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**AN ACTIVITY THEORY ANALYSIS OF SOCIAL
EPISTEMOLOGIES WITHIN TERTIARY-LEVEL ELEARNING
ENVIRONMENTS**

A thesis

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ABSTRACT

In recent years, eLearning or the use of information and communication technology (ICT) in tertiary-level educational environments has experienced phenomenal growth. There is an extensive body of research that has established the pedagogic value of eLearning. The literature has identified key factors that can afford or constrain participation in learning activities supported by ICT. However, amidst much discussion of the benefits of eLearning, concern has been voiced about the apparent failure of eLearning to transform teaching and learning environments.

In response to these concerns, this study intends to examine one aspect of eLearning – the use of learning activities underpinned by social epistemologies and mediated by asynchronous web-based technologies in three blended papers (a combination of face-to-face and ICT-supported modes of delivery) in higher education in New Zealand. More specifically, due to the significant numbers of English as an Additional Language (EAL) learners enrolled in New Zealand tertiary institutions, the study seeks to gain a rich and in-depth understanding of the nature of teacher and EAL learner participation in three mainstream (not English language learning) papers within the disciplines of nursing, management, and applied linguistics. By positioning the study within an activity theory perspective and thereby highlighting mediated activity, this inquiry intends to use an expansive conception of participation that takes account of social, cultural, and historical factors in the local and broader context.

To investigate the nature of participation within three eLearning contexts, the research design has been shaped by a qualitative orientation. The study has used a case study approach, an exploratory research question, and inductive procedures, and has drawn from ethnographic and phenomenological research methods to allow the nature of participation to emerge through the experiences of teachers and students. Data have been systematically gathered over a five month period by way of semi-structured interviews, accounts, and observations of face-to-face and online activity. Using activity theory as an interpretative tool and drawing from

techniques of grounded theory, the collected data have been analysed, coded, and categorised, and the findings emerging from this process have been grounded in the data.

The findings show the complexity of eLearning environments and emphasise the crucial role that social and historical factors play in shaping participation. The study has shed light on the ways in which students and teachers make sense of the learning activity by exploring the intersection of previous beliefs and understandings with emergent practice, indicating that sometimes the classroom community constructs meaning in differing and conflicting ways. In addition, this inquiry has brought a critical perspective to bear on the use of interactive learning activities, suggesting that the enactment of social epistemologies is both complex and problematic. This has been particularly evident in relation to the credibility of students to act as resources for each other and the pervasiveness of expedient and instrumentalist approaches to participation. Finally, this inquiry adds to the growing body of work that has used activity theory in educational research, finding activity theory well positioned to meet the need for more expansive conceptions of participation in eLearning.

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Sticks and sand, papyrus scrolls and brushes, the printing press and books, television and radio, mobile phones and podcasts – the history of education is replete with instances of tools used to support teaching and learning. Since the nineteenth century, education has utilised a succession of tools including the textbook and chalkboard; more recently, a broad range of communicative tools termed information and communications technologies (ICT) such as radio, television, telephony, computers, and the Internet have emerged. Indeed, using a broad definition of technology as “tools that extend human perception and human action,” it can be argued that all teaching involves the use of technology (Murphy, Walker, & Webb, 2001, p. 2). This perspective helps us to view the use of ICT in education as yet another step in a long line of tool-mediated learning rather than a profound transformation in learning (Murphy, Walker, & Webb, 2001; Säljö, 1999).

In recent years, the use of ICT in educational contexts has experienced significant growth (Allen & Seaman, 2003; Bates, 2001; Dziuban, Hartman, Juge, Moskal, & Sorg, 2006; Jones & Cross, 2009), and this trend has also been observed in higher education in New Zealand (New Zealand Council for Educational Research, 2004). This growth of ICT is perhaps unsurprising considering that “ICT use is implicated increasingly in what it means to be socially, economically, culturally and politically involved in 21st century society” (Selwyn & Facer, 2007, p. 9). As ICT has penetrated higher education, more teachers are incorporating ICT into the delivery of curricula and more students are encountering these technologies in their educational experiences. Rising interest in constructivist and social constructivist approaches to learning (Garrison & Archer, 2000; Selander, 2008) and the emergence of online technologies that can support social theories of learning (Brown & Adler, 2008;

Garrison & Akyol, 2009) have led to the growth of online learning activities where participants (teachers and students) are required to engage in collective meaning-making processes with others. New pedagogies which shift the locus of cognition from the individual to the collective create new challenges for both teachers as designers and students as consumers of interactive learning activities.

Within higher education, the student body has become increasingly diverse (Bennell & Pearce, 2003) as universities, which had traditionally focused on domestic students, have enrolled overseas students in significant numbers (Lea, 2007). This trend has been particularly evident in the tertiary sector in New Zealand. Although enrolments of international students have fluctuated significantly since 1999 (New Zealand Ministry of Education, 2005), recent statistics showing that enrolments of international students increased by almost 10 percent in April 2009 (New Zealand Ministry of Education, 2009 [June]) attest to their continuing significance in New Zealand tertiary education. Moreover, significant numbers of Pacific Island and Asian students are enrolled as domestic students at tertiary institutions in New Zealand (Wensvoort, 2006). These findings indicate that there are considerable numbers of English as an Additional Language (EAL) students, both domestic and international, immersed in mainstream learning contexts in which they are learning their chosen discipline through the medium of English. Diversity of the student body presents many challenges to higher education within New Zealand (Coolbear, 2008; Franken, 2005; Johnson, 2008) and EAL students may face a number of hurdles as they engage in learning activities mediated by social theories of learning, forms of ICT, and the English language (which they may still be in the process of learning).

1.1 The Focus of this Research

Although there is extensive literature documenting the ascent and spread of ICT in education, at the present time, there is uncertainty about how ICT is transforming education. Wide gulfs exist between home and school use of ICT (Crook, 2008; Somekh, 2007); ICT has struggled to have a significant effect on teaching practice (British Educational Communications and Technology Agency [BECTA], 2008; Garrison & Akyol, 2009); inequities of student access to ICT remain (BECTA, 2008); and current uses of ICT often serve to re-package old pedagogy rather than transform educational settings (Howard 2004; Salinas, 2008). This sense of uncertainty has been echoed by other scholars (see for example, Convery, 2009; Goldberg & Riemer, 2006; Goodfellow & Lea, 2007; Johnson & Walker, 2007; Lai, 2005; Zemsky & Massy, 2004), unsettling claims that the adoption of ICT is necessarily desirable and/or challenging the view that eLearning is transforming education to a significant degree.

The incorporation of ICT into education is shaped by a myriad of pedagogical, technical, political, and cultural factors (Selander, 2008) and efforts to understand eLearning have grappled with the complexity of this multi-faceted and multi-levelled social phenomenon. The use of limited conceptions of online participation which do not fully represent this complexity (Hrastinski, 2008, 2009); the prevalence of optimistic rhetoric which reinforces dominant beliefs that eLearning is inherently beneficial (Convery, 2009; Goodfellow & Lea, 2007); and a focus on examples of best practice which may not reflect the daily eLearning experiences for many teachers and students (Convery, 2009) may foster simplistic and arguably naïve understandings of eLearning. There is a need in the field of eLearning to dispense with the rhetoric associated with the concept of “techno-utopia” (Lears, 2000, p. 39) and instead examine ordinary (not extraordinary) instances of eLearning with a

critical perspective to determine “what it is really like” to be a teacher or student in everyday ICT-mediated educational settings.

At the heart of this thesis lies the argument that more expansive research approaches to eLearning are required that can accommodate the complexity of this social phenomenon and reveal the socially-situated and culturally-mediated nature of ICT use in education. If we are to learn how to use ICT in transformative ways, we need to better understand this multi-faceted phenomenon by examining the value-laden nature of ICT (Hodas, 1993; Howard, 2004); and more specifically, how values embedded within technology shape activity and reinforce or disrupt social, cultural, and historical factors in the educational context. In particular, it is argued that relatively little research has examined the experiences of EAL students and their teachers within mainstream academic contexts which are underpinned by social epistemologies and mediated by a form of ICT. More expansive research approaches should be brought to bear on this particular aspect of eLearning.

In response to these issues in the field of eLearning, this thesis is guided by one primary research question:

How do EAL students and their teachers participate in interactive learning activities mediated by ICT in mainstream tertiary-level educational settings?

By asking this question, the main intent of this thesis is to contribute to ongoing discussions about the transformative use of ICT to enhance teaching and learning experiences in the tertiary sector. The inquiry intends to provide an in-depth and critical representation through the eyes of EAL students and their teachers as they engage in social interaction in learning activities mediated by asynchronous web-based technologies. Three blended papers (a combination of face-to-face and ICT-supported modes of delivery) spanning a range of disciplines (management, applied

linguistics, and nursing) and levels (undergraduate and postgraduate) will constitute the three case studies in this inquiry. EAL students and their teachers within these papers will be followed for the full duration of the semester.

To achieve the above objectives, the study uses an exploratory research question, a qualitative methodology, and an inductive approach in the data collection and analysis phases to allow the nature of participation to emerge through the experiences of teachers and students. In addition, by highlighting mediated activity rather than individual actions or mental states, activity theory (Engeström, 1987; Vygotsky, 1978) provides an expansive conception of participation which encompasses the mediating role of social, cultural, and historical factors in the local and broader context. An activity theory perspective recognises the inherent complexity of eLearning, acknowledges the value-laden nature of ICT (Hodas, 1993), supports a critical stance which reveals affording and constraining factors in the surrounding context, and illuminates the transformative or non-transformative use of technology in educational settings

It is anticipated that this study will contribute to discussions within the fields of social theories of learning by gaining detailed and descriptive data about the experiences of EAL students and their teachers as they share and build understanding with others in an educational setting mediated by ICT. By concurrently investigating the experiences of teachers and students, the dynamic interplay between the two may reveal nuanced understandings and holistic perspectives. In particular, this study intends to add to the modest amount of literature investigating EAL experiences in higher education contexts outside of language learning. One can speculate that EAL students face considerable challenges as they encounter learning which is mediated by forms of academic English, social epistemologies, and ICT. However, this assumption must be challenged by approaches which examine student agency in an

idiosyncratic manner, focusing on the unique experiences of individual students over time. In addition, because the learning activities under study require student-to-student interaction using a text-based mode of communication, the study may have implications for the field of academic literacy acquisition in computer-mediated contexts. As EAL students are faced with negotiating yet another academic discourse (such as written course outlines and face-to-face meetings with lecturers) in addition to a multitude of others (Biber, Conrad, Reppen, Byrd, & Helt, 2002; Cooper & Belowski, 2007), they face the daunting task of becoming proficient in an academic discourse mediated by the English language, a form of ICT, and a social epistemology which requires them to co-construct understanding with other students.

In more practical terms, it is also anticipated that the study will generate a number of implications for the design and implementation of interactive learning activities supported by ICT which will be transformed into best practice pedagogical guidelines. These guidelines may help teachers to maximise the potential of interactive learning activities within eLearning to enhance participation by EAL students, although they may have wider application to issues of eLearning in general. These pedagogical aims of this study are consistent with three of the five challenges in teaching and learning with technology identified recently by Educause (Educause, 2009, para. 2) which are:

1. Creating learning environments that promote active learning, critical thinking, collaborative learning, and knowledge creation;
2. Developing 21st century literacies (information, digital, and visual) among students and faculty;
3. Reaching and engaging today's learner

Finally, in terms of methodology, this study will contribute to ongoing discussions about the use of activity theory as a research tool in educational contexts.

In summary, this thesis argues that expansive research approaches which can accommodate, embrace, and accurately represent the complexity of eLearning should be brought to bear on mainstream (not English language learning) eLearning contexts that are mediated by ICT, underpinned by social epistemologies, and experienced through the eyes of EAL students and their teachers. It is anticipated that the study will have conceptual, methodological, and pedagogical significance for the fields of eLearning, social theories of learning, and also academic literacy practices in online environments.

In the following sections, my perspective as author of this thesis will be provided to frame this study; pertinent issues around the use of terminology will be clarified; and finally the structure of the thesis will be outlined.

1.2 A Personal Perspective

Having changed career paths several times, I have been a student for many years studying philosophy, nursing, applied linguistics, and now eLearning. Upon returning to tertiary study in 2003, I was surprised and a little dismayed to encounter eLearning, or more specifically, online learning for the first time. For me, it was yet another hurdle I had to overcome in my studies as I juggled my nursing and university workloads with the demands of raising a family. As I became more comfortable with online learning, I started to appreciate the continuous access to content, the ability to upload electronic assignments, and the ease of communicating with the teacher. In my studies, I also encountered learning activities where I had to interact online with peers through an asynchronous technology. I had mixed feelings about these learning activities. I found them to be a useful way to reflect upon paper content out of class time and consider a range of experiences around the topic. However, at times, they were frustrating and unfulfilling activities as I laboured

through screens of text, attempted to decipher the often tangled and unclear contributions by EAL students, and encountered dry and distant postings which were created (or so I surmised) in order to impress the teacher rather than communicate with classmates. At times, it seemed that the pedagogy behind these activities was driven by the arguably naïve assumption that social interaction between students was inherently valuable for learning. In contrast, more often than not, I felt that individual learning experiences would have been far more beneficial to me than collective ones – two heads were not necessarily better than one. These mixed experiences as a student have fostered a cautious and critical perspective in my approach to social epistemologies in eLearning contexts.

This study emerges from the convergence of two primary interests. First, I am interested in social interaction as a way to enhance the learning experiences of students, specifically through the medium of ICT. I am curious about a number of issues including what factors afford or constrain teaching and learning in these educational settings; how do online and face-to-face components relate to each other; can the emergence of rapport, trust, and compassion be designed through pedagogy; and can meaningful social interaction occur within the artificial setting of the classroom where an awareness of assessment practice is omnipresent? A deliberate decision has been made to avoid instances of best practice, in other words, settings where enthusiastic teachers harness new technologies in innovative and exciting ways. Instead, this study seeks to capture a certain level of authenticity by focusing on teachers who may not have a strong interest in ICT (although the teacher in Case Study Three is an exception) and who are using ICT in their day-to-day teaching practice.

Second, based on my applied linguistics background, I am interested in examining how EAL students fare in mainstream (not English language) classes in higher

education. I have great admiration and respect for many of these students who are often young, far away from home, burdened with the knowledge that their families have sacrificed much to support their education, and faced with the challenges of adapting to life in a different cultural environment. I am curious about how EAL students experience learning activities in their chosen discipline of study where they are required to engage socially with others to build and share understanding through the medium of an asynchronous technology and the English language. It is interesting to consider how their preconceptions about teaching and learning affect participation; what role their English ability plays in their participation; whether they value social interaction as a credible way to learn; and how they relate to other students in their immediate group.

To conclude, my past and present experiences as a student have been powerful factors in shaping my interest in and motivation for undertaking this study. At times, my chief supervisor has remarked that my interpretations are shaped by a bias towards a learner perspective and I believe this is a fair comment. Possibly in years to come when I have more teaching experience, I will feel my interpretations are somewhat naïve. I do not believe that requiring students to interact will magically lead to learning or that it can mitigate the effects of weak pedagogy. Rather, past experience has shown me that social epistemologies within ICT-mediated educational contexts can be fickle things, inspiring in some contexts and unfulfilling in others. It is my intent to explore the nature of participation in interactive online learning activities with a critical perspective to better understand how they work in order to improve the educational experiences of learners and teachers.

