ASYNCHRONOUS CONFERENCING AND LEARNERS' MOTIVATION IN A BLENDED LEARNING CONTEXT

Perspectives from the Experiences of Students in a University in the United Arab Emirates

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ABSTRACT

This study investigated the perceptions of 48 students in their first year in a UAE university as they pursued a blended learning course during the 2004 autumn semester. All of the students engaged in asynchronous conferencing to extend classroom activities using collaborative group discussions on the Blackboard Learning Management System. This study aimed to explore students' perceptions of online interaction and its impact on their motivation in relation to peer-to-peer interaction, instructor-to-peer interaction, sociocultural factors and other enabling and disabling motivational factors. The adopted research method was a case-study for which three sets of data were gathered via questionnaire, focus group interview and asynchronous transcripts. All three sets of data produced evidence to suggest a positive impact of peer-to-peer and instructor-to-student interaction on learners' motivation. From the findings, peers' active participation and contribution in asynchronous conferencing emerged as some of the important motivational factors. Participants' freedom to experiment with a new role that allowed them to be in control of their own learning was particularly noted. They felt that their participation in asynchronous conferencing could result in an improved performance and better grades in the final exams. Nonetheless, time pressure emerged as a constraining factor for the students.

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ABBREVIATIONS

ALNs	Asynchronous Learning Networks
APM	Academic Programme Model
ARCS	Attention, Relevance, Confidence, Satisfaction Motivational Model
CMC	Computer Mediated Communications
CMS	Course Management System
COL	Colloquy on Integrated Learning Programme
CSCL	Computer Supported Collaborative Learning
Bb	Blackboard
BF	Blackboard Forum
E-portfolio	Electronic Portfolio
ECSSR	Emirates Centre for Strategic Studies and Research
ICT	Information Communication Technology
GCSE	General Certificate Standard Examinations
SATs	Standard Assessment Tests
IB	International Baccalaureate
IT	Information Technology
HCT	Higher Colleges of Technology
LMS	Learning Management System
LAS	League of Arab States
Med	Master of Education
NRI	Networked Readiness Index
TOEFL	Test of English as a Foreign Language
UAE	United Arab Emirates
UAEU	United Arab Emirates University
UNDP	United Nations Human Development Programme
ZPD	Zone of Proximal development
ZU	Zayed University

CHAPTER 1

INTRODUCTION

The advent of the "global digital revolution" in the twenty-first century has triggered a shift of pedagogy from the conventional classroom-based learning to an electronic interactive learning environment (Cuban, 1990; Czerniak, Lumpe, Haney and Beck, 1999 & Shearman, 1997). Over a decade ago, Davis and Botkin (1994) wrote:

> with the move from an agrarian to an industrial economy, the small rural schoolhouse was supplanted by the big brick schoolhouse. Four decades ago we began to move to another economy but we have yet to develop a new educational paradigm, let alone create the 'schoolhouse' of the future, which may be neither school nor house. (Davis and Botkin 1994, p. 23)

Today, many parts of the world are striving to embrace technology in academia and training (Riley & Gallo, 2000), and as Davis and Botkin predicted, the new schoolhouse may not be constructed exclusively of bricks and mortar. The use of e-learning is rapidly developing in the Western world as a tool to increase accessibility to education. Romano (2006) reported in *The Washington Post* that as more schools embrace Web-based courses, more students log on to expand their education while they work. The same report also indicated that the number of students enrolled in U.S. online courses has more than doubled in the past few years. Whilst 483,011 students were enrolled in online programmes in 2002, this number was expected to reach 1.775 million in 2007. According to Guri-Rosenblit (2001), this rapidly expanding use of e-learning is the result of the environment in which higher education evolves and the way it responds to new demands, new markets and shifting consumer-needs elements. He wrote:

> the pace of change in higher education has been so outstandingly rapid that the visible and palpable barriers between distance and conventionally higher education are no longer clear (p. 487).

Many aspects of daily life have also been impacted by the rapidity of technological development. This phenomenon has vastly contributed to the transformation of travel, tourism, entertainment, businesses, communication and education (Ayers, 2004). Others, such as Tiffin and Rajasingham (2003), noted that distributing education via networks is becoming economically more attractive. Another essential element is the integration of telecommunication into education systems, and the availability of information through the world's hypermedia libraries. However, while Hall (2002) noted that there is a tendency to view the Internet as a little more than a tool for delivery, he argues that its educational value lies within its ability to merge delivery of information and communication in order to "promote the mastery of learning" (Hall, 2002, p. 152). Moreover, the Internet allows self-driven learners to access information while interacting with others who have similar interests but maybe contrasting points of view, or who have teaching skills that will support the learner by means of personalized tutorials (Tiffin & Rajasingham, 2003).

In spite of the importance and benefits of e-learning as an educational tool, e-learning has its own challenges. It is technology dependant and users need to have support and access to computers and internet connection. It is also skill dependant. E-learners need to have certain skills, such as keyboarding and written communication skills. E-technologies cannot be used effectively without the full support of those who will use them. The literature showed that traditional teachers, who hold more traditional views on education, are less likely to perceive e-learning as a viable approach in their teaching (O'Donnell, 1991 and Salmon, 2003). Without the structure of the traditional class of learners

and the presence of trained e-instructor, students may feel lost, isolated, confused and frustrated. According to O'Donnell (1991), teachers must be prepared to move away from traditional methods of teaching towards a more constructivist pedagogy that will enable their students to derive full benefit from e-learning.

Schofield (1997) suggested that institutional e-learning planning is a complex process which requires changing the educational offering through technology and employing effective implementation plans and strategies. For example, sound e-learning course planning requires attention to developing course contents that include sound pedagogical underpinnings, and are suited for e-learning delivery (Biddara and Dias, 2003).

Despite its complexities, the literature has revealed an increase in Internet use in education which is currently impacting on and changing the roles of participants. Carwright (1998) noted:

> The increasing use of computer and telecommunications based technologies to deliver post-secondary instruction is bringing with it significant changes in areas such as student patterns of attendance and participation, sources and uses of revenues, learning environments and faculty roles (p. 48).

It is documented that the rapidity of developing information technologies in Computer-Supported Collaborative Learning (CSCL) is affecting the speed of change in higher education (Ramsden, 1992). According to Carnevale (1991), today's global nations and their economies are competing to deliver products of high quality in large quantities. The culture of postmodernism has resulted in an increasing pressure for "choice, flexibility and diversity" (Hartley, 1995, p. 421). This culture has found its way into higher education, paying particular attention to the development of flexible learning (KirkPatrick, Jakupec & Riole, 1999).

As in the rest of the world, higher education in the Arab world has recently been faced with high expectations and demands from the new market and consumers' shifting needs. Arab educational policymakers believe that the modernization process of the Arab world hinges on introducing technology in education and training. The Arab Region Internet and Telecom (2001) summit, held in Muscat, Oman, in 2001, indicated that Internet uptake in the Arab region is as low as 2.2 per cent, less than half the world average of 5.2 per cent. These figures indicate a wide gap in the distribution of Information Communication Technology (ICT) among the Arab States as compared with other countries. The United Nations Human Development Programme (UNDP, 2002) reported that the Arab region, with 5 per cent of the world's people, has only 0.5 per cent of the world's Internet users.

In 2003, the League of Arab States (LAS) prepared a draft declaration of principles endorsing the use of technology in education and training. On e-learning, the declaration stated that:

> E-learning should contribute to achieving the elimination of illiteracy, universal primary education world-wide through better delivery of education and better training of teachers, and to offering improved conditions for lifelong learning, encompassing people that are outside the "normal" education process, and for improving professional skills. (LAS, 2003, p. 4)

In 2003, a UN Report on Arab Human Development painted a bleak picture. Among other findings, the report concluded that:

- There are 18 computers per 1,000 people in Arab countries, compared with a global average of 78.3 per 1,000.

- Internet access is available to 1.6 percent of the population in Arab countries, while telephone line access is barely one-fifth that of developed countries.

In contrast with other Arab countries, the United Arab Emirates (UAE) ranked 28th in the world in the Global Information Technology Report 2005-2006, issued by the World Economic Forum. The report used the Networked Readiness Index (NRI), covering a total of 115 economies in 2005-2006, to measure the degree of preparation of a nation or community to participate in and benefit from ICT developments. The only other Arab country to be featured in this report, at rank 39, was Qatar. The NRI is composed of three component indexes which assess the environment for ICT offered by a given country or community; the readiness of the community's key stakeholders, individuals, businesses and governments; and the use of ICT among these stakeholders.

The national report on the development of education in the UAE, which was presented to the International Bureau of Education (UNESCO) at its 64th session (2001), stated that the curriculum should emphasise the engagement of analytical and problem solving skills in order for students to cope with life skills. A 20-year strategic plan was drawn in 2000 and intended to "address all the obstacles of education, reshape the education system and try to ensure that the output of the education process suits the needs of globalization" (United Nations, 2001). Further to this, the UAE education vision for the year 2020 contains a view of education and technology. The vision states:

> Education in essence is the making of the future. It prepares man [sic] for the future...it is the entry card to the world of global economy which depends on knowledge and technology which enable man [sic] to compete efficiently and effectively. (Ministry of Education and Youth, 2000, p. 4)

Much of the development of women and education in the UAE is attributed to His Highness the late Sheikh Zayed's vision, which ensured the wide availability of educational and employment opportunities to national women. His Highness the late Sheikh Zayed believed in

empowering women and affording them the opportunity to choose their role in society. He stated:

> Women have the right to work everywhere. Islam affords to women their rightful status, and encourages them to work in all sectors, as long as they are afforded the appropriate respect. The basic role of women is the upbringing of children, but over and above that, we must offer opportunities to a woman who chooses to perform other roles. (HH Sheikh Zayed, 2001, p. 111)

He regarded education as the key element to prosperous societies:

> Spreading education is a national duty and the government has put forth all its options in making it happen for tomorrow's generation. This is our way of compensating for what we have been deprived of in the past. (HH Sheikh Zayed, 2004, p. 3)

As an illustration of this point, the first female government minister in the UAE was appointed in 2004 (Gulf News, 2004, p. 1). Another article in the same paper stated that 22.5% of the seats in parliament were taken by female Emirati women. The UAE is one of the few countries in the world with a high percentage of female parliamentarians (Gulf News, 2007, p. 10).

The setting for this investigation was a university in the United Arab Emirates, which was one of HH Sheikh Zayed's initiatives. It was the first university in the country to cater only for women nationals. It is well known for its technological resources, small student faculty ratio and international-based curriculum.

The use of e-learning has been greatly facilitated by the university's excellent electronic infrastructure. Since its inception in 1998, the university has made a conscious decision to equip every student and faculty member with a modern laptop, and the entire campus has Internet connections with unlimited access. These facilities are in line with the University's mission to provide all of its students with the knowledge and

skills that they need to succeed in today's rapidly changing world. In its mission, the university,

> seeks to prepare Emirati students for a meaningful and successful twenty-first century personal and professional life; to graduate students who will help shape the future of the UAE; to support the economic and social advancement of the UAE; to lead innovation in higher education in the UAE through teaching, learning, research, and outreach; and to do so in a culturally diverse, humane, technologically advanced, and increasingly global environment. (University Catalogue, 2005-2006, p.1)

1.1 Problem Statement

This university has demonstrated the importance of technology integration into its curricula through the development of its e-learning infrastructure. Students, faculty and staff own their personal laptops. Wireless connections are accessible throughout the campus. However, in spite of the excellent infrastructure for e-learning in this University, these technologies are not utilized to their full potential. Students use the available technologies mainly for word processing, surfing the Web and chatting with friends. The institution uses these technologies primarily for e-mails, posting documents, course syllabi, and course grades and monitoring attendance. Most faculty members working in the institution are often reluctant to use technology because they lack training and are not sure how to facilitate pedagogically sound activities (Patronis & Scheopp, 2006). These observations are in line with other studies on the use of technology in UAE academic institutions (Kayser, 2002).

Educators in the region recognize that Arab students face challenges in developing self-directed learning and engaging in critical-thinking learning activities. This perception is due to the fact that these students have been exposed to traditional didactic approaches of teaching and learning throughout their schooling (Al-Banna, 1997). As a way of helping students in developing these skills, the literature suggests the use

of text-based Computer-Mediated-Communications (CMC). This form of teaching and learning places much emphasis on student-based interaction that is supported in a format that allows for asynchronous reflection and expression of views in a text-based format (Garrison, Anderson and Archer, 2000). Student interaction allows for reduced student-teacher interaction, and the capacity to make effective use of peer moderators (Rourke Anderson, Garrison and Archer, 2001). It also facilitates students sharing and discussing student-content learning resources gathered or created by students (Collis & Moonen, 2001). Text-based communication with its time flexibility is a major attraction to distance learners. In addition, asynchronous communication has been found to promote analytical and reflective thinking (Harasim, 1990; Jonassen, 2000).

It has been reported by Coley (2002) that converting a course from a traditional classroom-based environment to blended learning increased learners' performance. Sloman's (2006) study showed that one of the pedagogically desirable modes of e-learning occurs when it is combined with more traditional forms of learning, as this mode has the ability to maximize effectiveness by matching the best medium to each learning event.

Further research has revealed that cultural differences can have a profound effect on learning, as communication and culture reciprocally influence each other (Gudykunst et al., 1996). The culture in which individuals socialize influences the way they interact, and the way that individuals communicate can change the culture they share over time. Members of different cultures learn different theories of communication to guide their behaviour through the socialization process (Hofstede, 2001). Freedman and Liu (1996) reported that learners from different cultural backgrounds seem to exhibit different patterns of interactions with peers and instructors in an online environment.

Despite the fact that e-learning has been subjected to significant research in the western world during the recent decades, there is no a priori reason to conclude that findings from these countries may be directly applicable to other regions. However, whilst acknowledging that generalisation from culturally contextualized case studies is to be avoided, it may emerge that findings from this case study research in the UAE may resonate with that emerging from other parts of the world. In other words, data from this case study may make an incremental contribution to the developing global literature on e-learning. Little is still known about UAE students and their e-learning experiences. In promoting e-learning to its full potential in the UAE, it is vital that we understand instructors', learners' and peers' online interactions and whether they have an effect on student motivation towards learning.

1.2 Research Questions

In light of the above, this research study centres around the effect of online interaction on students' motivation to learn in a blended learning context. In particular, this study will attempt to investigate the following research questions:

1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context?

2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context?

3. What socio-cultural factors affect students' online interaction in a blended learning context?

4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

1.3 Research Justification

The questions addressed in this study focus on perspectives and experiences of learners in asynchronous online conferencing and in their learning interactions. This focus is important for several reasons: first, interaction between students and teachers plays an important role in stimulating the learning environment. As cited in the literature, Collins (1998) emphasized the importance of asynchronous communication fostered by both student-to-student interaction and student-to-instructor interaction. Second, as far as I am aware, there have been virtually no major studies that have sought the voices of learners in the UAE in regard to their asynchronous conferencing experiences. For this reason, this research sought to explore and offer an understanding of students' perceptions of their educational experiences in asynchronous conferencing, and to construct a rich and detailed account of the wide range of factors that might have influenced the students' motivational behaviour in blended learning at this particular university. Third, in order for the university to develop and improve its blended learning courses and programmes, it is essential to gain an understanding of the learning environment that its students attend - an understanding that goes beyond attendance records and academic achievements. Finally, the implications of this study are pertinent to how this institution's administrators and educators organise courses, programmes, and educational activities to meet the needs of students through the medium of blended learning. Ultimately, this study will contribute to a deeper understanding of how online interaction is perceived and experienced by distance learners at a university in the UAE. Such understanding will enhance our knowledge of how to go about designing and implementing effective future blended-learning programmes and services for e-learning in the future.

This study has several main areas of significance.

1.4 Professional Significance

As we move into the 21st century, we teachers are becoming increasingly aware of just how technology-savvy our students are. They are dynamic learners, eager to learn about the sophisticated and technologically based world that they live in, and about the types of jobs that will be available to flexible, creative, lifelong learners. Spender (2001) asserted that e-learning is the next generation of learning. Undoubtedly, alongside this realisation, there is need for sound pedagogical processes that identify the needs of the learners and design motivating experiences that result in better learning outcomes.

Although the Blackboard Learning Management System (LMS) was made available since 2000 to all courses at this particular university, little was known about the design and delivery of online courses. One of the obvious uses of LMS at that time was to disseminate course materials, presentations and lecture notes.

As my familiarity with LMS developed, its use in distributing course grades and assessments came into play. At the next phase, discussion forums were utilized to extend classroom discussion online. Additionally, small virtual groups were created to work on collaborative projects in the collaboration area of LMS. Subsequently, all my courses were designed and taught in a blended learning format (combination of face-to-face and online). As a faculty member at this university, I started out experimenting with online teaching in 2001 just about the time when e-learning was at the threshold of taking its place on UAE's higher educational landscape. To stay abreast of these changes, I joined the MEd programme in e-learning at Sheffield University to learn how to effectively integrate technology in my teaching activities. During my MEd programme, I carried out several research projects where I investigated the online environment. Preliminary data revealed higher engagement than expected in the online environment. As my teaching

practice extended to include asynchronous communication, there was a need to understand better the online learning environment, its dynamics and how instructors and learners interact in the learning environment. I noticed that my students made use of technology for their communication outside class. They were particularly interested in communicating online, although contributions were not compulsory. For them, contrary to my expectations, communication through technology was quick and convenient. I noticed that the high level of online interactivity went on 24/7 except between the small hours of the day, 3:00 and 6:00am. I began to wonder if this high level of interactivity was a particular feature for those students. I wondered if other UAE learners in other learning contexts would have positive perceptions of a similar kind.

The level of investment and personal involvement in this project is determined by my wish to be informed of how to maximize learning for our students. Bober (2004, p. 165) defined stakeholders as those "with a vested interest in the project (programme, product, project) under investigation and able to take advantage of the results". Bober, in the same year, identified stakeholders as those who wish to be informed ("conceptual" use) and those who have the authority to make decisions and are involved with funding ("instrumental" use). This research will provide a better understanding of the environment in which I will play my role as an educator. As Torres and Perskill (2001) suggested, the intention behind stakeholder involvement is to increase "their buy-in to the evaluation, their understanding of the evaluation process, and ultimately their use of the evaluation's findings (Torres & Perskill, 2001, p. 388). However, stakeholders' participation comes with difficulties, as House (2003) pointed out. These evaluations are constrained by time, cost and interaction. Others, such as Worthern (2001), expressed concern relating to the trends of participatory, empowerment and advocacy evaluation. Nonetheless, House (2003) asserted the need for

consideration of all stakeholders' interests, values and perceptions, and as means of reduced bias advocated for the representation of stakeholders who are unable to represent themselves. Worthen (2001) applauded the role of evaluators who aim "to help people to help themselves...is a valuable role that evaluators and all citizens should play, but it is not evaluation" (Worthen, 2001, p. 415).

By conducting this study I believe that I can advance my personal aspirations and academic career in this field. Laurillard (2002) suggested that professional development programmes should elaborate the facilitator's understanding of how students learn through different media, allow facilitators to improve learning design, and increase their likelihood to make their own contribution to the field. This research, as Laurillard suggested, may yield useful and meaningful findings not only for the case study in this university but also for other institutions of higher education in the UAE regarding their future implementation and development of e-learning. It may also contribute towards a base from which more extensive research can expand and inform the practice of e-learning for practitioners and policymakers.

1.5 Structure of Study

This research work is divided into six chapters, including this chapter.

Chapter 1 introduces the dissertation work by giving a brief background commentary about the development of education technology and how it pertains to the Arab world and the UAE. The chapter also introduces the reader to the aims and objectives of this research and presents the guiding enquiry of this research study. The research questions, justification and the significance of the study are addressed.

Chapter 2 aims to establish the cultural context essential for a learning environment in which higher education functions in the UAE. Thereby, it

provides brief background information about the context of the research study, the country and its educational system, the institution itself, and its Academic Programme Model (APM). It describes the students' educational and cultural backgrounds, the courses and the learning environment.

Chapter 3 provides a review of related literature and definitions of the key theoretical concepts in the study. The review starts by discussing the recent pedagogical shifts and some of the significant learning theories underpinning the design of the courses under-study. These theories include constructivist learning, constructivist social-learning theories, collaborative learning and virtual teams and blended learning. The chapter then moves on to discuss issues pertinent to the study, such as learner autonomy, the role of the instructor in the online environment and motivation and factors affecting learners' motivation (intrinsic and extrinsic). The chapter proceeds to give an overview of interaction, its various types and its importance in the learning environment. It follows on to examine Computer-Mediated-Communication (CMC) along with an examination of cultural and linguistic considerations. Lastly, the linguistic and cultural factors in an online learning environment are discussed, which are complementary and appropriate for my study because the learners in this context reside within their home culture, they are speakers of Arabic and the language of instruction is English. Chapter 3 concludes by looking at language and the online environment.

Chapter 4 explains the basis for the research methodology, and ethical considerations involved in this project; it also describes the process of gathering and analysing data. The chapter begins by setting out the theoretical background of educational research methodologies and moves on to present the approach adopted for this research. This is followed by defining case studies and the benefits and disadvantages of using one are discussed. The development of the case study methodology that is used

throughout the study is also presented. I then move on to describe the method used for selecting participants before proceeding to examine the three sets of data collected and the modes of analysis. Each method is described in terms of its applicability to this study and the preparatory steps taken in conducting the research tasks. The strengths and weaknesses of each method and the corrective measures taken to counteract any weaknesses are discussed along with the data analysis techniques. This is then followed by addressing the role of the researcher and the ethical considerations. Finally, the chapter concludes by looking at the issues of validity and reliability.

Chapter 5 presents and discusses the results of the three sets of data along with an analysis that addresses all four research questions. Discussion and interpretation of the results, discussion of the validity and reliability of the collected data and methodological issues are presented in this chapter. The chapter starts by reporting and discussing the questionnaire findings in relation to each of the 4 research questions. Graphical representations are included. In the second section I report and discuss the results of the focus group interview, which is then correlated with the questionnaires findings. This is followed by presenting and discussing the asynchronous transcripts findings. The chapter moves on to discuss the methodological issues and how I counteracted the pitfalls.

Finally, chapter 6 presents the conclusions and a series of recommendations for future development by looking at the student-peer and student-instructor interaction, course design and the role of the e-instructor. It then presents my critical reflection on the process and the procedure of carrying out the dissertation work. The chapter concludes by proposing areas for future research.

CHAPTER 2

BACKGROUND

THE CONTEXT OF THE RESEARCH STUDY

In this chapter, I provide background information about the United Arab Emirates (UAE), its people and the institution where this research took place. The educational background and experiences of UAE students are also presented. The courses and the methods of teaching and learning where this research study was conducted are described. I then refer to previous research studies, which I carried out in this context that are relevant to the present study.

2.1 The Country

The UAE is a federation of seven emirates that was formally established in 1971. It is located on the Arabian Peninsula and occupies an area of 82,880 square kilometres. The UAE borders Saudi Arabia to the south and west, and Oman to the north and east. Four-fifths of the UAE is desert. It lies within a sub-tropical arid zone where the climate is recognised by a combination of extreme temperatures and high humidity. However, between October and May, the temperature ranges from 20 to 30 degrees centigrade. The harsh climate and the hostile terrain have kept the country isolated until the recent discovery of oil. After the country's independence from British rule in 1971, the state of the UAE was created under the leadership of the late HH Sheikh Zayed Bin Sultan Al Nahyan. Since then the country has undergone considerable and rapid development.

The map below shows the UAE and its neighbouring countries.

Figure 2.1: Map of the UAE (World Factbook)

The population of the UAE was estimated to be 2,602,713 in July 2006. However, only 19% are national Emiratis and the rest of the population is made up of people from the rest of the Arab world, Asia, Europe, Africa and the Americas. The official religion of the UAE is Islam, and the official language is Arabic, but English is widely used.

2.2 Emiratis: Cultural Considerations

After the discovery of oil in 1953, the people of the UAE went through a tremendous transformation, from a very traditional nomadic lifestyle to a modern one. This is due to the increased wealth of the population and exposure to other cultures and the process of globalization. Despite these alterations, the culture and society of today's UAE combines traditional and modern ways of life, although traditional social rituals remain important.

Emiratis are essentially tribal people. The heritage of a traditional tribal society forms the basis of a stable and essentially conservative social structure. Their social life is still characterised by cooperation and

solidarity, and the family is the centre of their lives. A tribe is bound together by blood relations, which help strengthen the tribe's social unity. Decisions regarding marriage, divorce and education are made collectively by the larger family. Marriages are still arranged in a traditional manner, where parents are the decision makers and cousins are the preferred match. The concepts of honour and shame are a constant preoccupation and, to a large extent, serve to control the social behaviour of individuals. In terms of interpersonal relations, Emiratis are very hospitable and friendly. They talk a great deal, and their conversations are highly emotional and full of gestures. (Gale, 1997, p. 194).

Although the UAE, like the rest of the Arab world, has traditionally been a male-dominated society, the role of women has gradually expanded since the discovery of oil. Before 1960, there were few opportunities for women outside their homes and families. In 2002, a study was conducted by Sayed under the banner of the United Nations Educational, Scientific and Cultural Organization (UNESCO), which investigated the participation of UAE women in public life by surveying 700 male and female UAE students. The respondents believed that it is important for women to be educated, and it is their right.

Although UAE women began entering the fields of science and technology since the early 1970s, their representation remains a small percentage of the total workforce in these fields. Sayed (2002) noted that this is attributed to the UAE schooling system which encourages students to select an "art stream" or "scientific stream". Sayed's study revealed that 90% of female students select "art stream" during their secondary schools. However, this streaming policy has been phased out recently (Sayed, 2002), and it is expected that the number of UAE national females entering the scientific and technological fields is likely to increase.

2.3 Education in the UAE

Since the establishment of the UAE almost four decades ago, education has been a priority for the federal government. Higher education is provided through private and government universities. Likewise, primary through to secondary education is provided by private and government schools.

Private schools are for non-nationals, although nationals can attend private schools if they wish to. Such schools follow the curriculum of foreign countries such as the United States, the United Kingdom and India. Their programmes lead to international qualifications such as General Certificate Standard Examinations (GCSE), Advanced Levels (A Levels), Standard Aptitude Tests (SATs), and the International Baccalaureate (IB).

Government schools cater for nationals only; boys and girls are educated separately, but both follow the same curriculum. The language of instruction is Arabic, with English used for some science and technical subjects. Government education was traditionally based on teacher-centred learning methods. A criticism of the education system of the UAE by the Emirates Centre for Strategic Studies and Research (ECSSR, 1999) highlighted inappropriate methods of teaching and learning, inadequate use of technology and inflexible curricula and programmes. Since the publication of the ECSSR report, the UAE has made significant strides in developing its education system. A number of reforms are currently underway to improve education. This means that the education system needs to move away from the traditional approach to a more flexible and responsive system that promotes student centred learning emphasizing critical-thinking skills (Mawgood, 2000).

The UAE established a higher education system for its nationals, free of charge, in 1978, with the opening of the United Arab Emirates University

(UAEU) in Al Ain. Then, in 1988, a number of Higher Colleges of Technology (HCTs) were opened in the different emirates to provide vocational education to UAE men and women. These were followed by Zayed University (ZU) in 1998. Since the opening of these federal institutions, many private institutions of higher education have opened in the emirates.

2.4 The Context of the Study: The University

The university where this study was carried out was founded in 1998 to cater exclusively for UAE national female students. Two campuses were created in the emirates of Dubai and Abu Dhabi, led by a single administration, and offering the same programmes. The university currently enrols more than 3,000 students. Now, in its tenth year, and in response to strong national and regional demand, the university has opened an International College for male and female students of all nationalities. The university offers majors in the fields of Business Studies, Communication and Media Sciences, Education, Arts and Sciences and Information Systems. This university is based on an international model of education. It features two years in the Readiness Programme (for those students who lack English language competencies), two years in the Colloquy on Integrated Learning Programme (COL) General Education, and a further 2 years in specialization in a major. The language of instruction is English. Students are required to achieve a 500 score on the Test of English as a Foreign Language (TOEFL) before they can enrol in the Colloquy on Integrated Learning.

From the outset, this university initiated a large-scale project through which every student owns a laptop computer. Presently, all students and faculty members are equipped with modern laptops and have unlimited wireless access to the Internet connection on campus. Students are required to use their laptops throughout the duration of their university

education. When technical and technological failures occur, students, staff and faculty are aided to resolve these issues through the Helpdesk and the IT department. Every classroom has a network connection for each seat, a data projector and printer and audio and visual equipment. A former IT Director of the university places the university at the forefront of learning technology use in the region. He stated:

> The university is clearly among the institutions of higher learning most advanced in the use of technology in a learning outcome-based academic model, and among the leaders in the broader category of institutions that have embraced ubiquitous computing. The University is well positioned to take advantage of the emerging technologies, such as pocket PCs, wireless networks, and knowledge-based systems (Briggs, 2000, p. 2).

To support instructional technologies, in 2000 all courses were available online via the Blackboard Course Management System (CMS). However, its use ranges from posting grades and course information to online discussions (Patronis & Schoepp, 2006). At that time, virtually no thought was paid to the pedagogical potential of the Web. Now, ten years later, e-learning still remains an option at the university, and efforts to deploy e-learning currently remain purely ad hoc. There is no systematic use of e-learning across the university to lead students to a credit bearing courses. And while it is true that some departments use e-learning in selected course offerings, the fact is that no comprehensive e-learning system is in place to guide the future expansion of e-learning activities in a holistic, comprehensive manner. While training workshops have been offered on the use of e-learning and development of e-learning materials, and software packages are made available to those wishing to engage in e-learning, no comprehensive or compelling strategy to guide universal e-learning deployment at the university is in place. Nonetheless, several viability studies have been carried out, all of which cite the applicability of e-learning at the university. Similarly, several proposals to make e-learning available have been tabled. These activities reveal the

university's present interest in e-learning. Nonetheless, these activities are a huge undertaking, and it will take a tremendous amount of strategic planning to make it happen.

2.5 The University Academic Programme Model (APM)

The Academic Programme Model (APM) is the core of the university's curriculum. Six Learning Outcomes were developed in 2000 by a number of faculty from the different departments under the leadership of the Provost. These Learning Outcomes form the framework for the Academic Programme Model. Upon graduation, all students at this university must demonstrate accomplishments in these six Learning Outcomes. The learning outcomes include:

- Information Literacy and Communication: Graduates will be able to recognize information needs, access and evaluate appropriate information to answer those needs, and communicate effectively to a variety of audiences in both English and Arabic.

- Information Technology: Graduates will be critically aware of the implications of information technology on the individual and on society, and be able to use IT to communicate and solve problems in an ethical way

- Critical Thinking and Reasoning: Graduates will be able to use information, reasoning, and creative processes to achieve goals and make responsible decisions

- Global Awareness: Graduates will be able to relate to communities beyond the local, perceive and react to differences from an informed and reasoned point of view, and be critically aware of the implications and benefits of cultural interaction.

- Teamwork: Graduates will be able to work efficiently and effectively in a group.

- Leadership: Graduates will be able to assume leadership roles and responsibilities in a variety of life situations and accept accountability for the results. (The University's Academic Programme Model Book, 2002, p. 35)

These learning outcomes are published in the University's *Academic Programme Model Book.* Each learning outcome enlists a number of indicators, and each indicator provides detailed criteria and standards that are stated in terms of developmental levels, from "beginning" to "accomplished". Students gather evidence of growth and performance development throughout their study at the university. The selected pieces of evidence are uploaded on an electronic portfolio and assessed at each level of competency. The aim of the e-portfolio is to allow students to reflect and evaluate their growth against the university's learning outcomes.

2.6 The Students' Educational and Cultural Background

The majority of the teaching faculty in this university is Western and come from different cultural backgrounds or worked in cultural contexts different from their students. Most of the students were raised and educated in the UAE, and a large number of the students in this university were exposed to teaching methodologies in primary and secondary schools which were based on rote memorisation and passive learning (Al-Banna, 1997; Bel Fekih, 1993 & Mawgood, 2000). Students were given a set of facts to learn without opportunities for critical evaluation or research. This teacher-centred approach left students unprepared for university life in terms of both content knowledge and study habits (Shaw, 1997). The only source of knowledge in schools was often the teacher and the textbook (Bel Fekih, 1993).

Throughout their schooling, the majority of UAE students are taught in Arabic language, and they are assigned a number of hours for English as a Second Language (ESL) instruction. However, as Guefrachi & Troudi (2000) pointed out, most UAE students from primary through to secondary schooling have low levels of English despite years of instruction in English. The reason for this is that the traditional methods of teaching English fail to provide adequate preparation for its students. For example, the grammar translation method is still the primary approach to English as a Foreign Language (EFL) instruction in UAE schools, despite its limitations in terms of preparing students who can use the language effectively to communicate (Al-Mansoori, 2001).

It has been noted that many teachers in UAE primary and secondary schools lack adequate training in teaching (Al-Banna, 1997 & Bel Fekih, 1993). Also, the observation is that schools are reluctant to provide professional development for teachers, as many teachers are contracted non-nationals. According to Mawgood (2000), it is not seen as cost-effective to provide professional development for them, as their commitment to education in the UAE is perceived to be only as long as their contracts last. Even in cases of providing training opportunities, many teachers have resisted change in the past and believe it is easier to maintain teacher-centred methods (Al-Banna, 1997).

