carefully to see if there is sufficient evidence to justify it</strong></td>
<td><strong>Not taking something at face value and looking deeper, especially for evidence or confirmation of a point and/or analysing material, e.g on a website</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Justifying eg with an example</strong></td>
<td><strong>Supporting a position by providing a reason</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Relating the material in other ways</strong></th>
<th><strong>Other kinds of relating activities not already covered.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mapping …to see how ideas fit together, looking for coherency</strong></td>
<td><strong>Broad overview and marshalling statements, matching comments</strong></td>
</tr>
<tr>
<td><strong>Using new info and generating new ideas</strong></td>
<td><strong>Ideas which are evidenced by some investigative activity, eg in the library or on the Internet.</strong></td>
</tr>
<tr>
<td><strong>Addressing ambiguity</strong></td>
<td><strong>Discussing things which are unclear, e.g. conflicts, puzzles.</strong></td>
</tr>
<tr>
<td><strong>Relating discussion to the class and course</strong></td>
<td><strong>References to the face-to-face class, course materials, textbook, and to any assessment.</strong></td>
</tr>
<tr>
<td><strong>Relating to other student’s/teacher’s comments</strong></td>
<td><strong>Direct interaction by mentioning a name and indirect interaction, e.g. from connection to the topic etc.</strong></td>
</tr>
<tr>
<td><strong>Relating to own experience</strong></td>
<td><strong>Reflections on personal experiences and not direct applications of theoretical principles</strong></td>
</tr>
<tr>
<td>Intrinsic motivation</td>
<td>Desire to learn more about subjects of interest</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>That learning/study can be exciting and gripping – enjoyment in the activity</td>
</tr>
<tr>
<td></td>
<td>Spending lots of time in the CMC discussion or away from class finding out about interesting topics in the course</td>
</tr>
<tr>
<td></td>
<td>An interest in furthering study after the end of the course</td>
</tr>
<tr>
<td></td>
<td>Curiosity and its satisfaction</td>
</tr>
</tbody>
</table>
### APPENDIX 5

Surface approaches to learning

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Indicated by or exemplified by:</th>
<th>Nvivo Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A reproducing approach</strong></td>
<td>Recall without any purpose</td>
<td>Direct copying of material with no clear purpose e.g. cutting and pasting from the Internet.</td>
</tr>
<tr>
<td></td>
<td>Not wanting to think about or understand the issue</td>
<td>Superficial statements or show lack of interest in the topic.</td>
</tr>
<tr>
<td></td>
<td>Sees the task as too complicated</td>
<td>Statements about the difficulty of the task, and generally negative.</td>
</tr>
<tr>
<td></td>
<td>Showing minimum of effort</td>
<td>Statements about doing little work.</td>
</tr>
<tr>
<td></td>
<td>Perceiving the situation in a fragmentary or short term manner</td>
<td>Looking at aspects of the task, or giving it little attention.</td>
</tr>
<tr>
<td><strong>Stays inside course boundaries</strong></td>
<td>Preoccupation/focus on with the task/what is required in the course</td>
<td>Attention giving to requirements rather than the substance of the activity or the course</td>
</tr>
<tr>
<td></td>
<td>Focus on what is required and doing little beyond that “what do we do to pass”</td>
<td>Statements which show assessment focus</td>
</tr>
<tr>
<td></td>
<td>Repetition of other comments</td>
<td>Repeating others’ comments.</td>
</tr>
<tr>
<td></td>
<td>Trivia</td>
<td>Statements which are nor connected to the task, or are general or vague, but nor statements which establish rapport, or social presence.</td>
</tr>
<tr>
<td><strong>Unthinking approach</strong></td>
<td>Focus on the “signs” of the activity e.g. words, formula in a mechanistic fashion</td>
<td>Including technical terms and jargon without any coherence.</td>
</tr>
<tr>
<td></td>
<td>Focus on unrelated material</td>
<td>Including material that is irrelevant</td>
</tr>
<tr>
<td></td>
<td>Not associating facts and concepts</td>
<td>Not relating comments to course concepts or ideas.</td>
</tr>
</tbody>
</table>
### APPENDIX 5

| Jumps to conclusions with little evidence | Unsubstantiated opinions or statements (one’s own statements). |
| Confused statements | Muddled or confused statements |
| Uncritical acceptance of ideas e.g. agreement and nothing extra | Agreeing with other comments and not saying why |

#### Fear of failure

| Focus on negative aspects of activity or course | Negative comments about the course, task etc |
| Concern about making a contribution in CMC | Anxiety about the CMC environment and making a posting. |
| Concern about passing the course/assessment | Worried about getting through the course |

#### Extrinsic Motivation

| Views task as an external imposition | Sees task as a performance measure with no value for learning |
| More interest in completing the task to get a pass than to learn | Wants to complete task and not interested in learning anything. |
APPENDIX 6

NVivo node structure

(1) CMC Environment. For analysis of the impact of the characteristics of the CMC environment on student learning, including how students learned through the online discussion process.