1.3 A Note about Terminology

For the purposes of this thesis, the terms *eLearning* and *ICT-mediated learning* will be considered synonymous. This decision has been based on the following definition of eLearning which equates the two concepts. The term eLearning is defined as “learning facilitated and supported through the use of information and communications technology (ICT)” (Joint Information Systems Committee [JISC], 2009a, para. 1). The term *ICT* is defined as:

Forms of technology that are used to transmit, store, create, display, share or exchange information by electronic means. This broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing, e-mail and blogs. (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2009, para. 2)

In recent literature, there has been an increasing tendency to associate the term *eLearning* primarily with teaching and learning practices that are supported by Internet-based information and communication technologies (Garrison & Anderson, 2003; Holmes & Gardner, 2006). In addition, there has been a shift to associate eLearning with forms of social interaction between students and teachers (New Zealand Ministry of Education, 2009 [August]). While acknowledging these shifts in meaning, it is important to remain cognisant that, technically speaking, the term *eLearning* represents a broad category encompassing learning mediated by ICT in general and not just the use of specific web-based technologies for social interaction such as online discussions and collaborative wikis. ELearning includes a range of non-online digital tools which do not revolve around social interaction such as word processing software, multimedia CD-ROMs and DVDs, and stand-alone software where all aspects of teaching and learning are contained within an application and no internet access is required. Additionally, the term can span not only computers, but a multitude of mobile tools including cell phones, iPods, and personal digital assistants.

Due to pragmatic constraints related to accessing eLearning contexts for this study (discussed in the Methodology Chapter), this study will focus on one small aspect of eLearning – the use of interactive learning activities supported by asynchronous internet-based technologies embedded within institutional learning management systems.

A glossary of terms used in the thesis is included in Appendix P and the reader is referred to this for further information.

1.4 The Structure of this Thesis

This thesis contains eight chapters. This chapter has presented the context within which this study is located, has outlined my approach to the research project, and has articulated the intent and focus of this inquiry.

Chapter Two: The Conceptual Framework. This chapter undertakes a critical review of literature in the fields of social theories of learning, academic literacy, and eLearning using a social constructivist lens in order to inform this study and position it within a theoretical framework.

Chapter Three: Activity Theory. This chapter develops the argument (initiated in Chapter One) that more expansive research approaches are required in the field of eLearning and argues that activity theory can meet this need. Activity theory is described and a rationale for its use is given. The chapter concludes with a discussion of the use of activity theory as a research tool.

Chapter Four: The Research Process. This chapter outlines the methodology used in this thesis. It describes and explains the use of a qualitative research design that employs a case study approach and draws on ethnographical and phenomenological techniques to support the data collection process. In this chapter, sampling methods, descriptions of case study sites, data collection methods, and data analysis strategies are described and an explanation of the approaches used to enhance the trustworthiness of the study is provided. The chapter concludes with a description and justification of the data analysis techniques employed.

Chapter Five: The Findings. This chapter presents an analysis of the findings emerging from an interpretation of the data from an activity theory perspective. The chapter consists of three sections representing each case study and adhering to the same format. Within each section, a brief description of the case is provided and the findings are examined in relation to the activity theory-based concepts of object orientation (making sense of the learning object) and the division of labour (occupying the role of knowledge resource). In addition, a brief cross-case analysis is provided.

Chapters Six and Seven: Discussion Part One and Part Two. In these chapters, I extend the discussion initiated in Chapter Five by examining the findings in relation to literature in the field. Due to the size of this discussion chapter, it has been divided into two chapters: Part One (Chapter Six) – making sense of the learning object – and Part Two (Chapter Seven) – occupying the role of knowledge resource. In Chapter Six, conceptual considerations are discussed in relation to how the participants ascribed meaning to the learning activity and connections are forged between the findings and the fields of curriculum implementation and teacher cognition. Chapter Six concludes by discussing pedagogical implications in relation to issues of curriculum implementation. In Chapter Seven, conceptual considerations around the

use of social epistemologies in these learning activities are discussed in relation to the zone of proximal development (ZPD). This is followed by a discussion of the prevalence of limited forms of cooperation in the findings. Part Two concludes with an examination of pedagogical implications emerging from the study, particularly in relation to the concept of a capability differential.

Chapter Eight: Conclusion. This final chapter of the thesis provides a summary of the study's key findings, identifies a number of implications emerging from the study, and highlights some limitations and future directions for research. The thesis concludes with some final comments.

1.5 Chapter Summary

This introductory chapter has provided a background to this study, articulated the research question, described the intent and focus of this study, clarified key terms, and outlined the structure of the thesis. In the following chapter, issues foreshadowed in this introduction will be further developed to construct the conceptual framework for this thesis. The research question will be considered in relation to three broad conceptual fields – social theories of learning, academic literacy, and eLearning – in order to highlight gaps in understanding and show the significance of this study.

CHAPTER TWO: THE CONCEPTUAL FRAMEWORK

2.0 Introduction

The overall intent of this inquiry is to better understand and improve teaching and learning experiences mediated by social epistemologies in everyday tertiary-level eLearning contexts. To achieve this objective, this study intends to embrace the complexity of eLearning environments by obtaining an in-depth and critical representation of this multi-faceted social phenomenon through the eyes of EAL students and their teachers as they engage in interactive learning activities mediated by ICT. To inform this study and position it within a conceptual framework, a critical review of the literature has been undertaken in fields where it is anticipated that the findings will have the greatest potential to contribute to ongoing discussions. Therefore, this study is positioned as lying at the intersection of three broad conceptual fields: social theories of learning, academic literacy, and eLearning. In order to limit the scope of this endeavour in the face of an extensive amount of literature in each of these fields, the first section – social theories of learning – will shape the following sections by infusing them with a social constructivist perspective that perceives human activity as a socially situated and culturally mediated phenomenon.

This chapter is organized into four sections. In the first section, the field of social theories of learning will be introduced and key characteristics described. This section will be primarily descriptive to construct a social constructivist perspective in which to anchor the following sections on literacy and eLearning. In the second section, social conceptions of academic literacy will be considered. This area is significant because participation in the learning activities under study was dependent upon an asynchronous text-based mode of communication which required the ability to read and transcribe within an academic context. The third and largest section will be

devoted to an examination of the literature associated with the use of ICT in higher education with a specific bias towards the use of asynchronous online technologies to support social interaction. Through a critical review, three needs will be identified. First, eLearning requires research approaches that recognise its complexity. Second, eLearning requires additional critical perspectives to identify how ICT interacts with (reinforces or disrupts) social and cultural factors in the educational context. Third, eLearning requires more studies that explore authentic teaching and learning practice to counter the prevalence of studies examining pedagogical innovation which have a decidedly positive and arguably uncritical perspective. Specifically, it will be argued that more expansive research approaches that examine EAL student experiences in mainstream (not English language learning) settings are required to augment the modest number of existing studies. The fourth section functions as a bridge between Chapters Two and Three by considering conceptions of participation in the eLearning literature in order to lay the foundations to advance a rationale for the use of activity theory. This section will argue that more expansive conceptions of participation are required to extend understanding of eLearning and activity theory is well positioned to provide a perspective which encompasses social, cultural, and historical factors in the surrounding context.

2.1 Social Theories of Learning

In the literature, a number of terms have been used to describe theories that conceptualise learning as a socially-mediated process. These terms include *social constructivism*, *contemporary theories of learning*, *situated learning*, *distributed cognition*, and the title of this section, *social theories of learning*. Regardless of variations in terminology, these approaches share fundamental beliefs about the nature of knowledge and the means to acquire it. The following discussion will unpack these common beliefs and assumptions and describe them in more detail.

For the past three decades, cognitive theories of learning have been challenged by theories which view learning as a fundamentally social process (Brown, Collins, & Duguid, 1989; Greeno, 1997; Lave & Wenger, 1991; Littleton & Häkkinen, 1999; Putnam & Borko, 2000; Salomon & Perkins, 1998; Vygotsky, 1978; Wenger, 1998) and represent radical shifts in epistemology and conceptions of learning (Barab & Duffy, 2000; Jonassen & Land, 2000). Although many of these social theories approach the field of learning from differing perspectives, they share common epistemological underpinnings by contending that learning is a “collective participatory process of active knowledge construction emphasizing context, interaction, and situatedness” (Saloman & Perkins, 1998, p. 2). These theories stress the dialogic nature of learning through social interaction (Jonassen & Land, 2000) and advance the notion that learning is inextricably bound to participation in collective practices (Lave & Wenger, 1991). Social theories of learning can help explicate the complexity of human activity by “underscoring the need to look at real activity in real situations and in squarely facing the conflux of multifaceted, shifting, intertwining processes that comprise human thought and behavior” (Nardi, 1996, p. 78). Drawing from scholars in the field (Barab & Duffy, 2000; Jonassen & Land, 2000; Salomon & Perkins, 1998), three axiomatic and interconnected tenets have been delineated: situated activity is the cognitive unit of analysis; learning is a process of becoming a member in a community; and learning is mediated by cultural artefacts. To a degree, these tenets do overlap but the intent here is to highlight various aspects of social theories of learning rather than create mutually exclusive categories.

2.1.1 Situated Activity is the Cognitive Unit of Analysis

The first tenet asserts that the unit of analysis for cognition is situated activity, contending that learning is a co-constructive process, located within specific social and cultural contexts, and where systems of meaning (culture) are shared amongst

participants (Barab & Duffy, 2000; Greeno, 1997; Lave & Wenger, 1991). Learners are engaged in a continuous process of making sense of the world as they interact with other people and cultural artefacts in their environment. Meaning cannot be separated from the contexts in which it originates (Barab & Duffy, 2000; Vygotsky, 1978). Mind and action are integrated and learning is “a matter of participation in a social process of knowledge construction” (Salomon & Perkins, 1998, p. 4). Dualistic conceptions of mind and world separation are discarded in favour of non-dualistic perspectives which argue that knowing and doing in the world are inseparable (Billet, 2001; Jonassen & Land, 2000; Salomon & Perkins, 1998). Brown and Adler (2008, p. 18) assert “*we participate, therefore we are,*” drawing attention towards the inextricable ties between thought and activity, mind and society.

This concept of situated activity is further developed from a neo-Vygotskian perspective by Engeström (1987) and from an anthropological perspective by Lave and Wenger (1991). Through activity theory, Engeström (1987) has visually represented the integration of individual and social aspects of cognition through activity. Similarly, Lave and Wenger’s (1991) community of practice model has also made significant contributions in this area. They argue that the “locus of meaning” (Jonassen & Land, 2000, p. vi) is not only located within the mind of an individual; it is also distributed in the social and cultural matrix of the community. “A community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice” (Lave & Wenger, 1991, p. 98). As learning is participation in the social world, it is inseparable from day-to-day activity. Individual activity occurs within a community and the community gives legitimacy to individual practice (Barab & Duffy, 2000). Knowledge can exist in physical tools, theories, and models; social relationships between individuals; and the types of discourse between participants (Jonassen & Land, 2000). Within this conceptual framework, the unit of analysis shifts from individual cognition to what it means to be a member of a community (Barab &

Duffy, 2000) and attention is redirected toward concepts such as communities of practice, knowledge building communities, and communities of learning.

The concept of situated activity has been considered from an ecological perspective of learning (Van Lier, 2000). Van Lier (2000, p. 246) contends that “the learner is immersed in an environment full of potential meanings [and] these meanings become available gradually as the learner acts and interacts within and with this environment.” He questions theories which define learning as the transmission of input into the brain, and instead argues for a theory which views learning using the “ecological notion of affordance” (p. 257). Under this definition, learning is conceptualised by “the relationship between properties of the environment and the active learner” (p. 257). Clear parallels with social theories of learning can be seen here as learning is conceptualised as emerging through the learner’s activity in their environment.

2.1.2 Learning is Becoming a Member of a Community

In contrast to conventional beliefs that view learning as the acquisition of knowledge, social theories reconceptualise learning as becoming a participant in and member of a community (Sfard, 1998). This perspective entails the transformation of identity as an individual joins, participates in, and ultimately belongs to a community. Social interactions not only produce meanings about the social world, they also produce identities as “individuals are fundamentally constituted through their relations with the world” (Barab & Duffy, 2000, p. 26). As a novice gains knowledge in a field, they are “not only ‘learning about’ the subject matter but also ‘learning to be’ a full participant in the field” (Brown & Adler, 2008, p. 19). Lave and Wenger (1991) have made significant contributions to this area, contending that gaining knowledge and skills goes hand-in-hand with developing an identity as a member of a community.

As apprentices gradually acquire the norms, conventions, and practices of expert practitioners through observation and limited practice, they become enculturated into a community of practice and their identity is subsequently transformed.

2.1.3 Learning is Mediated by Cultural Artefacts

The third tenet asserts that learning is mediated by cultural artefacts (Säljö, 1999) and expands on the first tenet by closely examining what is meant by the claim that cognition is an inherently social process. It is advanced that knowledge does not reside primarily in the minds of individuals, but rather it is distributed collectively in the community. In other words, knowledge is contained within the culture, the discourse between people, the cultural artefacts, and the history of activity of a community (Lave & Wenger, 1991; Vygotsky, 1978). Therefore, the unit of analysis for cognition should not focus exclusively on an examination of the individual, but should explore how meaning is co-constructed through the medium of social activity (Säljö, 1999). Within this conception of cognition, the mediation of cultural artefacts such as physical tools (for example, pencils and books), mental tools (for example, strategies and models), virtual tools (for example, software and websites), and conceptual tools (for example, theories) play a key role in shaping thought. In particular, language is conceptualised as a powerful symbolic tool that helps people make sense of the world (Vygotsky, 1978) and engage in dialogic interactions with others to negotiate meaning (Jonassen & Land, 2000). It is through interactions with others about particular issues or problems that understanding is socially constructed (Brown & Adler, 2008); therefore, learning activities should provide opportunities for students to engage in dialectical processes where they negotiate their understandings with others.

This area has been significantly influenced by Vygotsky's (1978) concept of the zone of proximal development (ZPD). The ZPD is defined as the distance between what an individual can accomplish alone and what an individual can accomplish with assistance from more capable peers (Barab, Evans, & Baek, 2004; Wertsch, 1985). External social processes (for example, guidance and support from others and/or the use of tools) become internalized as mental processes, thereby transforming an individual's cognition (Ormrod, 2008; Salomon & Perkins, 1998). Learning can be reconceptualised as originating from collaboration between people (inter-mental) as they interact in cultural environments and employ various cultural artefacts before being internalised (intra-mental) by the individual (Barab et al., 2004).

Building upon Vygotsky's (1978) concept of the ZPD, other scholars have developed the notion of learning as a social process in relation to legitimate peripheral participation (Lave & Wenger, 1991) and situated cognition (Brown, Collins, & Duguid, 1989). By engaging in legitimate peripheral participation, learners in work-based settings are able to access "arenas of mature practice" (Lave & Wenger, 1991, p. 110). The learners observe and then gradually work alongside more mature members of the community, eventually moving from the periphery to more mature and central forms of practice. They learn by appropriating and internalising the culture – ways of doing, thinking, perceiving, and knowing – of a specific work setting. In the same vein, Brown, Collins, and Duguid (1989) have explored the concept of situated cognition whereby learning is embedded within specific contexts and developed through activity. Through "cognitive apprenticeships" learners become enculturated into specific practices and learn, not only how to do a task, but also how to think about a task (Brown, Collins, & Duguid, 1989, p. 37). By interacting with more and less experienced members of the community and becoming engaged in authentic problem solving activity, learners discover solutions to immediate problems and are assisted by others into higher levels of thought.