Academic writing is probably one of the most difficult skills for Emirati students to acquire. According to Fattah (1993), it would not be unusual for these students to copy a teacher's sample essay from the chalk board and memorise it in order to reproduce it word-for-word for a test. Alreyes (1996) suggested that Emirati students' home lives may also contribute to their writing difficulties even in their first language, as they may not have the opportunity to share knowledge and opinions with their families. Moreover, the curriculum in government schools is partly to blame for this problem, as it has been criticised for placing too little emphasis on

writing (Fattah, 1993). In addition, although it has been argued that extensive reading plays an important role in the development of writing skills, not enough reading is done in Emirati national schools (Alreyes, 1996). Bel Fekih (1993) has suggested that UAE learners are not often given the opportunity to develop individual strategies for learning or opportunities to develop critical-thinking skills in high school, and therefore they are often unable to self-correct mistakes from their writing in order to make improvements.

Furthermore, as Emirati students' participation in the larger family life is very important, the students often spend most of their time with their family members. Females, in particular, rarely spend time outdoors in public without the company of a family member. This is coupled with cultural values where female students can be shy, which reduces their participation in a face-to-face setting, and they are often seen online chatting to friends and colleagues.

2.7 The Courses

The setting for this study was based on the Colloquy on Integrated Learning courses (COLs). Colloquy courses are taught during the first two years of the baccalaureate programme. In general, Colloquy courses are designed to provide an intellectual experience to all university students, aged 17-20 years, to create a framework supportive of the university's learning outcomes. Through a series of closely related interdisciplinary courses, students develop their abilities in critical thinking, computer applications, globalization, information literacy, English and Arabic. In particular, course COL 105 (careers education) and COL 120 (ways of knowing), which are used in this research aim to:

1. Introduce students to the university and careers education;

2. Empower students to take responsibility for their own learning and to become life-long learners and

3. Develop students' critical thinking, information literacy and language skills.

These two courses systematically introduce students to the university and to its disciplines and are organised so as to demonstrate the ways in which each discipline generates knowledge and solves problems. Also embedded in the courses are study skills such as time management, exam preparation, rational decision-making processes and personality and learning-style testing.

COL 105 and COL 120 are primarily assessed in a traditional manner through exams and quizzes. Although online activities such as Blackboard forums and collaborative work are not directly graded, students are made aware that participation will enable them to develop a better understanding of the course, and hence better grades.

2.8 The Learning Environment

A blended learning environment was applied to COL 105 and COL 120 courses which were used in this research study. In addition to the traditional face-to-face mode of teaching, the Blackboard platform was utilised to extend classroom discussions and course readings. Students were encouraged to work online collaboratively in accordance with the university's learning outcomes to promote critical thinking and information literacy, global awareness teamwork and leadership. The courses were based on a constructive, collaborative approach targeting interactions for social and critical engagement.

The courses' design was founded upon various theoretical perspectives which emphasis the positive effects of social interaction on learning (Dillenbourg, 1999). Peer tutoring was employed to benefit the learners

by helping them take control of their own learning. Brown and Palincsar (1989) asserted that reciprocal teaching interactions among students have been shown to exert positive influences on students' learning. Thus, collaborative teams were created to enable students to build meaningful knowledge in online environments (Carabajal, LaPointe, & Gunawardena, 2003) and to increase their motivation and self-esteem (Dueck, 1993 and Whitman, 1988).

The online component of the courses was launched at the outset of the semester. To ensure that students experienced both the learning platform and the dynamics of online learning, I conducted face-to-face meetings with students aiming to form virtual groups and to orientate them towards the new learning environment. This was to ensure familiarity with the virtual environment, as Salmon (2000, p. 10) describes the process as a structured or 'scaffolding' approach. Salmon (2003) proposed a five-stage model for 'computer mediated conferencing', which was considered in the design of this context (see Figure 2.2, p. 28).

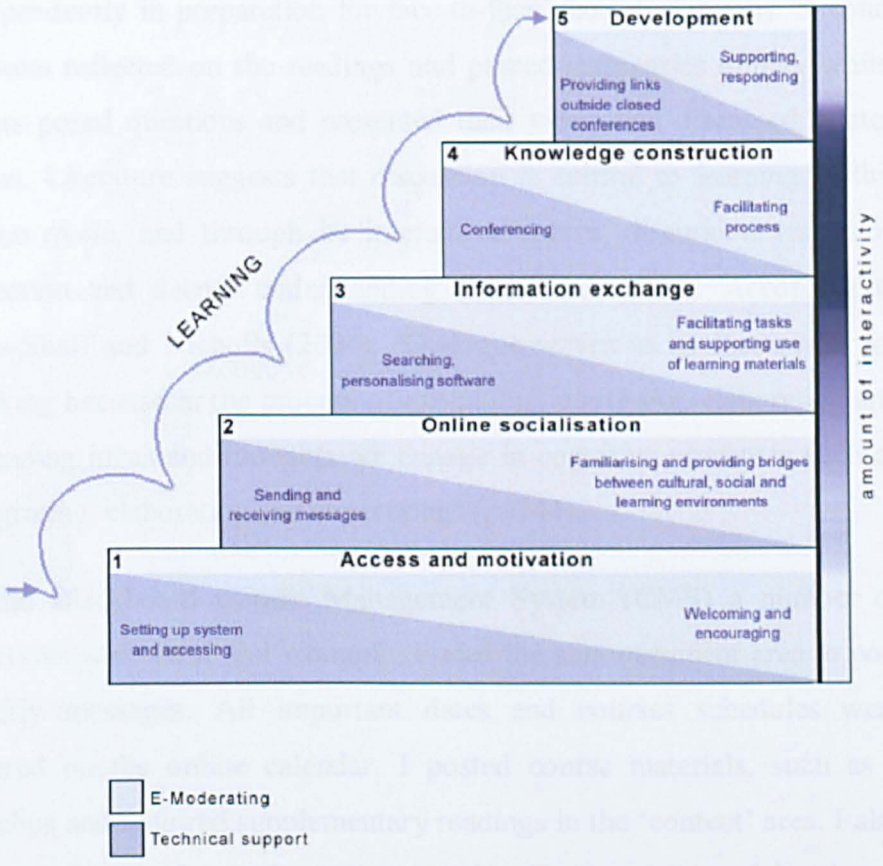


Figure 2.2: Salmon's five-stage model (2003, p. 11)

As students started to gain competence in the learning environment, task support throughout the phases decreased gradually (Salmon, 2000). The courses were divided into three phases, and all phases integrated face-to-face and online dialogue.

In the introductory phase, proposed by Salmon (2000), I asked students to work in teams face-to-face and online to explore the virtual learning environment and to share their biographies.

Phase two combined both face-to-face and online dialogue, and it dealt with course content. First, required course readings were posted online in the content area and learners were asked to read designated articles independently in preparation for face-to-face class discussions. Second, students reflected on the readings and posted summaries online, whilst others posed questions and presented their views and discussed related issues. Literature suggests that discussion is central to learning in this online mode, and through its interactive nature, discussion results in reflection and deeper understanding (Laurillard, 2002). According to Pena-Shaff and Nicholls (2004), 'Dialogue serves as an instrument for thinking because in the process of explaining, clarifying, elaborating and defending ideas and thoughts we engage in cognitive processes such as integrating, elaborating and structuring' (p. 244).

In the Blackboard Course Management System (CMS) a number of functions were used. For example, I used the announcement area to post weekly messages. All important dates and courses schedules were entered on the online calendar. I posted course materials, such as a syllabus and required supplementary readings in the 'content' area. I also opened forums for each unit and tasks. To promote socialisation, I created virtual cafeteria space for informal conversations. At the same time, virtual groups were created to work collaboratively on defining the elements underpinning the courses' learning outcomes. As part of the course requirements, pieces of evidence and students' reflections were gathered for the e-portfolio, which is required upon graduation. Therefore, students in their groups were encouraged to collaborate in producing a final reflective report on the learning process, including critical thinking, information literacy and language and global awareness development.

2.9 Previous Research

As part of my previous research, I experimented while making a transition from the traditional face-to-face mode of teaching to collaborative blended learning. The aim of my experimentation was to understand how our students could learn better and to explore their readiness and satisfaction with online learning. In doing so, I used an investigative research approach involving several pilot studies of my own teaching practice. Feedback from my students indicated that they were prepared to take up online learning in terms of access and usage of technology. My experiences as a tutor and researcher of e-learning have led me to believe the following:

- Students can benefit from the use of technology if it is employed effectively.
- Technology provides students with ample opportunities to develop their communication and writing skills, and their self-directed learning.
- Technology provides sufficient opportunity to our students to engage in meaningful collaborative tasks.

In addition, a colleague and I conducted a small-scale research study investigating the effect of a "tribal" culture on students' collaborative learning in a UAE university (Patronis & Wells, 2005). The study attempted to determine whether UAE students learn better collaboratively rather than individually by looking at Arab tribalism and cultural values, and linking those to the social learning theories that have been put forth in numerous studies (Vygotsky, 1978). Students exhibited better academic performance when they worked collaboratively, and the survey results showed significant preference (79%) for group work. This may be attributable to their cultural upbringing in which tribal customs

and ethnic clans emphasize interpersonal relationships and community mutual assistance. The study concluded that the majority of UAE students prefer to work in groups, and in fact performed better when working collaboratively regardless of the medium form.

2.10 Conclusion

This chapter aimed to establish the cultural context essential for the learning environment of the study. Thereby, the chapter presented background information about the context of the research study. It gave an overview of the UAE providing details about the development of its educational system, its schooling and its higher education systems. It presented the institution in which this study was carried out and its Academic Programme Model (APM). The chapter described UAE students' educational and cultural backgrounds, the courses and the learning environment in which the study was carried out. The next chapter presents a review of the literature that relates to this study.

CHAPTER 3

LITERATURE REVIEW

In this chapter, I present a literature review which compares and evaluates themes relevant to the context of the study. In particular, this review establishes the theoretical framework for the research questions as outlined in section 1.3. These are:

1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context?

2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context?

3. What socio-cultural factors affect students' online interaction in a blended learning context?

4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

The review starts by looking at the pedagogical shift from the traditional mode of teaching to blended e-learning, which is the main focus of this study. I proceed with an examination of the theories that underpin the approach used in the learning environment of this study. These include: the constructivist learning theory, collaboration, virtual teams and blended learning. This is followed by giving an overview of motivation. The definition and the types of motivation and motivational constructs that occur in the learning process are presented. Also in this chapter, a reference is made to online interactions and interactivity by discussing the types of interactions and tools that can be used for online interactions. Next, I discuss the benefits and drawbacks of Computer-Mediated-Communication (CMC). Lastly, the linguistic and cultural factors in an

online learning environment are discussed, which are complementary and appropriate for my study because the learners in this context reside within their home culture, they are speakers of Arabic and the language of instruction is English. The chapter concludes by looking at language and the online environment because the effect of language skills on the ability of students to adapt to online interaction constitutes a critical consideration in this study.

3.1 The Pedagogical Shifts

The revolution of the Internet has changed the way information is located and accessed. The Web has also facilitated the development and growth of virtual learning environments (VLEs). These new environments offer unlimited opportunities for interactive learning and collaboration in the digital university (Norman, 1998, p. 39). Web-based instruction in higher education institutions is seen as an "innovative approach for delivering instruction to a remote audience" (Daugherty & Funke, 1998, p. 22).

In traditional settings, most instructors follow a presentational lecture-style approach to teaching. Diamond (1997) and Handy (1998) noted that traditional models often lack personal attention and opportunities for practicing skills for workplaces. The delivery methods are often inappropriate for a diverse population. Laurillard (2002) noted that university students are expected to do more than 'attending,' a one-sided part of the 'discursive level' (p. 103). She explained that students are truly active when they are given tasks to practice the techniques they have been taught. There is always need for activity on the part of the student to make the knowledge their own to embed it in their way of interacting with the world: knowledge and skill, theory and practice combined (Laurillard, 2002).

Many researchers have advocated the effective use of technology for active learning, learner-centred and collaborative learning (Bonk & Kim,

1998; Cove & Love, 1996). These expectations for technology to transform higher education match closely the theories of constructivism, which are deemed appropriate for e-learning (Kearsley, 2002). Hence, it is important that I discuss constructivism and the concepts associated with it, as constructivist theory forms the basis for the learning approach adopted in this study.

3.2 Constructivism

Constructivism is based on Piaget's (1951) work; it defines learning as a process of accommodation and assimilation. Rather than the transmission of knowledge, Piaget believes that learning is constructed by an individual through interaction with a rich learning environment. Learning, therefore, becomes an internal process of interpretation in which learners create interpretations of the world based upon their past experiences and their interactions with the world.

In the constructivist view, students are no longer passive learners attempting to mimic what they see and hear from the expert teacher (Berge, 1996), but it is a social construct mediated by the interaction with peers and the expert. Most social constructivist models, such as that proposed by Jonassen (1994), stress the need for collaboration among learners, in direct contradiction to traditional competitive approaches. Laurillard (2002) proposed collaborative learning as a very effective strategy to engage students in an active, constructive, intentional and authentic manner. Constructivists believe that students should work together collaboratively rather than competitively (McMahon 1997 & Palincsar, 1998).

3.3 Collaborative Learning

Dillenbourg (1999) defined collaborative learning as a situation when peers are more or less at the same level and work together towards a

common goal. McConnell discussed cooperative learning in more detail, identifying that it;

- helps clarify ideas and concepts through discussion
- develops critical thinking
- provides opportunities for learners to share information and ideas
- develops communication skills
- provides a context where the learners can take control of their own learning in a social context
- provides validation of individuals' ideas and ways of thinking through conversation (verbalising);
- provides multiple perspectives (cognitive restructuring); and argument (conceptual conflict resolution). (McConnell, 2000, p. 26)

Johnson and Johnson (1996) provided sound theoretical grounds for collaborative learning, basing it on the Vygotskian perspective (1978). Accordingly, learning is a social activity which takes place through communication or interaction with others and on the basis of social interdependence theory. One Vygotskian notion with significant implications for peer collaboration is called the Zone of Proximal Development (ZDP) and is defined as:

> The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978, p. 86).

Through a process of scaffolding, a learner can be extended beyond the limitations of physical maturation to the extent that the "the development process lags behind the learning process" (Vygotsky, 1978, p. 24). Through the process of collaboration, students clarify and verbalize their problems, thereby facilitating solutions. Furthermore, when students

work in teams, they often have the opportunity to work with others from quite different backgrounds, and this facilitates an understanding of diversity and multiple perspectives that can result in deeper levels of knowledge creation (Brooks & Brooks, 1993). In this way, learners construct knowledge for themselves by interacting with other participants (Kearsley & Shneiderman, 1999). McConnell (2000) added that this form of learning is highly motivating and can be crucial in developing a learning community.

Furthermore, in constructivism, the tutor's role becomes that of a facilitator. A facilitator is supportive, acts as a resource, is non-directive and allows learners to manage the learning process (Roger, 1983). In accordance with other theorists, Berge (1996) asserted that the traditional teacher-student power structure is changing to something more equal. In the online environments, students come to learn together, at the time, place and space that suit them and are appropriate for the task (Harasim, 1990). Students explore information rather than just accept what the teacher determines what should be learnt.

Although collaboration in general provides a pedagogically-rich context to assist students in building meaningful knowledge, it might not be as effective in certain situations. The literature on educational psychology has revealed a paradox in students' help-seeking behaviours (Bruer, 1993), which can be a hindrance to collaboration. That is, if students are confused, they may not want to seek help, perhaps to avoid admitting their confusion and it thereby prevents students from collaborating. Another hindrance to collaboration is a perception of single-answer assignments or activities. If the students perceive that there is only one answer, there isn't as much need for the group to collaborate. Cohen (1994) in her review of the literature on collaborative learning found that open-ended, ill-structured problems tend to encourage productive group learning. Also, collaborative activities are unsuccessful if teachers are not

supportive of collaboration or they do not convey to students what collaboration is about or how or why they should collaborate. Further, collaborative work can result in conflicts among team members. Often group conflicts stem from the different views, attitudes and expectations that group members have of one another. When team members are highly competitive, it is only rational not to collaborate or help others.

While it would appear that care is necessary in the formation of collaborative groups, it has been proposed that heterogeneous grouping can assist in the creation of Zones of Proximal Development (Walker & Lambert, 1996). Hence, it should be recognized that the formation of collaborative teams requires the teachers' careful attention when designing learning activities. Since collaboration involves teamwork by nature, attention will be directed to virtual teams.

3.4 Virtual Teams

While collaboration and peer instruction were once only possible in a shared physical space, learning relationships can now be formed over distances through virtual learning environments. Collaboration in online environments is often referred to as virtual teams. Virtual team members are geographically dispersed. Idea exchanges and decision-making among members are done via technology. Nonetheless, these processes require detailed guidelines, more time and effort than traditional classroom teamwork. The efficient running of virtual teams depends on how the pedagogical activities are integrated in the technology. To attain this balance, based on Himmelman's (2002) framework, Lee et al. (2006) classified three different modes of technology (i.e., communication, cooperation and collaboration). Himmelman (2002) classified collaboration in relation to three developmental strategies for working in teams: "networking, coordination, and cooperation" (Himmelman, 2002, p. 1). These developmental strategies indicate that teams can be distinguished by what they are eventually seeking as a team and how

they behave during teamwork. Lee et al. (2002) merged Himmelman's "networking" and "coordination" into the term "communication". They then identified a framework with three modes of teamwork: (1) communication, (2) cooperation and (3) collaboration (see Figure 3.1).

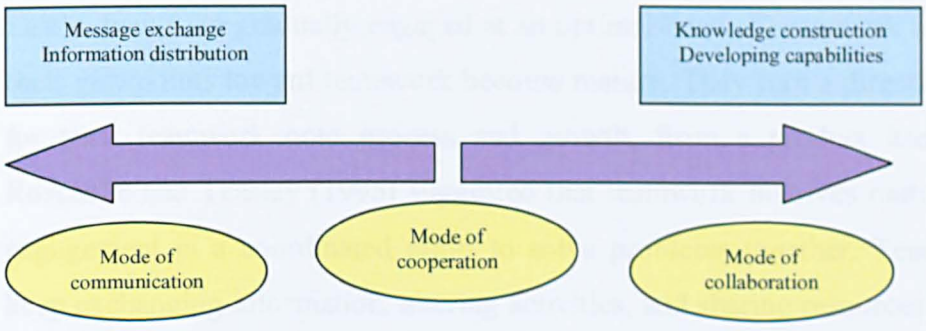


Figure 3.1: Three modes of virtual teams, adapted from Lee et al. (2006)

As shown in the above figure virtual teams experience three developmental modes. Firstly, the communication mode can be found at an early stage of the team developmental process. Teams mainly exchange information and change work activities that are mutually beneficial for all participants (Himmelman, 2002). Behaviours such as sending, receiving or responding to messages are ordinary communication behaviours. Under these modes, team members transmit information among themselves via technology. In order to smooth team activities, teams naturally show basic communication behaviours such as social interaction, information searching and changing activities.

Next, virtual teams move onto the next level of teamwork cooperation. At this level, communicational behaviours begin to coordinate positive relationships among team members. Cooperation has been defined by Himmelman (2002) as "exchanging information, altering activities, and sharing resources for mutual benefit and to achieve a common purpose" (p. 2). In a cooperative virtual team mode, individuals work more actively and beyond surface communication and information distribution.

Others, such as Lehtinen, (2003) and Roschelle & Teasley, (1995) emphasized the notion of sharing resources within teams. By doing so, team members clarify the direction of team projects and divide work and responsibilities for a portion of the mutual tasks.

Lastly, teams are gradually engaged at an optimal level of teamwork and their viewpoints toward teamwork become mature. They turn a direction for their teamwork onto process and growth, from a product itself. Roschelle and Teasley (1995) suggested that teamwork involves mutual engagement in a coordinated effort to solve problems together. Teams keep exchanging information, altering activities, and sharing resources to fit their mutual project needs, as they did in the modes of communication and cooperation. Further, they eventually support enhancing the capacity of peer members or teams, and on achieving a common purpose (Himmelman, 2002). The collaborative mindset of teamwork pushes team members to jointly produce meaningful products and accomplish team goals (which should simultaneously meet individual goals and expectations); these experiences include social interdependence, whereby members give and receive help, exchange resources challenge and encourage each other, and jointly reflect on their progress and process of learning. As in constructivism, the emphasis is placed on the student rather than the teacher, so strategies that encourage the student's autonomy and initiative are encouraged (Salmon, 2000).

3.5 Learner Autonomy

A key element in social constructivism and collaborative learning is learners' autonomy. In constructivism, students become autonomous, self-directed learners. Self-directedness and autonomy are associated with an increased problem-solving ability and critical thinking and they appear to link to intrinsic motivation in learning (Brookfield, 1995). In agreement with the theory of constructivism, Rathbone (1971) viewed the autonomous learner as an active participant in the learning process. In

his conception, learning is not simply a matter of rote memorization, but is:

> .....a self-activated maker of meaning, an active agent in his/her own learning process. He/she is not one to whom things merely happen; he/she is the one who, by his own volition, causes things to happen. Learning is seen as the result of his/her own self-initiated interaction with the world. (p. 100)

Within such a conception, it is important to examine the definition of autonomy. Many scholars attempted to gain insights into what learner autonomy means. For example, Knowles (1975) and Boud (1988) defined the autonomous learner as the one who takes a pro-active role in the learning process, generating ideas and availing oneself of learning opportunities rather than simply reacting to various stimuli of the teacher. Cast in a new perspective, Little (1991) regarded the autonomous learner as having the "capacity for detachment, critical reflection, decision-making, and independent action" (p. 4)

Others argued that autonomy is a process, not a product. One does not become autonomous; one only works towards autonomy. For instance, Candy (1991) indicated that autonomy is a perennial dynamic process amenable to educational interventions. Also, Holmes and Ramos, (1991) proposed that "in order to help learners to assume greater control over their own learning, it is important to help them to become aware of and identify the strategies that they already use or could potentially use" (p. 198).

It is noteworthy that this shift of responsibility from teachers to learners does not exist in a vacuum. It is, nonetheless, the result of the changes in the curriculum that moves away from teacher centeredness towards a more learner centeredness. It is the result of change in attitude from both the learner and the teacher. It is also the result of creating situations to enhance autonomy such as adapting resources, materials and methods to

the learners' needs. Breem and Mann (1997) noted that educational systems that operate in highly structured environments are less likely to provide a person with opportunities to develop as an autonomous learner because the formal conventions of the system seriously challenge the exercise of authentic autonomy.

However, it should be recognised that adopting approaches to enhance autonomy does not necessarily produce autonomous learners because, as Tumposky (1982) suggested, individual learners differ in their learning habits, interests, needs and motivation, and develop varying degrees of independence throughout their lives. Candy (1991) argued that autonomy:

> ....takes a long time to develop, and simply removing the barriers to a person's ability to think and behave in certain ways may not allow him or her to break away from old habits or old ways of thinking (p. 124).

As indicated earlier in this section, an important aspect of learner autonomy is a transition from teacher control to learner control. This shift in roles has its difficulties. Little (1990) commented that it is not easy for teachers to let learners solve problems for themselves, nor it is easy for them to change their role from conveyor of information to counsellor and manager of learning resources. This shift, on the other hand, makes the student's role more proactive rather than reactive (Kannan & Bento, 1996) and extends the teacher's function in the learning process. Learner autonomy does not mean that the teacher becomes redundant, Boud (1981) viewed the relationship between teachers and learners as the central quality for fostering autonomy. It is to these changing roles that I will turn in the next section to examine the role of the tutor.

3.6 The Role of the Tutor in an Online Environment

The role of the teacher changes because student-centred learning requires certain strategies for effective implementation. The teacher is no longer

the sole source of information, but becomes a facilitator. Teachers may need to make changes in their instructional role. Yet, Macanzi (1998) proposed that a good teacher is the one who knows when to act as "sage on the stage" and when to act as a "guide on the side".

In the student-centred learning approach, the responsibility for learning is transferred to the student and the teacher facilitates learning by acting as a facilitator of learning, resource person and guide. However, it is suggested that handing responsibility over to the students requires modelling and guiding. Harvey (1998) noted that students must be shown how to learn by presenting them with learning strategies and then gradually handing over responsibility while modelling and guiding them.

Indeed, in Boud's (1981) view, perhaps the single central quality which fosters autonomy and student-centred approaches is the quality of the relationship between teachers and learners, which develops through an attitude of acceptance and appreciation of the views, desires and frames of reference of learners. This attitude shift makes the student's role more proactive rather than reactive (Kannan & Bento, 1996) and extends the teacher's function in the learning process.

In reference to electronically-mediated learning environments, McKeachie (2002) explained the difference in the process of teaching online as follows: "Distant teaching is an extended act of imagination" (p. 258). Teachers have to process the course sequence and guide instructional activities while anticipating the needs of the students. Encouraging, motivating and guiding are descriptors of the online Web-based instructional experience. Salmon (2003) added that the "e-moderator" has a different role to undertake when compared to the traditional lecturer. E-moderators have to be effective managers. These management skills include time management, a capacity to monitor the learning process, an ability to evaluate the process of teaching and

learning and the skill to adapt and change teaching approaches and courses to accommodate the specific needs of e-learners.

3.7 Motivation: What is Motivation?

Many definitions have emerged from the various theoretical approaches to motivation. In general, motivation is an internal state or condition (sometimes described as a need, desire, or want) that serves to activate or energize behaviour and give it direction (Kleinginna & Kleinginna, 1981). Motivation increases individuals' energy and activity levels (Maehr, 1984).

According to Maslow's (1987) motivational theory, humans have five basic needs. These are: physiological needs, safety needs, belonging needs, esteem needs and self-actualization needs. People are motivated by the desire to achieve or maintain the various conditions upon which these basic needs rest and by certain more intellectual desires. He believed that these needs are related to each other and are arranged in a hierarchy of prepotency. If any of the needs is unsatisfied, all other needs may become simply non-existent or be pushed into the background. For example, if the physiological needs are relatively well gratified, there then emerges a new set of needs, which maybe categorized roughly as safety, belonging, esteem and actualization needs. In other words, lower - level needs obscure or even restrict upper level needs until they are satisfied. Thus, a hungry person will focus on food rather than safety, esteem or actualization (Maslow, 1987).

In Maslow's hierarchy of needs, individuals' self-esteem is based upon their capacity of achievement and respect from others. These needs have been categorised in two subsidiary sets: a) The desire for strength, achievement adequacy, confidence in the face of the world and independence and freedom. b) The desire for reputation or prestige (defining it as respect or esteem from other people), recognition,

attention, importance or appreciation (Fromm, 1941). Satisfaction of the self-esteem need leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world. Conversely, a reduction of these needs produces feelings of inferiority, weakness and helplessness. These feelings in turn give rise to discouragement (Wenden, 1998).

According to Dweck and Elliot (1983), motivation directs individuals towards certain goals and promotes the initiation of certain activities and persistence in them. Students' reasons for engaging in tasks are primarily influenced by internal or external factors.

3.7.1 Extrinsic and Intrinsic Motivation

Sources of motivation have been categorised as either extrinsic or intrinsic. Weiner (1990) pointed out that behavioural motivation is essentially extrinsic, which implies a reaction to positive and negative external reinforcements. Students who are extrinsically motivated tend to work on tasks because they believe that participation will result in desirable outcomes, such as good grades, teacher praise or avoidance of punishment. On the other hand, cognitive motivation is essentially intrinsic, based on a learner's internal drive. Intrinsically motivated students do not need external incentives because the activity itself is rewarding to them. Such students have the natural tendency to seek out and conquer challenges as they pursue personal interests and exercise their capabilities (Deci & Ryan, 1985).

Although previously the emphasis has been placed on intrinsic rather than extrinsic factors of motivation, some recent studies hold that intrinsic and extrinsic factors are interactive rather than separate (Crookes & Schmidt, 1991). That is, the external classroom atmosphere we create causes internal psychological changes in students. Humanistic attitudes, empowerment, feedback, creating relaxed alertness,

playfulness, humour and other classroom behaviours must also be considered as factors of motivation including friendship as a motivating factor as well as the influence of "competitiveness" (Crookes & Schmidt, 1991, p. 495).

Moreover, since learning is essentially a social phenomenon (Bandura, 1977), learners are partially motivated by rewards provided by the knowledge community. As Skinner (1938) pointed out, an individual's behaviour is conditioned through the use of consequences. At the same time, because knowledge is actively constructed by learners (Kearsley & Shneiderman, 1999), learning also depends to a significant extent on the learner's internal drive to understand and promote the learning process.

Based on Stipek's (1988) suggestion, Huitt (2001) listed a variety of specific actions that can increase learners' motivation. In general, these fall into the two categories of intrinsic and extrinsic motivation, as shown in the chart below.

Intrinsic	Extrinsic
Explain or show why learning a particular content or skill is important	Provide clear expectations
Create and/or maintain curiosity	Give corrective feedback
Provide a variety of activities and sensory stimulations	Provide valuable rewards
Set goals for learning	Make rewards available
Relate learning to student needs	
Help students develop a plan of action	

Table 3.1: Actions to enhance motivation (Huitt, 2001, p. 5)

3.7.2 Factors Influencing Students' Motivation

Based on Maslow's conception of needs, many scholars closely relate learners' motivational behaviour to psychological and social factors. The need for self-esteem has been highly stressed in learning settings. For example, Coopersmith (1967) related motivation to self-esteem and desire to learn. He suggested that self esteem and the desire to learn are deemed to be crucial factors in the learner's attitude and ability to overcome occasional setbacks or minor mistakes in the process of learning.

> Self-esteem is a personal judgement of worthiness that is expressed in the attitudes that the individual holds towards himself (p. 4).

The impact of social effects on motivation is another addition to the theory of motivation and is related to social cognitive theory. "Social cognitive theory focuses on how people acquire strategies, beliefs, and emotions through their interactions with and observations of others" (Pintrich & Schunk, 1996, p. 195). Social influences such as modelling, social comparison, conformity and compliance seem to affect motivation through self-efficacy, while other social influences, such as social facilitation, social loafing and cooperative learning seem to affect motivation directly (Pintrich & Schunk, 1996).

According to Bandura's (1986) social cognitive theory, behavioural and environmental information create the self-beliefs that, in turn, inform and alter subsequent behaviour and environments. This is the foundation of Bandura's (1978) conception of triadic reciprocal causation, the view that (a) personal factors in the form of cognition, affect and biological events, (b) behaviour and (c) environmental influences create interactions that result in a triadic reciprocality of human functioning. Bandura provided a view of human functioning in which the beliefs that people have about

themselves are key elements in the exercise of control. These self-beliefs influence and are themselves influenced by human behaviour and by environmental effects. In this social cognitive perspective, individuals are both products and producers of their own environments and of their social systems. Bandura (1986) emphasised the influence of self-belief on people's successes or failures, stating, "by exercising self-influence, individuals are partial contributors to what they become and do" (p. 6).

Additionally, Huitt (2001) noted that motivation to learn is a competence acquired through general experience but stimulated most directly through modelling, communication of expectations and direct instruction or socialization by significant others, such as institutions and teachers. In particular, watching and imitating others have consequences which are considered important motivators. Students expect to learn if their teachers expect them to learn (Stipek 1988). Institution-wide goals, policies and procedures also interact with the classroom climate and practices to affirm or alter students' increasingly complex learning-related attitudes and beliefs. Teachers' attitudes and beliefs related to teaching and learning, and the nature of the expectations they hold, may exert a powerful motivational influence.

Keller (1983) presented a motivational design model that involves four motivational concepts in getting the students motivated to learn. These include: a) attention, b) relevance, c) confidence and d) satisfaction (ARCS). First, the instructor must capture learners' attention. This can be accomplished by posing questions to the students and/or incorporating a range of methods and media to meet the students' varying needs. After gaining the students' attention, the instructor would need to retain it. The relevance factor involves relating the information to the student's previous experiences. This allows the student to make a connection, and thus their attention is retained and enhanced. Third, when students begin to believe in their learning and work, they become motivated to learn

more. Their high confidence level equals high value. The final step in the ARCS model involves intrinsic reinforcement: encouragement and the support of fundamental enjoyment of the learning experience. An instructor can provide opportunities to use the newly acquired knowledge or skill in a real or simulated setting.

Pintrich and De Groot (1990), further described three components that characterize student motivation that can be monitored and measured. These components are: (a) the value component, (b) the expectancy component and (c) the affective component. The main idea behind the value component of motivation is that the task's value encourages student interest in the task, which in turn fosters a deep approach to learning. How students value a task depends upon how meaningful, important or interesting it appears to them (Pintrich, 1989). The expectancy component of motivation includes the concept of control of learning, which was found to affect students' motivation for engagement in a learning task (Pintrich & Garcia 1991). Control of learning refers to students' beliefs that their own efforts to learn will result in positive outcomes. Pintrich et al. (1991) described internal and external control beliefs. Students who believe that learning outcomes are subject to their own efforts have internal control beliefs. On the other hand, students who believe that learning outcomes are subject to the teacher or factors other than themselves have external control beliefs. Pintrich's and Groot's (1990) third motivational component focuses on the students' emotional feelings about the learning tasks, specifically test anxiety or fear. The affective component of motivation consists of the cognitive and emotional parts. The cognitive part refers to students' negative thoughts that may obstruct performance, such as worry about the outcome of an exam. The emotional part refers to the affective and physiological aspects of anxiety.

Social cognitive theory researchers have examined group motivation as well. Since we live in a world of relationships, one can no more separate the influence of peers or teachers from motivation than influence of the goals themselves (Williams, 1997). Sullivan (1968) further proposed that interpersonal and social relationships are fundamental for motivational behaviour.