(1.1) Preparation. Activities leading up to a posting, including practice in a step by step fashion in the different case contexts.

(1.2) Time and place of participation.
   (1.2.1) Place
   (1.2.2) Days and times
   (1.2.3) Time spent (How long the activity took).

(1.3) Strategies. Included tactics for participation and message posting. It was difficult for students to discuss and was abandoned after the first interviews.

(1.4) Motivation. Things that were and were not motivational for participating in online discussions, including aspects of the CMC environment, the learning context and personal factors.
   (1.4.1) Positive
   (1.4.2) Negative, including anxiety.

(1.5) Reading. Comments on the message reading process and the role of reading the messages and any connection to learning.

(1.6) Writing. Comments on how the students went about writing their messages, responding to other students and any connection between the writing process and their learning.

(1.7) Thinking, reflecting. Comments about thinking in the CMC context, including space and time to think, role of other messages and connections to learning.

(2) Learning Context/Curriculum. Enabled analysis of the dimensions of the online discussions which were not related to the CMC environment or students’ personal circumstances.

(2.1) The Activity. The learning task and what it involved for the students and their perspectives of it. Included references to assessment because in three of the cases the activity was assessed and it was difficult to sensibly separate these two aspects.

(2.2) Responding to others/interacting. Comments on responding to others or vice versa. Comments were often included those about the CMC environment as well. Was positioned here because interaction appeared to be driven by the activity, not the CMC environment.
APPENDIX 6

(2 3) Size of discussion.
(2 3 1) Whole class. Positive and negative viewpoints.
(2 3 2) Groups. All comments about discussion in online groups.

(2 4) Teacher’s role. Student perspectives on the role of the teacher in their online discussions, but not the classroom.

(2 5) Features of the course. Modelled on Ramsden’s (2003) features of good teaching and provided information on the wider learning context to identify any other factors there which might be impacting on the online discussions.
(2 5 1) Clarity about the course e.g. objectives, assessment, online discussions.
(2 5 2) Workload
(2 5 3) Course content e.g. number and depth of topics
(2 5 4) Teacher
(2 5 5) Choice
(2 5 6) Relevance for students

(3) Relationship between the face-to-face aspects of the course and the online discussions.
For analysis of this relationship and how it contributed to student learning.

(3 1) Nature of the Relationship. Used in the Group case to begin to examine the differences between the face-to-face and online discussion environments and their impacts on learning and provided a basis for deeper exploration in the next three cases.

(3 2) Online and face-to-face discussions. Used in the Participation, Debate and Priority cases to examine specific differences, similarities and preferences for students and their learning.
(3 2 1) Read and write versus listen and talk. Exploring different communication modes and their value for thinking and learning.
(3 2 2) Physical versus virtual mode. Examining impact on discussion especially absence of visuals
(3 2 3) Delay versus instant feedback. For analysis of the impacts of timing differences, e.g. pace, control, responsiveness.
(3 2 4) Having a say. Positive, negative and effect on participation.
(3 2 5) Staying on task. Exploring the reasons as to why students thought everyone stayed on task.
(3 2 6) Voluntary attendance at class. Comments about why students attend class when its voluntary and do not participate in (voluntary) online discussions.

(3 3) Linkages between the online and face-to-face activities. To analyse the role of such connections and identify which kinds of connections supported student learning.

(4) Student Views. Comments on broad issues related to learning by students, including their personal circumstances, e.g. employment and other activities.
(4 1) Time. Positive and negative comments, including time management issues.
(4 2) **Getting through the work.** Comments about workload, task focus, and assessment.

(4 3) **Work and family commitments.** Including comments in relation to study loads.

(4 4) **Learning.** For analysis of students ideas about learning, and the ways in which they liked to learn, in order to establish their attitudes to learning.

(4 4 1) **How students view learning.** Focus is on the meaning of knowledge and students’ learning goals and intentions.

(4 4 2) **Learning preferences.** Further comment about learning modes, covering activities, like lectures, projects, and participants, e.g. teacher, groups or alone.

(4 4 3) **Learning in online discussions.** Extension of comments to online discussions, including whether the online discussions helped students with assessment.

(4 4) **Blended/flexible learning.** All positive and negative comments.

(4 5) **Goals, careers, aspirations.** Including comments about course relevance.

(4 6) **Change.** All statements relating to change in learning, including student maturity, attitudes, approaches, adaptation.