2.1.4 Summary

This section has built the overarching structure of this conceptual framework by delineating key characteristics of social theories of learning. The view that learning originates from social interaction is crucial to this thesis as the learning activities under study were underpinned by social epistemologies. Three aspects of social theory have been delineated and explored: situated activity is the cognitive unit of analysis, learning is becoming a member of a community, and learning is mediated by cultural artefacts. In the following sections, the influence of social theories on academic literacy and eLearning will be explored.

2.2 Social Conceptualisations of Literacy

Although this study is firmly rooted within the field of eLearning, it also has implications for the field of literacy studies. As all three case studies used asynchronous modes of communication, participation was inherently text-based – students and teachers were compelled to read and transcribe in an academic setting in order to engage in the learning activity. The term transcribe is used here to mean “transforming the words that the writer wants to say into written symbols on the printed page ... [using] the processes of spelling and handwriting (or typing)” (Graham & Harris, 2000, p. 8). Therefore, the case studies represent forms of literacy practice mediated by electronic technology within an academic context.

The meaning of the term *literacy* has been contested (Beetham, McGill, & Littlejohn, 2009) and continues to evolve as indicated by variations in terminology such as *digital literacies*, *new media literacies*, *information literacy*, and *computer literacy* (Coiro, Knobel, Lankshear, & Leu, 2008). Indeed, *literacy* can simply mean accessing or understanding a body of knowledge (Barton, 1994). More recently, the

term *learning literacies for the digital age* has been used which is defined as “encompassing the range of practices that underpin effective learning in a digital age” (Beetham, McGill, & Littlejohn, 2009, p. 8). Acknowledging these varied understandings of literacy, the intent of this discussion is to conceptualise literacy as social practice to align it with a social constructivist approach.

A group of scholars have been associated with the concept of literacy as social practice (Barton, 1994; Gee, 1996; Lea, 2004; Lea & Street, 2006; Street, 1984; Street, 1995). They have argued against “autonomous” models (Street, 1984, p. 1) which view literacy as a singular concept consisting of universal and de-contextualised skills and techniques which can be acquired by an individual and transferred between contexts (Lea, 2004; Street, 1984). They contend that this view locates the domain of literacy within individual psychological processes (Gee, 1996) and denies the socially situated nature of literacy practices and their ideological foundations (Street, 1984). Instead, it is argued that reading and writing are social practices, underpinned by and existing in agreement with the cultural beliefs, values, and ideologies of their contexts. Literacy is therefore defined as “both behaviour and the social and cultural conceptualisations that give meaning to the uses of reading and/or writing” (Street, 1995, p. 2). Building on this platform, participation in a particular discourse or form of literacy involves not only displaying behaviour appropriate to the context, but also understanding the vast reservoir of shared meanings (culture) that underlies the behaviour. Additionally, membership in particular discourses does not only mean that a person acts in specific ways, it also means that they take on new identities or “ways of being in the world” (Gee, 1996, p. 127). Thus, participation in a particular discourse or form of literacy involves acting and being in the world in particular ways and, therefore, fundamentally shapes identity.

An additional dimension of this social approach to literacy is the use of a critical perspective which extends the field of vision beyond immediate communities to the wider context in order to consider issues of ideology and power relations (Lea & Street, 2006). Ideology is defined as “significations/constructions of reality (the physical world, social relations, social identities) which are built into various dimensions of the forms/meanings of discursive practices [and] are most effective when they become naturalized, and achieve the status of ‘common sense’” (Fairclough, 1992, p. 87). This critical perspective contends that there are multiple literacies in multiple contexts underpinned by particular cultural and epistemological viewpoints. These views represent specific ideologies which are linked to power structures within communities and privilege some individuals, but not others.

2.2.1 Social Conceptualisations of Academic Literacy

Within social approaches to literacy, attention has been directed toward understanding writing in academic contexts (Lea, 2004; Lea & Street, 1998; Lea & Street, 2006). Student participation in academic contexts has been described by Lea and Street (1998) as:

The requirement to switch practices between one setting and another, to deploy a repertoire of linguistic practices appropriate to each setting, and to handle the social meanings and identities that each evokes. This emphasis on identities and social meanings draws attention to deep affective and ideological conflicts in such switching and use of the linguistic repertoire. (Lea & Street, 1998, p. 159)

By adopting a critical perspective, it is argued that an “academic literacies” (Lea, 2004, p. 740) approach moves beyond merely portraying students as being enculturated into academic practices through various forms of participation with practitioners. Viewed through a critical lens, issues concerning knowledge and identity come to the fore and students are viewed as encountering dominant literacy practices which are underpinned by various beliefs and values (Lea & Street, 1998).

This study intersects with the field of academic literacies by building on the work of Lea and Street (1998) who explore student perceptions and experiences of different literacy practices within two universities and the understandings of academic staff in relation to the literacy requirements of their specific areas. In their research, Lea and Street (1998, p. 161) observed students “course switching” which is the practice of adapting to varying expectations of different disciplines and tutors as they moved through a varied number of courses in the university. Lea and Street (1998, p. 161) observed “different assumptions about the nature of writing, related to different epistemological presuppositions about the nature of academic knowledge and learning, are being brought to bear, often implicitly, on the specific writing requirements of their assignments.”

Research has suggested that students must negotiate a wide range of text types in their learning experiences in higher education (Biber et al., 2002; Cooper & Bikoski, 2007). An increasing number of these text-types are mediated by ICT which presents “a particular kind of rhetorical space ... reshaped or reconfigured by its attendant technologies” (Locke & Daly, 2006, p 39). Within interactive learning activities supported by asynchronous web-based technology, students are required to read and write – to engage in an academic literacy practice – in order to participate. Moreover, as the learning activities draw from social epistemologies, students encounter not only new forms of texts, but new ways of thinking about the nature of knowledge and how to acquire it. Of particular interest, are the experiences of EAL (English as an Additional Language) students who may originate from cultures where social views of learning are less prevalent, and thus, are required to adapt to new forms of academic literacy which are shaped by technology, the English language (which they may still be in the process of learning), and a social epistemology.

This study will explore both student and teacher experiences and perceptions as they participate in three specific academic contexts – nursing, management, and applied linguistics – and, in particular, it will explore academic literacy practices that are supported by ICT. It is anticipated that the research will contribute to growing understanding of the nature of literacy in these contexts by exploring what it means to be academically literate in contemporary higher education and how ICT shapes the nature of literacy. For example, the study may shed light on teaching expectations of writing, the epistemological assumptions that support these expectations, how the expectations are communicated to the students, how the students “unpack the ground rules of writing” (Lea, 2004, p. 740), and whether the students construct texts that align with the teachers’ expectations.

The research may also extend work in the area of academic literacies by re-examining the data with a critical perspective. By considering instances of academic literacy as a potential site of ideological struggle where the nature of knowledge and the ways to represent it may be contested, one’s perspective is transformed. The teacher’s understanding of the literacy practice is seen in a new light – as a dominant literacy imposed by the teacher who as assigner of grades is positioned in a relationship of power over the students. This dominant literacy is not only concerned with ensuring that conventions associated with the way to represent knowledge (for example, issues of formatting, referencing, and style) and the type of knowledge to be represented (for example, the nature of the content to be presented) are adhered to; it also assumes that knowledge is obtained through particular cognitive processes such as critique, summarisation, and synthesis, and advances the implicit epistemological proposition that knowledge can originate from social interaction between learners. Concepts of acquiescence (submission to the curriculum), accommodation (an effort to reconcile personal beliefs with the curriculum), and resistance (opposing the curriculum either overtly or covertly) (Smagorinsky, Lakly, & Johnson, 2002) may emerge with a critical perspective.

The issue of dominant/non-dominant literacies is particularly relevant in the case of EAL students who, originating from varied educational backgrounds, may have differing expectations about the nature of academic literacy. As observed earlier, the epistemological belief that learning can occur through student interaction may be unfamiliar to them. Indeed, the findings from this study may or may not reinforce the perception that EAL students can be “marginalized by a dominant academic culture” (Lea, 2004, p. 742).

2.2.2 Intersections with the Field of Multiliteracies

It could be argued that the research also intersects with the field of multiliteracies (New London Group, 2000). Responding, in part, to an increasing number of texts stemming from the advance of technology, Cope and Kalantzis (2000, p. 5) observe that online settings afford an “increasing multiplicity and integration of significant modes of meaning-making, where the textual is also related to the visual, the audio, the spatial, the behavioural, and so on.” Online spaces can provide meaning-making opportunities which focus on a range of visual forms of representation (Kress, 1997) such as icons, images, graphics and videos. For example, when considering how a learner navigates through an online paper, it is clear that she has to have an understanding of browsers, log-ins, and various navigational features such as breadcrumbs, back buttons, hyperlinks, and scrolling tools. In addition, she needs to have an understanding of particular semiotic systems (icons and pictures) in order to meaningfully participate in an online experience.

Acknowledging that the use of ICT has increased the potential for multi-modal forms of representation in texts, it is pertinent to consider whether this potential is actually being manifested within academic contexts. In the three case studies, visual modes of

meaning were used to a degree (for example, icons and images), but significantly, the main requirement was that students read and produce text. This observation is consistent with Lea (2004):

The dominant authoritative texts in higher education reflect the institutional concerns with knowledge and assessment, which are still – for the most part – instantiated in writing. It is advisable, then, to be cautious of explanations predicting the kinds of texts one might find associated with new technologies and new domains of visual design. (Lea, 2004, p. 744)

Therefore, while the use of ICT and particularly asynchronous web-based technologies in higher education may potentially provide opportunities for new modes of meaning-making, institutional factors may limit this potential. In relation to the learning activities under study which use text as the primary means of communication, it is advisable to note Lea's cautious tone. While online spaces do offer new tools for communication, reading and producing text remains the focus of participation. Therefore, it is unclear at this stage whether a significant contribution will be made to the field of multiliteracies.

2.2.3 Summary

To summarise, the asynchronous online learning activities under study represent forms of academic literacy because participation is mediated by an ICT which requires students and teachers to read and transcribe in a virtual environment. Drawing on conceptualisations of literacy as social practice (Lea, 2004; Lea & Street, 1998; Lea & Street, 2006), the case studies represent instances of academic literacy practices which are mediated, not only by online technologies, but also by social and cultural practices. In addition, these literacy practices can represent sites where particular views of knowledge and the way to represent these views can become dominant and imposed on or negotiated with others. This research can contribute to ongoing discussions in this area of literacy studies by exploring what it means to

participate (both from the teacher and student perspective) in these literacy practices, and assumptions that EAL students can be marginalized by dominant academic literacies can be examined and perhaps challenged.

2.3 eLearning in Higher Education

The extended discussion in this section critically considers scholarship in the field of eLearning in order to reveal gaps in understanding and offer a rationale for this inquiry. First, a descriptive and generally upbeat picture of the current state of eLearning will be provided. Next, a more critical lens will be brought to bear on eLearning to suggest that there are cracks in this optimistic façade. It will be argued that eLearning is a complex phenomenon requiring more expansive approaches which can provide critical perspectives and it will be contended that there is a need for more research that examines instances of everyday classroom practice. In addition, it will be advanced that research examining the interplay between student and teacher should be examined more closely, and in particular, the experiences of EAL students are worthy of further study. This section concludes by identifying gaps in understanding and explaining the intent of this thesis.

As noted in Chapter One, while this discussion will employ the term *eLearning*, many of the studies discussed here pertain to learning mediated by a specific form of ICT – asynchronous web-based technologies (for example, discussion forums, bulletin boards, asynchronous conferencing, and threaded discussions). This bias is based on the prevalence of this form of ICT to support social interaction (Hrastinski, 2008; Williams, 2002) and the nature of the case studies selected for this inquiry.

2.3.1 The Rise and Expansion of eLearning

In recent years, the use of ICT in educational contexts has experienced significant growth (Allen & Seaman, 2003; Bates, 2001; Dziuban, Hartman, Juge, Moskal, & Sorg, 2006; New Zealand Council for Educational Research, 2004). Increasingly, academic institutions have turned to online technologies and particularly learning management systems to support teaching and learning (Papastergiou, 2006; Steel, 2009), and a number of New Zealand tertiary institutions have followed this trend (Mitchell, Clayton, Gower, Barr, & Bright, 2005). Learning management systems are online technologies which help teachers to organise and distribute course content, facilitate communication and collaboration, support assessment processes, and perform class management duties (Papastergiou, 2006). Additionally, interest has developed around the potential of Web 2.0 technologies such as wikis, blogs, instant messaging, internet telephony, and social networking websites which offer “increase[d] interactivity and participation by enabling collaborative communication, creation and content sharing” (Garrison & Akyol, 2009, p. 21). Excitement has been generated around the potential of mobile technologies such as MP3 players and mobile phones to enhance learning (Herrington, Herrington, & Mantei, 2009). The use of podcasting has gained momentum within the university context (Traxler, 2008) and iTunes U (<http://education.apple.com/itunesu>) provides a large and growing repository of free educational content with more than 150,000 lectures, presentations, videos, readings, and podcasts available for downloading.

Much interest has been shown in the educational uses of ICT in the United Kingdom, China, Europe, Africa, the United States, Australia, and New Zealand (Conole, 2007; Lai, 2005; New Zealand Council for Educational Research, 2004; Office for Standards in Education [OFSTED], 2004; Reynolds, Treharne, & Tripp, 2003). Key drivers behind this interest in eLearning are a number of perceived benefits – the development of new markets for education and new forms of educational provision, the ability to increase access to learning opportunities through different models of

education, and the creation of forms of education which will meet the demands of both traditional and lifelong learning (Conole, 2007). Indeed, the adoption of computers has been seen as vitally important if countries are to gain economic advantage (Convery, 2009). In the United Kingdom, eLearning has been identified as an important factor in addressing national priorities and the recent BECTA report (BECTA, 2008, p. 96) contends that “there is an increasing body of evidence on how technology can support the wider education priorities of raising achievement, narrowing achievement gaps, engaging disadvantaged and vulnerable learners, and improving capacity, quality and efficiency.” Finally, there is growing pressure to accommodate the needs of “technologically savvy” students who use ICTs such as MP3 players, mobile phones, and laptops as a seamless and rich aspect of their everyday life (Lomas & Oblinger, 2006; Pletka, 2007).

Many claims have been made about the potential of ICT to transform education and indeed society and, seen from within the context of much eLearning research, this enthusiasm for eLearning is understandable. The potential of eLearning to support meaningful learning experiences has been well documented (Becker, 2000; Felix, 2002; Garrison & Kanuka, 2004; Hammond, 2005; JISC, 2009b; Luppigini, 2007; Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, & Liu, 2006). For example, online technologies have been shown to support higher levels of cognition (Garrison, Anderson, & Archer, 2000; Newman, Johnson, Webb, & Cochrane, 1997), foster learner reflection and the processing of information (Davidson-Shivers, Tanner, & Muilenburg, 2000), afford access to virtual guests (Kumari, 2001), and level the playing field between participants (Kamhi-Stein, 2000). Recent evidence from the United States Department of Education showing that learning benefits may exist for blending online and face-to-face instruction (Means, Toyama, Murphy, Bakia, & Jones, 2009) have served to bolster these beliefs. This meta-analysis and review of online learning studies has found that “*students who took all or part of their class online performed better, on average, than those taking the same course through*

traditional face-to-face instruction” (Means, Toyama, Murphy, Bakia, & Jones, 2009, p. xiv, italics in original).