Related to social influences are cultural influences. People in different cultures have vastly different interpretation of self and others. "These construals can influence, and in many cases determine, the very nature of individual experiences, including cognition, emotion and motivation" (Markus & Kitayama, 1991, p. 224). How the concept of self influences motivation is especially pertinent to UAE students. The Emirati concept of self is interdependent rather than independent, as in the Western world, and thus influences self-efficacy and goal orientation.

Now we have seen research that indicates how psychological and environmental influences play a prominent role in learners' motivation; it is also important to explore the course design that underpinned this study.

3.8 Blended Learning: Blending Face-to-Face with e-Learning

Colis and Moonen (2001) defined blended learning as a hybrid of traditional face-to-face and online learning. Teaching and learning occur both in the classroom and online, whereby the online component becomes a natural extension of traditional classroom learning. Mason (2002) proposed that blended learning often offers the most satisfactory outcomes because it has the potential to combine the best of face-to-face and online interactions. The combination of face-to-face and online interaction often affords convenience and flexibility and space and time for reflection. A blended course can lie anywhere between the fully face-to-face and fully online learning environments. The face-to-face

component can be delivered on campus while the online component can be delivered from anywhere at anytime. Blended learning is thus a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact. Moreover, In her study, Lee (2005) found not only did the interaction through discussion board bring issues raised in class, but it also sparked in-class discussions the next day, as well as connecting with the previous in-class discussions. In this sense, the Web-based communication served as a space for both reflection and inquiry.

While there is no doubt that the Web is viewed as a resource of information, it should be recognized that the Web instruction is becoming a strong multimedia platform (Shotsberger, 1996). Berners-Lee, (1989) commented that the Web remains true to its initial objective of being a means of linking documents across a diverse network. Undoubtedly, the Web can be used as a communication medium in the learning environment rather than a mere content provider, but slow response times often make such environments impractical. Another concern was raised over the level of interactivity and engagement that can be supported by the Web (Shank, 2002).

Any approach to Web-based learning must be guided by assumptions of what is to be learned and how learning itself occurs. Collis and Moonen (2001) regarded placing pedagogy and the learner, rather than technology at the centre of learning as a key principle. Driscoll (2002) stressed pedagogical factors such as blending constructivism, behaviourism and cognitivism. The synthesis of these strategies is about producing learning, reaching out to students through technologies and promoting a strong sense of community among learners. The result is a potentially more robust educational experience than either traditional or fully online learning can offer. Indeed, the concept of blended learning becomes more

learner-centred, with emphasis on active learning through collaboration and social construction of understanding. Blended learning does not only incorporate technology, but also incorporates blending the delivery and content delivery to learning within a communicative, social interactive mode. Blending the benefits of face-to-face learning with e-learning requires a paradigm shift away from transmission (Mason, 2002, p. 26). It is in blended learning where social constructivism fits well.

3.9 Interaction

The section below presents a review of the literature associated with interaction.

3.9.1 Interaction and its Definition

The literature survey revealed many different interpretations of the word "interaction" (Sutton, 2001 and Wagner, 1994), which has resulted in the terms "interaction" and "interactivity" being used interchangeably. Rose (1999) pointed out that especially in the domain of instructional technology, the concept of interaction is "a fragmented, inconsistent, and rather messy notion" (p. 48). Wagner (1994) argued that "interactions are reciprocal events that require at least two objects and two actions. Interaction occurs when these objects and events mutually influence one another" (p. 8). She noted that interaction focuses on people's behaviour, while interactivity focuses on the characteristics of technology systems. Indeed, in online learning, people's interactions depend on technologies that allow interactivity. Wagner (1997) asserted that interactivity "appears to emerge from descriptions of technological capability for establishing connections from point to point (or from point to multiple points) in real time" (p. 20).

Downes (1998) identified three types of computer-based interactions, namely, human-to-human interaction, human-to-computer interaction and computer-to-computer interactions. Human-to-computer interaction

refers to humans interacting with a computer, for example, quizzes marked by the computer and computer games. Computer-to-computer interaction refers to interactions between computers with human intervention. The third type of interaction refers to human-to-human, which includes human activities such as sending and receiving e-mails, chat forums and discussion lists. Downes (1998) continued to make distinctions between the types of interactions as time based (asynchronous and synchronous interactions), number based (one to many and many to many) and location interactions (distant and near).

3.9.2 The Importance of Interaction

Many researchers pointed out the importance of interaction in online learning environments. For instance, Garrison and Shale (1990) stated that interaction is education in its most fundamental form. Palloff and Pratt (1999) contended that the interactions among students themselves, the interactions between faculty and students, and the collaboration in learning that results from these interactions are the keys to the learning process. Moore (1992) pointed out that increasing the interaction between learner and peers, and learner and instructor, can lead to a smaller transactional distance (i.e., a physical separation that results in a psychological and communicative gap) and more effective learning. Other empirical evidence also suggests that increased interaction results in increased student course satisfaction and learning outcomes (Irani, 1998; Zirkin & Sumler, 1995).

Laurillard (1997) constructed a conversational model of learning in which interaction between students and teachers plays a critical role in the teaching and learning process. In her model, she suggested that interactions between teachers and students operate at two levels, the "discursive level" and the "interactive level" (Laurillard, 1997, p. 103). The discursive level is the level of theory. At this level, the teacher presents the subject matter and the students join the dialogue, putting

forth their points of view, asking questions, and practicing the move of language and argument. The process allows the teacher an opportunity to re-express his or her point in order to clarify or elaborate, and then it allows the students to have another attempt at representing the theory to be sure the dialogue has arrived at consensus between the student and the teacher.

At the interactive level, the student is given the opportunity to put the theory into practice. The teacher sets the task and students act, the world responds to their action, and the students can then modify their actions in order to better achieve the goal of the task. The process represents the way the student acts in the world, or at least in a world constructed by the teacher such that their interactive activities will give them experience of the theory in action. This process can be presented for example, by a field trip, or laboratory experiments, or any authentic situation where the teacher sets a task and gives feedback that enables the students to improve their performance.

Laurillard's framework suggests that theory and practice should not remain separate; the student should be using the theoretical description to "adapt" their actions and also to "reflect" on their experiences as they articulate their ideas at the discursive level. Therefore, the student is using "reflecting" and "adapting" to link the two levels at which they are operating. Similarly, the good teacher will be using evidence of the student's understanding of theory to "adapt" the interactive activities to those appropriate to the students' needs, and will "reflect" on their performance at the interactive level in elaborating the theory.

Wagner (1997) outlined twelve specific instructional outcomes achievable through interaction:

1. Interaction to enhance elaboration and retention;

2. Interaction to support learner control/self-regulation;

3. Interaction to increase motivation;

4. Interaction for negotiation of understanding;

5. Interaction for team building;

6. Interaction for discovery;

7. Interaction for exploration;

8. Interaction for clarification of understanding;

9. Interaction for closure;

10. Interaction to increase participation;

11. Interaction to develop communication;

12. Interaction to receive feedback. (p. 22-25)

These outcomes are highly valued by constructivist theorists, who believe that social interaction is critical to learning (Brown & Duguid, 1989; Lave & Wenger, 1991; Scardamalia & Bereiter, 1994). Many of these outcomes are fully operational through human interaction which takes place through tools and technologies. Wagner (2005) proposed that interaction remains an essential component in technology-mediated learning. She asserted:

> in this world, the ability to interact with instructors, students, content interfaces, features, code, and environments is analogous to being connected. For technology-mediated learning, interaction is a key value proposition ... interaction continues to be perceived as the defining attribute for quality and value in online learning experience...interaction continues to be an essential component of a technology-mediated learning design success...interaction increasingly serves as a so-called

> "glue" that holds together all of those variables being blended. (p. 6)

3.9.3 Types of Online Interaction

Moore (1989) suggested three types of interaction in distance learning: learner-instructor, learner-learner and learner-content interactions.

Learner instructor interactions establish an environment that encourages learners to better understand the content. This type of interaction is "regarded as essential by many educators and highly desirable by many learners" (Moore, 1989, p. 2).

Learner-learner interaction takes place between one learner and other learners, alone or in group settings, with or without the real-time presence of an instructor (Moore, 1989, p. 4). Following Moore's proposed types of interaction, many studies show that this type of interaction is a valuable experience and learning resource (Bull, Kimball & Stansberry 1998; Vrasidas & McIssac, 1999). Empirical evidence shows that students desire learner learner interactions, regardless of the delivery method (King & Doerfert, 1996).

Learner content interaction is defined by Moore (1989) as follows:

> ....the process of intellectually interacting with content that results in changes in the learner's understanding, the learner's perspective, or the cognitive structures of the learner's mind (p. 2).

Anderson and Garrison (1998) extended the discussion to the three types of interaction (teacher-teacher; teacher-content and content-content), as shown in Figure 3.2, p. 56. They suggested that deep and meaningful formal learning is supported as long as one of the three forms of interaction (student–teacher, student-student or student-content) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience. High levels of

more than one of these three modes will likely provide a more satisfying educational experience, though these experiences may not be as cost-or time-effective as less interactive learning sequences. This theorem implies that an instructional designer can substitute one type of interaction for one of the others (at the same level) with little loss in educational effectiveness thus the label of an equivalency theory.

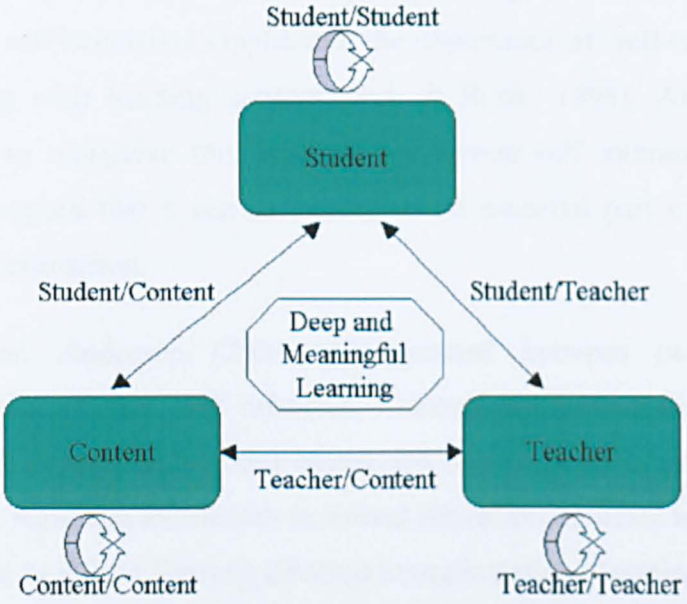


Figure 3.2: Modes of Interaction in Distance Education from Anderson and Garrison (1998)

Given the technology-mediated nature of online education, learner interface interaction is considered to be another important type of interaction. Hillman, Willis and Gunawardena (1994) defined it as "a process of manipulating tools to accomplish task" (p. 34). This type of interaction occurs between the learner and technology-mediated interface. They further pointed out that it can be one of the most challenging types of interaction due to the fact that people lack learner interface interaction in their traditional classroom education. If learners are not able to use the online technologies to interact with others, they can be inhibited and demotivated.

There are other types of interactions that are not as widely discussed in the literature, such as vicarious interactions (Devries, 1996 and Sutton, 2001) and learner-self interactions (Robertson, 2002; Soo & Bonk, 1998). Vicarious interaction often happens when a learner chooses to observe rather then actively participate in online discussion and debate. Devries (1996) noted that "vicarious interaction means that learners are participating internally by silently responding to questions" (p. 181). Learner self interaction emphasizes the importance of 'self-talking' when engaging with learning content (Soo & Bonk, 1998). Although it is critical to recognize the existence of learner-self interaction, Moore (1989) argued that it can be treated as an essential part of the learner content interaction.

Moreover, Anderson (2003) distinguished between two types of interactions, formal and informal. Informal interaction occurs in any informal context, and formal interaction occurs in a formal educational context. Although interaction in formal education contexts is specifically designed to induce learning directed towards defined learning objectives, Anderson suggested that interaction outside any influence of formal learning can occur between students and teachers and can often lead to effective learning.

3.9.4 Tools for Online Interaction

Human online interaction occurs in two forms, synchronous and asynchronous. In a synchronous environment, interaction takes place in real time, such as in chat rooms. Asynchronous or delayed communication is any transfer of information that is stored and then later accessed, such as discussion forums and emails.

3.10 Benefits and Drawbacks of Computer-Mediated-Communication (CMC)

CMCs share some technical and pedagogical strengths and weaknesses. Among the reported strengths, this medium allows interaction among course participants, including the instructor (Harasim, 1997; Shank, 2002); it facilitates communication (Cooper & Selfe, 1990); it increases oral discussion (Pratt & Sullivan, 1994) and it helps learners access the teaching material at any time and place. It also allows the learner to reflect on ideas and take time to prepare a reply. It also develops the writing/thinking connection (Warschauer, Turbee & Roberts, 1996). Learners have opportunities to integrate ideas being discussed in class. It is desirable to have some level of synchronous communication between instructor and students, since this creates the most spontaneous interaction and enables the instructor to respond to questions without delay. It reduces anxiety (Sullivan, 1993) and it focuses the energy of a group and encourages students to keep up with their peers and continue to study. It can also help create a feeling of community and classroom cohesion. Additionally, it allows for rapid feedback, which can foster consensus building in group activities (Rourke, Anderson, Garrison & Archer, 1999). Warschauer (1996a) concluded that CMC can enhance student motivation.

Despite the reported potential benefits of CMC, many students encounter various difficulties with using technology. Commonly reported problems include difficulties in adjusting to the technology and students' frustration with technology, Burge (1994) reported. Novice students, for example, tend to feel apprehensive about using the Internet, and the extended time it takes to feel comfortable using it for online conversations may jeopardize intellectual interaction and their ability to succeed in a Web-based course. Moreover, students who are technologically less proficient tend to spend many hours trying to figure

out how to use online technologies, communicate with instructors, submit online assignments or download class-related material from the class Web site. When the students cannot access the material due to technical problems, they became anxious and frustrated.

Additionally, because of the time lag inherent in computer conferencing, discussions may loose momentum and seem fragmented (Burge, 1994 and Shank, 2002). Shank (2002) noted reservations about conversing in textual mode and worry associated with perceptions of others and lack of visual cues. Another common complaint among online learners is information overload from having to navigate through large amounts of postings, especially when a large percentage of posting content is off topic or irrelevant (Centre for Systems Science, 1994 and Shank, 2002). A related complaint is the bandwidth and time requirements for opening numerous postings (Shank, 2002). The issue of lack of physical appearances is identified in the literature by Harasim (1987) and McIsaac and Gunawardena (1996), who cautioned that the lack of communication cues is a disadvantage of computer-mediated communication. The absence of physical cues in CMC, such as gestures and facial expressions, can result in lack of message clarity and lead to some anxiety and frustration among students, (Harasim, 1989 and Moore, 1992).

3.11 Cultural Considerations for an Online Environment

According to Gudykunst & Ting-Toomey (1996) cultural differences can have a profound effect on learning, as communication and culture reciprocally influence each other. They explained that the culture in which individuals socialize affects the way they interact. Similarly, the way that individuals communicate can change the culture they share over time. Hofstede (1980) added that members of different cultures learn different theories of communication to guide their behaviour through the socialization processes.

Research has shown that learners from different cultural backgrounds exhibit different patterns of interaction with peers and instructors in an online environment. Freedman and Liu (1996) conducted a study on American middle school students who corresponded electronically with Asian American students. Their study concluded that depending on their cultural and ethnic background, students' interaction behaviours differed. For example, non-American students tended to ask fewer questions of either teachers or students. They were less likely to use trial-and-error or experimental methods in their work processes. They were also more hesitant towards being watched when working with computers than their counterparts. Some worked cooperatively in groups when using e-mail, often helping each other.

Another study by Liang and McQueen (1999) drew a comparison of Web-based interaction patterns between Asian and Western adult learners. They concluded that learners from Asian and Western cultures were dissimilar in their expectations about the role of tutors and their learning styles. Most of the Asian students had been teacher-centred learners and tended to rely heavily on direction from their teachers even in the interactive online learning environment. In contrast, Western students tended to be peer-oriented learners. A further study, conducted by Kim and Bonk (2002) found that cross-cultural differences exist not only among students but also among online mentors. For instance, Finnish instructors mentored their students in a conversational or collegial (i.e. horizontal) fashion, while instructors from the U.S. tended to use an authoritative (i.e. vertical) perspective in responding to their student cases and comments.

To explain similarities and differences in communication patterns across cultures, Hall (1976) distinguished between two types of cultures: high-context cultures and low-context cultures. In the high-context cultures people are characterized by extensive information networks among

family and friends. Their relationships are close and personal. This extensive background knowledge of each other is automatically brought to bear in giving meaning to events and communication. Nothing that happens to them can be described as an isolated event; everything is connected to a meaningful context. Conversely, people in low-context cultures tend to compartmentalize their lives and relationships. They permit little "interference" of "extraneous" information. Thus, in order to give detailed meaning to an event, they require detailed information in a communication. The "context" must be explicit in the message. Low-context cultures use language with great precision. In general, most Asian cultures, including Arabic culture, are more likely high-context (Hall, 1966).

As a collectivist society, Barakat (1993) said that Arabs tend to interact as committed members of a group rather than as independent individuals. The family is the basic unit of social organization, where paternalism rules and individuals typically subordinate personal aspirations for the good of the collective. In the collectivist classroom "the virtues of harmony and the maintenance of face reign supreme" (Hofstede, 2001) and students are not expected to call attention to themselves by calling out answers. Thus, group work is preferred when giving assignments. Neither the teacher nor the student should be put into a situation where it might cause them embarrassment. Furthermore, researchers in the UAE have identified that students' lack of readiness to take responsibility for their own learning stems from their previous experiences in local primary and secondary schools, where passive learning and memorization of tracts is the expected way of learning (Richardson, 2004). This reflects previous findings, when researchers noted that students frequently feel unable to adjust to a different system of education, where they are expected to take responsibility for their own learning and apply higher-level of critical thinking and problem-solving skills. Students often feel

ill equipped to make the move towards autonomy (Bel Fekih, 1993 and Faquharson, 1989).

3.12 Linguistic Considerations for an Online Environment

Language skill is a barrier that can hamper second language learners' communication. Linguistic problems relate to incapacity to use well both the mother tongue and a second language. But, at a deeper level, there are difficulties and problems associated with nonverbal language or communication which includes a variety of cues, gestures and hand and body expressions. For example, Tuffs and Tudor (1990) conducted an experiment which tested differences in story comprehension of a video played in silent sequence to one group of British native speakers of English and to three groups of non-native speakers of English with different cultural backgrounds. Results indicated that non-native speakers are less able to recognize and use available visual cues compared to native speakers.

Others, however such as, Kim and Bonk (2002) found that limited language proficiency is likely to adversely affect the level of interactivity among online learners. They indicated that learners with lower language proficiency were reluctant to participate in online discussions, especially when group members were not known to each other. In contrast, Beauvois (1998) and Warschauer (1996) reported that learners with limited language proficiency feel less anxious about participating in discussions as they have more time to process the language in computer-mediated communication than in face-to-face communication. Gunawardena (1998) and Harasim (1990) discussed the relative values of reflective interaction among learners as it affords them the opportunity to compose and edit one's responses in CMC (as opposed to spontaneously respond in face-to-face situations) and the possible reluctance to post messages online.

3.13 Conclusion

This chapter attempted to provide a theoretical framework for the dissertation. The questions guiding this research were stated in the opening chapter. These were:

1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context?

2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context?

3. What socio-cultural factors affect students' online interaction in a blended learning context?

4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

The chapter started with an overview of the pedagogical shifts and how these shifts have impacted higher education. The next section dealt with the learning environment and the instructional models used in the context of the study. Then I reviewed the blended learning model, as this was the design of the course used in this research. The literature was then surveyed to define motivation and interaction, as these two concepts form the main focus of the study. Then, literature on the potential benefits and shortcomings of CMC was surveyed. Further, the review of the literature discussed the linguistic and cultural issues in an online environment, as these were considered appropriate and complementary to the context of the study.

These sources for the issues raised throughout this review of the literature are summarized below. A constructivist approach assumes that learners

construct their own multiple perspectives by interacting with the world and people within it and engaging in problem-solving activities which lead to sustaining learner's motivation. The use of technologies can facilitate constructivist learning and promotes collaborative activities. Also, the success of online courses depends on the appropriate use of pedagogy and related technologies, not just on the introduction of technologies themselves. It has also been reported that one effective approach of using technologies in the learning environment is blending traditional face-to-face teaching and e-learning. Further review revealed that online collaborative interaction among participants and course tutors affords pedagogically sound activities. Self-directedness and autonomous learning are closely linked to constructivist collaborative learning and have been found to be important in online environments. However, there is need for teacher interventions to assist learners in developing their autonomy. Scholars have also indicated there is a relationship between the concepts of collaborative learning, autonomy and motivation; thereby they proposed motivational strategies to sustain learners' motivation. Whilst some studies revealed the limitations of using CMC in the learning environment, they also highlighted its benefits, for it provides pedagogically sound activities. However, further review revealed that cultural factors can affect asynchronous and synchronous interactions. At the same time, while some researchers concluded that limited language skills can impede interaction, others found lack of that language does not act a deterrent to participation.

The following chapter addresses the selected research methodology to conduct the investigation. In it, I explain the various methods of data gathering and methods of data analysis.

CHAPTER 4

RESEARCH METHODOLOGY

As discussed in chapter 1, this research study focuses on the role of online interaction between students and their peers, and between students and their instructor and how these interactions influence learners' motivation. Driven by the nature and the objectives of the research problem, suitable research strategies were adopted to address the research questions in an in-depth exploration.

This chapter begins by setting out the theoretical background of educational research methodologies. It follows on to present approaches adopted for this research. Next, case study is defined and the benefits and disadvantages of using one are discussed. I then move on to describe the method used for selecting participants before proceeding to examine the three sets of data collected and the modes of analysis. Each method is described in terms of its applicability to this study and the preparatory steps taken in conducting the research tasks. The strengths and weaknesses of each method and the corrective measures taken to counteract any weaknesses are discussed along with the data analysis techniques. This is followed by addressing the role of the researcher and the ethical considerations. Finally, I conclude the chapter by looking at the issues of validity and reliability.

4.1 Theoretical Framework of the Research Approach

A variety of research approaches are used in social research studies which are often labelled at opposite ends of the spectrum. They include positivist/interpretive, qualitative/quantitative, case-study survey, interventionist/non-interventionist and experimental/naturalistic. Many social-science research studies utilize more than one methodology. The

strengths and weaknesses of each approach have been outlined in the literature and an argument was developed that a combined approach decreases weaknesses of individual methods and increases overall reliability (Wellington, 2003).

4.1.1 Positivism and Interpretivism

Carr and Kemmis (1986) divided social science research into three dominant paradigms: the positivist, interpretative and critical approaches. From these three paradigms, I used the interpretivist and positivist approaches. The critical research approach was not used because this study did not intend to critique ideology or change a social order for democratic freedom and empowerment, although I believe that this research will hopefully empower learners indirectly by providing insights into learning on-line.

At this point, it is important to identify the main elements of the positivist and interpretivist approaches. The positivist approach posits objective knowledge of an external reality, which is independent of the observer and views knowledge as obtained via the testing of hypotheses based on objectively verifiable data. On the other hand, the interpretivist approach is concerned with meaning and how social members construct their own definition of reality. Some researchers explained the role of interpretive research in the field of education as an attempt to: a) understand classrooms as socially and culturally organized spaces for learning and b) understand what teachers and learners do, think, feel, and say. Both aspects form an integral part of the process of education (Erikson, 1986). Schwandt (1994) added that interpretivist research aims to deepen and extend the knowledge of social life as perceived and experienced in a real context by trying to understand and explicate the subjects' definitions. Gephart (1999) explained that the aim of the interpretivist approach is to describe meanings, to

understand respondents' definitions of the situation, and to examine how objective realities are produced.

According to Pring (2000), due to the different assumptions about the positivist and the interpretivist paradigms, a false dualism was created. Pring admitted that there is often something inappropriate about the scientific paradigm as an approach to educational research, and that "the practice of education cannot be the object of science" (p. 29). He urged researchers to "be eclectic in their search for the truth" (p. 32) and encouraged the use of both qualitative and quantitative approaches for educational research.

Although this research study merges both interpretivist and positivist approaches, it leans more towards the interpretive approach because it seeks to understand how meaning is produced by examining members' definition of a situation and how they describe meanings. In this study, I am interested in what participants might conceivably think about asynchronous conferencing and the factors that might affect their motivation to learn. Therefore, an in-depth understanding of students' perceptions is needed. As Cohen, Manion and Morrison (2003) noted, there is a need to understand as well as we can the socially mediated world in which the informants operate. The study also employs the positivist approach as it seeks generalizations based on uncovering quantifiably determined facts. Positivists base their analyses on data gathered from questionnaires, experiments and the use of secondary data obtained from quantitatively coded documents. Interpretivists use a more communicative approach stressing participants' observation, interviews, case studies, and the like. This, however, does not mean that the positivist never uses interviews nor that the interpretivist never uses a survey. They may do so, and I argue here that such methods complement each other. At this point, it should be noted that positivist philosophy is not a

synonym for quantitative and qualitative does not necessary mean interpretive assumptions. Guba and Lincoln (1989) stated that methods and paradigms may be regarded as independent. Quantitative researchers can use interpretive philosophy to complement their research, while qualitative researchers can use pre-structured instrumentation. Further, Patton (1987) suggested that researchers should feel free to change or blend their paradigms as the need arises. Guba and Lincoln (1989) claimed that methodology is best understood as an overall strategy for the resolution of choices that may be encountered by the researchers.

As previously mentioned, the current study used both objectivist and interpretivist methods of data gathering. These were questionnaires, a focus group interview and asynchronous conferencing transcripts. Then, the data were analyzed using both quantitative and qualitative approaches. This raises the question of quantitative and qualitative approaches.

4.1.2 Qualitative and Quantitative Approaches

Many researchers used both quantitative and qualitative methodologies in researching online learning (Mowrer, 1996; Romiszowski & Mason, 1996). Others drew comparison between the two methodologies. According to Taylor et al. (1995) a quantitative data approach is in the form of numbers; the usual research tools adopted in quantitative methods are questionnaires and structured interviews. On the other hand, qualitative data covers a range of materials which may originate from the descriptions of social life provided by participants, from observation and unstructured interviews to information, and from written sources, such as diaries, autobiographies, and novels. Although the two approaches of data gathering may be closely connected and complement each other, Taylor (1995) argued that qualitative data provide greater depth and a more detailed picture of social life.

Another distinction between qualitative and quantitative methods was drawn by Stake (1995), noting differences between explanation and understanding as the purpose of the inquiry; the personal and impersonal role of the researcher and the knowledge discovered and constructed (Stake, 1995, p. 37). By blending the two methodologies, it was hoped that the advantages of each methodology complemented the other and their individual inadequacies were minimized.

4.2 Case Study

The sample selected for this study can be described as a single case study. This particular university was chosen because of its leadership position within the higher education institutions in the Gulf region. The university is also known for its technology-rich environment. At the time of the study, the courses selected were the only blended courses that used asynchronous conferencing. In considering the university's position in the region and the uniqueness of the courses, a case study approach was adopted in this research study.

Some of the features of a case study are highlighted in the literature. For example, Merriam (1988) defined case study as being particularistic, descriptive, interpretive, and exploratory. First, it is particularistic because it focuses on a particular event or a situation. This particularity makes it an appropriate design for situations arising from everyday practice. This feature is applicable to this study, as it focuses on the particulars of online interaction and the challenges that learners may face in a blended e-learning environment. Second, it is descriptive because it narrates accounts that illustrate the complexities of a situation. It shows the influence of personalities on the issue; it includes interviews and quotations; and it obtains data from many sources and presents the information in many

different ways. This is relevant to this research since the end product is intended to provide description of learners' perceptions and experiences of the online environment. Third, it is interpretive as it develops conceptual categories inductively to examine initial assumptions. This feature is also applicable since this case study attempts to understand the meaning that participants attached to their online interactions with their peers and instructor. Fourth, case studies are exploratory. As Yin (1994) noted, a case study is the preferred strategy when, 'what', 'why', or 'how' questions are asked, when the investigator has little control over events, and when the focus is on a phenomenon within a real-life context. This feature conforms to the requirements of this research and hence its applicability.

Furthermore, Merriam (1998) regarded a case study as a phenomenon of some sort occurring in a bounded context. To ascertain whether a study is ring-fenced, Merriam (1998) added that the researcher should ask how finite the data collection would be in terms of the following:

- Is there a limit to the number of people involved who could be interviewed?

- Is there a finite amount of time for observation?

In this study, both questions can be answered positively. The case study involved 48 students (from three classes of the two cohorts), who used online interaction in their courses, and the observations were made for one semester only, suggesting that there was a finite starting and ending point.

Next, it is important to look at the advantages and disadvantages of using a case study research strategy.

4.2.1 Advantages and Disadvantages of Case Studies

There are advantages and disadvantages to using a case study method of enquiry. As described by Nisbet and Watt (1984), an advantage of a case study approach is that the results are accessible to a wider readership providing that the report is well written. Case studies capture unique features that may otherwise be lost in larger-scale research. This is true in this study, since it attempted to capture online interaction particulars in a specific context. Case studies can also provide insights into other similar cases and situations, thereby assisting in the interpretation of similar situations. Nisbet and Watt also suggested that case studies are useful in identifying patterns of behaviour in particular cases that may not be identifiable by other methods.

Others, however, stated some of the disadvantages of using case studies. Yin (1994) suggested that the results of a case study may not be generalisable except where others see their application. He considered case methodology "microscopic" because it "lacked a sufficient number" of cases. But Yin (1994) forcefully argued that the relative size of the sample whether 2 or 100 cases are used, does not transform a multiple case into a macroscopic study. The goal of the study should establish the parameters, and then should be applied to all research. In this way, even a single case could be considered acceptable, provided it met the established objective. Nisbet and Watt (1984) considered case studies as not easily open to cross-checking, and hence they may be selective, biased, personal, and subjective, which makes them prone to problems of observer bias.

4.3 Participants

The participants were first-year baccalaureate female students taking colloquy courses during the autumn semester, 2004 (see chapter 2, p. 25 for the courses description). At the time of conducting the study, the participants

were between 17 and 20 years old. The majority were graduates of the Readiness Programme, and very few were direct entry from high school. The Readiness Programme is a two year programme which offers intensive English as a second language for those students who lack English language competencies. All of the students were native speakers of Arabic, but they had passed the Test of English as a Foreign Language (TOFEL) with a 500 score or above. All participants were based in one campus, and had access to the Internet from campus and home and were very well versed in information technology (Patronis, 2003). The participants were introduced to the online environment during a Blackboard orientation session at the beginning of the course.

The number of students enrolled in these courses during the study was 50; eighteen in COL 120 course, seventeen in COL 105 course, section 1, and fifteen in COL 105, section 2. Forty eight out of fifty students responded to the survey. The courses selected for the study were diverse in content and included an introduction to the disciplines, study skills, and career exploration (see chapter 2, p. 25, for courses descriptions).

It was decided to carry out the study with this student population for two main reasons. First, at the time of the study the participants were the only groups of students who were using blended learning courses. Second, I was the course instructor and had easy access to students for data gathering. The survey sample was, therefore, a convenience sample. A convenience sample "relies on available subjects". This is usual when there are captive audiences, such as students (Cohen et al., 2003, p. 102). Berg, however, cautioned when using this type of sample in cases where the available participants may not be appropriate to the research question. He stressed the fact that the sample needs to be evaluated "for appropriateness or fit for a given study" (Berg,

2001 p. 32). The sample was appropriate for the area of this research study because the courses included blended e-learning.

To recruit focus group participants, purposive (or specific) sampling was used. In quantitative research, Strauss and Corbin (1998) suggested that a purposive sample needs to be carefully selected to represent the population. For this reason, representatives of the most active, average and least active participants were selected for these interviews based on the frequency of their online postings, the quality of their postings, and their attitude toward e-learning. A point worth mentioning is that whilst purposive sampling meets the researcher's needs, it makes no pretence to represent the wider population and may contain bias (Cohen et al., 2003). According to Cohen et al. (2003), small-scale research often uses non-probability samples. Despite the disadvantage that arises from its non-representativeness, small-scale research is less complicated to set up, is considerably less expensive, and can prove adequate when researchers do not intend to generalize their findings beyond the sample.

Although generalisation did not concern me in this study, the findings of this small-scale research may be considered useful in relation to similar contexts for the purposes of comparison and may lead to some degree of generalisation. Delamont and Hamilton (1984) showed their support for the use of small-scale research. They noted that individual classrooms often have common characteristics. So by studying one particular context, it may still be possible to identify common phenomena. The abstracted summaries may then be formulated, which may, upon further investigation be found applicable to a wider variety of settings.

Consistent with Delamont and Hamilton, Bassey (1999) proposed the notion of "fuzzy generalizations" as a means of disseminating the results of case studies. He viewed fuzzy generalizations as a way of generalising the findings of educational research. A fuzzy generalisation is that in similar situations x is likely to lead to y. It is something neither likely to be true in every case, nor likely to be untrue in every case. He stressed the importance of the relationship between a fuzzy generalisations and the written report which supports it. The fuzzy generalisation on its own may be memorable, but it has little credence. However, once read in conjunction with the research report it may gain high credence and in consequence may encourage others to act on it in their own school and circumstances (Bassey, 1999).