(5) **Approaches to learning.** A translation of Ramsden and Entwistle’s (1983) research for analysis of the online discussion transcripts. See Appendix 5 for the node descriptors.
# APPENDICES

## APPENDIX 7

### Weekly teaching programme and getting the most from the programme

The weekly teaching programme for this module outlines key details on what and how you should study for each week of the course.

<table>
<thead>
<tr>
<th>EACH WEEK’S ACTIVITIES COULD INCLUDE</th>
<th>WHAT YOU CAN DO TO GET THE MOST OUT OF THE ACTIVITY AND ACHIEVE SUCCESS…</th>
</tr>
</thead>
</table>
| **Face-to-face classes** or lectures. Sometimes these will include some discussion activities | • Make sure you are prepared for the sessions by completing the previous week’s readings and activities.  
• **Read through the programme** for the week so you know what to expect and can start thinking about the topic  
• Get to class on time  
• **Take an active part** in class activities such as discussion or small group activities  
• Your lecturers will regularly ask if there are any questions about what has been covered. If there is something you are not sure about, this is your opportunity to ask – your fellow students will often be grateful you did! |
| **Online activities** such as discussion | • Log in regularly to Blackboard – at least once a day every day is best  
• **Read the instructions** for the activity carefully and ask if you don’t understand what to do  
• **Take an active part** in online discussion: check the next section on *Guidelines for Online Discussion* for advice on how to get the most out of these activities |
| **Independent study** where you are asked to read an extract and possibly respond in some way, either face-to-face or online | • Make sure you have a copy if the set texts and have access to recommended texts.  
• **Take notes** as you read, then review the notes when you have finished reading the extract.  
• **Keep up** with the set readings |
| **Independent activities**, where you are asked to carry out an activity individually or as part of a small group | • Make sure you understand what you are expected to so and clarify this if necessary. If you are part of a group, meet with them or use email to agree on how you will go about the activity |

*In our experience, students who succeed are those who keep up with the weekly programme of readings and activities. We strongly recommend that you attend all the planned face-to-face sessions and complete all the activities, including the online component.*
Guidelines for online discussion

Guidelines for Online Discussion

Taking an active part in online discussion activities is an important part of the course - it allows you to test your understanding of key concepts and provides an excellent opportunity to prepare for assessments such as your assignments and exams.

In addition, the assessment requirements for modules in this programme may include your contributions to online discussion - if this is the case, the criteria to be used will be clearly detailed in the section on assessment.

How you can benefit most from the discussion activities:

1. **Be prompt** - when asked to respond to a set discussion topic, do so as soon as you can. This will provide plenty of time for allow others to give you feedback on what you have written.

2. Respond to the correct forum topic and **stick to the point**. If you have an unrelated or a general query, raise it during face to face sessions.

3. **Read and respond** to the other messages in the forum. A response could be:
   - a **question** which you feel is relevant and important
   - a **request for clarification** - if you are not sure what is meant
   - a **different point of view** - if you disagree with the original message. Please be polite and considerate!
   - an **example** from your own experience which you feel illustrates one of the key points
   - a **statement of agreement** - if you feel that it would be useful to lend your support to the original message.
   - a **reference** to something relevant you have read

**Note** Because discussion forums allow people to take part in their own time, you may find yourself waiting for others to contribute. Remember to come back and check the forum often!
### APPENDICES