E-Learning has shown a remarkable ability to support a diverse range of pedagogical approaches (Crook, 2008; Dalgrano, 2001; Ravenscroft, 2001). It is worthwhile dwelling on this point for a moment by employing Mosham’s (1982 as cited in Dalgrano, 2001) useful delineation of four general types of pedagogical approaches: pre-constructivist, endogenous constructivist, exogenous constructivist, and dialectical constructivist approaches. Originating from behaviourist theories of learning (Skinner, 1954), pre-constructivist approaches view learning as a process of repetition with rewards and sanctions as feedback to encourage or discourage certain behaviour. This approach can be realised through ICT (for example) by creating online tutorials with drills and practice to reinforce the desired behaviour. Drawing from cognitive theories (Piaget, 1971), endogenous constructivism conceptualises learning as a process of active knowledge construction by learners. This approach might use virtual cognitive tools to help learners encounter and explore a range of online content and simulations, and the teacher’s role is to act as a guide or facilitator rather than instructor. Exogenous constructivist approaches share similar beliefs about learning as a constructive process but advocate a combination of formal direction from the teacher and discovery learning. Finally, dialectical constructivism, grounded in social theories of learning (Vygotsky, 1978) focuses on cooperation, collaboration, dialogue, and consensus building between a learner and a learned other.

In relation to social theories of learning, it has been widely acknowledged in the literature that learning activities based on social epistemologies can be effectively supported by ICT (Barab, Thomas, & Merrill, 2001; Brown & Adler, 2008; Harasim, 2000; Singhanayak & Hooper, 1998). There has been a shift in tertiary education towards pedagogies that use social interaction and collaboration to support the collective construction of knowledge (Garrison & Akyol, 2009; Garrison & Archer,

2000) and many online technologies, particularly Web 2.0 technologies, are well placed to afford virtual learning environments that can effectively leverage the social nature of learning (Crook, 2008; Garrison & Akyol, 2009). Specifically, scholars have explored social learning from a variety of aspects including knowledge building communities (Scardamalia & Bereiter, 1994), collaborative learning (Bonk & King, 1998a; Murphy, 2004), learning communities (Kling & Courtright, 2004; Riel & Fulton, 2001; Riel & Polin, 2004), social presence (Picciano, 2002; Rourke, Anderson, Garrison, & Archer, 1999), affective dimensions of social interaction (Kreijns, Kirschner, & Jochems, 2003), and the process of knowledge co-construction (Johnson, Bishop, Holt, Stirling, & Zane, 2001; Pena-Shaff & Nicholls, 2004).

To conclude, the use of ICT in educational contexts has experienced significant growth in recent years. The potential of eLearning to support meaningful learning experiences has been well documented and it has shown a remarkable ability to afford a variety of pedagogical approaches. In particular, research has shown that learning activities based on social epistemologies can be effectively supported through ICT by affording opportunities for students to connect with each other in varying ways. However, this section has presented only one general perspective on eLearning which tends to portray it in rather optimistic (and arguably idealistic) terms. The next section will bring a more critical eye to bear on the literature in order to argue that the field of eLearning is more complex and problematic than the above discussion might suggest.

2.3.2 Uncertainty in the Field of eLearning

Although there is extensive literature documenting the growth and benefits of eLearning, at the present time, there is uncertainty about how ICT is transforming education and a sense that eLearning has not realised its anticipated potential to

transform teaching and learning processes (Garrison & Akyol, 2009; Howard, 2004; Johnson & Walker, 2007; Kopyc, 2006-2007; Lomas & Oblinger, 2006; Nichol & Watson, 2003; Reynolds, Treharne, & Tripp, 2003; Salinas, 2008; Zemsky & Massy, 2004). Wide gulfs exist between home and school use of ICT (Crook, 2008; Somekh, 2007); ICT has struggled to have a significant effect on teaching practice (BECTA, 2008; Garrison & Akyol, 2009); inequities of student access to ICT remain (BECTA, 2008); and current uses of ICT often serve to re-package old pedagogy rather than transform educational settings (Howard 2004; Salinas, 2008). The following discussions will argue that eLearning is a multi-faceted and problematic educational phenomenon and that better understanding will be generated by research responses which can represent this complexity.

2.3.2.1 The need to represent the complexity of eLearning

The incorporation of ICT into education is shaped by a myriad of pedagogical, technical, ideological, political, and cultural factors (Selander, 2008) which implicate issues in local and broader contexts. For example, the BECTA (2008) report presents a mixed view of the state of eLearning in the United Kingdom. While reporting that steady progress has been made in the use of technology for learning, the report highlights a number of issues including lack of access to technology and lack of learner skills. In addition, the report claims that there is a need to build leaders' understanding of the role of technology in supporting their priorities; there are issues around teaching practice (lack of awareness about the pedagogical value of ICT, lack of pedagogical skills, and lack of time and incentives to transform teaching practice); and there is a need for more professionalism within technology services. Specifically, in relation to further education in the United Kingdom, the report observes that while some progress has been made "there appears to be a stubborn core of FE [further education] colleges which are late adopters ... and polarisation within the FE sector between practitioners making good use and those making little or no use" (BECTA, 2008, p. 15). Other studies have confirmed some of these

observations, noting that the adoption and sustained use of ICT in education can be affected by technical and pedagogical support for teachers (Butler & Sellborn, 2002; Egbert, Nakamichi, & Paulus, 2002), a lack of support for learners (Shaw & Pieter, 2000), a lack of faculty incentives and access to resources (Johnson & Walker, 2007), and student resistance to new ways of teaching and learning (Shaw & Pieter, 2000).

The complexity of eLearning is reflected in discussions centred on the design and implementation of curricula mediated by ICT (for example, de Bruyn, 2004; Dennen, 2005; Dennen, 2008; Garrison, Anderson, & Archer, 2000; Hammond, 2005; Oliver & Shaw, 2003; Tallent-Runnels et al., 2006). In relation to learning activities that require social interaction, there is an extensive body of research which has considered key factors which affect participation. These factors can include the size of the group, knowledge of other participants, the clarity of task guidelines, task ownership, a need for the technology, the online interface, and prior experience with online learning (Tolmie & Boyle, 2000). In their “model of community inquiry,” Garrison, Anderson, and Archer (2000, pp. 87-90) delineate three essential components: cognitive presence (the ability to construct meaning through ongoing communication), social presence (the ability to project aspects of one’s identity into the interaction to increase the sense of being a “real person” to others), and teaching presence (the design and facilitation of learning whereby social and cognitive objectives are supported and realised). In his review of 62 case study papers examining asynchronous discussions in higher education, Hammond (2005) has identified four interrelated issues that constrained student behaviour: curriculum design, teaching support, software, and learners’ attitudes and behaviours. Rovai (2007, pp. 79-82) has identified four elements of effective online discussion design: the presence of both intrinsic and extrinsic motivation, clear dissemination of course expectations around participation, the creation of informal online spaces where students can meet, interact, increase their knowledge of each other, and develop a

sense of learning community, and the provision of authentic or “real-life” topics for discussion.

In terms of the design and implementation of ICT-mediated learning activities, studies have found that students learn more when they participate in courses which are carefully designed and structured, well implemented, adequately resourced, and underpinned by sound pedagogy (Anderson, Rourke, Garrison, & Archer, 2001; Dennen, 2005; Johnson, 2008; Kear, 2004; Tallent-Runnels et al., 2006; Vonderwell, 2003; Whipp, 2003; Williams, 2002). As Loveless et al. (2001) observe:

Maintaining a purposeful working atmosphere, effective questioning, careful listening and providing pupils with opportunities to consolidate knowledge – do not change substantially with the integration of ICT. Lessons and activities still need to have a clear purpose, structure and pace, and to elicit participation. (Loveless et al., 2001, p. 71)

Whipp (2003) has found that higher levels of reflection in a teacher education course were rare until more structure was added such as the addition of course readings, the use of critical questions from the teacher and students, clearer criteria for postings, and individual teacher feedback to students about their postings. Similarly, in relation to learning activities that require social interaction between students, King (1998, p. 371) has observed “educational networkds are open spaces requiring social shaping for effective dialogue” and she advises that the pedagogical use of social interaction in online spaces must be underpinned by compatible learning theories. A number of studies have shown that assessment practice has a profound effect on levels of learner participation (Gerbic, 2006; Hammond, 2005; Oliver & Shaw, 2003; Rimmershaw, 1999; Williams, 2002). Williams (2002) notes that learners tend not to participate unless online activities are linked to assessment and Kear (2004) suggests that students need to perceive a tangible benefit for their investment of time in terms of marks, interaction with peers, and/or support from others. These studies challenge the notion that meaningful activity will spontaneously occur – just because a teacher

creates an online discussion does not necessarily mean it will be used by the students or that desired learning outcomes will be realised.

Research specifically examining teacher and student roles in interactive learning activities has returned mixed results. A number of studies have offered evidence to suggest that active participation by the teacher can facilitate learning (Christopher, Thomas, & Tallent-Runnels, 2004; Kear, 2004; Weasonforth, Biesenbach, & Meloni, 2002; Williams, 2002), particularly in relation to establishing higher levels of community among online learners (Shea, Swan, Li, & Pickett, 2005). In their study of constructivist learning activities, Weasonforth et al. (2002) found that in order to realise constructivist goals the teacher had to intervene by providing prompts that would target specific course-related topics and thinking skills and tie classroom discussions to online discussions. Christopher et al. (2004) found that discussions not facilitated by teachers exhibited mid-levels of cognitive engagement such as organising, classifying, applying, comparing, and contrasting, and they suggested that direct teacher guidance may have propelled the discussion onto higher levels of evaluation and synthesis. In contrast to these studies, it has been found that teacher intervention may hinder learner participation (Durrington & Yu, 2004; Poole, 2000). It has been observed that students respond more in student-moderated discussions and less in teacher-moderated discussions (Durrington & Yu, 2004); tutors can dominate posting activity (Oliver & Shaw, 2003); students can remain on task with no instructor involvement (Dietz-Uhler & Bishop-Clark, 2002); and students can be effective in the role of moderator (Poole, 2000). These mixed findings suggest that the role of the teacher is a complex issue of maintaining a balance between facilitating participation and yet ensuring that teacher presence does not “stifle student participation” (Oliver & Shaw, 2003, p. 58).

Clearly, the design and implementation of eLearning activities is a multi-faceted social phenomenon encompassing factors at the local level and extending outwards to involve issues at the classroom, departmental, institutional, and national level. It involves the rich and complex interplay of historical, technical, pedagogical, social, cultural, and political factors in the local and wider context. Using ICT is not just about picking up a tool and using it in the classroom; it is far more complex. The use of ICT implicates a wealth of diverse issues including teacher and student roles in the classroom, affective support for social interaction, the pedagogical design of activities, learner access to ICT, professional development of teachers, and the need for more professionalism in support services (to name but a few factors).

Many years ago, Hodas (1993, p. 1) asserted that technology is not “value-free” as it contains values, assumptions, and beliefs embedded within it. Incorporating technology into educational settings has social and cultural implications. The “values and practices [of the technology] must always either support or subvert those of the organization into which it is placed” and failures to incorporate technology into education is due to a “mismatch” between the values of the organisation and the values within the ICT (Hodas, 1993, p. 1). Similar thoughts have been echoed by contemporary scholars who argue that computing technology is commonly used, not to transform education, but to reinforce existing educational practices (Blin & Munroe, 2008; Garrison & Akyol, 2009; Howard, 2004; Salinas, 2008). Salinas (2008, p. 653) exemplifies the “mis-utilization” of technology by observing that “in most cases, the computer is used as a fancy substitute for the overhead projector, and the Internet as an expansion of the school library, severely limiting the educational value of the technology.”

In order to realise the transformative potential of ICT we must learn how to use it in transformative ways by fundamentally restructuring current ways of teaching and

learning (Howard, 2004; Salinas, 2008). We need to better understand the complex interplay between ICT and its social, cultural, and historical surroundings by employing research approaches that embrace this complexity. Similar thoughts have been articulated by a number of scholars from differing perspectives (Chambers & Bax, 2006; Hrastinski, 2008, 2009; Somekh, 2007). There is a need to examine eLearning from multiple angles of vision, at different moments in time, using mediated activity as the unit of analysis so that relationships between differing factors on differing phenomenal levels (for example, activity, paper, programme, institutional, and national levels) can be identified and examined. To gain a richer and more comprehensive understanding of eLearning we cannot dwell on, for example, one level, at one time, through the eyes of one person but rather we must cast the net wider to encompass social, cultural, and historical elements which shape eLearning activity.

2.3.2.2 The need for more critical perspectives

Much rhetoric has accompanied the growth of eLearning (Convery, 2009; Lea, 2007). It is noteworthy that in a recent report from the United Kingdom, it is suggested that the term *technology-enhanced learning* may replace the term *e-Learning* (JISC, 2009b). The inherent bias of the former term does not appear to be appreciated and there seems to be little recognition that technology may enhance or constrain learning. The belief that technology inherently represents progress (Goldberg & Riemer, 2006; Lears, 2000) can dull critical faculties and induce an unchallenged acceptance that ICT will transform education for the better. This situation has provoked a critique of the rhetoric associated with the adoption of ICT in education and the (arguably) naïve rush by institutions, governments, researchers, and teachers to embrace ICT without careful consideration (Convery, 2009; Goodfellow & Lea, 2007).

By focusing on the discourses of eLearning, Lea (2007) has examined how language is used to convey particular beliefs and assumptions about the use of ICT in education. Disseminated through written and visual texts in policy documents and web pages, these beliefs have become increasingly uncontested and dominant within higher education. Lea (2007, p. 11) critiques the “celebratory rhetoric [which] heralds each new iteration of technologies as transforming the learning experience.” By examining specific characteristics of eLearning discourse including how connections between different texts may reinforce shared beliefs and the omission of material may bypass alternate perspectives, Lea (2007, p. 27) argues that eLearning is implicated in the reconfiguration of higher education where attention is being directed away from “learning through engagement in disciplinary bodies of knowledge towards the management of learning.”

Similarly, by closely examining the construction of texts such as reports and policy statements on eLearning, Convery (2009, p. 25) argues that “these rhetorical claims espousing technology appealed to readers’ ‘vision’ and consistently emphasized innovation at the expense of reflection on teachers’ thinking and practices.” More specifically, Convery (2009, p. 32) examines a report evaluating the use of PDAs (personal digital assistants) by students in an art gallery project and draws attention to an instance where “children beaming messages to each other has become inflated into ‘collaborative learning.’” He argues that the lack of robust engagement with critical educational theory has equated the shared use of the PDAs with the notion of collaborative learning. Educational discourse has been appropriated without critical consideration and reflection.

Concerns about the misappropriation of terms have been echoed by others. Kling and Courtright (2004) have criticized the use of the term *community* when describing learning groups, arguing that this practice is problematic. Other scholars have argued

that the term *community* is often used as a “slogan rather than as an analytical category” (Barab, Kling, & Gray, 2004, p. 3) or as a “clichéd bit of jargon used to refer to a social group in which learning is an intentional explicit goal” (Riel & Polin, 2004, p. 17).