4.4 Data Collection Methods

Three sets of qualitative and quantitative data were gathered and analyzed. These were: an online questionnaire, a focus group interview, and students' asynchronous transcripts. The following sections provide a detailed description of each method as it relates to the study and discuss the different approaches taken to analyse the different types of data sets.

4.4.1 The Questionnaire

The questionnaire aimed to gain a better understanding of the students' perceptions of their interactions with peers and the instructor. Also it aimed to gather information about their cultural background and their views with regards to asynchronous conferencing together with the enabling and constraining factors that affected their motivation.

Saunders et al., (2000) provided a typology of questionnaires under two headings: (1) self-administered and (2) interview administered. In the first type, the questionnaire can be submitted online or delivered and collected by post. The second type can be conducted by telephone in a structured interview. Saunders et al. (2000) continued to explain the advantages and disadvantages of using questionnaires. They proposed the use of questionnaires for a number of reasons. For example, questionnaires are inexpensive and incur low administration cost in terms of money and time. Also the same questionnaire can be distributed to a large number of recipients and provides ready transcribed data. Nevertheless, they listed a number of disadvantages of using questionnaires. For instance, data collected can be limited in quality, and suffer from the inability to probe responses. In addition, questionnaires are structured instruments and allow little flexibility to the respondent with respect to response format. In particular, they often lose the essence of the response. This drawback can be partially overcome by allowing spaces for respondents' comments. Another drawback of questionnaire is respondents' openness and willingness to answer the questions. They might not wish to reveal the information or they might think that they will not benefit from responding and perhaps even be penalised by giving their honest opinion. For this reason, the questionnaire could be conducted anonymously, although anonymity limits the ability to check the validity of the answer.

I employed a self-administered on-line questionnaire for this study for several reasons. First, the students were familiar with the medium because they were exposed to it throughout the course. Second, the time available for the completion of the questionnaire was relatively short in relation to the course duration. Participants had easy and flexible access to the on-line questionnaire so they could complete it at their own their pace and on their

own time, although a time line of one week was given. Lastly, the medium (the survey tool on Blackboard) provided readily transcribed data which could be easily exported to Excel for further analysis.

The questionnaire (see Appendix A) was devised based on the four primary research questions. It contained closed and open-ended questions in two separate parts. The first part was comprised of five sections that included true/false answers and Likert scale questions rated from 1 (strongly disagree) to 5 (strongly agree). Questions in the first section focused on eliciting information about the students' learning styles. In the second section, the questions focused on student-to-student interactions. In the third section, the questions focused on student-to-instructor interaction. The fourth section of the questionnaire dealt with enabling factors and barriers to online interaction. The fifth section of the questionnaire aimed at gathering data about students' cultural backgrounds. The second part of the questionnaire included a series of open-ended questions to allow students to express their views freely in their own words and to uncover factors that had influenced their motivation positively or negatively during their online interactions.

4.4.1.1 Piloting the Questionnaire

Oppenheim (1992) stressed the importance of conducting a questionnaire pilot, as it increases the reliability, practicality, and validity of responses. The pilot serves to check for clarity and comprehension of the questions, to check the time taken to complete the questionnaire, to identify redundant questions, to check whether the questionnaire is too difficult and/or too long and to obtain feedback on the layout of the questionnaire. To conduct the pilot, I randomly distributed the questionnaire to three students who completed the questionnaire within 15-20 minutes. As a result of the pilot questionnaire, some redundant and repetitive questions were crossed out and

were not used in the study. Because the students involved in the research study were second-language speakers of English, several questions were misunderstood due to language issues. Question formation and word selection were carefully considered and changes were made to the questionnaires in terms of language clarity, with some words translated into Arabic to ensure understanding by all students. However, a number of shortcomings in the design were not picked up at the time. In hindsight, a trial analysis on the pilot samples could have allowed me to test out my analysis procedure and pinpoint some of the shortcomings of the complex design, such as in questions 28 and 32, which dealt with two issues in a single question.

4.4.1.2 Conducting the Online Questionnaire

During week 12 in the autumn semester, the questionnaire was posted to students via Blackboard (Bb) using the survey manager tool. Clear instructions were given to the participants, and the purpose of the questionnaire was made clear. A consent letter was sent to students explaining the purpose of the research and allowing them to opt out at anytime they wanted (see Appendix B for consent letter to students). Within one week, forty eight out of the fifty respondents completed and submitted the questionnaire. The remaining two questionnaires were partially complete and had to be excluded from this study.

4.4.1.3 Questionnaire Data Analysis

Having collected the survey results, I checked the questionnaires for completeness and errors. I then started the "data reduction process" which involved data coding Cohen et al. (2003, p. 265). The survey questions were classified in five distinct areas, according to the specific area of interest. One area focused on students' learning style, another on the effect of peer-to-peer

interaction, a third on the effect of instructor-to-student interaction, and a fourth on the socio-cultural effects on students' motivation to learn in an online environment. A further area explored the motivational factors and barriers faced by students in an online environment. The questionnaire data were downloaded to Excel for further data checking and subsequent analysis.

For each question, the percentage responses were calculated for each of the 5 Likert scale (strongly agree to strongly disagree) and the results were plotted in the form of bar charts. For convenience, the strongly agree and agree percentage responses were combined together as a single parameter, and the same was done for the strongly disagree and disagree responses. This allowed a clearer presentation of the results in bar chart form under three more general categories of agreeing, neutral and disagreeing as illustrated in chapter 5, Figure 5.4, p. 117.

During the questionnaire analysis and the interpretation process, I came to realize some of the pitfalls of the questionnaire and its design. In hindsight, had I used the three categories of the Likert scale only, the questionnaire might have produced more decisive responses. Another pitfall of the questionnaire was in its length. The large amount of data generated by the questionnaire was not only time consuming to analyse, but it may have impeded the respondents from giving meaningful answers in some cases because they may have been unwilling to spend a long time on the questionnaire.

4.5 The Focus Group Interview

Morgan (1988) defined a focus group as a form of group interview that relies on interactions between research participants who discuss a topic, initiated by the researcher, in order to generate data. This means that instead of the interviewer asking each participant to respond to a question in turn,

participants are encouraged to communicate to one another: asking questions, exchanging feelings and commenting on each others' experiences and points of view.

According to Cohen et al. (2003), the focus group interview method is not only adequate to triangulate with the survey questionnaire, but it has also the potential to generate more critical comments than individual interviews because respondents' ideas may spark new ideas with others, creating a snowball effect. Watts and Ebbutt (1987) observed that the focus group interview affords the chance for everyone concerned to hear what others are saying and thereby help people to explore and clarify their views in ways that would be less easily accessible in a one-to-one interview. Watts and Ebbutt (1987) also recommended a group interview for its homogeneity within each group in order to capitalise on people's shared experiences. An additional advantage is that friends and colleagues can relate each other's comments to incidents in their shared experiences. They may challenge each other about contradictions between what they believe and how they actually behave. It can also be advantageous to bring together a diverse group to maximise the exploration of different perspectives within a group setting (Cohen et al., 2003).

According to Morgan (1988) the quality of data collected in focus groups can be influenced by a number of issues: 1) Focus groups have less control over members; less able to control what information will be produced. 2) They can generate relatively a large amount of data and hence, making data analysis more difficult. 3) Small numbers and convenience sampling severely limit ability to generalize to larger populations. 4) They require carefully trained interviewer who is knowledgeable about group dynamics. A moderator may knowingly or unknowingly bias results by providing cues about what types of responses are desirable. 5) There is uncertainty about the accuracy of what participants say. Morgan (1997) viewed the group voice as a threat to the authenticity of individual participants' views and perceptions. Morgan commented on the "groupthink" phenomenon and the contamination of the individual's true response. This phenomenon could result in difficulty in extracting the views of individuals from those of the group as the responses of each participant are not independent. Another disadvantage of using focus group interview is that one person may consistently undermine the others, dominating the conversation, which can result in generating biased data. By the presence of a very dominant or opinionated member; more reserved members may be hesitant to talk.

> Some researchers claim that the focus groups are not a good research methodology because of the potential influence of one or two respondents on the remaining members of the group. These critics say that a dominant respondent can negatively affect the outcome of the group and that group pressures may influence the comments made by individuals (Wimmer and Dominick 1997, p.461).

4.5.1 Conducting the Focus Group Interview

As already mentioned, the focus group participants were selected to represent the most active, average, and least active online participants, based on the frequency of their postings online, and the quality of their postings. The focus group interview was conducted with 8 of the 48 students who completed the survey questionnaire. The actual interview was conducted on campus in a classroom that ensured privacy and had as few distractions as possible. Participants sat in a circle to establish a comfortable atmosphere, and I chatted with them informally when they arrived. Whilst running the interview, language issues were taken into consideration and were overcome. For example, the respondents' English language abilities varied, so I employed a dual-language approach. During the interview process, respondents could switch from English to Arabic depending on their level of language comfort to allow them to express themselves freely. This proved useful in providing participants with a non-threatening environment and in teasing out experiences without being hampered by difficulties in expression.

At the beginning of the interview, the participants were asked for permission to tape record the interview and they were assured of confidentiality. The focus group consisted of unstructured discussion with no set questions. The interview was centred around the following issues, which were guided by the primary research questions:

- Students' interactions with peers
- Students' interactions with the tutor
- Students' attitude about using asynchronous conferencing

- Motivating and de-motivating factors

At the initial stages of the interview, one or two students did not respond to questions and gave short answers. According to Saunders et al. (2000), this was to be expected since focus group interviews are not fully confidential or anonymous as the material is shared with the other members and may discourage some from trusting others with sensitive or personal issues. Or it could be because those particular students were intimidated by the presence of other more confident and able students. To prevent the more dominant students from taking control of the discussion, I encouraged each participant's involvement and assured them that all contributions were highly valued regardless of the diversity of views. When one of the participants was dominating the discussion, I adopted a more interventionist style and encouraged the group to discuss the inconsistencies both between participants and within their own thinking.

In line with Merriam's (1998) recommendations, I made every attempt to reduce bias, including validating my findings with the participants by utilizing participants' checks. Having a transcript of the interview, I shared it with the participants and verified what they said. The participants were also afforded the opportunity to change the information representing their perspective. According to Stake (1995), this places the decision of transferability to another context on the respondent and not the researcher.

4.5.2 Focus Group Interview Data Analysis

In this section, I describe the analytical approach which I adopted with the focus group interview data. The focus group interview was guided by the primary research questions. I aimed to gather participants' opinions, perceptions, and experiences and to cross check them with other sets of data. By following Creswell's (1998) procedures, I first tape-recorded the

interview and then transcribed it. The transcript was sent back to students to confirm accuracy. After confirmation of the text's accuracy with the participants, I proceeded with the analysis following the three phases of data analysis proposed by Miles and Huberman (1994). The three phases involved data reduction, data display, and conclusion drawing.

In the data reduction phase, I listened to the transcript several times. Then I read the transcribed data carefully as a whole to form an overall impression. Gadamer (1976) suggested that the process of understanding involves movement from the whole to the part and back to the whole. I went back and forth from pieces and from whole to the pieces, over and over again, noting emerging key issues on the margin. This technique resulted in clarifying the extracts and the whole and it helped me in reducing the data and identifying the words, phrases, or sentences which typify the key issues of the study. In identifying patterns and themes, I highlighted key phrases, words and so forth that were in the transcript. As I was reading the transcript, I noticed that several participants within the group repeated similar statements, and when a participant in the group made a statement, a substantial number of people in the group demonstrated agreement.

In the data display phase, the major quotes, key points, and emerging themes identified from the review of the transcript were classified in relation to the main research question headers. To identify who said what and when without revealing the identity of the participant, I coded participant 1 as "A", participant 2 as "B", and so on. Once I had established preliminary codes, I reread the responses for each prompt, I made new codes as the need arose. Statements that fell into codes were examined for specific meanings in relationship to the purpose of the study. Miles and Huberman (1994) supported the idea of counting codes in qualitative data analysis as long as

the sums and codes remained together throughout the analysis. For clarity of presentation, I displayed common themes expressed by the focus group in a tabular form, as illustrated in chapter 5, Table 5.6, p. 150. This table was comprised of three columns. The first column contained students' perceptions in reference to the four research questions, another listed the number of positive comments, and the third column listed the number of the negative comments. I attempted to include responses that expressed the majority of the participants. All the new items that emerged from the transcript review were also included. I was also mindful of the fact that representative views and experiences do not necessarily lead to generalisable findings. Since the ultimate goal of the focus groups was to identify emerging themes around the main topic, I assembled the responses according to each research question. Then I categorized them according to each of the research questions.

The conclusion-drawing phase focused on examining the data and their interpretation for themes and patterns. Lastly, an overall representation of participants' responses was created where conclusions were drawn based on the data presented.

The following section discusses the asynchronous transcript analysis technique, which is the third method I used in this case study.

4.6 Asynchronous Transcripts Analysis

The section starts by giving an overview of the use of asynchronous transcripts for research. It then discusses the benefits and limitations of using such approaches. The section then moves on to present the method of selecting transcripts for this study, and it concludes with the analysis.

Until 1992, Asynchronous Learning Networks (ALNs) were studied by using a variety of methodologies including case studies, surveys, interviews and participant observation (Mason, 1992). According to Mason, learning indicators available in the content of transcripts of ALN discussions did not receive enough attention by researchers. Instead emphasis was centred around identifying the skills and abilities that ALN participants demonstrated in the discussions as learning indicators. Henri (1992) also identified the importance of ALN transcripts as indicators of the learning processes and argued that a detailed content-analysis framework was needed to evaluate the use of CMC in education. For this reason, Henri (1992) devised a model consisting of three levels whereby the first level addressed the product of learning and the other two levels addressed the learning process. Within Henri's framework, five dimensions were identified. These were participative, social, interactive, cognitive and metacognitive.

Following Henri's work, other scholars like Hiltz and Turoff (1993), Olson (1994), and Newman et al. (1996) developed analysis tools to evaluate the learning process of students in ALNs. Further literature review revealed two primary approaches for measuring online interactions. The first relates to the use of students' feedback (Rovai, 2002), and the second relates to content analysis (Penna-Shaff & Nicholls, 2004). Rovai (2002) created a classroom community scale based on factor analysis of student perception. As the content analysis is considered to be more revealing, some researchers adopted quantitative approaches by counting the number of messages, postings, threads, length of threads (e.g., Harasim, 1990; Henri, 1992), interaction patterns (Penna-Shaff & Nicholes, 2004) and the quality of interaction (Blignauat & Trollip, 2003).

Educational researchers have pointed out the benefits of using asynchronous transcripts for research. For example, Noakes (2000) recommended using CMC data collection methods for a number of reasons. First, it saves time, space and cost since transcripts are available online. Second, it minimizes transcript bias because content and context are immediately accessible for the researcher. Third, participants can be anonymous if they wish; therefore, they feel open to express their views freely. Lastly, transcripts can be transferred to qualitative computer-analysis software. Furthermore, social constructivists such as Lazonder et al. (2003) argued that using CMC promotes the collaborative process, in which meaning is negotiated and knowledge is constructed. These views "acknowledge the importance of interaction in collaborative learning" (Lazonder et al., 2003, p. 292). This interaction, occurring in forums, can be the object of educational research. Besides mentioning the benefits, researchers have stated some of the drawbacks of using asynchronous transcripts for analysis. In a subsequent section, I elaborate further on the reported limitations of this technique.

4.6.1 Methodological Issues with Content Analysis

Henri (1992) pointed out some problems with content analysis. She explained that despite the overload of messages, the analysis did not indicate that the learners participated collectively in the construction of knowledge, as the majority of the messages were independent that lacked interactivity among members where participants posted messages and received no replies to these messages. Moreover, measuring the number of logins and hits does not necessarily tell us very much about what a student is actively doing. Mason (1992) explicitly warned about confusing student activity with student learning, encouraging researchers to focus on the quality of learning that takes place rather than the number of hits and logs. Rourke et al. (2001) reported on the challenges of this type of research due to the amount of data

generated by computer conferencing, as this requires a considerable amount of time to sort the data into manageable segments for analysis. They also warned about the lack of software to facilitate the process of sorting and analyzing the data. Another drawback of using qualitative indicators in content analysis is that data may be a challenge to interpret because, as Rouk et al. (2001) explained, each message needs to be examined independently and as part of a connected train of discourse. This is because, according to Henri (1992), online discussion is a collaborative endeavour.

Mindful of the challenges, I proceeded with using the asynchronous transcripts, as it gave me the opportunity to gather additional evidence to triangulate the results of the questionnaire and the focus group interview. The messages posted within the asynchronous online environment afforded the advantage of ensuring there was a full record of the responses that can be archived and stored easily for future reference. Besides the students' responses approach, I used quantitative analytical approaches for asynchronous transcripts, aiming to provide a more comprehensive picture of the online interaction that took place in this case study.

4.6.2 Method of Asynchronous Transcripts Analysis

Henri's (1992) analytical technique of online discussion mode of quantitative and qualitative analysis was used to examine participation and interaction rates. The participative dimension is defined as the number of messages posted in a discussion group. The interactive dimension focuses on whether the messages are posted in response to previous postings, and thus "a chain of connected messages is shaped" (Henri, 1992b, p. 128).

Participation	Social	Interactive	Cognitive	Meta-cognitive
Compilation of the number of messages or statements transmitted by one person or group.	Statement or part of statement not related to formal content of subject matter.	Chain of connected messages, explicit interaction, implicit interaction, and independent statement.	Statement exhibiting knowledge and skills related to the learning process.	Statement related to general knowledge and skills and showing awareness, self-control, and self-regulation of learning.

Table 4.1: Summary of Henri's (1992) five dimensions model

Following Henri's data analytical model, I composed six questions to analyze the asynchronous transcripts' participative and interactive dimensions. Questions 1-5 were linked to the participative dimension, and question 6 related to the interactional dimension. The questions were:

1. What is the number of messages posted by students in each of the electronic forums during the course?
2. What is the number of messages posted by the instructor in each of the electronic forums during the course?
3. What is the number of threads initiated by the students?
4. What is the number of threads initiated by the instructor?

5. What is the duration of each of the forums?

Although it could be argued that all Henri's five dimensions are important for an analysis of motivation, I focused on the participative and interactive dimensions. Social, cognitive and meta-cognitive dimensions were not used because this study did not intend to look into the knowledge construction and learning processes and only aimed to explore the level of students' participation and interaction. However, social, cognitive and meta-cognitive dimensions could be recommended for future studies.

Using the participative dimension, I included the total number of messages posted by the group of students and the course instructor. I also included the number of threads initiated by the course instructor and the group of students. These raw data were generated automatically on the Blackboard Forum (BF). These contained the number of postings and the frequency of participation of every individual student, including times and days of the week. Discussion forum transcripts were collected, automatically, by using the collect button on the forum and copied and pasted on a word document. Hard copies were printed off for the analysis. The number of messages and threads were counted and then coded according to whether the student or the instructor posted the message or initiated the thread. The obtained quantitative data were tabulated as shown in Table 5.7, p. 155. The table columns listed the forum numbers, total number of messages posted, number of messages posted by the instructor, discussion periods and duration and the number of threads initiated by the instructor. The last column presented the number of threads initiated by the students. The analysis also included the number of messages posted by each participant in each of the forums. Similar to the group-participation analysis process, I used BF tools for sorting out participants by name. For speed I used the BF tools. For accuracy

and reliability, I counted the number of messages, posted by each student in each forum, more than once, which I then I recorded on a hard copy and entered on an excel file.

4.7 My Role as a Researcher and Course Instructor

Due to my position at the university as the course tutor and the investigator of this study, and due to the organizational support I had received, it was possible to utilize multiple approaches of data collection. Documents were collected, and students' surveys and focus group interviews were conducted. Also my position allowed me to study the situation as a whole so as to understand the processes that shape the focus of the research. Guba and Lincoln (1981) commented that researchers "emphasize, describe, judge, compare, portray, evoke images, and create for the reader or the listener, the sense of having been there" (p. 149). This case study provided the opportunity to examine the construction of reality through the researcher's interaction, with the participants' perspectives and the phenomena being studied. This was achieved through the range of methods I employed-taking survey, using focus group and employing transcript analysis. Furthermore, being the "primary instrument of data collection and analysis" (Merriam 1998, p. 7), I was able to respond to the situation while maximizing opportunities for obtaining meaningful information. Having worked at this university since its inception in 1998, I had greater insight and sensitivity to the context.

My role as a researcher participant had limitations besides benefits. Researchers have suggested that a major difference between quantitative and qualitative research is the underlying assumptions of the role of the researcher. In quantitative research, the researcher tries to be objective, while in qualitative research the researcher's role is more subjective (Hoepfl,

1997). Interpretivist approach predisposes that the data must be interpreted by the researcher using her intuitive processes, placing the researcher's values at prime position. As a course tutor I have a bias towards the study and advocacy for the students, so I wanted the online discussion to be successful and was hoping for increased interaction. Ragsdale (1988) argued that the researchers who study distance education may be biased toward technology.

> It is natural because events are interpreted in the context of experience and expectations. Thus, it might be said that the answer to questions about the effect of computers on education is unobtainable regardless of the researchers' backgrounds, or more precisely, because of their backgrounds. That is, our backgrounds cause us to expect certain results, preventing our clear perception of other results (Ragsdale, 1988, p. 14).

However, Denzin and Lincoln (1998), in their analysis of qualitative materials, described the "bricoleur" researcher who produces a set of practices that are appropriate for the context and the setting, thereby securing an in-depth understanding of the phenomenon (p. 3). Although the research was carefully planned and implemented, there were clear limitations to the work done.

Being both the researcher and the course tutor had its benefits and limitations. My role provided me with the opportunity to immerse myself into the setting and experience the natural setting as a whole. Bogdan and Biklen (1992), Creswell (1998) and Merriam (1988) concurred that natural settings should be used as the source of data. This approach was followed in this study since a "natural" online environment was used.

Moreover, I was mindful of the fact that my assumptions might influence my interpretations. The impetus behind this study was my initial observation of

the positive response of the students to the new mode of teaching and learning. Again, this can be viewed as starting the research with the researcher's biases. Therefore this might have meant that some potentially negative reflections were withheld or censored. However, in order to minimize this problem I made every attempt to reduce my effect on the data by utilizing what Miles and Huberman (1994, p. 264) called a "critical friend".

Costa and Kallick (1993) defined a critical friend as

> A trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is the advocate for the success of that work (p. 50).

Critical friends have been recommended by Stenhouse (1975). Stenhouse regarded them as those individuals who take up a proactive role through the building and maintenance of a partner relationship with the academics throughout their projects. In this study, my critical friend was an independent colleague of the project who was involved in reading the focus group interview and the asynchronous transcripts. His probing questions and critiques enabled me to gain fresh insight into the work. He provided objective feedback on everything from the coding to the interpretation of data. To maintain the focus of the study, he provided an outsider's view and independent questioning.

4.8 Ethical Considerations

All research activities raise ethical issues that need to be addressed as an integral part of the planning and implementation processes. Ritchie and Lewis (2003) noted the unstructured nature of qualitative research. Unexpected situations or issues can raise ethical consideration; hence, with careful anticipation of the possibilities, ethical issues can be overcome. In discussing research ethics, Weiss (1998) noted that one aspect of the research task is adaptation to change, aiming to impact the future direction of a programme or policy. The researcher, therefore, has the responsibility to report on both the strengths and the weaknesses of the focus of the research. Furthermore, Silverman (2000) believed that the relationship between the researcher and the participant necessitates consideration of the values of the researcher and of cultural aspects.

This study was conducted within an environment of local cultural awareness and ethical considerations. Issues related to cultural sensitivity, access to information, confidentiality of participants and the role of the researcher were important aspects of this study.

Before collecting any data, I took the precautionary step of briefing the Human Subject Committee at the university where the study was conducted (see Appendix D for a letter of consent) as well as the participants on ethical issues, and informed consent was sought (Miles & Huberman, 1994). It was made clear to the participants that their participation was voluntary and they could withdraw at any time. I also made clear that their identity would remain confidential and no one would have access to their raw data but me. They could use a pseudonym or stay anonymous when online and would be given the opportunity to review the transcripts and make amendments as and

when required. Confidentiality was assured, with student names being changed on any public documentation. They were informed that the purpose of this study was for my doctorate degree.

4.9 Triangulation

As explained in section 4.4 of this chapter, three sets of data were gathered and analyzed for the benefit of this research study: an online questionnaire, a focus group interview and asynchronous transcripts. The purpose of the three data sets was to provide a means of triangulation to corroborate the findings and provide an opportunity to investigate any discrepancies.

Denzin (1978) defined triangulation as a combination of methodologies in the study of the same phenomenon as an approach that would strengthen the validity of the findings of a single qualitative method. Yin (1994) also noted that triangulation arose from an ethical need to confirm the validity of the processes and, in case studies, argued that this can be achieved by using multiple sources of data.

Four different types of triangulation have been identified by Denzin (1970): (a) data source triangulation, which would compare data from different places and times generating contrasts; (b) investigator triangulation, in which triangulation would test for differences of interpretation between researchers; (c) methodological triangulation, in which one approach is followed by another, for example, a quantitative analysis is contrasted with a qualitative analysis; and (d) theoretical triangulation, which would allow contrasting theories to be used both as guides to data generation and as guides to interpretation. From Denzin's four triangulation types, this research study will follow the methodological triangulation approach (category c) as the study does not attempt to test differences between

researchers; nor to gather data from different places and times, nor to study contrasting theories.

Although, in general triangulation is widely used, many researchers have raised concerns about its possible hidden pitfalls. Discussions exist as to whether triangulation offers researchers a satisfactory method for validating their findings, and some researchers have reported that methodological triangulation is vulnerable to report bias. For example, Richardson and St.Pierre (2005) have critiqued the use of qualitative and quantitative methods for the purpose of triangulation. They argued that the various research methods, such as surveys, interviews and so on, which are also used in this research study to validate the findings, can carry the same "domain assumptions". This includes the assumption that there is a "fixed point" or an "object" that can be triangulated, which is also manifest in this research study through my primary four research questions (p. 963). Further, Richardson and St. Pierre recognised that there are more than "three sides" by which to approach the world and advocated the idea of crystallization rather than triangulation. They noted:

> Crystals are prisms that reflect the externalities and refract within themselves creating different colors, patterns, and arrays casting off in different directions. What we see depends on our angle of repose-not triangulation (p. 963).

In other words, a research focal point can be viewed differently by different researchers, depending on their professional background, sensibilities, or spiritual and emotional longings. In this research study, my personal involvement as a course facilitator and a researcher, together with my advocacy for e-learning, may impact my thinking in many ways. It could impact the object, my approach to the topic, my interaction with the participants, and my data collection, analysis and interpretation. Also, my

preconceptions may mark what I consider to be important in this research. To counteract this potential bias, I intend to seek the views of my supervisor, my research colleagues, and my critical friend in how to handle and interpret my data. I will also check the accuracy of the interview transcripts with the participants. Equally important, I intend to examine all data carefully, with an open mind and without preconceptions.

Continuing with the possible pitfalls of methodological triangulation, Bryman (1992) questioned how the researcher should respond if the quantitative and qualitative findings contradict each other and what the conflict in results actually means and comprises. Although discrepancies may surface in my data analyses of the questionnaire and focus group interviews, Patton (2002) suggested that such "inconsistencies not to be viewed as weakening the credibility of the results, but rather as opportunities for deeper insight into the relationships between inquiry approach and the phenomenon understudy" (p. 248). Following Denzin's (1970) argument that the partial or selective perspectives of the participants arising from each method can be summated to give "whole" picture, my intention is to use the findings from the three data sets to obtain the fullest possible picture. Fielding and Fielding (1986) debated whether the "inaccuracies [or partiality] of one approach to the data can [can be or does] complement the inaccuracies of another" (p. 35). In another instance, they asserted that the accuracy of a research method comes from its systematic application. They emphasised the systematic application of research methods, stating: "The accuracy of a method comes from its systematic application, but rarely does the inaccuracy of one approach to the data complement the accuracy of another" (Fielding & Fielding, 1986). The chosen methods for this research study are not random, but are chosen systematically to minimize the threats to validity identified in each. Fielding and Fielding then advocated the use of

triangulation as long as it is not used to produce a "whole" from the sum of the complex parts. Ritchie and Lewis (2003) suggested that the "security" that triangulation offers is through giving a fuller picture of a phenomenon, not necessarily a more certain one (p. 44). This is an important aspect and should be born in mind during the concluding part of this research study.

Mindful of the limitations of methodological triangulation, I intend to use the multiple data collection techniques systematically in the hope of overcoming the weakness or intrinsic biases and the problems that come from a single method. In doing so, it is hoped that each method can be summated to give a more complete picture with deeper insights and knowledge about the phenomenon. It is noteworthy, however, that although this research study centres around the four research questions, there is no absolute assurance that the three sources of data used in the triangulation process would remain equally focussed and entirely unbiased from the subjectivity that may arise from my professional stance and personal beliefs and preconceptions. Hence, the findings in this research may merely provide a partial understanding of the phenomenon.

4.10 Validity and Reliability

Researchers like Silverman (2003) and Meriam (1993) viewed validity and reliability in any research as key elements. They stressed the importance of being objective and thorough in the data gathering and analysis processes. Meriam (1988) held that validity and reliability concerns should be addressed according to appropriate standards that are devised through "careful attention to a study's conceptualization and the way in which the data were collected, analysed, and interpreted" (Merriam, 1988, p. 165). Furthermore, to ensure reliability and validity, Guba and Lincoln (1989)

recommended employing multiple methods of data gathering and analysis, expert review and member checks.

As in any other research study, this study sought reliable and valid results. To enhance the validity and reliability of this study, a number of measures were taken: first, triangulation was employed. As discussed earlier in this chapter, I used multiple sources of data to try to safeguard the soundness of the study. The three sets of data were continually compared within the set itself and against each other for inconsistencies and contradictions. Second, as outlined by Somekh (1995), I checked and clarified my interpretations with the participants as the research progressed, and I made every attempt to minimise any possible bias. This involved attempting to avoid my affect on the environment and the environment on me throughout the study.

The degree to which the findings of the study can be generalised to other settings reflects the study's external validity. While external validity remains an important element of quantitative research, Winter (2000) suggested that generalisability should emphasise the development and future testing of theories rather than attempt to apply it to the broader population. Bassey (1999) argued that policy makers often expect educational researchers to make scientific generalisation, but this is unlikely to happen because, unlike scientific research in educational research, there are many variables which cannot be identified, defined or measured. Bassey gave an example: the teacher may give what appears to be exactly the same lesson to another class, but the outcome may be quite different. This is because of some un-noted variables of the setting. He then suggested that the researcher must provide a detailed account of the environment to allow the reader to determine the significance of the meanings attached to the findings. Similarly, Lincoln and Guba, (1985) noted that such description must "offer

everything that a reader may need to know in order to understand the findings" (p. 125). Bassey concluded that the expectation of the educational researcher can be fuzzy generalization, leading to fuzzy predictions. Fuzzy predictions with best estimates of trustworthiness may empower the researcher to communicate with potential users of the research. However, Schofield (1990) argued that generalisability depends upon "the fit between the situation studied and others to which one might be interested in applying the concepts and the conclusions of the study" (p. 226). Then it is a matter of judgement of the environment, which allows others to assess the transferability of the findings to another context (Ritchie & Lewis, 2003). Although the intention of this investigation was not necessarily to investigate the phenomenon in other settings, the reader of this dissertation might find strong similarities that resonate with experiences elsewhere.

4.11 Conclusion

This chapter was concerned with the research design and methodology. It presented the research approaches and the methods of data collection. Then it discussed the approaches for selecting my study sample. Each method was presented in terms of its preparatory work, strengths and weaknesses. I then explained the methods of data analysis for each set of data highlighting the strengths and the problematic issues I encountered in gathering and analysing data. My role as a researcher was also examined. Relevant ethical issues and ways to enhance validity and reliability were also addressed. The following chapter discusses the findings and compares and contrasts results with the existing relevant literature.

CHAPTER 5

RESULTS AND DISCUSSION

This study attempted to tackle the four research questions which are central to this research. These are:

1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context?

2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context?

3. What socio-cultural factors affect students' online interaction in a blended learning context?

4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

This chapter presents and discusses the findings gathered through triangulation of the data described in chapter 4. Chapter 5 contains six sections, including this introduction. In the first section, I report and discuss the questionnaire findings, starting with students' preferred learning style, and then I focus on the questionnaire findings in relation to each of the four research questions. Graphical representations of the results are included to help to visualise the explanations. In the second section, I report and discuss the results of the focus group interview, which I also correlate with the questionnaire findings. In section 3, I proceed with presenting and addressing the results of the asynchronous transcripts. In section 4, I discuss the results of all the sets of data, and in section 5, I present the methodological strengths and weaknesses of the study. Finally, in section 6, I conclude this chapter.

5.1 Presentation and Analysis of Questionnaire Results

The raw data gathered from the questionnaire survey were analyzed using Microsoft Excel. The findings are presented and discussed in terms of perceived interaction effects with regard to peer-to-peer interaction, student and instructor interaction, socio-cultural factors and finally motivational and constraining factors.