#### APPENDIX 9 CROSS CASE ANALYSIS MATRIX

<table>
<thead>
<tr>
<th>Features of the Context</th>
<th>THE GROUP CASE (Chapter six)</th>
<th>THE PARTICIPATION CASE (Chapter seven)</th>
<th>THE DEBATE CASE (Chapter eight)</th>
<th>THE PRIORITY CASE (Chapter nine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online discussions (OLD)</td>
<td>Online discussions (OLD). A reflection on the weekly topic. In groups. Assessed at 30% of the final grade.</td>
<td>Online discussions (OLD). Exercised that were scaled from easy to hard. Whole class discussions.</td>
<td>Online discussions (OLD). A debate. Comprising the whole class</td>
<td>Online discussions (OLD). Activities which required Internet based research, analysis and evaluation. Whole class activities and one group activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assessed at 15% of the final grade</td>
<td>Assessed at 10% of the final grade.</td>
</tr>
<tr>
<td>Participants</td>
<td>Studying full time, mostly B grade students. Not work experienced. Some experience with OLD. Teacher focused. Liked interaction and discussion.</td>
<td>Mostly full time students. I 5 Kiwi students and nine Chinese (ESL) students. Kiwi students more experienced in OLD. Kiwi students liked FTF class discussion. Chinese students preferred teacher led FTF classes, and did not like FTF discussions.</td>
<td>Mostly full time students.</td>
<td>Full time and part time working students. Over half the students with study work loads that were greater than the recommended loads. Students liked to learn with the teacher. Students liked an interactive FTF classroom and discussion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low teacher presence was 90% of the FTF class.</td>
<td>Low teacher presence was 90% of the FTF class.</td>
<td>Low teacher presence was 90% of the FTF class.</td>
</tr>
<tr>
<td>Approaches and actions</td>
<td>High reading levels in the group. Message posting was less than the FTF class.</td>
<td>High levels of message posting: High levels of reading.</td>
<td>High levels of message posting. Message posting at the maximum (three) postings.</td>
<td>Low reading levels.</td>
</tr>
<tr>
<td></td>
<td>94% deep approaches to learning and 6% surface approaches to learning</td>
<td>Influential factors: Participants’ ability, all A and B grade students. Strong alignment with activity descriptor and marking criteria.</td>
<td>94% deep approaches to learning and 6% surface approaches to learning.</td>
<td>60% deep approaches to learning and 40% surface approaches to learning.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Influential factors: Participants’ ability, all A and B grade students. Strong alignment with activity descriptor and marking criteria.</td>
<td>Influential factors:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strong alignment between deep approaches and the activity requirements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Surface approaches arose from student perceptions of the news task as a cut and pour activity.</td>
</tr>
<tr>
<td>The CMC environment</td>
<td>OLD helped the students to learn. Valued time and place flexibility, but had time management issues. Reading (especially) and writing activities prompted thinking. Quality of the peer interaction was different from FTF class, with more depth and time to think. Students always on task.</td>
<td>OLD not viewed as helpful. Reading helped understanding through monitoring other messages. Could describe the benefits of writing messages. Viewed discussions as a noticeboard rather than as interactive. Time management issues. Discussion always on task.</td>
<td>OLD helped all the students to learn. Reading prompted engagement. Writing deepened understanding and communicating to peers improved thinking. Half the Kiwi students indicated communication anxiety. Chinese students participated more due to the CMC features especially the text based nature of the discussions, virtual environment and time to think. Students always on task.</td>
<td>OLD helped all the students to learn. Reading prompted engagement Writing deepened understanding, as did communication to peers. Little interaction between paired responses Low participating students had issues with communication anxiety, adapting to the CMC environment, and time management. Students always on task.</td>
</tr>
<tr>
<td>Influence of the curriculum</td>
<td>Liked group structure because it's small scale made discussion easier. Discussion was assessed. FTF class activities were motivational. Low teacher presence was accepted by students. Course was relevant.</td>
<td>Participation was voluntary. Activities were regarded as insufficiently discursive. Teacher was active online and with feedback. Course was relevant.</td>
<td>Assessment resulted in full participation and time and attention given to the activity which raised the quality of the debate. The controversial topic was motivational, but not for the Chinese students. The activity format was motivational, especially making the argument, providing evidence, and the requirement to respond. The absence of the teacher was not problematic. Course was relevant.</td>
<td>The major influence was assessment. However competing work and study demands meant that students prioritized and the discussions received less attention. Students liked the activities, but not enough to participate more. The activities may not have been sufficiently dialogic. Students preferred group as opposed to whole class discussions. Some students wanted more teacher involvement in the OLD. Course was relevant.</td>
</tr>
<tr>
<td>Relationship with the face-to-face (FTF) FTF classes</td>
<td>FTF class activities were the foundation of the OLD. The OLD added to the FTF class by: Deepening the depth and breadth of FTF class interaction. Deepening and extending understanding. In the FTF class, the teacher made connections by: Clarifying requirements and expectations. Providing encouragement in FTF class. Giving feedback on the progress, standard and content of the online postings.</td>
<td>Little connection by students beyond the weekly topic and added nothing extra to the weekly FTF classes.</td>
<td>The OLD were complementary to the FTF classes. The main enhancements were the record of the discussion, reading and writing instead of listening and talking, time to think, which improved the quality of the discussion, and everyone was able to have their say. Kiwi students found it easier to talk, and disagree and there was more disclosure online.</td>
<td>The FTF classroom was central to the students’ learning experience and was highly interactive. The OLD were linked by content and were complementary to the FTF classes. The main enhancements were the different communication mode i.e. reading and writing instead of listening and talking, the case of having a say and making a disclosure, the ability to work at one’s own pace and time to think, which improved the quality of the discussion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The FTF class, the teacher: Regularly referred to the OLD in FTF class, and Made substantive comments about the discussion activities and gave feedback.</td>
</tr>
</tbody>
</table>

OLD – Online discussions  
FTF – Face-to-face class
References


REFERENCES


Faculty of Business. (2005). *Student-centred learning*. Auckland, New Zealand: Auckland University of Technology.


REFERENCES


REFERENCES


REFERENCES