In their definition of *community*, Barab and Duffy (2000) describe a community as having:

... a common cultural and historical heritage, including shared goals, negotiated meanings and practices; an interdependent system in that individuals are becoming part of something larger than themselves; and a reproduction cycle, through which newcomers can become old timers and through which the community can maintain itself. (Barab & Duffy, 2000, p. 36)

It is challenging to apply this conception of community to a group of students within a semester-long tertiary classroom no matter how much they collaborate or develop feelings of trust and rapport with each other. Drawing on the definition of community provided by Barab and Duffy (2000), Hewitt (2004, p. 212) contends that classroom communities lack many of the characteristics of authentic communities – they usually only endure for the length of the course; they often lack a shared history; and classroom tasks are rarely meaningful beyond the boundaries of the learning institution. Similar concerns are echoed by others who contend that terms such as *community*, *learning communities*, *community of practice*, and *knowledge building communities* may be used uncritically and indiscriminately in education (Kling & Courtright, 2004; Roth & Lee, 2006).

This discussion has argued that a sense of euphoria has often infused the rhetoric surrounding eLearning, suppressing critique and claiming that the integration of ICT in education is inherently beneficial. The uncritical appropriation of terms such as *community* and *collaborative learning*, or at the very least their inconsistent use

(Hammond, 2005), may serve to bolster these optimistic claims. By using such terms without a degree of scrutiny and rigour, a group of students working together is transformed into a learning community and the shared use of PDAs becomes collaborative learning. Through the misappropriation of language, unwarranted meanings can be bestowed on activity and this may perpetuate the belief that ICT is inherently valuable in educational contexts. There is a need to counter this dampening of critique with additional studies of teaching and learning practices which can provide a fair and accurate appraisal of “what it is really like” to be a teacher or student in ICT-mediated educational settings. ICT is never neutral (Hodas, 1993; Steel, 2009), rather it brings both affordances and constraints to learning settings, and both sides must be fully explored before we can gain a deeper understanding of eLearning and learn to use ICT to both transform and improve education.

2.3.2.3 The need for studies of everyday eLearning practices

Building on the preceding section that has identified a need for more critical perspectives, it is argued that more research should be directed towards the empirical study of everyday manifestations of eLearning rather than inspirational examples of pedagogical innovation with ICT. The salience of studies which investigate emerging technologies and innovative practice is not contested here, but it is suggested that such studies can be of limited use to the average teacher faced with the many challenges of everyday classrooms. By examining these ordinary contexts, we can gain a deeper understanding of what factors afford or constrain the use of ICT more generally in educational settings.

The focus on inspirational practice is usefully critiqued by Convery (2009) in his examination of a policy report from the Department of Education and Skills in the United Kingdom (DfES, 2003). In this report, Convery notes the use of “fictitious

case studies of current good practice” (DfES, 2003, p. 13) which portray the use of ICT in exciting and desirable ways. He observes that these case studies bear little resemblance to real classrooms and may be of limited use to teachers in everyday learning contexts. Indeed, it could be argued that these case studies may be counterproductive as teachers compare themselves with these idealistic teaching practices and find themselves lacking. In addition, Convery (2009) also examines reports on the use of personal digital assistants (PDAs) to support learning activities in an art museum. He contends that, while these devices appeared to have been useful in aiding students to engage with the art gallery setting, the support of gallery staff, the teacher’s efforts to be well prepared, and the use of follow-up activities were crucial factors in the success of the learning activity. Thus, the success of the activity was dependent not only on characteristics of the tool, but upon a whole range of factors. Convery (2009, p. 26) concludes that “I was not convinced that these PDAs would provide such distinctive benefits if this same technology was to be used in the everyday school context.”

Drawing from Convery (2009), it is argued that a focus on innovative uses of ICT, while often inspirational and exciting, draws attention to what eLearning practices should occur in the classroom. Surely equally worthy, if not more worthy topics of investigation should ask what does eLearning actually mean in everyday classrooms and what ICT practices are possible within authentic educational contexts? Addressing these questions can contribute to the transformation of teaching and learning in ordinary rather than extraordinary learning contexts.

2.3.2.4 EAL students in mainstream tertiary-level eLearning settings

Over the past twenty years, the internationalisation of higher education has emerged as a major trend (Bennell & Pearce, 2003) as universities recast themselves as “commercial, market-led organizations” in their pursuit of the global market (Lea,

2007, p. 11). Universities which had traditionally focused on domestic students began enrolling overseas students in significant numbers (Lea, 2007) and this trend has been particularly evident in the tertiary sector in New Zealand. Although enrolments of international students have fluctuated significantly since 1999 (New Zealand Ministry of Education, 2005), recent statistics showing that enrolments of international students increased by almost ten percent in April 2009 attest to their continuing presence in New Zealand tertiary education (New Zealand Ministry of Education, 2009 [June]). Moreover, statistics from 2005 show significant numbers of Pacific Island and Asian students enrolled as domestic students at tertiary institutions in New Zealand (Wensvoort, 2006). These statistics indicate that there are considerable numbers of students for whom English is an additional language immersed in mainstream learning contexts in which they are learning their chosen discipline through the medium of English. As the student body becomes increasingly diverse, higher education within New Zealand is encountering many issues (Coolbear, 2008; Franken, 2005; Johnson, 2008), and these multi-ethnic learners, with their varied expectations about learning and teaching, create a culturally diverse learning environment which generates new challenges.

To date, although there is extensive literature on the use of asynchronous online technologies in tertiary-level classes in general, comparatively little attention has been focused on the learning experiences of EAL students (Biesenbach-Lucas, 2003; Campbell, 2007), particularly in relation to eLearning within mainstream contexts outside of the field of language learning (Campbell, 2004; Elgort, Marshall, & Mitchell, 2003). The available literature suggests that the use of ICT can bring learning benefits for EAL students. Studies have suggested that asynchronous discussions can support EAL learners by enabling deeper levels of thought (Gerbic, 2005; Weasenforth, Biesenbach-Lucas, & Meloni, 2002), by allowing additional time to read material, reflect and construct contributions (Campbell, 2004; Locke & Daly, 2006; Morse, 2003), by supporting the transition from outsider to insider status in the

online group (Campbell, 2004), by enhancing social interaction (Weasonforth, Meloni, & Biesenbach-Lucas, 2000), by facilitating understanding of course content (Biesenbach-Lucas, 2003; Locke & Daly, 2006), by exposing students to a range of opinions around course content (Locke & Daly, 2006), and by realizing constructivist goals to support the meaning-making process (Weasonforth et al., 2002). Additionally, it is suggested that EAL students do participate as much as English as a Native Language (ENL) students even though they write fewer words (Yildiz & Bichelmeyer, 2003). Within New Zealand, a limited number of studies have focused on EAL perceptions and attitudes to a new online environment (Elgort et al., 2003), EAL student experiences from a cultural perspective (Holmes, 2000; Morse, 2003), EAL student attitudes and perceptions about using a course management system (Johnson, 2008), and EAL student participation in online discussions within a management degree (Campbell, 2004, 2007).

While there is evidence to suggest that ICT may enhance the learning experiences of EAL students, there is evidence to the contrary. Elgort et al. (2003) in their New Zealand study found that EAL students reported fewer positive perceptions about the use of online learning to foster interaction. Biesenbach-Lucas (2003) found a lack of reflective thought, a lack of disagreement, the absence of challenges to ideas, and the presence of inauthentic interaction as students felt compelled to interact in specific ways with their peers. As noted earlier, threaded discussions can support constructivist goals, but unless the learning activity is carefully structured and monitored by the teacher, these goals may not be reached (Weasonforth, Biesenbach-Lucas, & Meloni, 2002). Also, while the text-based nature of the medium may afford additional time to read and write, it also imposes a heavy literacy load on students which can limit their ability to participate (Yildiz & Bichelmeyer, 2003).

There is a modest amount of research that has approached the topic of EAL learners and eLearning from an inter-cultural perspective (for example, Goodfellow, Lea, Gonzalez, & Mason, 2001; Morse, 2003; Warden, Chen, & Caskey, 2005). As the student base has become more diversified, tertiary classrooms have become a heterogeneous blend of different cultures. Particular ethnicities who may be “culturally and linguistically ‘other’” may import participatory expectations from their home cultures which shape their behaviour and may be in opposition to course values (Goodfellow, Lea, Gonzalez, & Mason, 2001, p. 71). Goodfellow and Lamy (2009) observe:

The practices of online collaborative learning, for example, favor dispositions that are associated with so-called Western cultural types: independence, low-power distance, acceptance of risk, and low-context etc., and the pedagogy of *e-learning* is strongly influenced by the equation of learner-centered and collaborative interaction with empowerment. (Goodfellow & Lamy, 2009, p. 174)

This critical stance reminds us that interactive learning activities are underpinned by certain beliefs (ideologies) about learning which may be unfamiliar or potentially unacceptable to a student from another culture. Exploring how EAL students engage with learning tasks which require them to interact with other students is worthy of further exploration.

Moreover, there are conflicting findings in relation to how EAL students, particularly Asian students, experience Western educational contexts. In some of the literature, EAL students, particularly Asian students, have been depicted as tending to be passive and reticent (Harris, 1995), reluctant to engage in social interaction (Tu, 2001), and influenced by a “Confucian Heritage Culture” which makes them uncomfortable with “probing and open student-student and teacher-student interactions ... [and] public questioning of authority” (Chiu, 2009, p. 43). In contrast, Cheng (2000) argues that these types of generalisations are inaccurate – Asian students do expect to be active participants and that a tendency to be quiet may be

“situation specific rather than culturally pre-set” (Cheng, 2000, p. 435). Other studies have indicated that Asian students may be uncomfortable with the concept of dialogic interaction and critique (Holmes, 2004) and yet appear to participate more in online discussions (Biesenbach-Lucus, 2003; Campbell, 2004; Gerbic, 2005). While not directly disputing findings which suggest that cultural predispositions may shape activity, this study sounds a cautionary note about the dangers of making generalisations based on cultural assumptions. Shaped by historical factors, each student is a unique and complex blend of past experiences, idiosyncratic beliefs, expectations about learning, and varied abilities. There is a need to focus on individual EAL students to shed light on idiosyncratic features of student activity which may challenge beliefs that EAL students behave in culturally pre-determined ways and suggest that learning activity is more complex (as sociocultural theory would advocate) than has been claimed.

2.3.3 The Objectives of this Study

The preceding sections have argued that although the use of ICT in education has seen dramatic growth and there has been much excitement about its potential to transform teaching and learning, there is a sense of uncertainty around eLearning. After surveying the eLearning literature, four main issues have been identified. First, the use of ICT in learning activities is a multi-faceted social phenomenon implicating issues at the activity, classroom, departmental, institutional, and national level, and involving the rich and complex interplay of historical, technical, pedagogical, social, cultural, and political factors in the local and wider context. Efforts to understand eLearning have grappled with its inherent complexity, often constraining our ability to deeply understand this educational phenomenon. This in turn has contributed to a sense of uncertainty about eLearning, unsettling claims that the adoption of ICT is necessarily desirable and/or challenging the view that eLearning is transforming education to a significant degree. In addition, the task of understanding the design

and implementation of learning activities based on social constructivist pedagogy has been problematic when faced with a complex array of interconnecting factors. Second, it has been advanced that there is a need for more critical perspectives which sidestep glowing descriptions of the potential of eLearning to transform teaching and learning and offer accurate descriptions of student and teacher experience. Third, it is argued that more research should focus on authentic everyday settings where teachers who may not have a strong interest in ICT are faced with many challenges. Finally, it has been advanced that it is unclear as to how ICT is affecting the learning experiences of EAL students and that more research which conceptualises these students as unique socio-historical agents is needed.

As stated in the introductory chapter, the overall intent of this thesis is to contribute to ongoing discussions about the transformative use of ICT to enhance teaching and learning experiences in tertiary-level educational settings that are mediated by social epistemologies. This study intends to embrace the complexity of eLearning environments by providing an in-depth and critical representation through the eyes of EAL students and their teachers as they engage in interactive learning activities mediated by ICT. If we are to learn how to use ICT in transformative ways, we need to better understand the complex and value-laden nature of ICT-use in education by employing research approaches that can represent complexity.

To achieve this objective, this inquiry intends to focus on a specific eLearning context and adopt an exploratory approach by asking students and teachers to define what participation in a learning activity mediated by ICT means for them. Through this open and inductive approach, the intent is to live vicariously through the participants' eyes without imposing preconceptions and describe how teachers and students make meaning in these contexts. Also, by encompassing both learner and teacher perspectives at multiple times during the paper, the dynamic interplay

between teacher (as designer of the learning activity) and student (as consumer of the activity) may reveal nuanced understandings and important insights. In a survey of the literature, this sustained teacher/learner relationship is often overlooked by many studies that focus only on teacher or student viewpoints and do not consider the relative nature of participation; namely, that the concept of participation varies depending upon who is participating. In addition, recognising the complex nature of learning settings and the need to recast eLearning in a critical light, this study has used activity theory to frame this thesis. Through the concept of mediation, activity theory operates as a powerful conceptual tool that can reveal how the nature of participation is shaped by various social and cultural factors in the immediate or broader educational context. In response to the need for more research that focuses on everyday educational settings, this study intends to investigate three ordinary educational settings to gain an authentic understanding of eLearning which may be more useful to teachers who are interested in using ICT to support their pedagogy. Finally, in response to the need to undertake research that seeks to understand the nature of eLearning from an EAL student perspective outside of language learning contexts, this inquiry intends to focus on how this group of students participate in eLearning activities, not only through ICT, but through a social epistemology and the English language (which they may still be in the process of learning).

2.3.4 Summary

The extended discussion in this section has sustained the main thrust of this thesis by arguing that more expansive, critical, and authentic research approaches to eLearning are required that can accommodate the complexity of this social phenomenon and reveal the socially-situated and culturally-mediated nature of ICT use in education. In addition, it has also argued that a particular manifestation of eLearning – the experiences of EAL students and their teachers in learning activities underpinned by

social epistemologies – is underrepresented in the literature and is worthy of further study.

2.4 Expanding Conceptions of Participation in eLearning

In the preceding sections, a critical review of the literature has been undertaken in order to position the study at the intersection of three major conceptual fields – social theories of learning, social perspectives on academic literacy, and eLearning. The intent of this review has been to identify gaps in current understanding where more research is required and to explain how this study intends to address these issues. As this thesis looks towards the next chapter, it is important to lay the foundations to provide a rationale for the use of activity theory as a conceptual tool in this study. This section will expand the argument articulated in the previous section that more expansive research responses are needed in eLearning. Thus, this chapter will act as a transition between the current conceptual framework chapter and the following chapter on activity theory. It could be argued that a discussion of activity theory resides more appropriately in the Conceptual Framework Chapter; however, it could also be argued that the use of activity theory to frame this inquiry clearly has far-reaching implications by shaping the way data is collected, interpreted, and discussed in this thesis. Because activity theory has both theoretical and methodological implications, this duality warrants the creation of a bridging chapter (Chapter Three) that extracts activity theory out of relative obscurity in the conceptual framework and recognises that it infuses almost every aspect of this study including the research questions, the methodology, the conceptual framework, the data analysis, and the discussion. Therefore, activity theory has been given its own chapter in order to recognise its profound significance as a powerful research tool in this study.