5.1.1 Learning Style

When asked about their preferred communication mode, 75% of the respondents favoured writing to verbal communication as a mean of expressing themselves (see Figure 5.1, p. 101). This is important in this study because the ability to use textual communication in the target language is prerequisite for online interactions to understand the content. Hillman, Willis and Gunawardena (1994) argued that a student's skill with the communication medium used in a distance education course is positively correlated with success in that course. Further, Eastmond (1993) found that online communication "presupposes the ability to read, write and type well", thus providing a barrier for weaker writers or those who are not skilful keyboard-users.

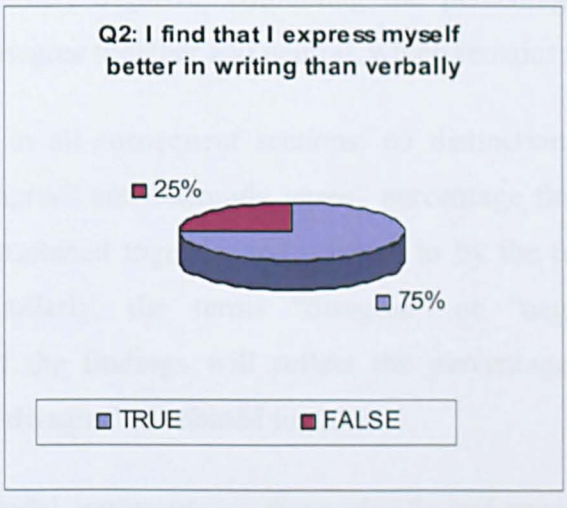


Figure 5.1: Students' responses to their preferred method of expression

Referring to Figure 5.1, p. 101, it is not certain whether the 25% of students who preferred oral communication were indeed less able in writing or they simply felt more comfortable with verbal communication in general. It should be noted that the participants in this study are generally shy and less confident to speak in public. In this respect, Bruce, Peylon and Batson (1984) argued that the online medium enables greater participation by certain groups, such as women, minorities, the physically challenged and shy students, which may be the case in this study.

5.1.2 Questionnaire Findings for Research Question 1

This section presents the findings of participants' responses in relation to research question 1, namely, to what extent does peer-to-peer online interaction affect students' motivation in a blended learning context.

The findings for each of the 13 questions of the questionnaire relating to research question 1, are tabulated in Table 5.1, p. 109, in percentages according to the Likert scale (from strongly agree to strongly disagree). The same is also shown graphically in the form of bar-chart in Figure 5.2, p. 110. For convenience, the results in Figure 5.3, p. 111, are reorganised in three categories: positive, combining the percentages of strongly agree and agree together; negative, combining the percentages of strongly disagree and disagree together and neutral, which remains unchanged.

Consequently, in all subsequent sections, no distinction will be made between the "agree" and "strongly agree" percentage findings. Instead, they will be combined together and referred to by the term "agree" or "positive". Similarly, the terms "disagree" or "negative" in the presentation of the findings will reflect the percentages of "strongly disagree" and "disagree" combined together.

Q.4: Find friends' comments on discussion board encouraging: Most of the respondents gave positive notice to this statement, with a combined total of 62.5% agreeing. While 25% gave a neutral answer, the

remaining 12.5% disagreed. This shows that most participants are encouraged by their peers' feedback and comments. Beach (1974) studied the environment in a peer-to-peer discussion and noted that "Student-led discussions provide a free and relaxed atmosphere for discussion, which makes students feel uninhibited in asking questions and challenging the statements of others" (p. 192). Similarly, Tagg (1994) asserted that this type of environment supports the beneficial processes associated with discussion and leads to positive evaluations from the students.

Q.5: Asking questions on discussion board motivates me: A combined total of 62.5% of the participants agreed to the above statement, while 20.8% gave a neutral answer. The remaining 16.7% disagreed. The overwhelming 62.5% positive response of the participants to this statement agrees with Harrington and Hathaway (1994), who asserted that peer facilitators remove power imbalances in discussions, encourage freedom of expression, and give students the feeling that they owned the discussions. Further, Tagg (1994) reasoned that interacting with peer students might ease their apprehension about posting messages.

Q.6: My friends' feedback on discussion board helps me improve my work: From the respondents, a combined total of 68.8% agreed with the above statement. Only 12.5% gave a neutral answer, whilst the remaining 18.8% disagreed. The large positive response of 68.8% to this statement may be explained by Levin and Waugh (1998) and Andrews (2002), who suggested that students have the opportunity to access information from more experienced peers to resolve classroom difficulties which in turn results in increased confidence. Further, Bolliger and Martindale (2004) and Hawkes and Dennis (2003) argued that feedback and interactivity also influence learner motivation in online environments.

Q.7: On discussion board I find my friends' ideas understandable: Whilst 14.6I% disagreed with this statement, 12.5% gave a neutral answer. However, the vast majority, or 72.9% of the participants, agreed. This is in line with Doise and Mugny's (1984) suggestion that when individuals operate on each other's reasoning, they become aware of contradictions between their logic and that of their peers. Hence, both learner and peer experience significant gains in learning as a result of their collaborative interaction.

Q.8: I ask friends' help when I need it: When asked if they sought friends' help when needed 25% gave a neutral response, with a further combined total of 27.7% disagreeing. However, 46.8% of the respondents reported that they would ask their peers for help when they needed. This indicates that although participants had the choice of asking the teacher for help, they also felt comfortable to seek help from their peers. A study by Bull, Greer, Mccalla, and Kettel, (2001) found that some students actually find help from their peers to be more useful than help from experts, because peers could appreciate the questioner's perspective on the problem. However, whether students will seek or provide assistance to peers is largely determined by the norms governing social interactions in a given setting (Nelson-Le Gall and Glor-Scheib, 1986). That is, if the learning environment is organized in such a manner as to promote collaborative learning, peers are likely to be utilized as a resource. Further, if peer norms define the act of seeking help as a sign of "weakness", incidents of help-seeking are reduced in frequency. According to Nelson-Le Gall (1981) and Ryan and others (2001), learners may not ask for help out of fear that they will receive less credit for a successful outcome or that the teacher or their peers will view them as incompetent. Further, it can be assumed that learners' help-seeking behaviour reflects their attitudes about learning, their achievement goals

(Ryan & Pintrich, 1997) and the development of independent skill and ability (Ames 1983 & Newman, 1994).

Q.9: Knowing my friends will read my messages motivates me: From the results, the majority, or 70.9% of the respondents, agreed that they were motivated by the fact that their peers would read their messages. This may be explained by the students' feelings that their perspectives in the discussion would be received positively by other students, hence resulting in a stronger feeling of self-worth, which can be motivating (Pajares, 1996).

Q.10: I find providing feedback to others encouraging: The findings show that the majority, or 64% of the participants, were encouraged by volunteering feedback to their peers. Only 20.8% disagreed with the statement, whilst 14.6% responded neutrally.

Q.11: I get disappointed when I log on and I find no new messages: A percentage of 47.9% of the respondents thought that the discussion board created a desire to check if their postings had induced a response from their peers. However, 33.3% of the respondents reported neutrality, which may indicate their unwillingness to be open about this statement.

Q.12: Friends' summaries and messages are helpful and useful: From the results, 66.4% of the respondents found peers' contributions helpful and useful for their learning. This is supported by Carswell (2000) and Matuga (2001) who suggested that the process of mutual explanation among students helps in the student's own understanding and also serves to maintain interest and motivation. Only 14.6% gave neutral response, whilst a combined total of 18.8% disagreed.

Q.13: I look forward to reading new messages from friends: A large proportion of the respondents gave positive notice to this statement, with a combined total of 64.6% in agreement. A percentage of 16.7% of the

responses were neutral, while 18.8% disagreed. This is significant, since anticipation is considered one of the motivational constructs in the learning environment (Keller, 1983).

Q.16: I feel my friends' participation is better than mine: The literature has revealed that having an accurate academic self-concept is a critical predictor of a student's academic success (Bouchey & Harter 2005). Likewise, students self awareness of their self concept and their perceptions of others affect the way they interact with each other. Thus, when participants were asked how they perceived their participation within the group, over half, or 54% of the respondents, gave neutral notice to this statement, followed by 22.9% of those in agreement and 8.4% who disagreed. The large percentage of neutrality may be because participants are reluctant to accept that their peers are better at participating than them. Or, perhaps because they are protective of their peers and do not want to be critical. Or, maybe they did not want to admit to their teacher that their peers' participation is better than theirs which may disappoint their teacher.

Q.17: I loose interest because my friends do not respond to me: Similar to the previous Q.16, almost half of the respondents, or 47.9%, answered neutral. Unexpectedly, only a small percentage of 22.9% agreed with the statement. This contradicts the findings in Q.13 when students expected replies from their peers with anticipation. This also contradicts some of the literature which suggests that students can become particularly frustrated when attempting to communicate with an unresponsive partner (Ragoonaden & Bordeleau, 2000). The high neutral response could be attributed to the respondents' uncertainly of their new roles in the given environment, or it may be due to their traditional cultural values that avoid blaming other team members.

Q.21: When my instructor does not respond, I ask my friends for help: Given the background of the students, it was expected that the majority would be influenced by their previous educational experiences of teacher-dependency. However, 47.9% of the respondents indicated the opposite, by agreeing to the statement that when the instructor does not respond, they often ask their peers. Only 8.3% disagreed with the statement whilst the remaining 35.4% were neutral. The high neutrality may be due to their uncertainty of their new role and the degree of their teacher dependency in this new environment.

5.1.3 Summary to Questionnaire Findings to Research Question 1

Overall, peer to peer interaction appears to have had a positive effect on students' motivation in a blended learning context in this case study. Over 60% of the respondents found their friends' comments on the discussion board encouraging and agreed that asking questions motivated them. Similarly, about 65% of the respondents found that providing feedback to others encouraged them, and they looked forward to receiving new messages from friends and found friends' summaries to be helpful and useful. Nearly 67% of the respondents found that their friends' feedback on discussion board helped them to improve their work and that knowing that their friends will read their messages motivated them. Over 70% found their friends' ideas understandable; and they were motivated by knowing that their friends would read their messages. However, half of the respondents gave a neutral answer when they were asked whether they felt that their friends' participation was better than theirs. A similar high neutral response was obtained when asked whether they lost interest if their friends did not respond to them. This contradicted the students' affirmative responses in Q.13 when over 64% responded positively on whether they looked forward to receiving new messages from their peers.

Also over 35% gave a neutral answer when asked if they would ask their peers for help when their instructor did not respond. The high neutrality responses could be attributed to several reasons: a) the respondents did not want to disappoint their teacher by posting a negative answer or admitting their weaknesses; b) they are protective of their peers and do not want to critique them; c) they are uncertain of their new role in the new environment.

Question title	% of Students 'Strongly Agreeing' and 'Agreeing' Combined Together	% of Students 'Strongly Agreeing'	% of Students 'Agreeing'	% of Students Answering 'Neutral'	% of Students 'Disagreeing'	% of Students 'Strongly Disagreeing'	% of Students 'Strongly Disagreeing and 'Disagreeing' Combined Together
Q4: Find friends' comments on discussion board encouraging	62.5	16.7	45.8	25.0	2.1	10.4	12.5
Q5: Asking questions on discussion board motivates me	62.5	12.5	50.0	20.8	8.3	8.3	16.7
Q6: My friends' feedback on discussion board helps me improve my work	68.8	29.2	39.6	12.5	6.3	12.5	18.8
Q7: On discussion board I find my friends' ideas understandable	72.9	22.9	50.0	12.5	6.3	8.3	14.6
Q8: I ask friends' help when I need it	46.8	12.8	34.0	25.5	12.8	14.9	27.7
Q9: Knowing my friends will read my messages motivates me	70.8	31.3	39.6	8.3	6.3	14.6	20.8
Q10: I find providing feedback to others encouraging	64.6	20.8	43.8	14.6	10.4	10.4	20.8
Q11: I get disappointed when I log on and I find no new messages	47.9	22.9	25.0	33.3	6.3	12.5	18.8
Q12: Friends summaries and messages are helpful and useful	66.7	31.3	35.4	14.6	6.3	12.5	18.8
Q13: I look forward to reading new messages from friends	64.6	20.8	43.8	16.7	10.4	8.3	18.8
Q16: I feel my friends' participation is better than mine	37.5	14.6	22.9	54.2	2.1	6.3	8.3
Q17: I loose interest because my friends do not respond to me	22.9	2.1	20.8	47.9	12.5	16.7	29.2
Q21: When my instructor does not respond, I ask my friends for help	47.9	8.3	39.6	35.4	8.3	8.3	16.7

Table 5.1: Participants' responses to peer-to-peer interaction questionnaire questions

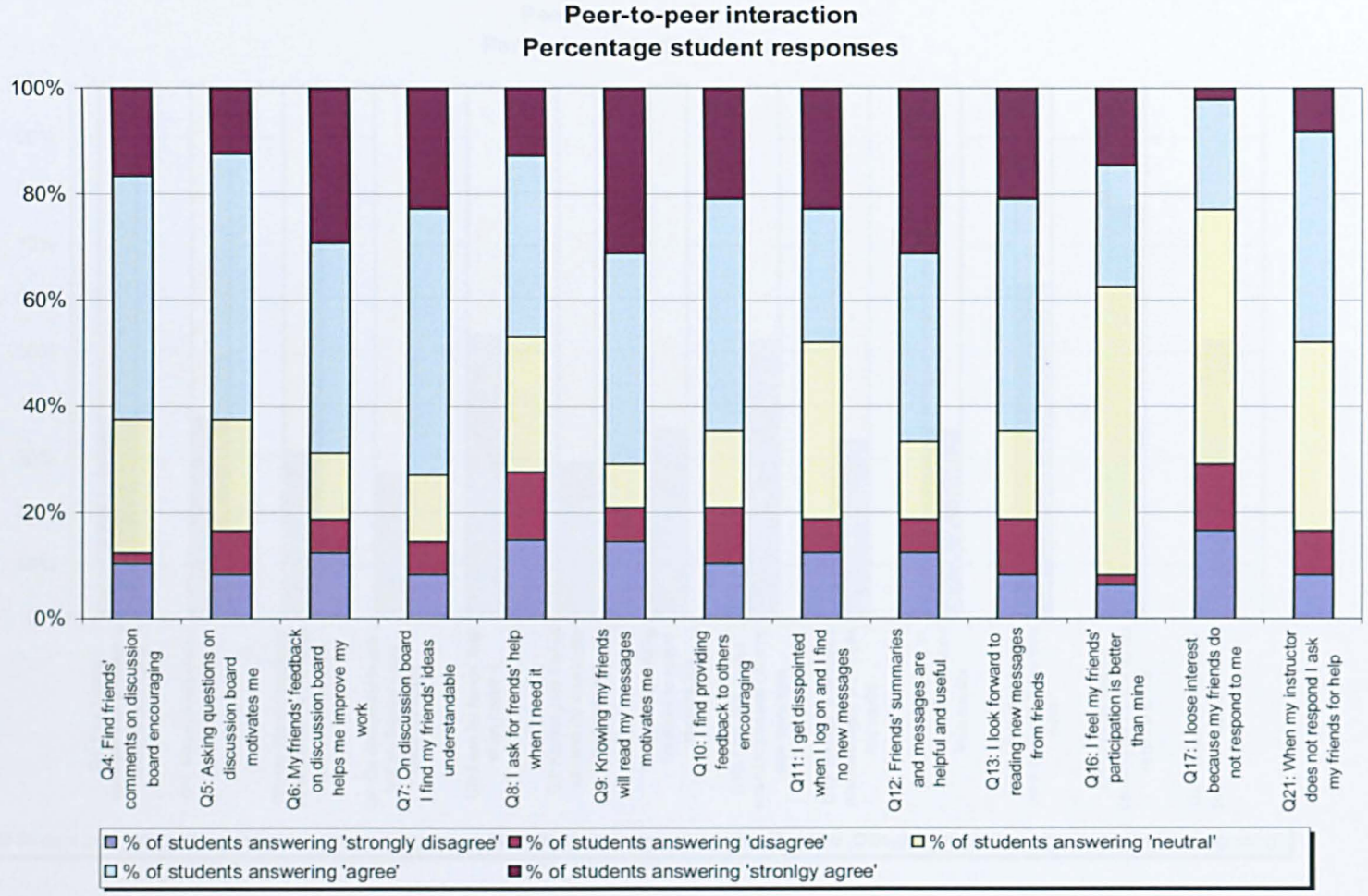


Figure 5.2: Students' responses to peer-to-peer interaction

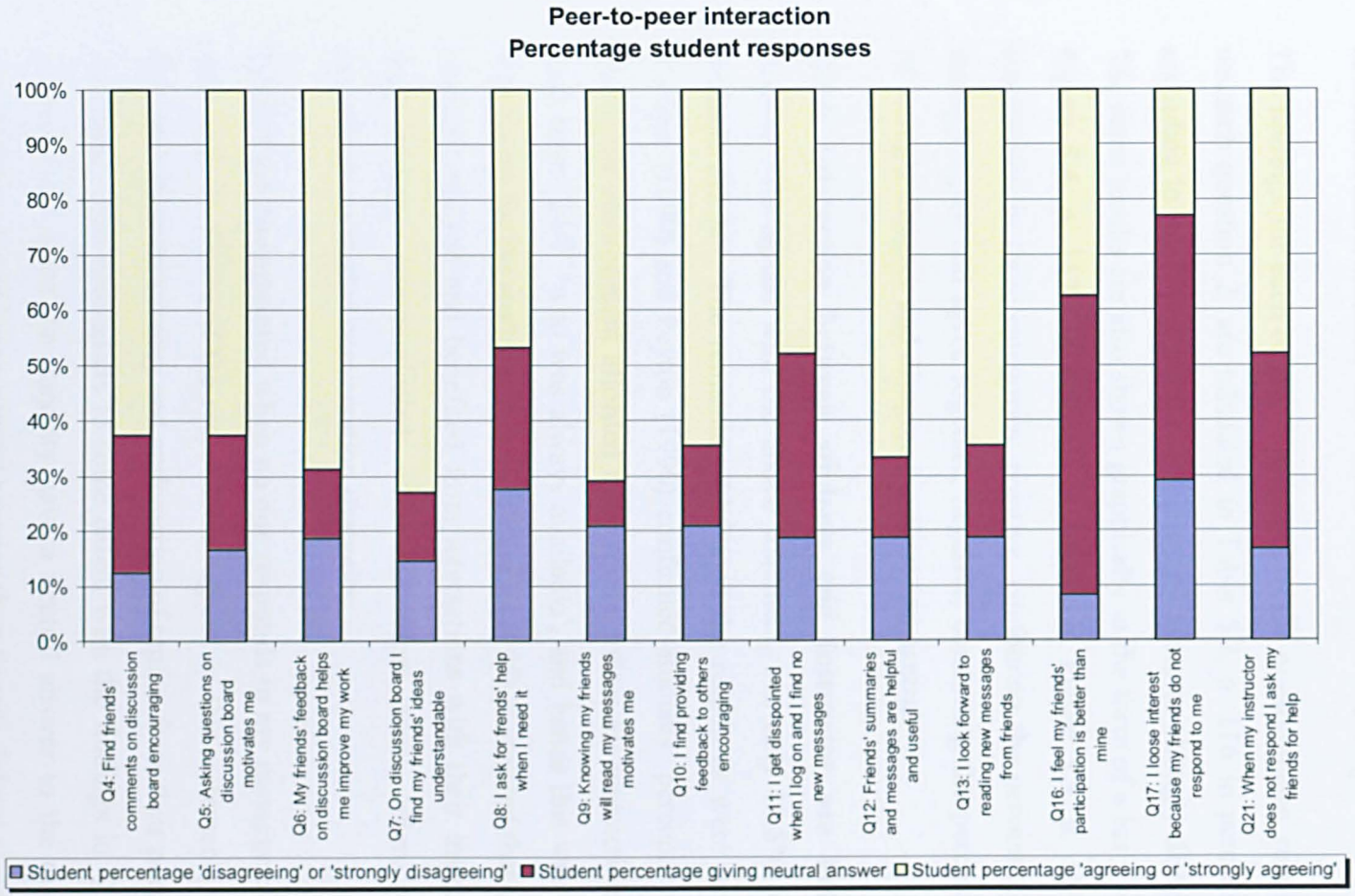


Figure 5.3: Students' positive and negative responses to peer-to-peer interaction

5.1.4 Questionnaire Findings to Research Question 2

This section presents the findings of students' responses to research question 2, namely, to what extent does instructor-to-student online interaction affect students' motivation in a blended learning context.

The findings for each of the 7 questions of the questionnaire, related to research question 2, are tabulated in Table 5.2, p. 116 in percentages according to the Likert scale (from strongly agree to strongly disagree). The same results are also shown graphically in the form of a bar chart in Figure 5.4, p. 117. As before, the results in Figure 5.5, p. 118 are reorganised in three categories: positive, combining the percentages of strongly agree and agree together; negative, combining the percentages of strongly disagree and disagree together; and neutral.

Q.14: Interaction between students and instructor are helpful: Almost 70% agreed with the above statement, and only 18.8% of the students did not. The remaining 12.5% of the responses were neutral. Roblyer (1999) and Peyton (1990) confirmed students' perception that the online environment afforded more opportunities for interaction with their tutor '24/7' 'who was always available', and hence this was more motivating for the students. Also, Holmberg (1995) postulated that online students enjoyed and benefited from interactions with their instructors and students communicated with instructors most often, using asynchronous guided conversation strategies.

Q.15: I get disappointed when no one responds to my messages: More than half, or 52.1% of the respondents, agreed to this statement, which indicated their expectancy and anticipation of replies from their peers and instructor. This contradicts to some extent with the findings in Q.17 in section 5.1.2 when the majority gave a neutral answer to the question whether they would loose interest because their friends did not respond to them. However, as in Q.17, the relatively high score of neutral responses,

or 35.4%, could be partly attributed to the students' uncertainty with the new roles of their peers and instructor, or partly to their cultural values, which avoid blaming other team members; or probably they did not want to appear as negative about the online experience to their teacher.

Q.18: Instructor's presence in the forum motivates me: The majority, or 70.8% of the students, rated the instructor's presence in the forums highly, whilst 16.7% did not. The remaining 12.5% indicated neutrality to this statement. The need for the instructor's presence online is in line with Wang and Newlin (2001), who suggested the need for asynchronous communication to increase the presence of the instructor which leads to improved feedback to students and higher levels of motivation.

Q.19: I find the instructor's feedback encouraging: When asked about the instructor's feedback on the discussion forum, 64.6% of the respondents agreed with the above statement. Assuming students receive positive feedback from their instructor, they are more likely to engage in and initiate teacher-student interactions. Rekkedal (1983) and Niven and others (2002) suggested that the instructor's feedback is important for both reinforcement of learning and motivation.

Q.20: I feel discouraged if my instructor does not respond to my messages: From the findings half of the students were discouraged when the instructor did not respond to their messages, whilst 27.1% reported neutrality. The remaining 22% disagreed.

Q.23: If I do not know the answer I ask the instructor first: As shown in Table 5.2, p. 116, only 27.7% of the respondents would pose questions to the tutor first if they did not know the answer. However, a large proportion (42.6%) reported neutrality and the rest (29.8%) disagreed. Similar to Q.15 and Q.17, the relatively high neutral rating could be attributed to the uncertainty of the new learning environment and

changing roles among course instructor and students and not knowing if their answers would disappoint their course tutor.

Q.24: If I do not know the answer, I wait for the instructor to answer: Less than half, or 46.8% of the students agreed with this statement. Whilst 31.9% gave a neutral response, the remaining 21.3% disagreed. This is indicative of students' dependency on the teacher, which supports Ziguras' (2001) suggestion that international students are often viewed by Western lecturers as being less self-directed learners and defer more to the authority of the teacher.

On the other hand, a study by Kell and Van Deurson (2002) found that adult students tend to be self-directed. This may not have been the case for all students in this study because their self-directed skills were still developing. According to Knowles (1990), students tend to be at different stages of self-directedness and might not always be aware of their educational abilities.

5.1.5. Summary to Questionnaire Findings to Research Question 2

In line with the literature (Laurillard, 1997) the findings of the questionnaire support the importance of student and teacher interaction and teacher's presence in the discussion board. About 65% of the respondents found interactions between student and instructor to be helpful and instructor's feedback to be encouraging. Equally important, 70% of the respondents agreed with the importance of the teacher's presence in the discussion forum, which was the highest score for research question 2. Furthermore, half the respondents felt discouraged if the instructor did not respond to the messages.

Regarding students' dependency on the teacher, the findings are less clear due to high levels of neutrality. This may be due to the fact that

these students are in their first year at the university and are influenced by their previous schooling, which is known to be highly teacher dependent. At the same time the course design in which this study was conducted aimed to empower students to become independent learners. Also, my position as the teacher and researcher might have influenced students' openness with their answers and their unwillingness to offend the teacher with negative responses.

Question title	% of Students 'Agreeing' and 'Strongly Agreeing' Combined Together	% of Students 'Strongly Agreeing'	% of Students 'Agreeing'	% of Students Answering 'Neutral'	% of Students 'Disagreeing'	% of Students 'Strongly Disagreeing'	% of Students 'Strongly Disagreeing' and 'Disagreeing' Combined Together
Q14: Interactions between students and instructor are helpful	68.8	33.3	35.4	12.5	6.3	12.5	18.8
Q15: I get disappointed when no one responds to my messages	52.1	22.9	29.2	35.4	6.3	6.3	12.5
Q18: Instructor's presence in discussion board is motivating	70.8	33.3	37.5	12.5	2.1	14.6	16.7
Q19: I find the instructor's feedback encouraging	64.6	33.3	31.3	18.8	2.1	14.6	16.7
Q20: I feel discouraged if my instructor does not respond to my messages	50.0	16.7	33.3	27.1	10.4	12.5	22.9
Q23: If I don't know the answer, I ask the instructor first	27.7	6.4	21.3	42.6	14.9	14.9	29.8
Q24: If I don't know the answer, I wait for the instructor to answer	46.8	6.4	40.4	31.9	8.5	12.8	21.3

Table 5.2: Students answers to questions pertaining to teacher-to-students interaction

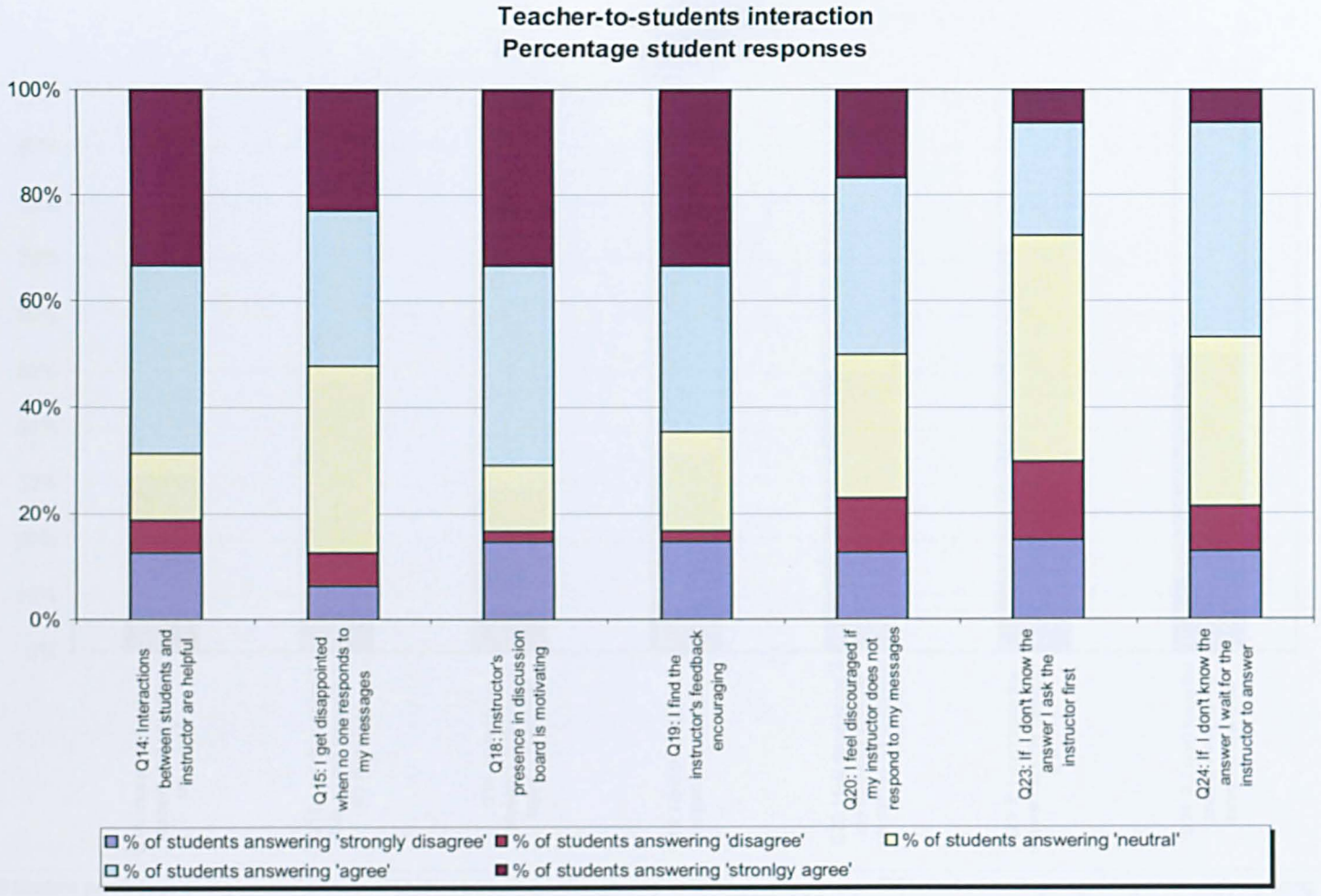


Figure 5.4: Students' responses to teacher-to-peer interaction

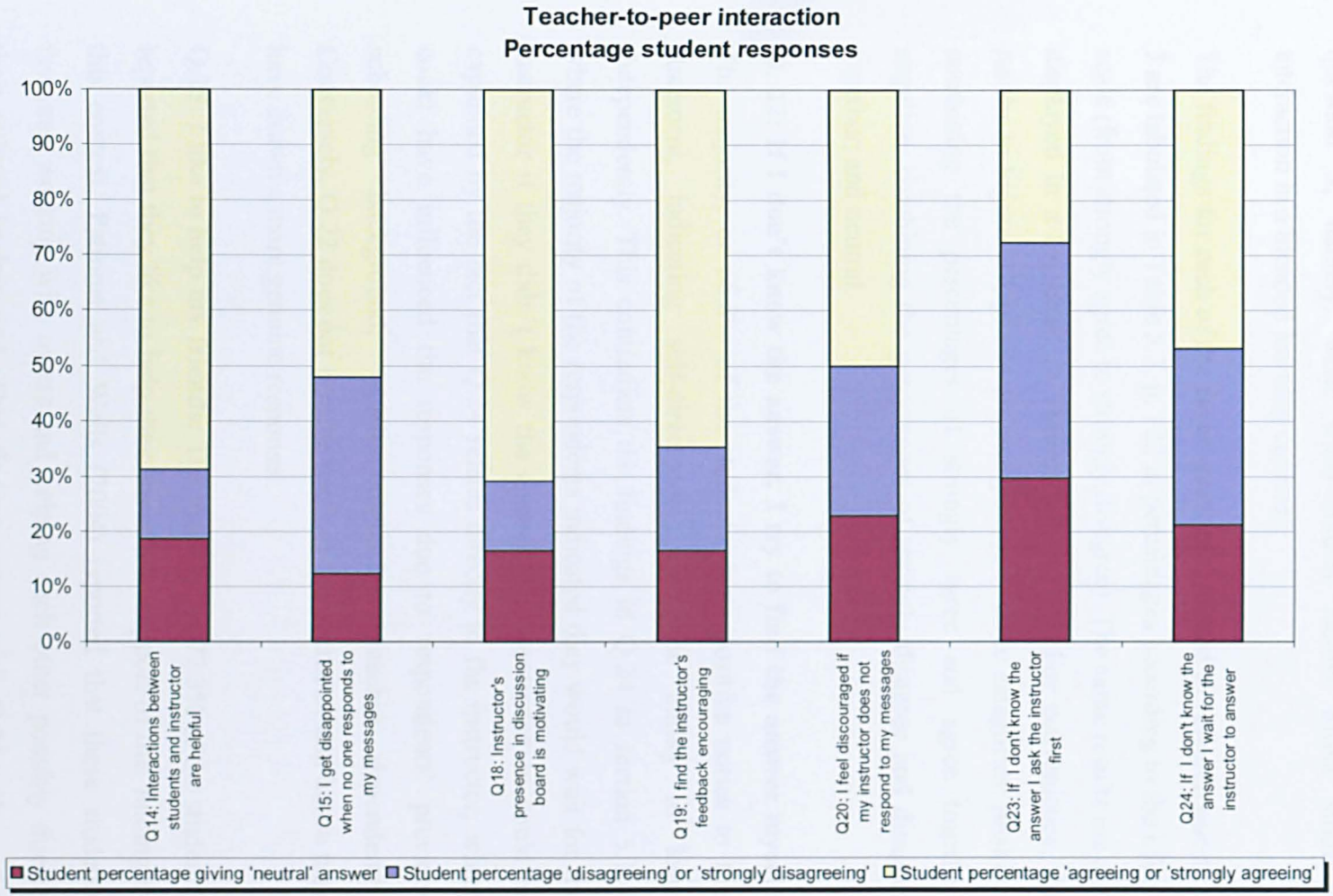


Figure 5.5: Students' positive and negative responses to instructor-to-peer interaction

5.1.6 Questionnaire Findings to Research Question 3

This section presents the findings of students' responses to research question 3, namely, what socio-cultural factors affect students' interaction in a blended learning context?

The findings for each of the seven questions, related to research question 3 are tabulated in Table 5.3, p. 122 in percentages according to the Likert scale (from strongly agree to strongly disagree). The same results are also displayed in a bar chart in Figures 5.6, p. 123. For convenience, the results in Figure 5.7, p. 124 are reorganised in three categories: positive, combining the percentages of strongly agree and agree together; negative, combining the percentages of strongly disagree and disagree together; and neutral.

Q. 22: If I don't know the answer, I try to find the answer myself: The majority, or 68.8% of the students, gave positive notice to this statement, indicating self-directedness and the ability to learn independently. This contradicts the findings in Q.24 in section 5.1.4, where the majority of the respondents indicated they would wait for the instructor if they didn't know the answer. The contradiction could be explained by the fact that Q.24 relates directly to the instructor, which could have influenced the responses due to respondents' previous schooling background, which emphasizes teacher dependency. Conversely, Q.22 does not involve peers or the instructor and hence may have drawn a more genuine response.

Q.25: I like to help my friends: The majority, or 72.3% of the students, reported that they like to help their friends. In support of this finding in this context, Patronis and Wells (2004) reported that these students favoured working with others and helping each other possibly due to their cultural background. This finding agrees with Q.26, where the majority of the students preferred working with others. As mentioned in

chapter 2, all collaborative learning theories suggest that human interaction is a vital ingredient to learning. The literature has emphasized that collaborative learning in asynchronous learning networks is more effective for online learning than pedagogical approaches that emphasize individuals working alone (Hiltz 1998).

Q.26: I prefer to work with others: Almost half of the respondents posted a positive answer to this question. While 25% posted neutral answer, the remaining 27% disagreed. In light of their collective cultural background, which emphasizes collectivism and collaboration, one would have expected a higher percentage to agree with this statement.

Q.28: I express myself better in writing than verbally because I am shy: From the findings, only 38% of the respondents felt that they could express themselves in writing better because they felt shy in face-to-face discussions. However, 33% were neutral. The high neutrality may indicate that students do not feel comfortable writing in English but at the same time they do not want to admit their weakness in language skill.

Q.32: I am not able to express myself in writing in English: Although over half of the respondents disagreed, 34.5% were neutral. This agrees with the findings above in Q.28.

Q.48 At school we were taught how to be independent learners: The literature review in this study indicated that these students lack self-directedness because of their previous educational background. However, when asked whether they were trained to become self-directed learners at school, their perceptions were divided; 40% agreed and 37.8% disagreed. This may be because, as Knowles (1990) suggested, students tend to be at different stages of self-directedness and are not all aware of their educational abilities. Coupled with this, some teachers may not be familiar with strategies that support self-directed learning (Sparling 2001), as it was the case during their previous schooling.

Q.49: At school we were taught how to improve our critical thinking: The responses to this statement were equally divided between those who agreed, disagreed and neutral. This could be because the concept of critical thinking was not clear to them, as those students were still in their first year.

5.1.7 Summary to Questionnaire Findings to Research Question 3

With regard to the socio-cultural aspects, the respondents' perception of self-directedness and their liking to help their friends scored the highest with over 68.8%. Nonetheless, the rest of the questionnaire in this section revealed a high degree of neutrality. This high neutrality could be attributed to the socio-cultural background of the respondents as they tend to be polite and protective of their peers. Their unwillingness to disappoint their teacher with negative responses might have also resulted in giving indecisive answers.

Question title	% of Students 'Agreeing' and 'Strongly Agreeing' Combined Together	% of Students 'Strongly Agreeing'	% of Students 'Agreeing'	% of Students Answering 'Neutral'	% of Students 'Disagreeing'	% of Students 'Strongly Disagreeing'	% of Students 'Strongly Disagreeing' and 'Disagreeing' Combined Together
Q22: If I don't know the answer, I try to find it myself	68.8	25.0	43.8	16.7	6.3	8.3	14.6
Q25: I like to help my friends	72.3	34.0	38.3	12.8	-	14.9	14.9
Q26: I prefer to work with others	47.9	18.8	29.2	25.0	14.6	12.5	27.1
Q28: I express myself better in writing than verbally because I'm shy	37.5	16.7	20.8	33.3	18.8	10.4	29.2
Q32: I am not able to express myself in writing in English	10.4	4.2	6.3	35.4	27.1	27.1	54.2
Q48: At school we were taught how to be independent learners	40.0	17.8	22.2	22.2	20.0	17.8	37.8
Q49: At school we were taught how to improve our critical thinking skills	31.3	10.4	20.8	31.3	16.7	20.8	37.5

Table 5.3: Students answers to questions pertaining to socio-cultural factors

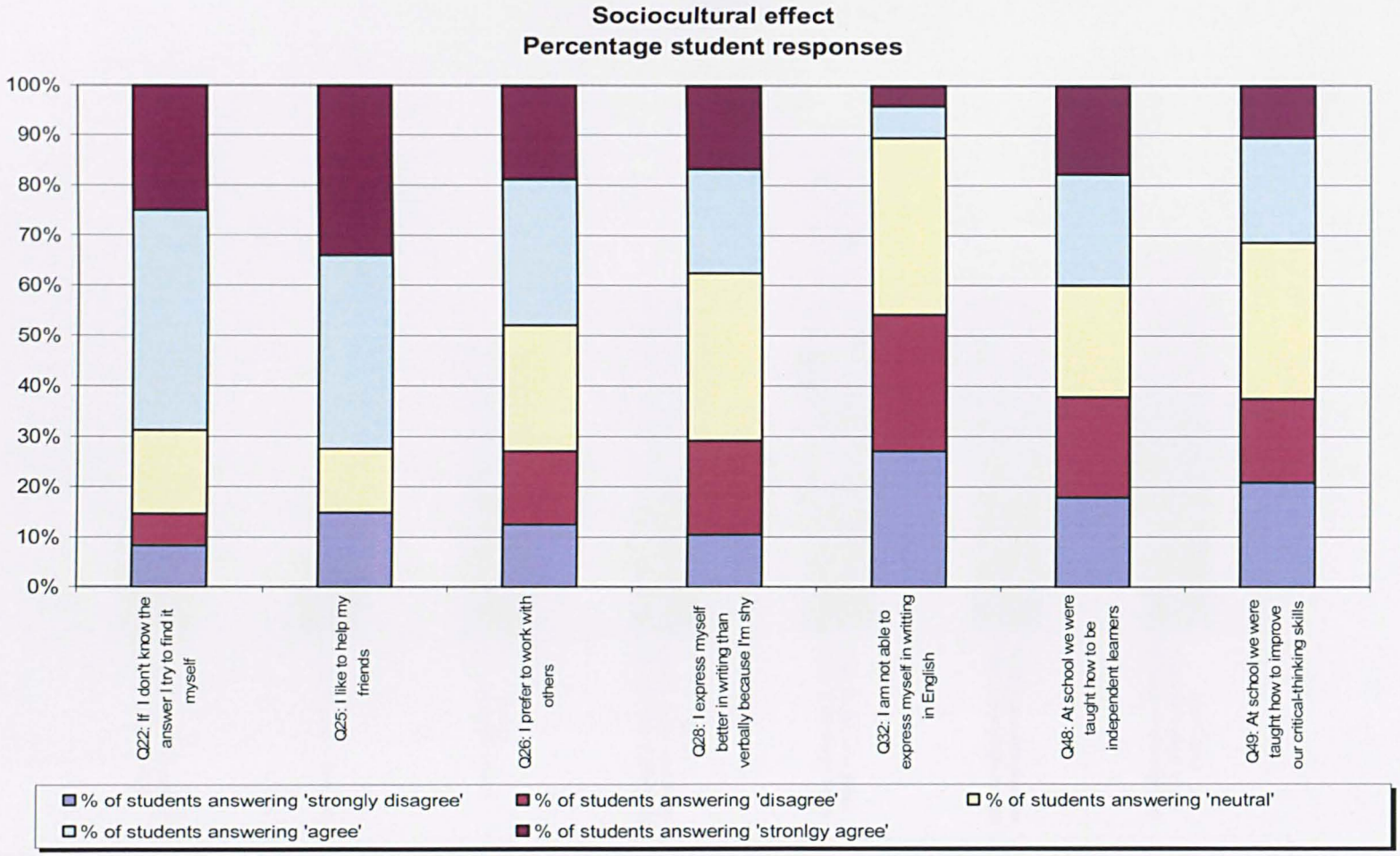


Figure 5.6: Students' responses to sociocultural effect

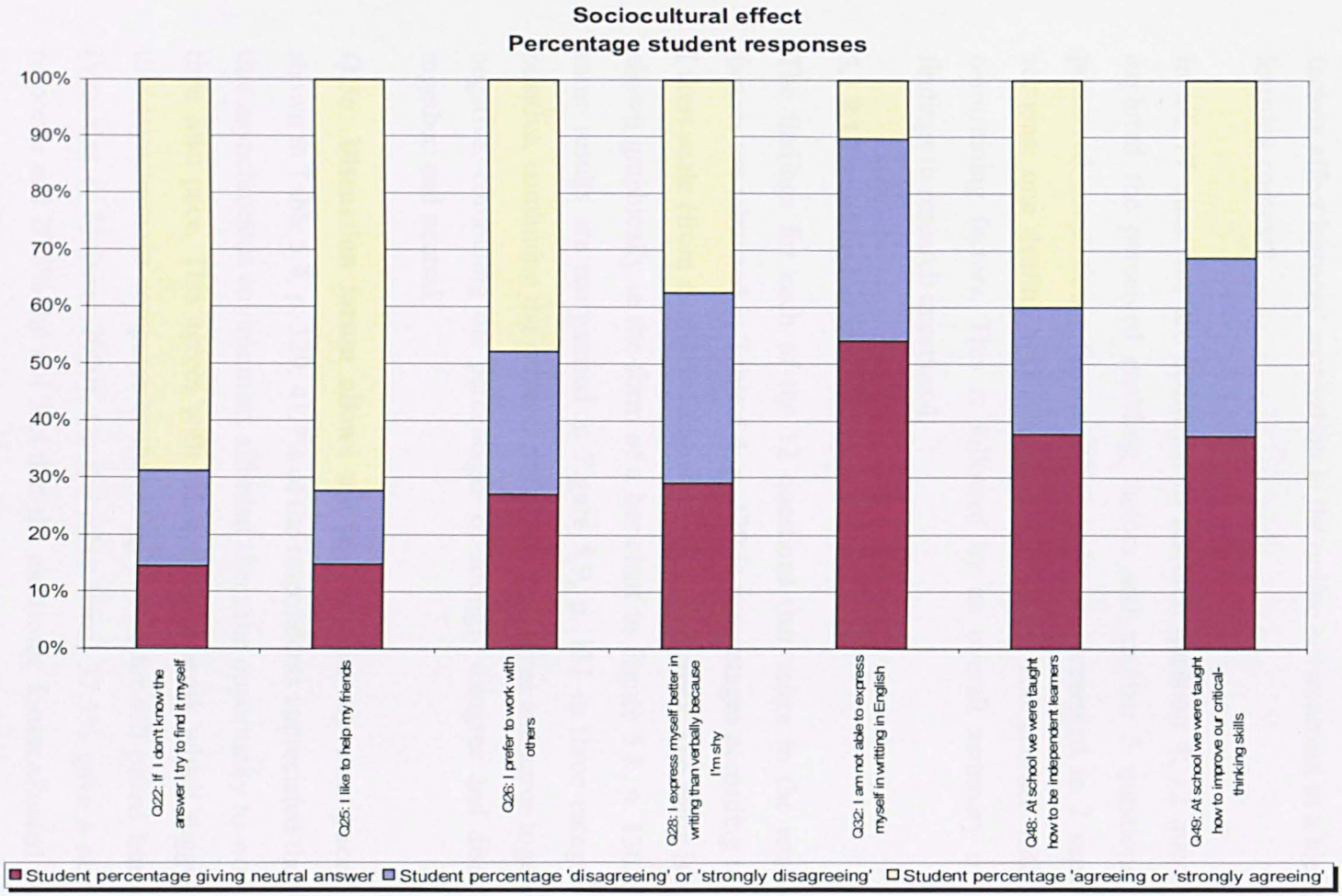


Figure 5.7: Students' positive and negative responses to socio-cultural effect

5.1.8 Questionnaire Findings to Research Question 4

This section presents the findings of students' responses to research question 4, namely, what other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

In all, 17 questions are dedicated to research question 4; 12 questions explored the perceived enabling factors and another 5 questions the perceived constraining factors. The results are presented in 2 separate sections, one dealing with the enabling factors and another with the constraining factors. This is followed by an overall summary of the findings to research question 4.

5.1.8.1 Enabling Factors

The findings for each of the 12 questions that relate to the enabling factors are tabulated in Table 5.4, p. 129 in percentages according to the Likert scale (from strongly disagree to strongly agree). The same is also shown graphically in the form of a bar chart in Figure 5.8, p. 130. The same results are reorganised in Figure 5.9, p. 131 in three categories: positive, combining the percentages of strongly agree and agree together; negative, combining the percentages of strongly disagree and disagree together; and neutral.

Q.36: Discussion forum allows me to learn on my own pace: As shown in Table 5.4, p. 129, 41.7% of the respondents appreciated the fact that asynchronous environment afforded them the opportunity to work at their own pace. This agrees with other research work which suggested that asynchronous computer conferencing allows for self-paced learning (Vrasidas & McIsaac 2000). On the other hand, 37.5% gave a neutral response and 20.8% did not feel that the electronic forum allowed them to learn at their own pace.

Q.37: I find Blackboard discussions meaningful: Only a small number, 16.7% of the respondents, did not agree with this statement, and 20.8% answered neutral. Over 62% of the students reported that the discussion forum was meaningful, which agrees with the literature. In particular, according to Brophy (1988), students tend to be motivated to learn when they find academic activities meaningful and worthwhile. Cheung (1998) agreed by stating that if students do not understand why they are doing something then they will not be motivated to complete the activity. Further to this, Keller (1998) added that learners can become frustrated when taking on learning tasks without knowing what is required of them and why they engage in the activity.

Q.38: I find Blackboard discussions relevant to me: On the basis of the findings, 41.3% of the respondents believed that blackboard discussion forums were relevant to them. A similar percentage of 41.3% gave a neutral answer and only 14.7% disagreed. The high rate of neutrality may be due to the vagueness of the question, which might have confused the respondents.

Q. 39: I gain course related knowledge through using blackboard discussion forums: A large percentage, or 45.8% of the students, reported that the asynchronous conferencing helped them gain course-related knowledge. On the other hand, 29.2% of the respondents posted a neutral answer and 25% disagreed with the statement.

Q.40: Blackboard discussions help me get better grades: Half of the respondents, thought that online discussion would improve their course grade, whilst 35.4% posted a neutral response. Schunk and Pajares' (2001) research studies concluded that unless people believe that their actions will have the desired consequences, they have little incentive to engage in those actions. Further, according to the expectancy value theory, motivation is primarily a result of individuals' beliefs about the

likely outcomes of their actions and of the incentive value they place on those outcomes (Atkinson 1957 & Rotter 1982). As in this study, the majority of the participants expected an improved grade through their participation in the forum, which affected their level of their motivation.

Q. 41 Blackboard discussions are fun and entertaining: Opinions were divided with regard to this statement. For example, 37.5% found the discussions fun while 35.4% were neutral, and the remaining 27.1% did not agree with the statement.

Q. 42 The discussions stimulated my learning: Most respondents, or 45.8%, thought that computer conferencing stimulated their learning, and only 20.8% disagreed with the statement. This could be because the medium afforded them the opportunity to extend traditional classroom activities by reflecting on the posting and slowly understand the material.

Q.43 I like the use of Blackboard because it is a new way of learning: Half of the respondents agreed with this statement, whilst 22.9% gave a neutral notice and 27.1% disagreed. The findings support students' liking of Blackboard for their learning because of its novelty. This is in line with Keller (1983), who proposed novelty as one of the motivational constructs in the learning environment.

Q.44 The materials presented in Blackboard are organized: Almost 67% responded positively to this statement and felt that the material presented on Blackboard was organized. This shows that the delivery of course materials to students was accessible without difficulty. In this vein, access and motivation have been emphasized by Salmon (2001).

Q.45 It is clear to me how the content of this material is related to what I am expected to know: Similar to Q.44, seventy percent of the respondents clearly understood how the content is related to what they are expected to learn, and only a very small percentage of the students

did not think so. According to Schunk (1996), students' judgements of their capability that they can learn the material required in this environment relates positively to performance and to subsequent skill and self-efficacy assessments. This is the case here, where the majority of the participants appeared to be familiar with the skills required to accomplish the task and can identify the skills on which to formulate their self-efficacy for performance.

Q.46 As I worked with this discussion board, I was confident that I could learn the content: As in Q.45, the majority of the students, 65.1%, agreed with this statement. The rest, 20.9% of the responses, were neutral and only 14% did not believe that the discussion forum contributed to learning the content better. Because the students were confident that the computer conferencing would help them understand the course content better, they anticipated successful outcomes. In other words, their self-efficacy beliefs helped them determine the outcome they were expecting. Bandura's (1997) key argument regarding the role of self-efficacy beliefs in human functioning is that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true" (p. 2). For this reason, students' behaviour can often be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing.

Q.27 I feel that I am in control of my learning: A large proportion of the participants, or 43.8%, responded positively to this statement. The assumption is that when students feel they are in control of their learning, they will be motivated and want to learn. This was supported by the literature when Glasser (1990) proposed that the feeling of loss of control is one of the most powerful antimotivating factors in education.

Question title	% of Students 'Agreeing' and 'Strongly Agreeing' Combined Together	% of students 'Strongly Agreeing'	% of Students 'Agreeing'	% of Students Answering 'Neutral'	% of Students 'Disagreeing'	% of Students 'Strongly Disagreeing'	% of Students 'Strongly Disagreeing' and 'Disagreeing' Combined Together
Q36: Blackboard and forums allow me to learn at my own pace	41.7	10.4	31.3	37.5	12.5	8.3	20.8
Q37: I find blackboard discussion meaningful	62.5	27.1	35.4	20.8	8.3	8.3	16.7
Q38: I find Blackboard discussions relevant to me	41.3	10.9	30.4	41.3	6.5	10.9	17.4
Q39: I gain course related knowledge through using blackboard	45.8	12.5	33.3	29.2	14.6	10.4	25.0
Q40: Blackboard discussions help me get better grades	50.0	8.3	41.7	35.4	6.3	8.3	14.6
Q41: Blackboard discussions are fun and entertaining	37.5	10.4	27.1	35.4	10.4	16.7	27.1
Q42: The discussions stimulate my learning	45.8	12.5	33.3	33.3	8.3	12.5	20.8
Q43: I like the use of Blackboard because it is a new way of learning	50.0	12.5	37.5	27.1	14.6	8.3	22.9
Q44: The materials presented in Blackboard are organized	66.7	6.3	60.4	18.8	2.1	12.5	14.6
Q45: It is clear to me how the content of this material is related to what I'm expected to know	70.4	3.7	66.7	25.9	-	3.7	3.7
Q46: As I worked with this discussion board, I was confident that I could learn the content	65.1	20.9	44.2	20.9	9.3	4.7	14.0
Q27: I feel that I am in control of my learning	43.8	10.4	33.3	25.0	20.8	10.4	31.3

Table 5.4: Students answers to questions pertaining enabling factors

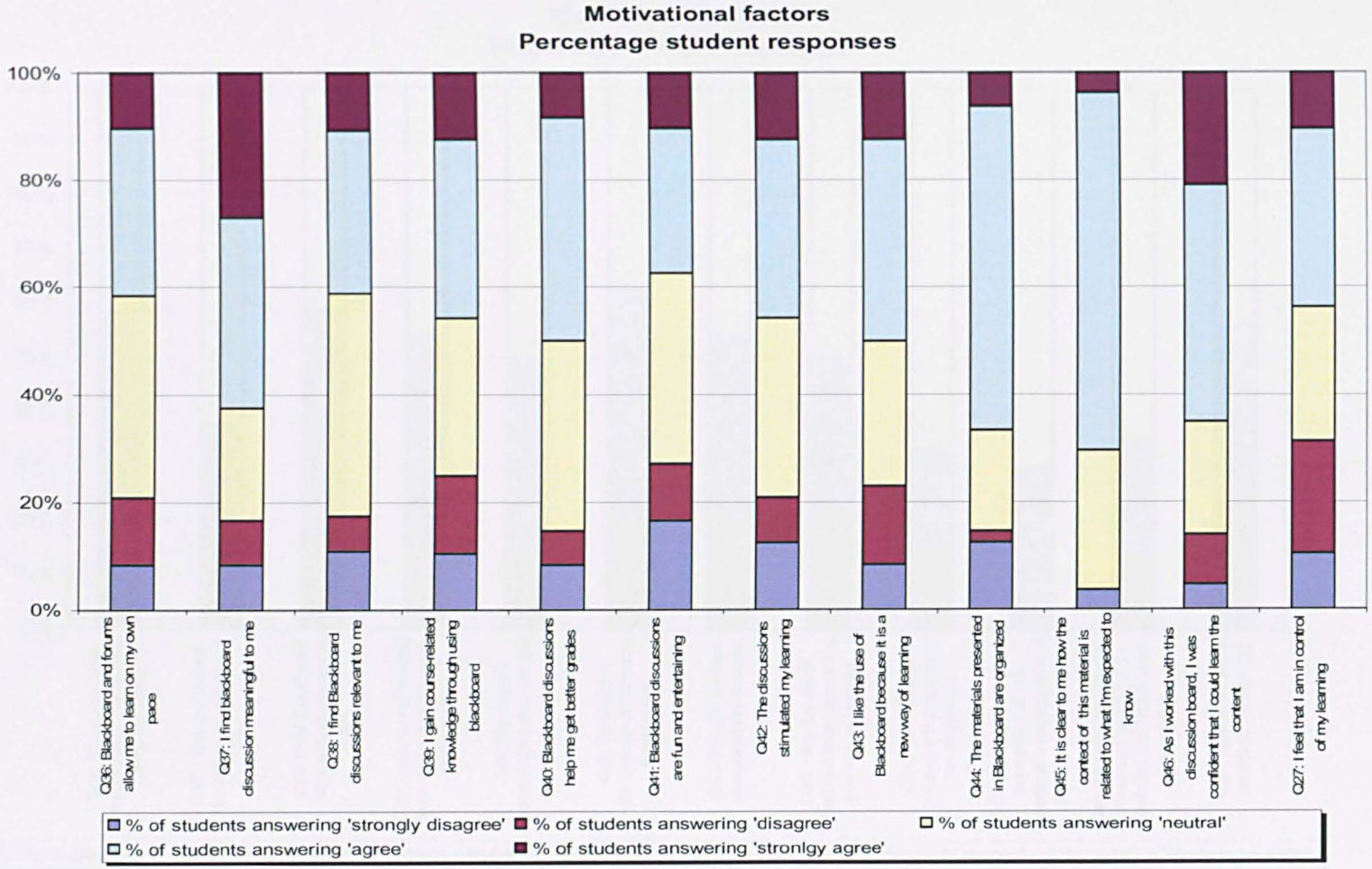


Figure 5.8: Percentages of all responses to enabling factors

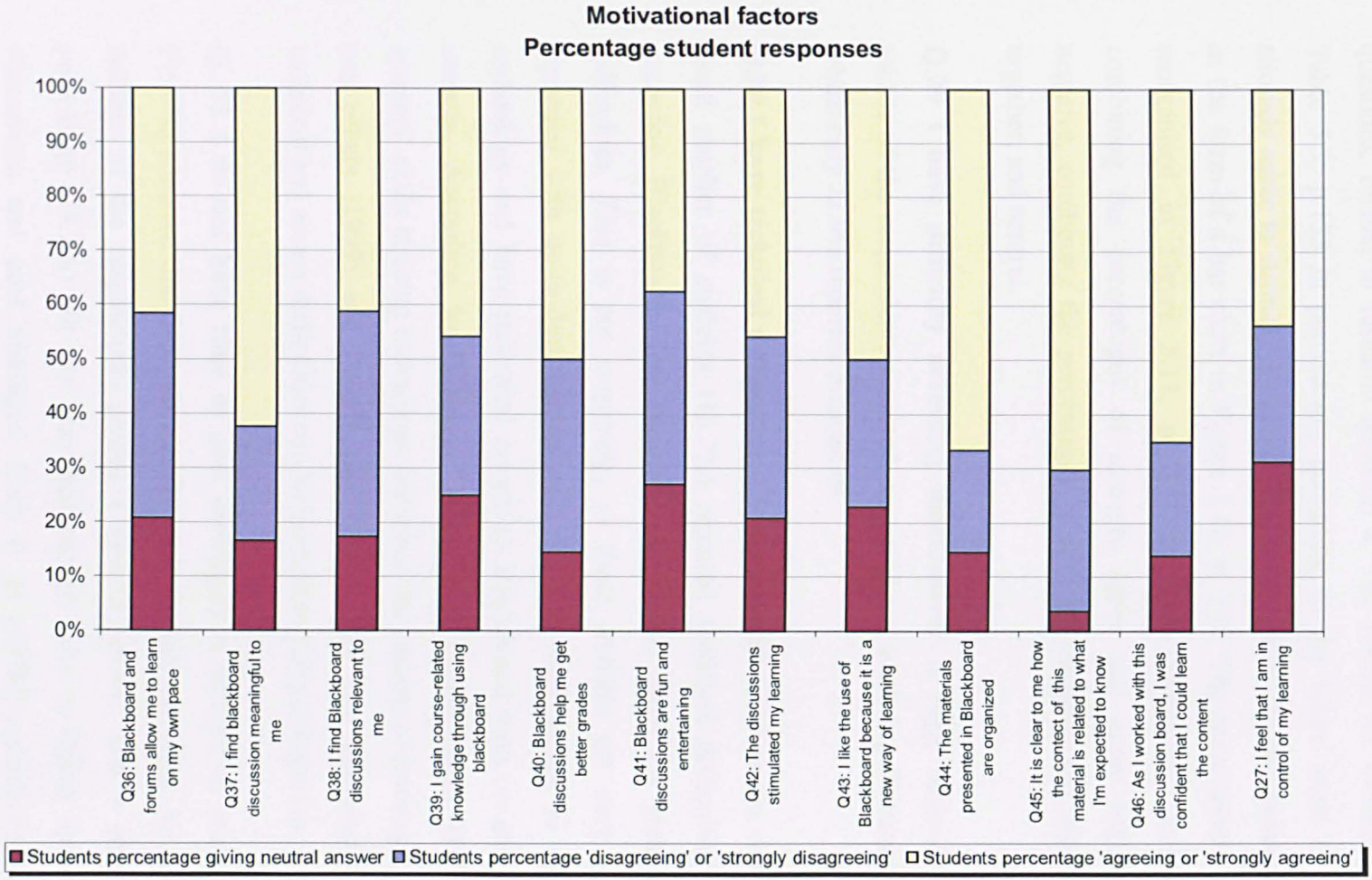


Figure 5.9: Percentages of positive and negative responses to enabling factors

5.1.8.2 Constraining Factors

This section presents the findings for each of the 5 questionnaire questions, related to research question 4. The results are tabulated in Table 5.5, p.135 in percentages according to the Likert scale (from strongly agree to strongly disagree). The same is also shown graphically in the form of a bar chart in Figure 5.10, p. 136. The same results are reorganised in Figure 5.11, p. 137 in three categories; positive, combining the percentages of strongly agree and agree together; negative, combining the percentages of strongly disagree and disagree together; and neutral.

Q.29 I have difficulty accessing Blackboard: A large majority or 68.8% of the respondents reported, no problems accessing Blackboard, whilst only 22.9% reported difficulties.

Q.30 I have technical difficulties: Consistent with Q.29 above, only a small number of students (16.7%) reported technical difficulties in accessing Blackboard. The majority, or 68.8%, faced no technical difficulties. This is not surprising, as these students are very well equipped with up-to-date laptops and are very well versed in using technology and have unlimited access to Blackboard both on and off campus. According to Hillman, Willies and Gunawardena (1994), learners' skills in using technology influence the success of learning. Lee and others (1999) and Palloff and Pratt (2001) also indicated that technical and access difficulties can be barriers to full participation.

Q. 31 I do not have time to post messages: A number of students, (35.4%) admitted that time was a problem in posting messages. An equal number of the respondents posted a neutral answer, and a smaller percentage (29.2%) felt that they had enough time to follow up with discussions and post messages. Hara et al (1998) considered time pressure or message overload as potential barriers for online learners.

Q.34 Discussion board is dull and boring: Interestingly, only 14.6% perceived the discussion board to be dull and boring, whilst the largest percentage (47.9%) did not. This is despite the fact that there were few visual effects in this particular design, which is often thought to be attractive and stimulating to learners. This suggests that students were stimulated merely by the human interaction. However, this finding contradicts Q.41, where students' opinions were divided as to whether blackboard discussions were fun and entertaining.

Q.35 There are too many questions to follow: Only 16.7% of the respondents disagreed with this statement, 43.8% posted a neutral answer and 39.6% found it difficult to follow the questions in the forum. Considering the large amount of messages posted, difficulties for participants were anticipated. These perceptions coincide with Q.31, where the majority admitted they had not enough time to post messages. Moreover, Woolley (1998) indicated that text-based asynchronous CMC can be overwhelming to students who are expected to read and/or respond to large numbers of messages.

5.1.9 Questionnaire Findings to Research Question 4

Several enabling aspects emerged from the questionnaire findings. Specifically, students enjoyed sharing knowledge with their peers and helping each other. Seventy percent indicated that they see the relevance and the usefulness of the materials to their learning, and 65% reported that a discussion board would give them the opportunity to learn the content better. Furthermore, 62% found the asynchronous conferencing meaningful, while half of the students perceived online discussion would improve their course grade. The majority perceived that asynchronous conferencing to be a useful learning tool which could have also have a positive effect on them (Toyoda, 2001). The students enjoyed being in control of their own learning. They also felt that they were progressing and were learning course-related material. Hackman and Walker (1990)

discovered that student attitudes towards learning were enhanced by increased interaction regardless of what the actual achievement was, and this could be seen as a factor in this case. Ridley (1997) makes the point that self-concept enables learners to shape actual learning and performance behaviour.

Potential constraints, such as unfamiliarity with the medium and technical difficulties were not perceived as barriers to interaction by the respondents. Some of them reported that their motivation to interact was hampered by time constraints and admitted overload of messages. This is attributed to the fact that text-based medium requires participants to read and respond to messages. Being second language learners of English, it is understandable that the process of comprehending and composing a text would require a considerable amount of time from the students.