2.4.1 Conceptualising Participation in eLearning

The research question which guides this study seeks to understand how EAL students and their teachers participate in interactive learning activities supported by ICT in tertiary education. A crucial issue in the design of this study has been how to conceptualise the term *participation* in a way that would accommodate the complexity of eLearning, and also allow the generation of critical perspectives. The following discussion explores this process.

A survey of the literature surrounding eLearning research suggests that there has been a tendency to focus upon restricted approaches which show a preoccupation with specific teaching and learning processes while overlooking the socially-situated and culturally-mediated nature of eLearning. This preoccupation with restricted approaches can be seen in the number of studies which focus on evaluating specific eLearning innovations or particular aspects of online learning such as student level of cognition (Christopher, Thomas, & Tallent-Runnels, 2004), student facilitation of discussions (Hew & Cheung, 2008), and the presence of substantive and non-substantive messages during online interaction (Davidson-Shivers, Tanner, & Muilenburg, 2000). These studies often limit their scope by considering only the internal activity of the paper rather than including broader factors in the educational context. Also, many studies consider either student or teacher experiences but do not consider them both as an holistic unit – the teacher as creator of the learning activity and the student as consumer.

It is not the intent here to dispute the value of approaches to eLearning which focus on specific aspects as it is acknowledged that these types of studies can certainly inform understanding; however, it is argued that they can pre-define the nature of participation, thereby narrowing the field of vision onto specific aspects and/or

constraining the ability of teachers and students to define what participation means to them. By focusing on specific aspects and key variables, these approaches may provide a simplistic view of eLearning that can exclude a wide range of factors such as personal beliefs and perceptions, implicit and explicit social rules that guide social interaction, physical, mental, and virtual tools that are employed to accomplish a task, non-visible background activity that may not be appreciated until participants are interviewed, and broader factors in the wider context such as student workload and institutional support for the professional development of teachers. It is advanced that, by narrowing the scope of vision onto specific teaching and learning processes, many studies fail to recognise that participation in eLearning is a messy, complex, and emergent process requiring more flexible and encompassing notions of participation.

Over ten years ago, Salomon and Perkins (1998, p. 2) asserted that “a focus on the individual learning in social and cultural solitude is increasingly being seen as conceptually unsatisfying and ecologically deficient.” More recently, similar views have been echoed by a number of scholars from differing perspectives in relation to eLearning (Chambers & Bax, 2006; Hrastinski, 2008, 2009; Somekh, 2007; Zhao & Frank, 2003). Somekh (2007) advises that there is value in directing attention towards research approaches that transcend the bounds of the classroom and consider the use of ICT in education from a variety of phenomenal levels (for example, at the classroom, programme, institutional, and national levels). Using an ecological perspective, Zhao and Frank (2003, p. 812) portray learning settings as “complex system[s] containing many parts and relationships.” In his review of research approaches that underpin online learner participation, Hrastinski (2008, p. 1760) identifies the prevalence of “low-level conceptions of online learner participation [which] do not recognise the more complex dimensions of online participation.” In his review, Hrastinski (2008) argues that online learner participation is often defined in limited terms such as the number of times a student accesses an online setting, and common research approaches have focused on measuring the frequency, length,

and/or configuration of messages. Although he concedes that the study of learner perceptions of participation is becoming more commonplace, he maintains that many studies still focus on limited conceptions of participation. Similar observations have been echoed by Rourke and Kanuka (2009, p. 43) who, in their review of the literature regarding the concept of community of inquiry (Garrison, Anderson, & Archer, 2000), have observed that “learning was uniformly operationalized as self-reports of perceived learning with one item.” They argue for more in-depth and robust studies of learning.

In relation to researching the concept of normalisation in computer assisted language learning (CALL) contexts, Chambers and Bax (2006) write:

...not only do we need to consider each relevant factor, but that we also need a better understanding of how exactly all of these factors interact and operate in real pedagogical contexts, so as to throw light on the ways in which different aspects, technological, administrative, social and others, interact to promote or impede the normalisation of CALL. This implies a programme of appropriate research. (Chambers & Bax, 2006, pp. 466-467)

In the same vein, the assumption that learners participate only by writing has been challenged by other scholars who recognise that participation is a complex and multi-faceted concept which includes both visible and non-visible aspects (Beaudoin, 2002; Bozik & Tracey, 2002; Dennen, 2008; Hrastinski, 2009; Lee, Chen, & Jiang, 2006; Mazzolini & Madison, 2007; Williams, 2004). For example, Dennen (2008) found significant levels of “pedagogical lurking” (p. 1624) where students viewed their peers’ work to obtain models, read postings, and reflected on the ideas presented. These students viewed their online experiences in a positive light, perceiving that both writing and reading supported their learning. In their study of online posting activity, Mazzolini and Madison (2007) have observed that the number of student postings appeared to decrease when instructors posted more frequently. However, they have argued that “clearly any judgment of the effectiveness of a discussion

forum that is based on posting rates only may be quite misleading” (p. 202). Thus, conceptualising participation as writing or the quality of writing in an online space may offer an impoverished perspective of participation which may mask the influence of other factors in the setting.

More expansive conceptions of participation in eLearning have been proposed (Hrastinski, 2008, 2009; Vonderwell & Zachariah, 2005). For example, in their study of learner participation in a graduate online course, Vonderwell and Zachariah (2005, p. 214) define participation as “taking part and joining in a dialogue for engaged and active learning” and claim that “participation is more than the total number of student postings in a discussion forum.” Another example is provided by Hrastinski, (2008, p. 1761) who, drawing from both Wenger (1998) and Vonderwell and Zachariah (2005), defines online learner participation as “a process of learning by taking part and maintaining relations with others. It is a complex process comprising doing, communicating, thinking, feeling and belonging, which occurs both online and offline.” From Hrastinski’s (2008) definition, a broader concept of participation can be obtained which includes temporal (participation occurs over time), situational (participation can occur in varied settings), social (participation involves others), and cultural aspects (participation involves using shared tools).

By adopting activity theory as a conceptual tool, the intent of this thesis is to appropriate a broader and more expansive conception of participation that recognises the inherent complexity of eLearning settings, acknowledges the value-laden nature of ICT (Hodas, 1993), affords a critical approach that reveals affordances and constraints in the surrounding context, and illuminates the transformative or non-transformative use of technology in educational settings. By conceptualising technology as a mediating tool and asserting that the smallest unit of analysis for understanding human learning is an activity system that includes a range of individual

and social factors, activity theory (Engeström, 1987) provides a powerful and expansive participatory unit of analysis that integrates cognition and activity and acknowledges the socially-situated and culturally-mediated nature of learning (Barab et al., 2004).

2.4.2 Summary

To summarise, this section has argued that more expansive conceptions of participation are needed to better understand the complex nature of eLearning, and that activity theory is well positioned to meet this need. This section has functioned as a bridge connecting this conceptual framework chapter with the next chapter which discusses activity theory, and issues raised here foreshadow further development later in this thesis.

2.5 Chapter Summary

In summary, this study has positioned itself at the intersection of three broad conceptual fields – social theories of learning, social perspectives on academic literacy, and eLearning. The purpose of this chapter has been twofold – to provide an overview of the literature in order to identify issues and problems and to show how this study intends to address these gaps in understanding. It has been proposed that a sense of uncertainty and unfulfilled potential is present in the field of eLearning and that more studies which engage with the complexity of these contexts, examine authentic teaching and learning practices, and offer robust critiques are required to better understand the phenomenon of ICT in higher education. Additionally, considering the relatively modest amount of literature relating to EAL student experiences in mainstream settings, it has been argued that more studies are needed to understand how EAL students negotiate forms of academic literacy mediated by ICT

and how they make meaning in these educational settings which are shaped by technology, the English language, and social epistemologies. Finally, this chapter has contended that more expansive conceptions of participation are required and that activity theory can fill this need by asserting that the minimal unit of analysis is an activity system

The next chapter will describe activity theory and consider the implications of using it as a conceptual tool.

CHAPTER THREE: ACTIVITY THEORY

3.0 Introduction

Chapter Two provided a critique of the current state of eLearning, arguing that it is a complex social phenomenon that requires a deep understanding of the relationships between different phenomenal levels (Somekh, 2007), the value-laden nature of technology and its interaction with the surrounding educational culture (Hodas, 1993), the interrelations between key factors in real-life eLearning contexts (Chambers & Bax, 2006), and the temporal, situational, social, and cultural nature of online participation (Hrastinski, 2008). A crucial issue in the design of this study has been how to conceptualise the term *participation* in a way that embraces this complexity. This chapter will contend that activity theory is well positioned to provide a powerful and expansive unit of analysis which can address this issue.

This chapter is divided into two main sections. In the first section, activity theory will be introduced and described in relation to first, second, and third generation perspectives on activity theory. Following this, the second section will discuss the use of activity theory as a research tool. This will include an overview of uses of activity theory within educational research, a discussion of the use of activity as the participatory unit of analysis, and methodological implications for this inquiry. The main objective of this chapter is to provide a bridge between the conceptual framework and the methodology by using activity theory to link the need for a more expansive unit of analysis for participation in eLearning studies with appropriate and effective research methods.

3.1 A Description of Activity Theory

Underpinned by the socio-historical branch of Soviet psychology represented primarily by the work of Vygotsky (1978, 1981), activity theory illustrates the role of society in shaping the mind of the individual and provides a unit of analysis for understanding human consciousness (Lantolf & Appel, 1994). Its central claim is that “the human mind emerges, exists, and can only be understood within the context of human interaction with the world; and ... this interaction, that is, *activity*, is socially and culturally determined” (Kaptelinin, Nardi, & Macaulay, 1999, p. 28).

The work of Vygotsky (1978; 1981) has contributed to the ongoing search for an appropriate unit of analysis to understand the relationship between the internal world of human consciousness and the external world. Activity theory transcends dualist theories that separate mental and physical dimensions by using the concept of activity as the minimal meaningful unit of analysis (Cole & Engeström, 1993). “Through the process of activity, the subject forms internal representations of the object and concurrently objectifies internal representations” (Van Aalst & Hill, 2006, p. 25), thus, the inner world of the mind is united with the external world. Consciousness is situated within everyday activity in the real world – “you are what you do” (Nardi, 1996, p. 7).

The history of activity theory can be represented by three distinct generations (Engeström, 2001). The first generation was characterized by work on mediation (Vygotsky, 1978); the second expanded the unit of analysis to include the social (Engeström, 1987; Leont’ev, 1981); and the third generation expanded the minimal unit of analysis to include two activity systems (Engeström, 2001).

3.1.1 First Generation Activity Theory: The Concept of Cultural Mediation

Central to the work of Vygotsky (1978) is the belief that the human mind is mediated by a third element, that is, “humans have access to the world only indirectly, or mediately, rather than directly, or immediately” (Wertsch, del Rio, & Alvarez, 1995, p. 21). The concept of mediated activity as the unit of analysis was a profound contribution to psychology as it meant that “the individual could no longer be understood without his or her cultural means; and the society could no longer be understood without the agency of individuals who use and produce artefacts” (Engeström, 2001, p. 134). Human consciousness (which includes voluntary attention, planning, problem solving, evaluation, conceptual thought, logical memory, and learning) is mediated by cultural artefacts (Cole & Engeström, 1993; Lantolf & Appel, 1994).

The use of artificial means, the transition to mediated activity, fundamentally changes all psychological operations just as the use of tools limitlessly broadens the range of activities within which the new psychological functions may operate. In this context, we can use the term *higher* psychological function, or *higher behavior* as referring to the combination of tool and sign in psychological activity. (Vygotsky, 1978, p. 55, italics in original)

Therefore, an individual transforms an object – “the ‘raw material’ or ‘problem space’ at which the activity is directed” – into an outcome by using various physical and symbolic tools (Engeström, 1993, p. 67). These cultural artefacts can be physical tools (for example, a computer or a hammer) which are “outwardly oriented” or symbolic tools (for example, strategies, arithmetic, language, and signs) which are more “inwardly oriented” (Cole & Engeström, 1993, p. 6). Symbolic tools are directed towards mediating the mental processes of the individual and physical tools are used to shape the environment outside the individual (Lantolf & Appel, 1994). For example, a student writes an essay (object) by using a laptop (physical tool) and the English language (a symbolic tool). In the educational domain, learning as a form

of consciousness always involves the use of cultural tools, in other words, “learning has to do with how people appropriate and master *tools for thinking* and *acting* that exist in a given culture or society” (Säljö, 1999, p. 149).

An essential point to grasp is that by using a cultural artefact “tools and the knowledge pertinent to their continued use are passed from generation to generation” (Barab et al., 2004, p. 201). The cultural artefact, embedded within specific social contexts, is infused with specific cultural and historical conditions of its environment (Lantolf & Appel, 1994). Thus, by engaging in mediated activity and using a cultural artefact, activity becomes a collective process which is or has been shared by others. The point is articulated eloquently by Cole and Engeström (1993):

The cultural environment into which children are born contains the accumulated knowledge of prior generations. In mediating their behavior through these objects, human beings benefit not only from their own experience, but from that of their forebears culture is, in this sense, history in the present. (Cole & Engeström, 1993, p. 9)

A central tenet of activity theory is that tools mediate or shape both human activity and mental development (Jonassen, 2000). As the human mind operates through cultural artefacts, the artefacts shape the experience by setting the conditions under which it will proceed. Additionally, the interactions between the subject, tool, and object move in both directions. “Cultural mediation has a recursive, bi-directional effect; mediated activity simultaneously modifies both the environment and the subject” (Cole & Engeström, 1993, p. 9). For example, the use of email sets conditions such as time-delayed communication and dependence on reading and writing for the exchange of information between people to occur. However, the use of the tool also affects how the subject chooses to carry out the activity as it may offer the individual new opportunities for communication in other contexts or new ways of understanding the world (Lantolf & Appel, 1994). Through the concept of mediated activity, attention is redirected away from individuals, their tools and properties,

toward what people do when they use a tool, and how they and the outcome of the activity are affected by using the tool.

3.1.1.1 The zone of proximal development

In order to explain the social nature of cognition and the relationship between the individual and the world, Vygotsky (1978) advanced the concept of the zone of proximal development (ZPD) (Barab et al., 2004). The ZPD is the distance between what an individual can accomplish alone and what an individual can accomplish with assistance from more capable peers (Barab et al., 2004; Wertsch, 1985). Vygotsky (1978) states “every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, *between* people (interpsychological), and then *inside* the child (intrapsychological)” (Vygotsky, 1978, p. 57). Learning can be conceptualised as originating from social interaction between people (inter-mental) as they interact in cultural environments and employ various cultural artefacts before being internalised (intra-mental) by the individual (Barab et al., 2004). Vygotsky understood internalisation to mean “a process whereby certain aspects of patterns of activity that had been performed on an external plane come to be executed on an internal plane” (Wertsch, 1985, pp. 61-62). Learning is distributed between two people functioning as the expert and novice, and language mediates their relationship (Lantolf & Appel, 1994). It is important to observe that Vygotsky viewed the ZPD as encompassing a restricted area, in other words, collaboration with a more capable individual must be set at an acceptable level. Therefore, “instruction is good only *when it proceeds ahead of development*, when it awakens and rouses to life those functions that are in the process of maturing or in the zone of proximal development” (Vygotsky, 1987, p. 222 as cited in Barab et al., 2004, p. 201).