Question title	% of Students 'Agreeing' and 'Strongly Agreeing' Combined Together	% of Students 'Strongly Agreeing'	% of Students 'Agreeing'	% of Students Answering 'Neutral'	% of Students 'Disagreeing'	% of Students 'Strongly Disagreeing'	% of Students 'Strongly Disagreeing' and 'Disagreeing' Combined Together
Q29: I have difficulties accessing Blackboard	22.9	6.3	16.7	8.3	31.3	37.5	68.8
Q30: I have technical difficulties	16.7	8.3	8.3	14.6	22.9	45.8	68.8
Q31: I do not have enough time to post messages	35.4	16.7	18.8	35.4	10.4	18.8	29.2
Q34: Discussion board is dull and boring	14.6	6.3	8.3	37.5	29.2	18.8	47.9
Q35: There are too many questions to follow	39.6	8.3	31.3	43.8	10.4	6.3	16.7

Table 5.5: Students answers to questions pertaining constraining factors

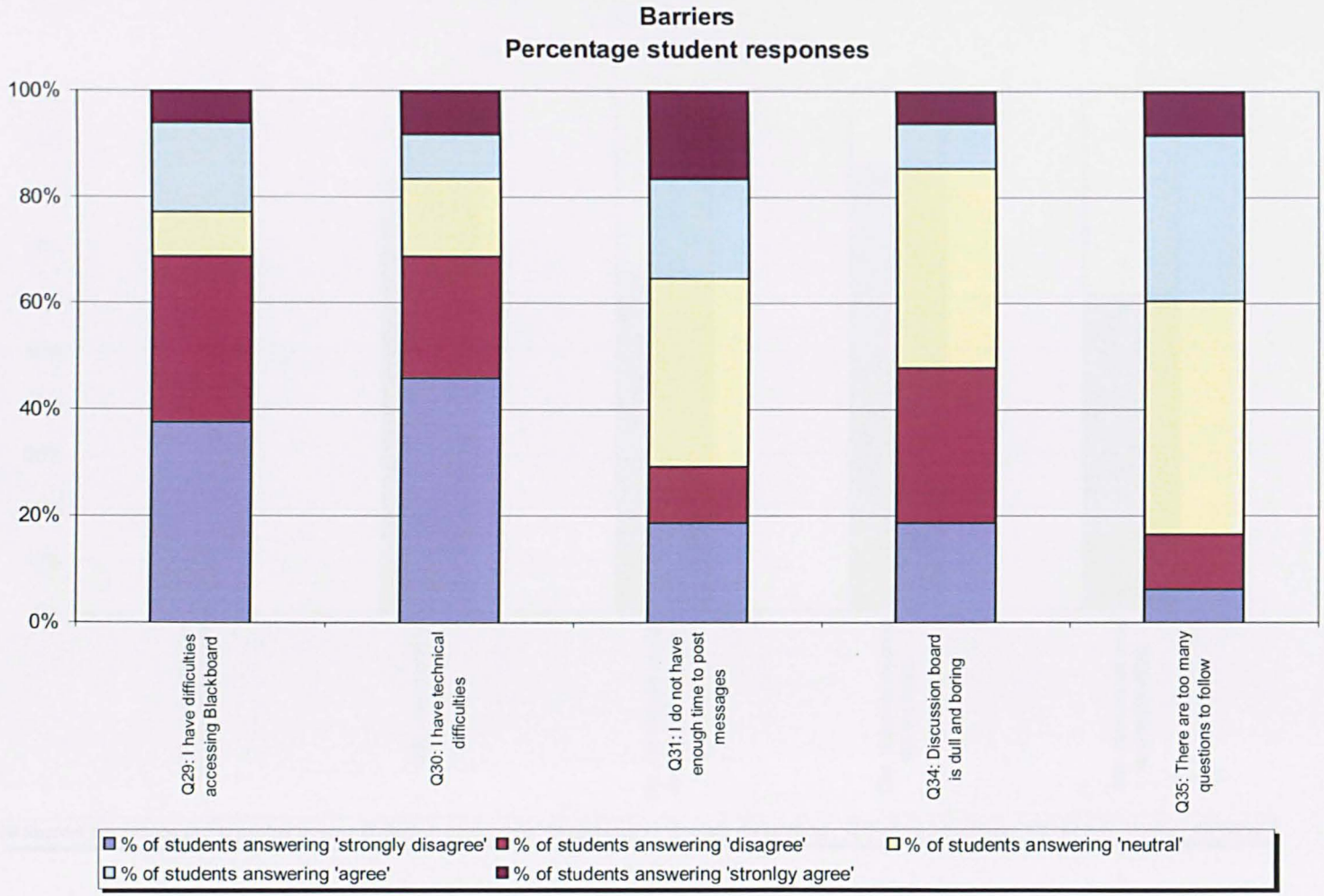


Figure 5.10: Students' responses to constraining factors

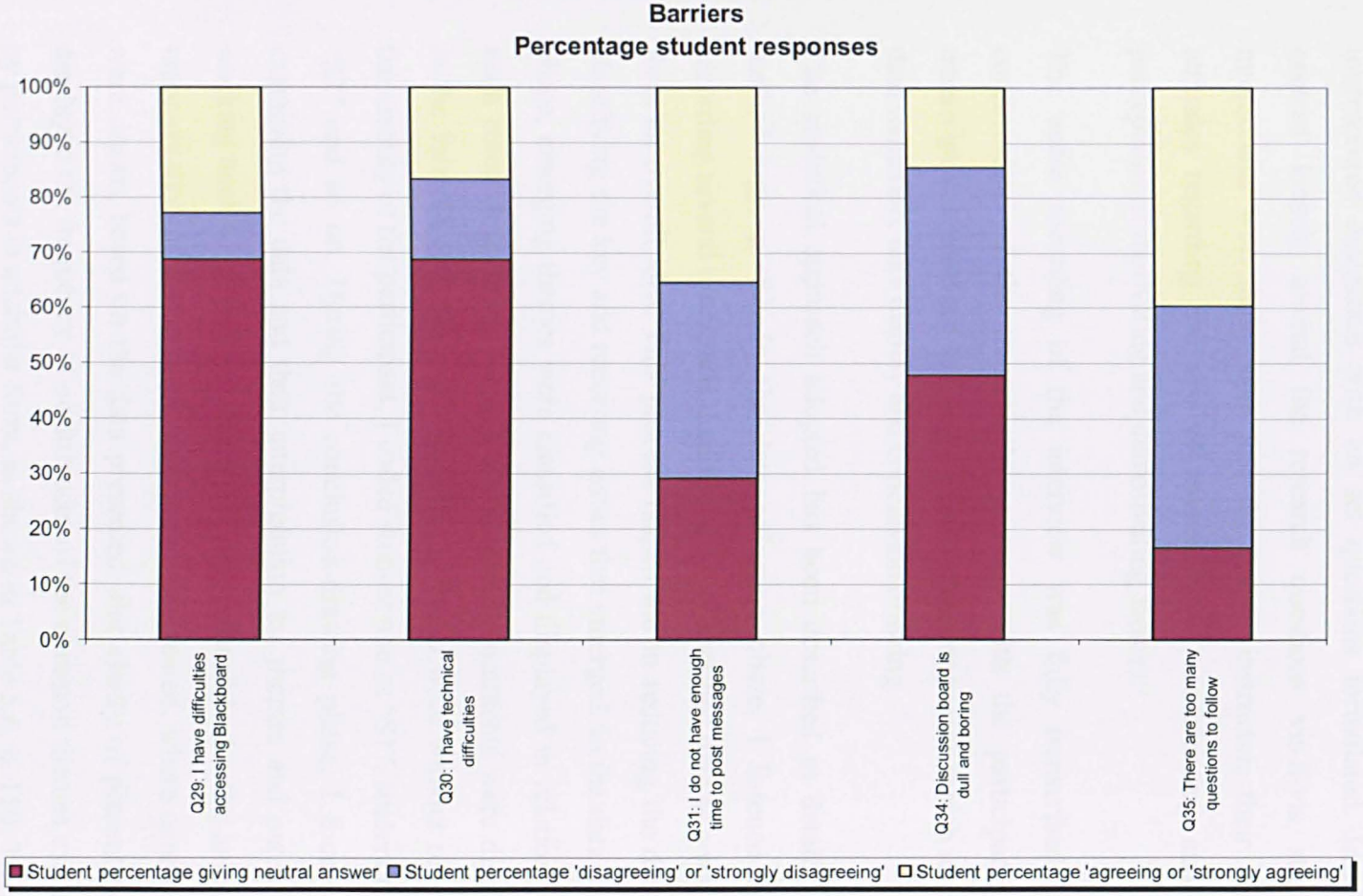


Figure 5.11: Students' positive and negative responses to constraining factors

5.2 Focus Group Interview

The focus group interview was conducted with 8 of the 48 students who completed the survey questionnaire. The interview took the form of unstructured discussion with no set questions formulated. Instead it centred loosely around the research questions vis-à-vis students' interactions with their peers and the course instructor; their cultural attitudes regarding the use of asynchronous conferencing and their perceptions of motivating and demotivating factors.

The audio recording of the interview was fully transcribed. After confirmation of the transcript's accuracy with the participants, the transcript was analysed following a three-phase approach which involved data reduction, data display and conclusion drawing.

The analytical approach adopted has been described in detail in the methodology, p. 82. In the data reduction phase, I listened to the recording several times, and then I read the transcribed data as a whole to form an overall idea. This process helped me in reducing the data and identifying the key and recurring issues that emerged. In the data display phase, emerging themes were classified and displayed in relation to the main research question headers. Participants' comments were displayed in the form of quotations. To identify who said what without revealing the identity of the participant, I coded student one as "S1", student two as "S2" and so on. During the conclusion-drawing phase, I focused on examining the data and their interpretation for themes and patterns by working back to see if the conclusions were plausible. Lastly, an overall representation of participants' responses was created, where conclusions were drawn, based on the data presented. For clarity of presentation, I displayed the frequency of occurrences of the common themes expressed by participants in a tabular form, as shown in Table 5.6, p. 150. The table comprises three columns. The first column contains students' perceptions in reference to the four research questions, another lists the number of the

positive comments, and the third column lists the number of the negative comments. All new items that emerged from the transcript review were also included in the table.

5.2.1 Focus Group Interview Results

In the following section I present the results of the focus group interview. For ethical consideration of authenticity, pseudonyms are used in the quotations. The focus group interview findings were compared and contrasted with the questionnaire findings and assessed in relation to the existing literature.

5.2.2 Focus Group Results to Research Question 1

This section presents the focus group results in relation to research question 1, namely, to what extent does peer to peer online interaction affect students' motivation in a blended learning context?

The effect of student-to-peer interaction on participants' motivation was highlighted in many instances in the interview, as they appear in the following extracts. For example, S1 appreciated her peer's response, which immediately triggered her motivation and interaction with other learners. Her peer's comments encouraged her to interact with others and made her more open and flexible. She found that online interaction developed her sense of community and "brought us kind of together". S1 noted:

> When I submitted my work, I found that Amna replied back to me, that motivated and encouraged me to interact with other students, and made me more open and flexible... So just having her respond to me was quite interesting. It brought us kind of together and that very much motivated me, and I went and responded again.

S2 was in agreement with S1 when she stated that she was encouraged by others responding to her contributions. Learning was a collaborative endeavour of sharing knowledge and experiences. In line with Egging's

and Slade's (1997) findings, the medium proved to break barriers even for reserved, shy students. S2, who was in her "own world", soon opened up to peers' comments and became flexible in approaching others. She was encouraged by seeing her peers' contributions that gave her confidence and made her more comfortable with the medium. S2 said:

> That time I started to know Samia and Shahad because I don't know who is who. I was like in my own world then I know who was who and even girls who I thought would not care. I was so surprised to see them contributing to my contributions and I was fascinated and then I guess somehow that made me more open and flexible.

S7 elaborated on the collaborative contributions to the online discussions by stating:

> We all the same, we share viewpoints, exchanging ideas and thoughts with friends that are more knowledgeable helped me improve my understanding. When students, for example, don't understand something in the chapter, through Blackboard we explain it for them. Other students could reflect on their own, and other students' ideas and contributions to the discussions.

S7's observation concurs with the findings of Carswell (2000), and Matuga (2001), when they concluded that computer conferencing forced students to look at the opinions of others as a way to get new information, take another point of view and learn from their peers.

S5, who joined the class three weeks later than the others, expressed her anger and frustration when her work was submitted late but soon her anxieties and frustration turned into motivation when other students commented on her work. S5 noted:

> I think I was the last one who submitted work and I was very upset and I hated it so much and I was so angry, but when I submitted my work I found that Rima replied to me back commenting on my work and that made motivated.

The effect of modelling for others is particularly relevant in this context. Through observing her peers' participations, S5, who was uncertain about her abilities because she had no prior experience with online interaction, was encouraged to contribute to the online discussion. Her confidence was raised by observing the successes of her peers contributing. S5 commented:

> I would say the students motivated me, seeing other students contributing in Blackboard. I mean seeing their contributions, I thought it can't be that difficult for me to contribute.

From the interviewees' responses, no negative comments emerged with regard to the effect of their peer interaction.

5.2.3 Focus Group Results to Research Question 2

The focus group findings in relation to research question 2 are presented in this section, namely to what extent does online students and instructor interaction affect students' motivation in a blended learning context?

The effect of student and instructor interaction on participants' motivation was brought up in several instances in the focus group interviews. The respondents emphasized the instructor's encouraging feedback and the importance of her presence online. When S4 contrasted face-to-face group activities with those online, she favoured online interaction because she felt safer and more comfortable due to the instructor's presence. According to her, face-to-face discussions in small groups are not monitored and peers' comments can be hurtful. In her culture, disagreeing with one's ideas could be hurtful and discouraging. S4 commented:

> Sometimes when we debate in the classroom some students might hurt my feelings when they say you are wrong or-I don't know-they kind of put your enthusiasm down. In face to face it can become personal. Yes, it can be personal but it can discourage you. In Blackboard it

> doesn't I wonder why, because there is like monitoring and limit. It's not like a chatroom you say whatever you want.

This comment may also suggest a certain dependency on the teacher, as participants may not yet be ready to self-monitor their discussions. S4 felt safer in the online environment because it is monitored.

S8 expressed her fear and anxiety after posting her fist message on the discussion forum. Her anxiety stemmed from her unfamiliarity with the medium. S8 noted:

> I thought I would open the forum and I would probably have a heart attack. Why - because I can say that this is my first serious experience putting something there without having an immediate feedback so there was fear that people would, I wouldn't know how.

However, her anxieties gradually diminished when the tutor's feedback was positive and encouraging. She noted:

> Because the instructor's feedback was very encouraging, I didn't regret putting it there. It was very interesting experience as a whole.

Overall, the interviewees perceived instructor's interaction and presence online to be important for their active participation.

5.2.4 Focus Group Results to Research Question 3

In this section I present the findings relating to research question 3, namely, what socio-cultural factors affect students' interaction online?

Several socio-cultural factors emerged from the focus group interview. For example, due to their cultural background, collaboration was perceived as a positive activity, as S8 remarked:

> We exchange thoughts and share ideas, which leads us to increase our knowledge. Even shy girls are encouraged to try and give their points of argument, comments, ideas and

> thoughts. Because it is always accessible we answer other students at any time, even at night.

S5 associated a good grade with cooperation. She noted, "because we want to have good marks we cooperate".

Helping each other and interdependency were perceived as contributing to group success, as stated by S1 below:

> Because my marks depend on not just my work, but also the group's so we helped each other.

This is in line with the literature stating that confidence in both a personal and a social construct in a collective system, such as classrooms and teams, develop a sense of collective efficacy (Bandura 1997). Also the notion of instrumental motivation (Hudson 2000) is emphasized in here when the respondent expressed the desire to obtain something practical or concrete from her contributions to the team effort.

Apart from collaboration and the desire to help each other to succeed, some of the difficulties associated with text-based communication emerged from the focus group discussions. By and large, text-based communication takes more time than face-to-face communication due to its complexity and the effort it involves, especially for non-native speakers of the target language. This is illustrated by the comment of student S5, who paid particular attention to editing her text before posting it to ensure that her peers would read and understand the text. S5 noted:

> Because I want people to understand what I say, when I write something in Blackboard I write it first in Microsoft word and check the spelling, and the order, grammar and everything. I make sure its clear for the students. This takes time, you know.

As presented in the literature review in chapter 3, Emirati females are known to be shy in speaking in public. Although student S4 was well-

informed of the subject, she rarely took part in the face-to-face public debates. Instead, she posted her comments online, as S4 commented:

> In the classroom meetings we don't feel comfortable to speak in public with other students and sometimes we feel shy to talk. We do our work, but we don't have the courage to say it out loud. We feel that there is something... so I like sending my thoughts in Blackboard

S4 perceived that learners tend to be kinder online than face-to-face when it comes to their peers. She regarded critiquing or disagreeing with peers as potentially hurtful. For this reason, S4 felt safer online, as her comments below show:

> I mean when online, no one can tell you it wrong or right, but they can correct you. But they can't like hurt you. In face to face it can become personal. Yes, it can be personal but it can discourage you.

This also suggests that there is a need for the teacher, as the authoritative presence, to monitor discussions. In this context, teacher's authority is a product of culture and past learning experiences, as authority is deferred to instructors and their positions are perceived to be more important than those of the students.

Self-directedness and the instructor's role emerged when S5 drew a distinction between the instructor's role in the face-to-face classroom and the online environment. Surprisingly, in face-to-face communication, they still expect instructions on what they should do, whereas in online environment they can "sort it out together". She went on to emphasize the importance of self-direction because she believed that she and her peers were capable of creating an enriched learning environment. Participant S5 stated:

> When using Blackboard we write whatever we want, whatever we need. This is important because we can depend just on ourselves and look after what we want in our own way. We send the idea to each other. It was easy

> for us not just what the teacher say you should do this and that we can do whatever we want as well we can match the information Friends send questions yes, they used to send questions and when you read the questions you do think about them. Even if you don't send a reply, you still keep thinking about the question. But then when we are in face-to-face we expect the instructor to tell us kind of mostly what we should do.

The focus group respondents expressed their desire to cooperate and collaborate with their peers. Although they thought the instructor's encouraging feedback was important, other comments implied teacher dependency. As second language learners they highlighted the challenges of text-based conferencing. Some however, favoured online communication as they were uncomfortable speaking in public.

5.2.5 Focus Group Results to Research Question 4

Below I present the findings of the focus group interview in relation to research question 4, namely, what are the perceived enabling and constraining factors which affect learners' motivation in the online environment in a blended learning context?

5.2.5.1 Results-Enabling Factors

One of the most repeated enabling factors was time and space independence (Harasim 1990), as the medium permitted students to revisit and reflect on the material anytime they wished. The majority expressed their satisfaction and liking of this mode of interactions for its novelty, flexibility and accessibility. Commonly repeated students' comments are listed below:

"It is new way of learning, flexible and accessible".

"We don't have to be together all the time so by using Blackboard it is easy for us".

> I can log at night because I can go anytime even in the weekend and this is what I would miss if I didn't have Blackboard going in my suitable time.
>
> It is very beneficial because students put their summaries from each chapter. You can go back and review the chapter, that's what I like about it.

Blending both face-to-face and online conferencing was perceived positively. S4 commented:

> Once you are more comfortable you like the combination of both you like the mixing of both face to face and Blackboard.

During the focus group interview, certain students' satisfaction stemmed from their feeling of control over their learning. They reported that they managed their time better and worked on improving their skills through interaction in a more collaborative environment. S2 noted:

> There is no specific time to do you work that's why I like it. I took my time. Nobody pushed me why you did not do it, why you are late, so I managed my time. There was kind of structure within two or three weeks. A good thing, you catch up even after three weeks. Even when finished and we moved to another chapter, we still had the freedom the flexibility to visit the Education Chapter and that's what I like.

This concurs with Vrasidas and McIsaac (2000), who reported that computer conferencing enabled students to take control of their learning and build knowledge where the instructor becomes a facilitator rather than the main source of information. This self-regulating system, according to Bandura (2001), affects individual motivation.

S2 felt that asynchronous conferencing was interesting as compared to the traditional face-to-face discussions and lectures because the medium afforded the opportunity for her reflections. S2 said:

> The conferences were interesting compared to the face-to-face discussions, lectures. I could slowly understand, interpret, and analyse the postings.

This agrees with Althaus' (1996), who noted that CMC provides students with more time to analyze and reflect on content and to compose thoughtful responses when compared with face-to-face instruction.

Grades were also perceived as one motivation factor for most participants in the focus group interview. Although students were informed that their contributions to the computer conferencing would not be graded directly, they were made aware that participation would result in better learning outcomes. S4 commented:

> The grades, yes grades, I mean of course if you didn't have grades, I wouldn't have contributed as much. It was kind of preparation for the final exam.

Research studies have shown that when people are intrinsically motivated to perform some behaviour, the promise of extrinsic rewards, such as money or grades, reduces their intrinsic interest in it (Thompson et al. 2002). As a result, they are less likely to perform the behaviour in the absence of the reward, as in the case with the above student.

Social chats and discussing personalities were also perceived as an interesting aspect of the online environment, as S4 observed:

> I liked the cafeteria area, there in Blackboard, we chatted about different things and we just tended to respond about different personalities, which is kind of interesting.

5.2.5.2 Results –Constraining Factors

Unfamiliarity with the new mode of teaching and learning, students learning style and the mode of communication were perceived as potential barriers in the asynchronous environment.

S8 was dissatisfied with the medium due to its novelty and unfamiliarity. Although she became accustomed to using the Blackboard site, she still preferred using textbooks as a resource and talked to her teacher face-to-face. S8 stated:

> When I started doing the reading online it was kind of a bit difficult and a bit uncomfortable because I like reading. I am used to holding a book. Just holding, you know, the keyboard in front of me was just a bit difficult. I couldn't at first. I usually get my resources from text books and interact socially with my instructors, but with Blackboard I found it at first very difficult, but then by time I guess! I can see it got a bit easier.

She further expressed her dislike by asserting her resistance to change.

> I don't prefer it. I still don't. It's not one of my preferences, but I like books, but maybe when you have another resource like books in your whole life you depending on it suddenly to change it. I guess you have to see a bit of difficulty.

S8 was hesitant about making any postings and continued to express her anxieties and unwillingness for disclosure in case she was misunderstood because of lack of facial expressions and cues. Her anxiety also stemmed from the written irretrievable texts. S8 commented:

> When I was writing about "a local story teller", at first I said no I am not putting it there. There must be misunderstanding and I thought I was very direct and so on. But then a day after I just put it in there. So, I was very conscious of doing that. I said maybe they will misunderstand me. I may need to say it face to face to someone else - to see her expression first. It may be because I am used to saying something and seeing you and then change it, based on your reaction. But when you write, it is like no going back, its just there for everyone to see.

This is in line with filtered-cues theorists, who argued that the capacity to express emotions, moods and feelings is reduced when body language,

facial expressions and vocal intonations are eliminated in text-based interaction. Short, Williams and Christie (1976) postulated that the inability of these media to transmit nonverbal cues would, as Mehrabian (1969) had shown, have a negative effect on interpersonal communication.

The above student expressed her anticipations, mixed with fear and anxiety:

> I logged in often yes, quite often and waited to see what people have said. I guess, any responses? There was fear that people would give me a feedback, written feedback. Why? Because I can say that this is my first serious experience putting something there without having an immediate feedback.

Although one of the most commonly stated enabling factors was that asynchronous conferencing is time-and place-independent interaction, the reverse has also been suggested, namely, that this flexibility leads to delays in presenting work. S4 suggested that because she needed more time to compose a response than just say it, she procrastinate until a later date. As writing a response takes a long time, she found it easier to simply talk to her peers when they meet in class. S4 stated:

> When you write something, it takes a long time. It is just easier to talk to other girls when we meet in class. For example, when some students put questions about the chapter, say they put the question today I want to answer the question, but I can't do it that same day because-I take my time and I answer the questions at the weekend.

The same respondent reported time pressure and overload of communication that is associated with the discussion forum when she stated:

> There were many questions and I was so late to answer them, I don't have just this course, also I have other studies, labs, Arabic, and project and all takes time.

Next I move on to give an overall summary of the focus group findings.

5.2.6 Summary of Focus Group Interviews

This summary discusses the focus group interview findings in relation to the questionnaire results and the relevant literature. The frequency of participants' comments to the four research questions is presented in Table 5.6.

Students' Perceptions	Number of students Positive	Number of students Negative
Student-to-peer interaction		
Feedback from peers	7 of 8	None
Community building	7 of 8	None
Harmony and helping each other	7 of 8	None
Instructor-to-student interaction		
Feedback from instructor and encouraging comments	5 of 8	None
Instructor's presence	7 of 8	None
Socio-cultural effects		
Shyness	4 of 8	None
Textual communication for second Language learners	4 of 8	2 of 8
Opportunity for collaboration and helping each other	7 of 8	None
Enabling factors		
Opportunity for enhanced learning in combining face-to-face and online environments	7 of 8	None
Novelty of the medium	6 of 8	1of 8
Anticipation	3 of 8	1 of 8
Opportunity for better grades	7 of 8	None
Opportunities for learners control and autonomy	7 of 8	None
Opportunity for better time management	2 of 8	None
Easy access and flexibility	7 of 8	None
Constraining factors		
Fear and anxiety	None	2of 8
Unfamiliarity	None	2 of 8
Dislike	None	1 of 8
Need of face-to-face interaction	None	1of 8
Time pressure	None	3of 8

Table 5.6: Frequency of occurrences of key point summary

While one student indicated her preference to face-to-face discussions, the majority of the participants reported their comfort with asynchronous conferencing. These students appeared to be more technology savvy, and shy in speaking in front of groups.

There was a general consensus among respondents regarding collaborative work. The majority of the participants perceived working and helping each other positively. This seems to support the questionnaire findings in which over 70% of the respondents reported that they liked to help their friends. One interpretation of Arab students' support of each other can also be traced to Hall's (1967) classification of Arabic culture as high-context, where people are characterized by extensive information networks among family and friends. He posits his analysis on the premise that their relationships are close and personal. Further, Barakat (1993) reinforces this interpretation by asserting that Arabs tend to interact as committed members of a group, rather than as independent individuals who constantly seek their privacy. Finally, Johnson and Johnson (1996) contrasted the individualistic and competitive work environments with the positive social interdependence in a group. To them, social interdependence is when reciprocal dependencies exist; and each individual depends upon others within the group.

As in the questionnaire findings the importance of peers' and instructor's feedback and comments was also highlighted in the focus group interview. Short et al (1976) identified attending to others as a critical feature in the promotion of socially meaningful interaction. Others such as Eggins and Slade (1997) added that responses serve several purposes in conversation. They build and sustain relationships, express a willingness to maintain and prolong contact, and tacitly indicate interpersonal support, encouragement and acceptance of the initiator.

Social interactions and community building emerged as a motivational element. This may be because the social attraction and bonding between participants, including self-disclosure, happened during the introductory phase of the course, when students introduced themselves and initiated discussion about themselves. Although all participants had the chance to meet face-to-face, these online experiences were necessary to introduce students to the new medium and to establish relationships in order to gain a sense of trust with peers and instructors. As Cutler (1995) explained, "the more one discloses personal information, the more others will reciprocate, and the more individuals know about each other the more likely they are to establish trust, seek support, and thus find satisfaction" (Cutler 1995 p. 17). Building on these observations, students' experience is supported by social interaction theorists such as Mead (1934) and Cooley (1956), who contended that the human basic needs for affiliation and self-esteem can be satisfied only through interaction with others.

Shyness that hampered face-to-face class discussion was apparently overcome in asynchronous conferencing, where participants were not visible. In line with the survey findings in Q.28 (see Figure 5.7, p. 124), when the majority preferred written communication to verbal communication, the interviewees felt more comfortable in asynchronous discussions.

Despite the overall perceptions of the importance of student-centeredness, one of the interviewees revealed lack of learner self-directedness and continued reliance on the instructor. This point has been already made by the majority in Q.24 in the questionnaire which stated that the majority felt they should wait for their instructor's answers rather than find it themselves.

Similar to the questionnaire findings Q.31 & Q. 35 (see Figure 5.11, p. 137), time constraints presented some challenges to the interviewees.

Three of the interviewees admitted that it is less time-consuming to converse with peers when they meet in class rather than compose a written response. Additionally, time pressures that resulted from other projects and an overload of messages in the asynchronous conferencing were perceived as a barrier interaction.

The findings of the questionnaire and the focus group interview, thus far, revealed that asynchronous interaction among participants has the potential to increase the level of learners' engagement. My next step is to visit the asynchronous transcripts and provide a quantitative evaluation of student and instructor participation in the forum.

5.3 Asynchronous Transcripts

Besides the questionnaires and the focus group interview instruments, I analysed the asynchronous transcripts. This analysis was prompted by the automatically recorded data generated on the Blackboard discussion board which created an opportunity for further analysis.

In the following section I will analyse the content of the asynchronous conferencing aiming to ascertain the degree of learners' actual participation on one hand, and the degree of course instructor participation on the other. In the quantitative analysis I look at the numbers of student and instructor postings.

As shown in Table 5.7, p. 155 the 10 forums created 665 messages, all of which were posted by students, except for 97 messages which were posted by the instructor. Similarly, there were 132 threads in total, 114 initiated by students and 18 threads were initiated by the course instructor. From the number of threads initiated by the students, it appears that the students dominated the forums.

Most of the discussions happened concurrently, which means that students were engaged in more than one forum at the same time. Some

studies have found a relationship between interactivity and website usage. A study by Gao and Lehman (2003) investigated learning outcomes of students using Web-based learning environments that provided different levels of participation. Their analysis showed that the students in the proactive and reactive interactions groups spent more time on task.

Considering the fact that no participants in this study had prior experience with Blackboard discussion forums, 76 messages were posted by students and 7 messages were posted by the course tutor in forum 1. This indicates that students made their first posting on the discussion forum with minimal technological difficulty in accessing Blackboard and the discussion forum. This finding agrees with the questionnaire results, where the majority of the respondents in Q. 29 & Q.30 reported no technological or accessibility problems.

Forum Number and Title	Number of Messages	Number of Instructor Messages	Number of Student Messages	Discussion Period	Threads Initiated by Instructor	Threads Initiated by Students
F1 Biographies	83	7	76	06/09-16/09	2	17
F2 Ancient cultures Chapter	83	18	65	08/09-01/10	1	17
F3 Urbanization& Environment Chapter	29	5	24	2/10-25/10	0	7
F4Communication Chapter	113	6	107	17/10-26/10	1	7
F5 Government Chapter	62	8	54	29/09-24/10	5	9
F6 Review	46	16	25	24/10-21/11	4	4
F7 Education Chapter	149	22	127	26/11-10/12	1	23
F 8 Art Chapter	74	9	63	11/12-19/12	2	22
F 9 Business Chapter	24	5	19	27/12-10/01	1	7
F10 Technology Chapter	2	1	1	04/01-12/01	1	1
Total	665	97	586		18	114

Table 5.7: BF participation in the COL 120 (Ways of Knowing) course during autumn/fall semester 2004.

Forum 7 revealed the highest number of messages posted, 149 in total, out of which only 22 messages were posted by the instructor. Only 1 thread was initiated by the course instructor, while 23 threads were initiated by the students themselves. Forum 7 lasted a shorter period of time and for only two weeks, compared with other forums, which lasted for 3 to 4 weeks.

The high level of activity in this discussion forum could be attributed to two factors; firstly, the students' familiarity with the topic, the education system in the UAE and its relevance to them. During this forum, two participants cited an article in the local press and volunteered to share it with their peers on the discussion board. Subsequently, they read the article independently and posed questions to each other. The article promoted discussion and reflection among students. During this process, little intervention was made by the course facilitator except for acknowledging responses with remarks of encouragement and praise. Secondly, as this forum was set up during the second half of the semester, it was thought that participants were accustomed to the online environment.

As evident in forums 9 and 10, the degree of participation was not as high as the other forums. This may be because at this time of the semester, assessed projects and other assignments were due for submission and students were engaged in preparation for their final exams. Therefore, students did not have enough time to engage in the forums. This was in agreement with students' perceptions in the questionnaire and the focus group interview, when they reported time pressure and overload of communication associated with the discussion forum. The section below discusses the findings of the study.

5.4 Discussion

The purpose of this study was to examine the effect of online interaction on learners' motivation in a blended learning context. The pedagogical design of the online mode was based on constructivist theory, and the process of moderating the online mode was operationalised by using Salmon's e-moderating model. This model required participants to assume responsibility in sustaining the asynchronous conferencing, and the instructor maintained presence online to guide students in the process.

Overall, the quantitative and qualitative data confirmed students' positive experiences in this asynchronous conferencing. The participants stated that student-peer interaction and student-instructor interaction are important in asynchronous conferencing. Peers' active participation, their encouraging comments and their willingness to help one another resulted in positive involvement in the discussions. When asked what enabling factors helped their online interaction, the students identified the following themes: (a) they perceived asynchronous conferencing as time and space independent, which afforded them the opportunity to extend classroom discussions on their own pace; (b) they felt their performance had improved; (c) they thought they could achieve better final grades; and (d) they enjoyed cooperation and collaboration and found their peers' contributions very beneficial.

From the findings, students' positive interaction through the asynchronous conferencing was attributed to a combination of personal factors and socio-cultural factors. Specifically, they favoured online interaction because they felt shy in face-to-face settings, which is consistent with typical characteristics of Emirati female students. They also stressed their preference for collaborative and cooperative work, which can be traced to their cultural background. Hall (1967) classified Arabic culture as high-context, where people are characterized by collectivism and extensive information networks among family and friends.

Although the students strived to achieve self-directedness, which is evident in the asynchronous transcript analysis, the results from the questionnaire and the focus group interview were mixed. This may be because of the uncertainty of dealing with the responsibility of taking control of their learning in the new environment. Although the students enjoyed the freedom from their traditional roles of students within the

previous schooling system, they still needed assistance and guidance from the instructor.

Participants' active contribution to the asynchronous conferencing could be also attributed to their interest in continuing their interaction with each other outside university hours to the limited opportunities for social interaction outside their homes and university. Perhaps students who habitually have more freedom to interact with the wider world would not have found these types of activities as motivating as these students.

Whilst the majority felt comfortable with the asynchronous conferencing and were motivated to discuss aspects of the course with their peers and tutor, some participants perceived text-based communication as challenging because it took them a long time to express their thoughts in writing in English. Time pressure in trying to keep up with the discussion and to balance other courses commitments was perceived to hamper their participation online. Also, in some cases, students' cautious attitude and resistance to self disclosure barred them from making public a permanent contribution to the discussion.

Since the researcher was also the course facilitator, it is natural to expect that more effort was exerted towards the success of the course. Hence, any positive response needs to be measured against this fact. It should be also recognized that the interaction that took place in this particular learning environment was a dynamic process with complex relationships which responded to circumstances of the people, time and place. If any of the above elements differed, the whole chain reaction could change.

5.5 Methodological Issues-Strengths and Weaknesses

Like in any other research, this study had its methodological strengths and limitations.

A strength in this research methodology was the large amount of data gathered and the commitment to a triangulated approach involving questionnaires, focus group interview and transcript analysis. The combination of these three instruments of data collection facilitated an approach to viewing the participants' perspectives through different lenses, providing a comprehensive understanding of their experiences (Wildy, 1999) and minimizing the limitations (Creswell, 2003).

Although the multiple sources of data required a significant amount of time and effort to assemble, each source provided detail which was not easily obtainable by other methods. For example, the questionnaire provided a picture of the online interaction, which was confirmed in the focus group interviews; the levels of interactivity were shown through the quantitative message analysis.

There were, however, limitations in the methodological approach. In the following section, I address the limitation of sampling, data instruments, analysis and the role of the researcher and discuss how I tried to counteract these limitations.

5.5.1 Sampling

This study could be said to be limited and non-generalisable in that there were only 48 participants out of a total of 250 in these cohorts. Although the sample gave a reasonable spread across courses in the cohorts, only 20% of the students in these cohorts were represented. Unfortunately, I was unable to collect more data from a larger sample because no other students from this cohort were using asynchronous conferencing in a blended learning mode at the time of this research. However, I felt that studying 3 classes in an in-depth manner and considering multiple data sources was an effective way of coming to understand the perspective of the students.