3.1.2 Second Generation Activity Theory: Relating the Individual to the Collective

As Barab et al. (2004) note, Vygotsky did not fully develop the concept of activity in his brief lifetime; thus, the task of articulating the nature of activity fell to his colleague Leont'ev (1981). Leont'ev focused on the object of activity, proposing that activities are differentiated by the objects they pursue (Barab et al., 2004). Additionally, he created a distinction between immediate goals and overall goals of activity by representing activity as a three tiered hierarchy – operation, action, and activity. At the highest level is the activity that provides the overall motive – to transform the object into an outcome. An activity is composed of actions of which individuals are consciously aware and they are often associated with skills and knowledge. In turn, actions are composed of operations which are automatic routines influenced by conditions in the setting. Leont'ev (1981) illustrates these abstract concepts with an example of hunters searching for food. The activity is motivated by the overall need to find food for the group; however, each member performs specific actions to realise this need. For example, one hunter might beat a drum to scare animals towards other hunters (an action). Taken in isolation, the action of drum beating appears to be disconnected from the need to obtain food; however, when viewed as a step in a wider activity, the meaning of the action becomes clear. Actions are in turn composed of operations, such as beating the drum or walking, and these operations are shaped by conditions such as the construction of the drum and drumstick and the nature of the climate and physical surroundings (Barab et al., 2004). Thus, Leont'ev illustrated the difference between individual and collective actions and how they relate to one another (Engeström, 2001).

Leont'ev's (1981) hierarchy can be extended to learning settings. A group of students may be focused on working with others in order to create an oral presentation – a collective object which is shared with the immediate group (the

community). However, while the activity is oriented toward a collective object, the actual work consists of numerous individual actions such as searching for and evaluating academic literature in order to contribute to group discussions about the construction of the presentation. In turn, these individual actions consist of a myriad of operations which occur as habitual routines, such as typing, reading, and navigating through websites. These operations are shaped by conditions in the setting. For example, typing usually requires an individual to sit down, look at a computer screen and depress various keys. If the computer's battery is empty and there is no electrical outlet nearby, no typing can occur and the activity stalls. In addition, if an individual has limited typing skills, typing may move upwards and become a conscious action requiring a degree of effort and attention rather than being an automatic process. Leont'ev's conceptualisation not only draws attention to how learning activities can be decomposed into sub-components but also shows how individual activity is simultaneously both individual and collective.

Leont'ev's (1981) ideas were used by Engeström (1987) who developed an organising structure called activity theory to graphically illustrate the role of cultural mediation, the social-cultural-historical context of activity, and the relationship between the individual and collective. Activity theory proposes that "a natural unit of analysis for the study of human behavior is activity systems, historically conditioned systems of relations among individuals and their proximal, culturally organized environments" (Cole & Engeström, 1993, p. 9). Thus, the minimal meaningful unit of analysis is widened from a focus on individual actions and processes to activity systems (Issroff & Scanlon, 2002).

Building on the work of Vygotsky (1978), activity theory represents the basic relationship involving a subject (individual or group) motivated by a need to transform an object (a goal, objective, purpose, or problem) and employing a cultural

artefact (a physical or mental tool) in the process (Barab et al., 2004). However, Vygotsky's (1978) basic representation of activity did not fully account for the relationship between an individual and the environment. To rectify this, Engeström (1987) contextualized activity by defining activity systems using six components: subject, object, tools and artefacts, community, rules, and division of labour. Under this conceptualization, individual actions are now embedded within and obtain meaning from a community of people who are directed towards the same object.

All activities are object oriented, in other words, they are forms of doing, directed towards an object. Object orientedness (Jonassen, 2000; Jonassen & Rohrer-Murphy, 1999; Kaptelinin et al., 1999) means “that every activity is directed towards something that objectively exists in the world, that is, an *object*” (Kaptelinin, et al., 1999, p. 28). The object is “the ‘raw material’ or ‘problem space’ at which the activity is directed and which is molded or transformed into *outcomes* with the help of physical and symbolic, external and internal tools (mediating instruments and signs)” (Engeström, 1993, p. 67). Objects can be considered “powerful sense makers” (Kaptelinin, 2005, p. 5) as they give meaning to an activity. An object of an activity can be anything if it can be transformed by the subject(s); for example, it can be physical (a vegetable garden), virtual (a website), or conceptual (a theory). The need to transform the object into an outcome drives the activity (Kuutti, 1996), in other words, people/subjects are motivated to engage in activities because they have unmet needs and perceive that the activity will meet these needs. Intentions or reasons that motivate a person to participate in an activity are embedded within the meanings ascribed to the object (Jonassen & Rohrer-Murphy, 1999; Yamagata-Lynch, 2003) and intentionality plays a key role in shaping how people relate to the object. Before engaging in activity, people often have tentative plans and objectives which they use to orient their activity (Jonassen & Rohrer-Murphy, 1999). In addition, once the subjects begin to transform the object into an outcome, “the intentions of the activity system are manifest” (Jonassen, 2000, p. 99). In other

words, people draw upon their intentions or objectives to make sense of the object, and these intentions shape the transformation of the object into an outcome.

Mediation occurs between the various components of the activity system through third parties (Kuutti, 1996). The relationship between community and subject is mediated by rules of behaviour which are explicit and implicit norms and conventions governing social interaction. The relationship between community and object is mediated by the division of labour which is “the explicit and implicit organisation of a community as related to the transformation process of the object into the outcome” (Issroff & Scanlon, 2002, p. 78). By adding the community and mediating artefacts (rules and the division of labour), activity theory shows how human behaviour is socially bound and depicts the unification of consciousness and activity or thinking and doing. Acting and consciousness or acting and learning are tightly bound together (Jonassen, 2000). Activity theory is represented below in Figure 3.1

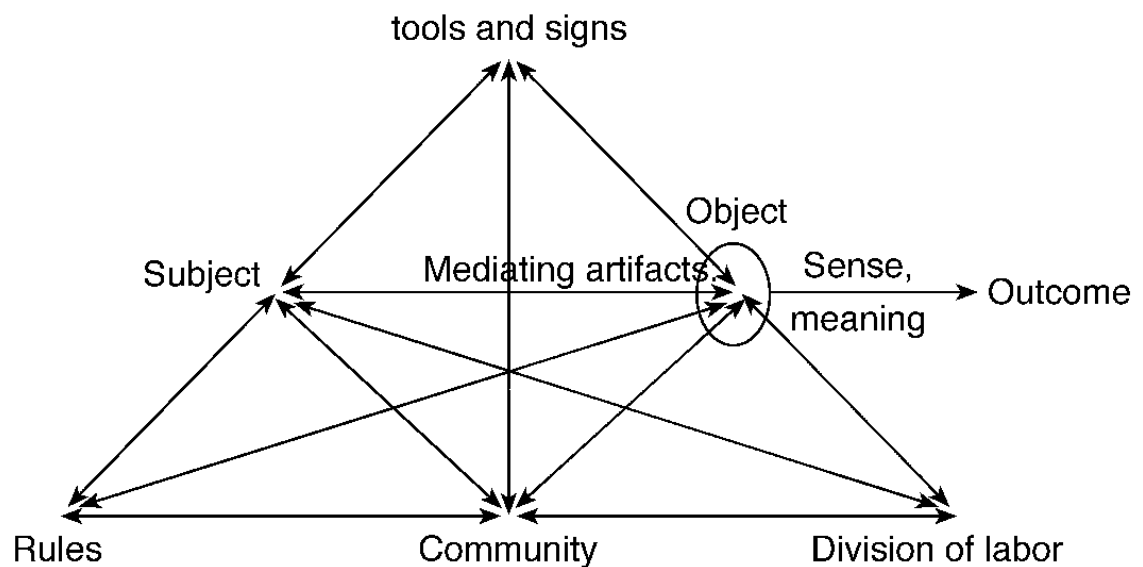


Figure 3.1 Structure of a human activity system (Engeström, 2001, p. 135, reprinted with permission).

Under an activity theory perspective, “learning is re-conceptualised as learning to participate in a cultural practice” (Gifford & Enyedy, 1999, p. 6). On the individual plane, the learner (subject) is directed towards the teacher-designed learning activity (object). The expectation of engaging in the activity is to realise an objective such as the occurrence of learning (Scanlon & Issroff, 2005) or simply successful completion of the task (Hewitt, 2004). The learner draws upon a variety of shared cultural tools (for example, learning strategies, computers, and paper) to realise the outcome, and these tools shape how the learning task proceeds and the nature of the outcome. However, the learner does not act in isolation, but rather shares the learning task (object) and various tools with other students and the teacher who represent the community (Hewitt, 2004). Finally, the learner relates to the community through norms of behaviour and codes of practice (rules) and understandings about how the work is to be divided amongst the participants (division of labour) (Hewitt, 2004).

3.1.2.1 Contradictions within activity systems

Contradictions are central components of activity systems and are manifested as problems, tensions, conflicts, or breakdowns within the activity system or between different systems (Kuutti, 1996). Indeed, stable activity systems which lack stress points are exceptions and “tensions, disturbances, and local innovations are the rule and the engine of change” (Cole & Engeström, 1993, p. 8). Therefore, contradictions should not be viewed in a negative light, but as problems requiring solutions which lead to transformation in activity (Issroff & Scanlon, 2002). Contradictions can exist at various levels of the activity system – within each node of an activity system (for example, tensions within the subject), between nodes (for example, between the community and the division of labour) or between different activity systems (for example, between the workplace and university) (Barab et al., 2004). A contradiction between nodes could develop when a new tool is introduced into a community which lacks understanding of how to use it. Within the hospital context, one can envision new blood transfusion equipment being introduced into a busy hospital unit which

languishes because none of the nurses has been taught how to use it. In this situation, there is a tension between quality patient care (the main motive and object of the activity system) and the presence of an unused tool offering functionality which could potentially enhance care.

Through contradictions, stresses and tensions develop within activity systems that may lead some individuals to question the status quo and deviate from expected norms. At times, this can develop into a collective endeavour to change the activity – a process called “expansive transformation” (Engeström, 2001, p. 137). This transformation is achieved when “the object and motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities than in the previous mode of the activity” (Engeström, 2001, p. 137).

3.1.3 Third Generation Activity Theory: Inter-activity Perspectives

As new perspectives have been brought to activity theory, scholars have observed that “activities are not isolated units but are more like nodes in crossing hierarchies and networks, they are influenced by other activities and other changes in their environment” (Kuuti, 1996, p. 34). In response to these observations, third generation activity theory expands the unit of analysis from one activity system to at least two interacting activity systems as the minimal unit of analysis (Engeström, 2001, p. 133). For example, Engeström (2001) has investigated the relationships and tensions between multiple activity systems in a healthcare system, and has sought ways to transform working practices to resolve contradictions in patient care. Third generation activity theory is shown below in Figure 3.2.

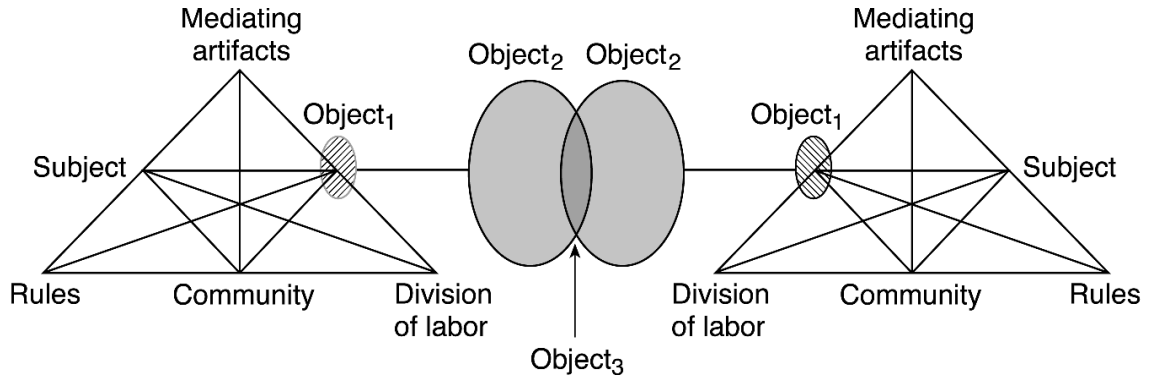


Figure 3.2 Two interacting activity systems (Engeström, 2001, p. 136, reprinted with permission)

Using this perspective, the relationship between different spaces such as school and work settings can be reconceptualised as the interaction between activity systems (Tuomi-Gröhn & Engeström, 2003; Tuomi-Gröhn, Engeström, & Young, 2003). Thus, the new unit of analysis expands from one activity system to “two or more collaborating activity systems that are embedded in a social, cultural and historical process” (Tuomi-Gröhn et al., 2003, p. 10). The concept of learning across boundaries of activity systems (Engeström, 2001) has been used in the field of further education to examine connections between work and university (Finlay, 2008). By following the experiences of students who were concurrently studying in a teacher education course and working as lecturers, Finlay (2008) observed students appropriating a variety of tools such as ideas, teaching strategies, and theories from the learning setting to help them in the workplace. Finlay argued that moving from a workplace activity system to a university system provided students with a number of tools which were appropriated as resources in the workplace, and this created opportunities for learning. Thus, third generation activity theory offers useful perspectives by expanding the field of vision from the inner workings of individual activity systems to the relationships between two or more activity systems.

This section has introduced activity theory by describing three generations of scholarship. The original concept of mediated activity developed by Vygotsky (1978) has been developed and expanded by neo-Vygotskian scholars to encompass collective aspects of activity and inter-activity dimensions. In the next section, the implications of using activity theory as a research tool will be considered.

3.2 Activity Theory as a Research Tool

This section considers the use of activity theory as a research tool from a number of perspectives and will include a brief overview of activity theory within educational research, a discussion of the use of activity as the participatory unit of analysis, and methodological implications for this inquiry

3.2.1 Uses of Activity Theory in the Literature

Whilst activity theory does not provide a methodology (Jonassen, 2000, p. 97) nor a “strongly predictive theory” (Nardi, 1996, p. 7), it does provide researchers with a “powerful and clarifying descriptive tool” (Nardi, 1996, p. 7) and “a methodological paradigm to carry out the necessary research” (Lantolf & Appel, 1994, p. 3), particularly in relation to contexts where the mediation of technology occupies a central role (Blin, 2004). Indeed, activity theory has been used to investigate human activity in a number of research fields (Jonassen, 2000) including human computer interaction (Kaptelinin, 1996; Kuutti, 1996; Nardi, 1996) and workplace activity (Cole & Engeström, 1993; Engeström, 2001). In the context of eLearning, there is a growing body of research that has employed activity theory to understand the use of technology in education (Benson, Lawler, & Whitworth, 2008; Blin, 2004; Blin & Munroe, 2008; Brine & Franken, 2006; Gillette, 1994; Issroff & Scanlon, 2002;

Jonassen, 2000; Jonassen & Rohrer-Murphy, 1999; Thorne, 2003; Van Aalst & Hill, 2006; Yamagata-Lynch, 2003).