It was never my intention to generalise, so I do not actually consider this to be a limitation given the scope of the study. The sample was a convenience sample, which I discussed in chapter 4, section 4.3, and the sample was typical of a first-year class in terms of attitude towards learning, exposure to computers, level of English language skills and their ability to use asynchronous conferencing. The participants were appropriate to the research area. However, whether the same results would be replicated in a more representative sample or at other institutions is unknown.

5.5.2 Data instruments

Data were collected using three methods (i.e. self-administered online questionnaire, focus group interview and asynchronous transcripts). The data collection instruments applied had their limitations.

The questionnaire sought specific information from the participants which only allowed participants to focus on what is being asked instead of bringing new information to the study. In order to minimize this limitation, part of the questionnaire was structured in an open-ended manner to provide the participants with the opportunity to explore their experiences and talk about the themes that are relevant to them (Creswell, 2003). Unfortunately, very limited information came through the open-ended questions. Perhaps participants faced difficulties in conveying their thoughts through writing in the open ended part of the questionnaire and this could have impeded their responses. Another reason for not completing the open ended part of the questionnaire may have been the length of the questionnaire. Participants might have been tired and bored at the end of the long questionnaires.

The online self-administered questionnaire used in this study was completed outside class meetings, where participants were dispersed geographically and the communication media did not involve face-to-

face interaction (Gillis et al., 2000). In this respect, lack of visual communication was considered as one of the limitations (Valente & Luzi, 2000). Another problem with the questionnaire was the lack of depth it provided. However, the questionnaire limitations were partly overcome by the use of the focus group interview in the sense of affording the interviewee the opportunity to talk about their experiences in an online environment, and by asking them to check their transcripts to ensure that no aspects of the conversation were missed or misunderstood.

The questionnaires were usually completed during the common break time, when students socialize and often discuss course matters. While completing the questionnaire, I had no way of knowing whether the students discussed the questionnaire with their peers, which might have influenced their views and hence their response to the survey. This may or may not have impacted on the questionnaire results. Clearly, this issue has to be set against other considerations, such as whether allowing students to complete questionnaires in class could have resulted in better or worse quality of response.

Like any other questionnaire, the questionnaire in this study was standardised, hence responses may not necessarily have captured the essence of the point. The questionnaire was too long, and the respondents may have been unwilling to spend time to complete it; they may even responded superficially. Also the respondents may not have been honest in expressing their views and refused to reveal certain information. In some cases they might have thought an honest answer would not work to their advantage, and they would be penalized by giving their real opinion. Or they may have reported their own behaviour in a more positive light than it may actually have been.

Another area of concern was the design of some particular questions. In the first part of the questionnaire, the multiple-choice format proved

ineffective when respondents could only select one item, although in some cases two or even three items could apply. This particular shortcoming of the design was not identified during the pilot study because the respondents who conducted it were not concerned with more than one choice. Some of survey questions needed careful examination especially the ones with high neutrality responses. What students reported as their behaviour might not actually have been how they behaved. For example, in certain questions they responded very positively and in other similar questions they responded either neutral or negative. Hence, no accurate interpretation could have been made. In addition, respondents may have reported their own behaviour in a more positive light than it may actually be because they did not want to admit their weakness or disappoint their teacher. As an example, when surveying their writing skills and technical skills, they may have responded more positively than they actually were. Also the lack of clarity in the responses of Q.28 and Q.49 could be attributed to the formation of the questions themselves. In particular, Q.28 involved two different concepts that are shyness and writing ability. In hindsight, Q.28 could have been split into two separate questions. Also Q.49 involved the concept of critical thinking which may have been alien to the students.

The length of the questionnaire might have affected the quality of the open-ended responses. In many cases, these were incomplete or not completed at all. The data from these questions were not as helpful in triangulating with interview data as I would have liked. In addition, the open-ended answers from students were less thoughtful than expected.

The focus group interview was successful in gathering data; however, the quality of the data gathered was influenced by a number of issues. The main issue was that in the focus group interview, I learned what the participants said and not necessarily what they actually did or thought. This was because of the group nature of the method which precluded

confidentiality of responses. The second issue was that participants expressed opinions which were in line with the rest of the group. Consequently, as individual respondents were influenced by group responses, separating individual views from the collective response was complex. My presence during the interview may have also influenced their responses. In order to minimize the researcher/course tutor bias and maintain critical and objective view of the process, I sought the critical friend's assistance in reviewing the data and in conducting the analysis. In hindsight, it would have been more beneficial to have extended the role of the critical friend by asking him to be present during the interview or allowing another colleague to conduct the focus group interview.

Participants' feedback in both data instruments (the questionnaire and the focus group interview) may have been influenced by the fact that I was the researcher and the course instructor. To overcome this limitation, I analysed the asynchronous transcripts to get a comprehensive understanding of the participants' experiences.

5.5.3 Analysis

A limitation of the study is the selection of the interpretivist approach for the analysis. By its nature, interpretive approach is subjective and can lead to researcher bias. For instance, the qualitative design involves taking data apart and then reconstructing it as to identify meanings. The process requires the researcher's interpretation of the data. There was a large amount of information generated, which might have led me to neglecting important information or overweighting some findings due to focusing on a particular set of data. My role also implied a danger in being selective and overconfident with some data. To minimize my biases, I first checked the transcript with the respondents for accuracy. Then, during the data reduction phase I sought my critical friend's input where he reviewed the transcripts and discussed them with me.

As for the content analysis, with more time I could have carried out a more comprehensive data collection from the asynchronous transcripts. For example, I would have had better insight into individual and group engagement by identifying which student posted messages, how frequently and the length of these messages. Due to the relatively large number of participants, and the large amount of data, it was clear that message analysis was very time-consuming. As some researchers suggested, content analysis of asynchronous transcripts is a "difficult, frustrating, and time-consuming" process (Rourke, Anderson, Garrison & Archer, 2001, p. 2). Rourke and Anderson (2004) further suggested that while the technique is "promising" it remains "unfamiliar" (p. 5). Hence, I finished more committed to the explicitness and simplicity of a multi-method approach.

5.5.4 The Role of the Researcher

The dual role of the researcher and the course facilitator can be a source for bias. Ragsdale (1988) asserted that researchers who study distance education may be biased toward technology.

Beside my bias towards technology, my advocacy for the students and my personal involvement as a course instructor may have introduced further bias. My role as a participant researcher may have influenced the participant students, especially in the focus group interview. For example, students may not have been inclined to critique certain aspects of the learning environment for fear that this could be harmful to them and I would not respect their confidentiality. Some researchers, especially positivists, might question this combined role for its lack of objectivity. However, an interpretivist perspective assumes that all research is subjective and influenced by the assumptions and perceptions of the researcher (Pierce, 1995). Interviews have also been criticized for lacking in objectivity because of the effect of the researcher on the respondent. However, despite the limitation, the multiple roles I had as

participant researcher provided me with insights and knowledge of the setting that an outsider might have lacked (Brown & Pennington, 1991).

5.6 Conclusion

In this chapter I have presented and discussed the results of this research study in the light of the questionnaire findings, which were triangulated with the focus group interview and asynchronous transcripts findings. These findings were contrasted with the literature written on this subject. I concluded the chapter by addressing methodological issues in terms of sampling and instrumentation.

The ensuing final chapter draws conclusions and addresses limitations of the study, while implications and strategies for future research will be outlined.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

This final chapter comprises five sections, including this introduction. Section 6.1 summarises the findings and section 6.2 presents a set of recommendations based on the findings. In 6.3, I present my critical reflection on the wider study by highlighting its limitations, and I conclude by suggesting possible further research.

6.1 Conclusions

The primary research questions sought to identify the extent of online interaction on learners' motivation. Research question 1 investigated student-peer interaction and research question 2 examined student-instructor interaction. Research question 3 explored the socio-cultural factors that can affect online learner interaction. Research question 4 addressed the enabling and constraining factors of asynchronous conferencing. In order to be able to tackle these questions, I examined students' perceptions through the questionnaire and the focus group interview, and also sought evidence of these perceptions in the asynchronous transcripts.

R.Q.1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context? Overall, all three sets of data produced positive results on the effects of peer interaction on learners' motivation in a blended learning environment. Significant associations were found between students' responses to the questionnaires and the focus group interview. The findings that the contribution of peers was a primary source of motivation was supported by Jung et al. (2002) and Shin (2003), who stated that students' satisfaction with online learning environments is strongly related to the amount of active interaction with other learners, noting that group

activities can enhance learning motivation. In fact, according to Jung et al. (2002), students' meaningful learning came about through their interaction with others. Further to this idea McConnell stated;

> When participants are willing to give time to cooperative learning processes and negotiations, the outcomes are extremely favourable, and the time involved seems to provide them with a real sense of engagement and collective identity. Their work together forges a sense of community. Although time consuming, the potential benefits to them in developing trustful relationships, which in turn will support and foster their collaborative work, are enormous. (McConnell, 2005, p. 39).

R.Q.2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context? The questionnaire findings showed the importance of the instructor's feedback and presence online, which were reinforced by the students' response in the focus group interview.

R.Q.3. What socio-cultural factors affect students' online interaction in a blended learning context? The data showed that self-directedness, the liking to work with others and their writing ability were prominent features that affected online interaction. The students expressed enjoyment at the freedom to experiment with a new role that allowed them to be in control of their own learning, which in turn seemed to help them develop their sense of online community.

R.Q.4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context? The enabling factors included the finding that learners' motivation in a blended leaning environment increased because the mixed mode of face-to-face and online environments afforded them the opportunity to interact with their peers and the instructor outside traditional class time. They perceived the medium positively because it allowed them to revisit course material and archived discussions on their

own time. They seemed to feel that their participation in the asynchronous conferencing would result in an improved performance and better grades in the final exams.

As for the demotivational factors, time pressure emerged as an issue based on the questionnaire's finding. This was also confirmed in the focus interview where students elaborated about the difficulty they faced in composing text-based communication. They expressed the feeling that they were sometimes unable to compose their texts according to the required schedule. Another possibly negative feature is the attention that must paid to structuring the student-peer interaction and the student-instructor interaction, as noted in the recommendation's section, in order to provide structure to the course and the instructor's role in it.

Still, the results suggest that student-peer interaction and teacher-student interaction are equally important and can affect students' motivation in an online learning environment more positively than negatively.

6.2 Recommendations

This dissertation described research undertaken in a UAE University, which explored students' perceptions with regard to online interaction and motivation in a blended-learning environment designed to support collaborative learning. This research suggests that students' motivation to learn can be enhanced through the interaction with their peers and their course tutor in asynchronous computer conferencing.

The study suggests several factors which can influence learners' motivation, including features of the dynamics of interaction among participants, course design and the role of the instructor. If institutions of higher education or instructors wish to blend asynchronous conferencing into their traditional classroom, particular attention to student-peer interaction and student-instructor interaction is needed. Also, the course

design needs to provide structure and guidance to students in learning. Most important, the role of the online instructor warrants careful consideration.

6.2.1 Student-Peer and Student-Instructor Interaction

One of the most commonly voiced motivational factors in this study was peers' and instructor's contact. Based on the findings of this study, certain assumptions suggest themselves in order to achieve positive results. First, the instructors need skill with asynchronous conferencing tools and they need to establish clear course expectations. Moreover, the response policy needs to be communicated to the students at the outset of the course (Laurillard, 2002). Although the online environment places an additional burden on the instructor since as evidenced students can post their contribution 24/7 days a week, the students need to receive timely replies to be fully motivated

Another motivational factor which was repeatedly voiced was the encouraging comments from the course instructor and peers. Anxiety levels were lowered among some students when they received positive encouraging comments. Feedback, however, needs to be timely. It is my contention that online student learning can be hampered by too much or too little feedback.

6.2.2 Course Design

As evidenced in this study, although there may be an assumption that technology-enhanced learning continues to be in demand in higher education, such technology needs to be effectively incorporated in the course design. In this study, the structural flexibility of blending face-to-face and online teaching proved to be a source of motivation for a number of reasons. Firstly, it extended classroom discussions. Secondly, it allowed students to read and reflect on peers' contributions. Thirdly, it provided students with the opportunity to go back over material

previously covered. Fourthly, the flexibility of the medium allowed students to learn at their own pace without pressure or frustration until they got the gist of the concept.

As the participants in the study felt the time pressure to read all the information and contribute to the forum, there is a need to structure the discussion threads in a systematic way. Students need to be trained to filter out unnecessary data and focus on the important information.

In order to achieve these goals indicated by the research, I think that the design should incorporate an orientation segment to introduce students to the new environment. Since personal interaction is of great importance in such environments, the design of community-building activities, such as sharing biographies or personal experiences, must be integrated. Additionally, as is basic to such a course, the design should allow for collaborative projects.

6.2.3 The Role of the Instructor

Another persistent theme that emerged from the study was the importance that the students placed on student-instructor interaction. For this reason, the online instructors need to understand their role in the online environment. Gerrard (2002) suggested that although the role of the online instructor is similar to the traditional face-to-face role in many respects, fundamental differences exist. Even for the more experienced face-to-face instructors, there is the need for much specialised knowledge about the skills required for e-instructors. In addition to possessing subject matter expertise and traditional pedagogical training, the e-instructor must be able to demonstrate additional skills, proven to be necessary by the research findings. These skills include the ability to create an atmosphere of collaborative learning basic to the course; provide timely feedback to material submitted by the students; develop and implement methods for learner feedback and reinforcement in order

to encourage individual and collaborative learning; challenge students to move further in their learning as the course progresses, paying attention to their emotional responsiveness regarding the course development; Towards the end of the course work collaboratively with students more as a colleague rather than as an instructor.

6.3 Critical Reflection

There were several strengths and weaknesses in this study, and many of them have already been identified in chapter 5. However, in this section I will provide a critical reflection on the wider study. I will reflect on the methodological limitations; and the process and procedures that I embraced when completing this dissertation. I will also share what I learnt and wished I had known prior to the experience. Clearly, the path was long and filled with tension, excitement and a sense of accomplishment, and the unforeseen obstacles created a unique journey.

There were some issues with research methodology. The primary limitation is that the research was conducted within one group of students in one university, which limits the applicability of the findings to other groups and universities in the Gulf region or the wider world. A second limitation in the methodology is the selection of an interpretivist approach for this case study. This approach may have introduced several biases. First, my role as a participant researcher might have influenced the students who took part in the study, especially in the focus group interview. For example, students may have avoided critiquing certain aspects of the learning environment for fear that I would not respect their confidentiality. In hindsight, the focus group interview could have provided me with stronger data if it was conducted by a trusted colleague or a critical friend. Also, I might have inadvertently increased the level of students' participation in the learning process by the focus I placed on their performance in order to complete the study. A third limitation

concerned the triangulation method. Although the multiple data sources had their strength in supporting each others' findings, they had their limitations. This particular triangulation method could have benefited from the use of observation data, where I could have observed and documented participants' activities. In addition, the collected data was carried out in different contexts, which may have influenced the accuracy of the method. For example, the questionnaire and the focus group interview sought participants' perceptions, whereas the asynchronous transcript analysed the degree of their participation in the forum. However, it should be recognised that the triangulation method provided more information and better understanding of the phenomenon. I feel that my methodology should have been thought through carefully before the start of the data collection process. Clearly this was difficult when one was not experienced enough in research and when one does not fully understand the implications of what one reads until one has to analyse and discuss data.

Despite the methodological limitations, I was able to gather and analyse a substantial amount of data. I attempted to be as objective as I could and to represent the view of the participants as faithfully as possible. By being aware of my empathy and support for the students and wanting to help them succeed academically, I have tried to control these biases. For example, I continuously sought the advice of my fellow researchers and my critical friend and discussed the data and their interpretation with them. This helped me to remain focused on my research questions and stay as detached as possible from my personal involvement with the students.

The challenges of carrying out this dissertation work have taught me several things: Firstly, the challenge of balancing family responsibilities and a full-time job while completing the dissertation meant that most of my dissertation work had to be carried out during weekends and holidays

in a highly structured schedule. I created manageable writing schedules that determined how much I needed to accomplish by the end of each period of time. Most importantly, I tried my utmost to meet those deadlines. The experience taught me that in order to ensure perseverance, one has to be highly organized and good at time management. One of the other challenges was the general lack of literature. At the time of the study very limited or no literature existed involving UAE students, especially in the area of online interaction and learners' motivation. Hence, I was obliged to rely on the existing international literature and create multiple data. Thirdly, the feedback that I received from my supervisor taught me to maximize my reading time prior to starting my data collection and analysis; it taught me how to create boundaries and how to organize my writing. At the outset of my research, I was not prepared for such intense constructive feedback concerning my organization, reading and the format of my writing. During my research I welcomed my supervisor's constructive comments and probing questions which furthered my inquiries. What I came to realise is that her probing questions helped me to stay focused. Her encouraging comments helped to sustain motivation. Her early and timely feedback helped me to persevere with my research.

There were things that I wished I had known prior to conducting this study. Although I took advantage of using technology in collecting and analysing the survey questionnaires, there were programs I wish I had used during the process. Endnote, a bibliography management software, could have made it more convenient and easy for creating the reference and bibliographic section of my dissertation. Instead, I created the reference and bibliography manually, which was laborious and time consuming.

Overall, I feel that this research study is valid within its stated aims and constraints, but it could be benefited by further research, as indicated in the following section.

6.4 Further Research

The most important avenue for future research lies in conducting a similar study on a larger student population at the same university or other universities in the region. Undoubtedly, the issues discussed in this study are relevant to many academic institutions, but the degree of relevance remains unknown. A cross-institution comparative study could provide a more thorough understanding of learners' interaction and their motivation.

In addition to widening the scope of participants and their perspectives to other academic institutions, an extension of the study on the same student population in their final year at the university would be also interesting in order to further explore measures of motivation and the development of learners' autonomy. It could also be very interesting to study the specific factors which determined students' academic gains in a blended learning mode by examining for example, how learners engage in higher-order thinking in asynchronous conferencing. Another area which deserves further study is the extent to which asynchronous conferencing contributes to the development of learners' cognitive and meta-cognitive skills.

As concluding remarks it should be noted that the experience of conducting this dissertation work has been rewarding in two ways. First, it afforded me the opportunity to contribute to the betterment of students' learning. Second, it provided me with a sense of participation in the growth of an academic field that is still in its infancy in the Gulf region. These preliminary findings may pave the way to a better understanding of the complexities of e-learning in the UAE. The implications of my

findings on policy makers is to enable them to take a step towards making e-leaning a viable option for the UAE's 20-year strategic plan, which was drawn up in 2000.

APPENDICES

Appendix A: Questionnaire

QUESTIONNAIRE

INSTRUCTIONS

Please circle your response to the items. Rate the answers on a 1 to 5 scale: 1 equals "strongly disagree" and 5 equals "strongly agree." Your feedback is sincerely appreciated.

Thank you.

LEARNING STYLE (tick your choice)

1. I learn best by:

☐ Seeing, reading or observing

☐ Listening or hearing

☐ Doing

Choose True or False

2. I need time to think and reflect before I respond to questions

☐True **☐False**

3. I find that I express myself better in writing than verbally

☐True **☐False**

WHILE USING DISCUSSION BOARD ON BLACKBOARD:

(Circle your response to each item.)

1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

4.I find friends' comments encouraging	1	2	3	4	5
5.Asking questions motivates me	1	2	3	4	5
6.My friends' feedback helps me improve my work	1	2	3	4	5
7.I find my friends' ideas understandable	1	2	3	4	5
8.I ask friends for help when I need it	1	2	3	4	5
9.Knowing my friends will read my messages motivates me	1	2	3	4	5
10. I find providing feedback to others encouraging	1	2	3	4	5
11. I get disappointed when I log on and I find no new messages	1	2	3	4	5

12. Friends summaries and messages are helpful and useful	1	2	3	4	5
13. I look forward to reading new messages from friends	1	2	3	4	5
14. Interactions between students and instructor are helpful	1	2	3	4	5
15. I get disappointed when no one responds to my messages	1	2	3	4	5
16. I feel my friends' participation is better than mine	1	2	3	4	5
17. I loose interest because my friends do not respond to me	1	2	3	4	5
18. Instructor's presence on the discussion board is motivating	1	2	3	4	5
19. I find the instructor's feedback encouraging	1	2	3	4	5
20. I feel discouraged if my instructor does not respond to my messages	1	2	3	4	5
21. When my instructor does not respond I ask my friends for help	1	2	3	4	5
22. If I don't know the answer I try to find the answers myself	1	2	3	4	5
23. If I don't know the answer I ask the instructor first	1	2	3	4	5
24. If I don't know the answer I wait for the instructor to answer	1	2	3	4	5
25. I like to help my friends	1	2	3	4	5
26. I prefer to work with others	1	2	3	4	5
27. I feel that I am in control of my learning	1	2	3	4	5
28. I express myself better in writing than verbally because I'm shy	1	2	3	4	5
29. I have difficulties accessing Blackboard	1	2	3	4	5
30. I have technical difficulties	1	2	3	4	5
31. I do not have enough time to post messages	1	2	3	4	5
32. I am not able to express myself in writing in English	1	2	3	4	5
33. I need time to think and reflect before I respond to questions	1	2	3	4	5
34. Discussion board is dull and boring	1	2	3	4	5
35. There too many messages to follow	1	2	3	4	5
36. Blackboard forums allow me to learn on my own pace	1	2	3	4	5

37. I find blackboard discussions meaningful	1	2	3	4	5
38. I find blackboard discussions relevant to me	1	2	3	4	5
39. I gain course related knowledge	1	2	3	4	5
40. Blackboard discussions help me get better grades	1	2	3	4	5
41. Blackboard discussions are fun and entertaining	1	2	3	4	5
42. The discussions stimulate my learning	1	2	3	4	5
43. I like the use of Blackboard because it is new way of teaching	1	2	3	4	5
44. The materials presented on Blackboard are organized	1	2	3	4	5
45. It is clear to me how the content of this material is related to what I am expected to know	1	2	3	4	5
46. As I worked on this discussion board, I was confident that I could learn the content	1	2	3	4	5
47. I feel that other instructors should use Blackboard	1	2	3	4	5
48. The university's teaching methods are the same as schools	1	2	3	4	5
49. At school we used to have class discussions	1	2	3	4	5

Please answer the following question

What is the most suitable time for you to log into blackboard and why?

.....

If you can add more features and options to blackboard to make it more interesting, what will it be?

.....

.....

THANK YOU FOR YOUR INPUT

Appendix B: Student letter of consent

Consent form/ information sheet for students

Dear students

Re: An Investigation into the Effect of Online Interaction on Student's Motivation

(draft)

I am writing to ask if you would be prepared to participate in a research study that I am undertaking for my Doctorate study (EdD Education). I am looking at the effect of Blackboard use on your learning. As this is a new venture, I would appreciate your views and evaluations of Blackboard use.

Students consenting to participate in this study will be asked to fill out a questionnaire and take part in an interview.

All information gained from you will be maintained in a strictly confidential manner. Participant's anonymity will be maintained throughout the study and during the reporting of it.

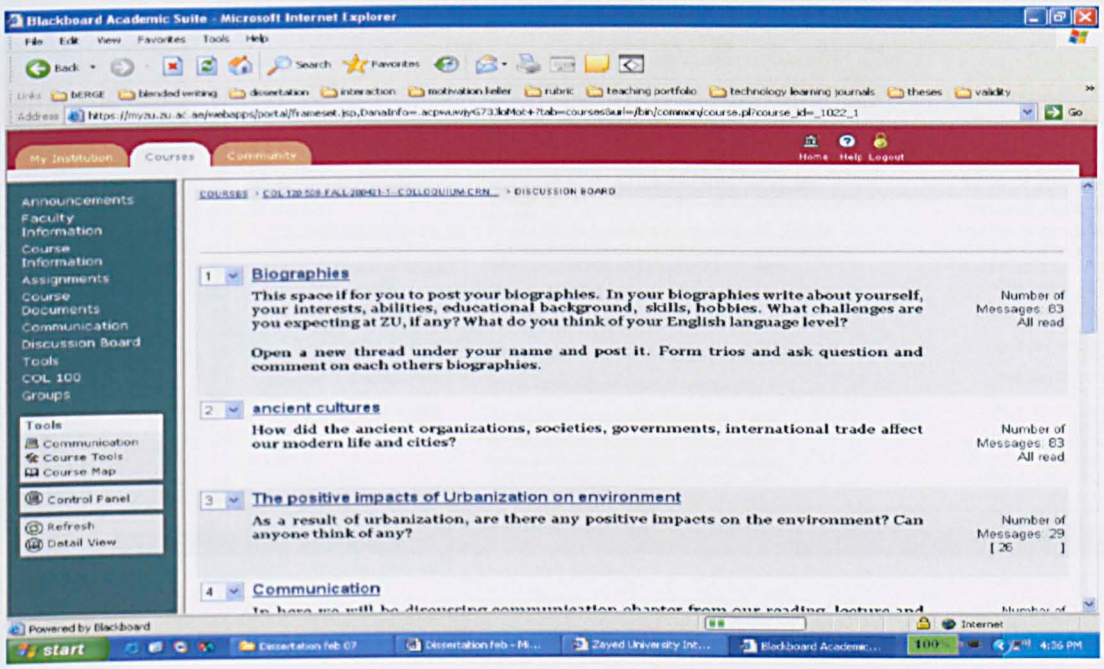
The only person who will have access to all the information is myself. All forms of data will be destroyed once the project is completed.

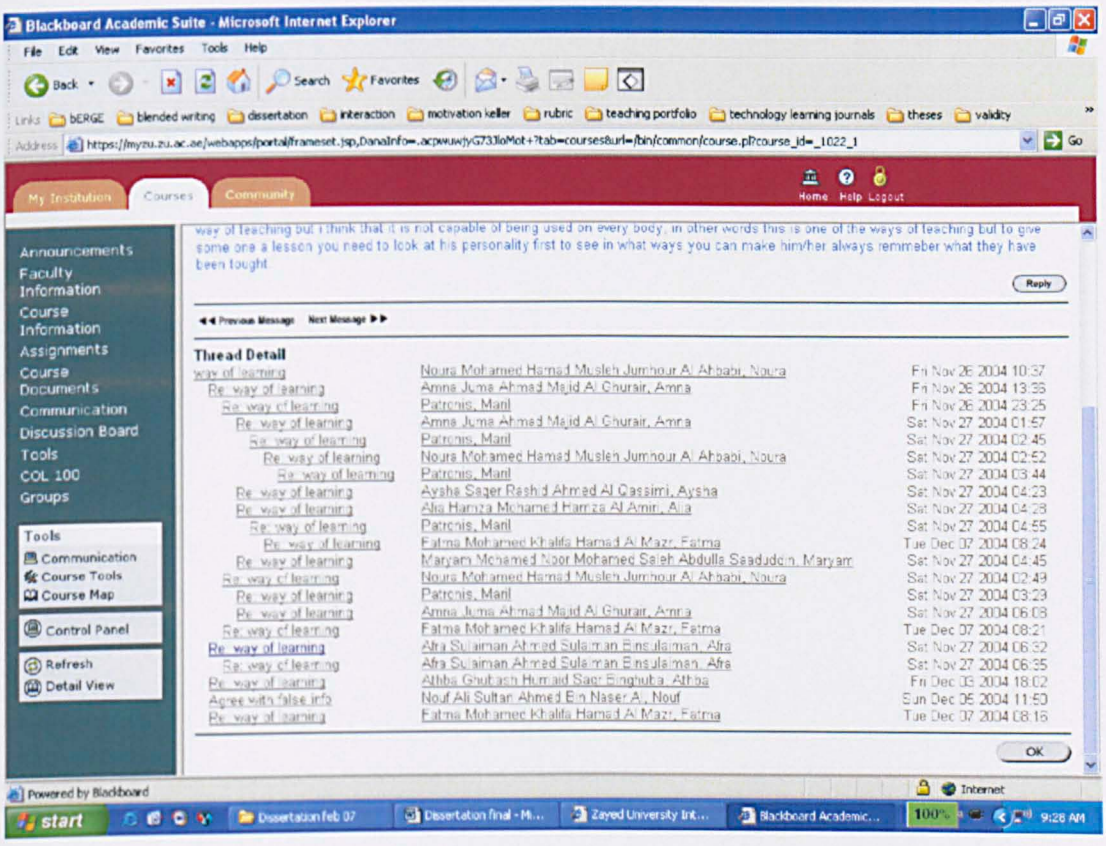
If you have any further questions, please don't hesitate to let me know either by email or by phone on extension 163.

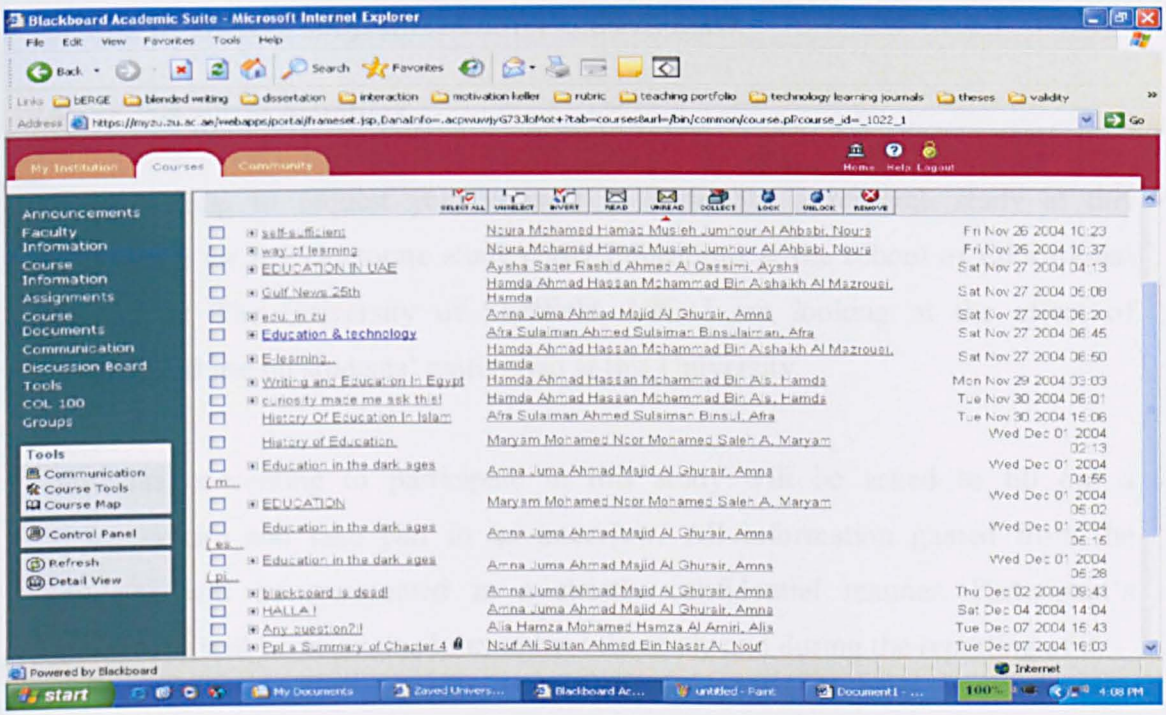
Many thanks

Marielle

Appendix C: Screenshots from Blackboard Forum






Blackboard Academic Suite - Microsoft Internet Explorer
My Institution
Courses
Community
Announcements
Faculty Information
Course Information
Assignments
Course Documents
Communication
Discussion Board
Tools
COL 100
Groups
Tools
Communication
Course Tools
Course Map
Control Panel
Refresh
Detail View
Powered by Blackboard
start

Appendices

Appendix D: Human subject committee consent letter

Dear committee members

I am writing to request your consent to undertake a research study at this University for my Doctorate study (EdD Education) at the school of Educational Studies at The University of Sheffield, UK. I am looking at the effect of Blackboard use on students' motivation at this University.

Students consenting to participate in this study will be asked to fill out a questionnaire and take part in an interview. All information gained from the students will be maintained in a strictly confidential manner. Participant's anonymity will be maintained throughout the study and during the reporting of it.

For further detail about the project, please see the application below. If you have any further questions then please don't hesitate to let me know either by email or by phone on extension 163.

THE UNIVERSITY HUMAN SUBJECTS COMMITTEE

Applications for Ethical Approval of Research: October 2004

Investigator: Marielle Patronis

Email: Marielle.Patronis@zu.ac.ae

Extension:163

Department: Colloquy on Integrated learning

Proposed Project Title: An Investigation into the Effect of Online Interaction on Students' Motivation (draft)

Appendices

Description of the project:

The intent of this research project is to discover students' views about asynchronous conferencing using interface program on Blackboard (Bb) which the university has readily adopted. This program will be requiring increase usage over the next years so I believe it is important to document students' views on the use of this program.

This study will be used primarily for my Doctorate (EdD) degree at the School of Educational Studies, The University of Sheffield, UK.

Research Questions:

1. To what extent does peer-to-peer online interaction affect students' motivation in a blended learning context?

2. To what extent does instructor-to-student online interaction affect students' motivation in a blended learning context?

3. What socio-cultural factors affect students' online interaction in a blended learning context?

4. What other perceived enabling and constraining factors affect learners' motivation in the online environment in a blended learning context?

Research Methodology

A survey will be sent to the participant via Blackboard Survey tools. Participants who indicate an interest to participate in the interview will be asked to meet with the investigator at a mutually convenient time and location.

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