Varied aspects of activity theory have been employed to obtain different angles of vision on learning contexts. For example, Gillette (1994) considered how French students' language learning histories affected how they perceived their current language learning experiences. In a similar vein, Thorne (2003, p. 40) has used the concept of "cultures in use" to show how online communicative tools are not neutral, but take "their functional form from its histories of use in and across cultural practices." Van Aalst and Hill (2006) have used activity theory to examine knowledge building in a primary classroom and Benson, Lawler, and Whitworth (2008) have considered interactions between micro levels (such as everyday individual practices) and macro levels (such as institutional factors). In her study regarding the effect of a professional development programme (an artefact) on the transformation of teaching practice, Yamagata-Lynch (2003) has used activity theory to create a diagrammatic representation of four stages in the process – before the programme, during the programme, immediately after the programme, and one year later. Her study offers insights into historical and developmental factors related to the introduction of a new artefact into an educational context. In addition, there has been growing interest in studies focused on the concept of contradiction (Barab, Barnett, Yamagata-Lynch, Squire, & Keating, 2002; Murphy & Rodriguez-Manzanares, 2008; Russell & Schneiderheinze, 2005; Walker, 2004). For example, activity theory has been used to explore tensions within a technology-mediated astronomy course (Barab et al., 2002) and to examine unresolved contradictions and the inhibition of transformation (Russell & Schneiderheinze, 2005). This brief overview shows that, to date, activity theory has been successfully mapped onto educational contexts to offer new perspectives and insights.

3.2.2 Activity as the Participatory Unit of Analysis

It was argued in the preceding chapter that more expansive research approaches were needed to accommodate the complexity of eLearning settings in order to enhance understanding, and that activity theory was well placed to fill this need. This is because activity theory is underpinned by the belief that learning occurs through participation in the world and is a fundamentally social process (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Vygotsky, 1978). Thus, emphasis is placed on “contextualized activity and ongoing participation as the core units of analysis” (Barab et al., 2004, p. 199). By acting “as a theoretical and methodological lens for characterizing, analyzing, and designing for the participatory unit,” activity theory recasts conceptions of participation by going beyond individual actions and mental processes and asserts that the minimal meaningful unit of analysis is an activity system (Barab et al., 2004, p. 199). Thus, it provides a more expansive and holistic conception of participation that can take account of individual and social factors, and recognise the socially-situated and culturally-mediated nature of learning (Barab et al., 2004).

An expanded conception of participation that encompasses contextual factors has great utility in this study because it can access many aspects of participation which have traditionally been under-explored by researchers including non-visible activity (activity which may be hidden from the teacher or researcher) such as reading texts on a website and navigating through a website. Also it can access non-visible activities that occur away from the computer (such as reflecting upon ideas while at the workplace), various degrees of participation (including passive and active resistance to learning tasks), and transformations in personal identity. Although only one research question guides this study, the use of activity theory generates a multitude of related questions which enrich and expand the primary research question. For example, by considering the internal dynamics of an activity (intra-activity), the researcher can investigate the nature of teacher and EAL student

understandings of participation, consider whether they are aligned, and explore how their understandings change over time. Also, the relationship of the individual to the community can be examined in terms of the nature of implicit and explicit rules guiding the group, the roles adopted, and the tools shared within the group. By considering the external dynamics of how one activity system relates to others, an inter-activity perspective can be gained which examines the relationship between virtual and face-to-face spaces, the interpenetration of institutional and learning activity, and the tensions emerging from the intersection of activity systems.

In addition, by considering mediated activity, technology is portrayed as a powerful tool that actively shapes human activity (Hodas, 1993; Innis, 1951; Smith, Alvarez-Torres, & Zhao, 2003) and is laden with many embedded values which may reinforce or disrupt the culture of the educational setting (Hodas, 1993). Instead of solely considering technology and its properties, researchers can consider how technology shapes human activity – what types of activity it affords and constrains and how the values of the technology interact with the surrounding social and cultural context. This perspective challenges traditional approaches to learning which have tended to ignore mediated activity (Säljö, 1999) adopting the view that computing technology is passive and exists to support pedagogical objectives (Smith et al., 2003). It is argued that different technologies have varied affordances; in other words, they have particular properties that “allow certain actions to be readily performed with them, and which therefore push behaviour in certain directions” (Tolmie & Boyle, 2000, p. 120).

Activity theory also provides a fluid and flexible conception of participation which can explicate multiple perspectives including local and global positions and differing temporal aspects. For example, activity theory can represent the “multivoicedness” of complex social situations (Cole & Engeström, 1993, p. 31) by allowing a teacher, student, administrator, or technologist to be slotted into the role of subject. This can

be repeated many times in order to obtain “snapshots” of activity at various points (see Yamagata-Lynch, 2003, for an interesting example of this approach) which reveal how people experience eLearning over time. The ability to represent multiple voices is particularly useful as it provides a means to capture the dynamic interplay between the teacher as designer and facilitator of the learning activity and the student as the consumer. The concept of participatory relativity – that participation can be interpreted differently depending on one’s identity and role in activity – can be overlooked in the research literature, particularly when teacher or learner experiences are studied in isolation from one another. It is crucial to determine if the students and teachers share the same meanings of the learning activity and examine how the teacher disseminates her view of participation, how the students access and understand this viewpoint, and how other factors shape student understanding of the learning activity. Additionally, the concept of multivoicedness can also include the voices of the past; namely, the historical beliefs, expectations, and values of participants which are imported into current activities and shape what transpires.

The ability to encompass different perspectives of a learning situation can also include the interplay between multiple levels of activity at the operational, action, or activity level. Drawing upon the work of Leont’ev (1981), activity systems can be viewed at three levels of activity, action, and operation. This multilayered analysis is helpful in understanding how activities can be decomposed into the conscious steps and automated routines of the individual (such as the action of strategically selecting postings to read or the routine of navigating through web pages), but it is also useful in showing how individual actions are meaningful within the context of the overarching activity which provides an object and motive shared by the collective.

In addition, activity theory illuminates connections between activity systems, filling a need to examine “the inter-relationships between local phenomena and the wider

socio-cultural context” (Somekh, 2007, p. 8). The magnification of the learning context can be increased or decreased, for example, the researcher can include not only what occurs in the classroom (micro view) but what occurs beyond the classroom (macro view) as learners juggle work, study, and family commitments. This capacity to view the learning context in differing ways can be extremely helpful in extending knowledge about eLearning as it offers more holistic perspectives and sheds light on how factors in the wider context can penetrate the classroom and affect teaching and learning practice. For example, issues in the broader context such as the lack of computers, the lack of professional development of teachers, or the lack of professionalism in IT support may shape the design and implementation of a learning activity.

The previous discussion has identified many benefits of using activity theory. However, amidst these claims, one potential drawback is that, by drawing attention to stresses, tensions, and contradictions, there is a danger that an overly negative slant might infuse research. Similar concerns have been articulated by Issroff and Scanlon (2002, p. 83) in their use of activity theory to explore technology in higher education who observe that “a key result of using AT in these settings is to highlight problematic features of the learning and teaching setting.” The researcher has to take care that a focus on “what went wrong” may dominate “what went right” in the learning context, leading to a sense that the activity under study is somewhat dysfunctional. Thus, while the concept of contradiction is useful in understanding how activity evolves, it must be balanced with perspectives that consider the affordances in the activity system and also examine how contradictions are resolved.

3.2.3: Methodological Implications for this Inquiry

As the final section in the chapter, this discussion will function as a link to connect activity theory with the following chapter on methodology by identifying some

methodological implications for the use of activity theory. While acknowledging that activity theory is “primarily a descriptive tool rather than a prescriptive theory” (Jonassen, 2000, p. 110), some general implications for methodology have been drawn. These implications concern the need for researcher reflexivity, the need to study real-life contexts over a period of time, and the need to employ a variety of data collection methods to encompass varied perspectives. It will be concluded that activity theory is compatible with the qualitative research design articulated in Chapter Four.

Lincoln and Guba (1985) state that a qualitative researcher must strive to ensure that the findings and interpretations of the research (the researcher’s constructions) are actually credible representations of the participants’ understandings and experiences (constructions). Brought within the domains of activity theory, this statement highlights the need to be sensitive to cultural mediation. This study can be conceptualised as an activity system directed towards the overall goal of conducting original research which provides a contribution to knowledge and shaped by various tools ranging from a digital voice recorder to the concept of activity theory itself. Included in these tools are the beliefs and assumptions (both explicit and implicit) that I, as the researcher, bring to the activity. Activity theory exhorts me to know my own mind, or in other words, to be cognisant of how the collection and analysis of participant constructions are shaped by mediating tools, including my own beliefs, values, expectations, and previous experiences. By using activity theory, I must commit myself to self interrogation and interrogation by others in the forms of researcher reflexivity, participant (student and teacher) checks of researcher interpretations, and peer checks of the data analysis.

Activity theory demands that instances of participation-in-the-world should be the object of study, in other words, research must be directed towards the real-life

activities people engage in including the motives, objects, and outcomes which drive activity and the social and cultural relationships amongst groups of people (Jonassen, 2000). In addition, as activity systems are artefact-mediated, mediational means must receive close attention, particularly in relation to the concept of distributed cognition which asserts that knowledge and understanding do not lie solely in the individual, but are shared collectively with the community through the use of cultural artefacts. It follows that the description of culture, and in particular the identification of cultural artefacts such as tools, social rules, and community roles, becomes a critical task for the researcher. In response to this and drawing from Thorne (2003, p. 40) who describes local “cultures of use” which develop around technological tools, I have chosen to use ethnographic techniques including interviews, accounts, and observations in order to describe and understand the culture which surrounds the learning activities under study.

It seems entirely consistent to align a theory based on social constructivism with a qualitative methodology as both emphasise the constructed nature of reality and the relative nature of knowledge. More specifically, qualitative methodologies which focus on obtaining rich and detailed information about human experience, and in particular approaches which draw from the field of ethnography, are well positioned to describe, explain, and enhance understanding of situated activity embedded within a social, cultural, and historical matrix. In addition, activity theory approaches should employ a variety of data collection methods in order to include many different perspectives (Jonassen, 2000). Activity systems are multivoiced, in other words, they incorporate multiple perspectives from participants who import their unique personal histories into new social contexts. These histories which may include personal values, experiences of learning, and future aspirations influence how individuals make meaning as they participate in activity (Blin, 2004). Therefore, it is important to talk with both learners and teachers on a number of occasions, but also to go beyond the core group of participants and talk with other learners, additional teaching

staff, and learning technologists (for example) who are involved in the learning activity directly or indirectly. This approach also allows broader perspectives to be obtained which reside outside the local activity system and show how a learning activity connects with wider activity systems. For example, a learning technologist may discuss issues of under-resourcing which exist at the institutional level but also implicate issues at the classroom-level. In addition, multiple temporal perspectives can be obtained as the context is viewed over time, offering insights into the ongoing and dynamic relationships between system components (Barab et al., 2002; Yamagata-Lynch, 2003).

Lincoln and Guba (1985, p. 178) argue that an inquiry should display “value resonance”. By this term, they mean that key elements of a study should be “consistent and reinforcing” (Lincoln & Guba, 1985, p. 178). In the previous section, it has been argued that a qualitative approach, ethnographic techniques, and multiple methods that collect data from a variety of individual and temporal perspectives are consistent with activity theory

3.3 Chapter Summary

This intent of this chapter has been not only to introduce and describe activity theory, but also to provide a link between the conceptual framework and the methodology chapters. It has been argued that activity theory provides a conceptual tool which affords a richer and more expansive conception of participation. It expands the participatory unit of analysis from individual actions and mental states to encompass a range of social, cultural, and historical factors which can more accurately represent complex human activity (Engeström, 1987; Kaptelinin, Macaulay, & Nardi, 1999; Nardi, 1996; Vygotsky, 1978). In addition, methodological implications arising from

the use of activity theory have been identified, foreshadowing further development in the following chapter.

In the next chapter, the methodology of this study will be described and justified as theoretical and practical issues are considered in relation to the data collection and analysis processes employed in this inquiry.

CHAPTER FOUR: THE RESEARCH PROCESS

4.0 Introduction

The purpose of this study is to better understand and improve teaching and learning practices underpinned by social epistemologies in tertiary-level eLearning contexts by obtaining an in-depth, expansive, and critical representation of this multi-faceted social phenomenon through the dual perspectives of EAL students and their teachers. Therefore, the study is guided by one broad question:

How do EAL students and their teachers participate in interactive learning activities mediated by ICT in mainstream tertiary-level educational settings?

As noted in the previous chapter, using an activity system as the participatory unit of analysis has generated a number of additional questions which consider the mediation of social and cultural factors in shaping the nature of participation. Thus, the study intends to identify key factors which affect the participants' eLearning experiences, explore how activity is shaped (afforded and constrained) by these factors, and examine how contradictions within and between activity systems emerge and are resolved or unresolved.

The purpose of this chapter is to give a detailed description of the methodology employed in this study so that an "audit trail" (Lincoln & Guba, 1985, p. 319) can be generated which will enhance the reliability of the study and facilitate the transferability of its findings. An audit trail is a record of the data collection and data analysis procedures occurring during the study (Lincoln & Guba, 1985; Merriam, 2002). This "transparency of method" (Merriam, 2002, p. 27) enhances the study's reliability by assisting the reader in determining the value of the research and whether the results are consistent with the data collected (Merriam, 2002). Moreover, by describing the methodology in detail, the transfer of the findings to other settings can

be facilitated as the reader has more information to judge whether the findings can be applied to other contexts.

Initially, this chapter will explore contextual and theoretical considerations in relation to the selection of a conceptual framework for the methodology. After establishing the need for a qualitative methodology, the chapter will examine the methodological implications of qualitative research and the use of ethnographical, phenomenological, and case study approaches. Focusing on more practical issues, the remainder of the chapter will discuss the implementation of research and sampling methods and a description of the three case studies will be provided. Finally, criteria for evaluating the research, ethical issues in relation to research decisions, and data analysis strategies employed in this study will be discussed.

4.1 Contextual Considerations

Methodology is defined as “the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes” (Crotty, 1998, p. 3). The selection of an appropriate research methodology to extend understanding of interactive learning activities mediated by ICT is crucial to this study as it offers practical guidance about how to conduct the research. In light of these comments, this section considers three key contextual factors which have influenced the selection of a theoretical framework for the methodology: the nature of the research questions, the use of activity theory as a conceptual tool, and the personal philosophy of the researcher.

4.1.1 The Research Question

The research intends to extend understanding of learning supported by ICT in tertiary education by investigating three eLearning contexts, generating new ideas, offering new perspectives, and identifying areas for further investigation. The main thrust of this inquiry is to live vicariously through the eyes of others and reveal the meanings the participants ascribe to their eLearning experiences. By engaging in an ongoing relationship with the participants, this study seeks to understand multiple perspectives, not only from different participants, but at different times during the learning activity. The study intends to build understanding through the process of induction directly from the data, rather than test hypotheses, perform numerical reductions of data, or offer generalized findings. Therefore, the study is exploratory, descriptive, inductive, and centred on the meanings people ascribe to their experiences.

4.1.2 The Use of Activity Theory as a Conceptual Tool

By using activity theory as a conceptual and interpretative tool, the study is shaped by a social constructivist theoretical framework (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Vygotsky, 1978) which holds particular ontological and epistemological beliefs about the nature of reality and knowledge. In terms of ontology, a social constructivist stance asserts that reality is constructed through situated human activity. In terms of epistemology, it maintains that social interaction is central to and crucial for the development of cognition and knowledge (Vygotsky, 1978; Wertsch, 1985). This position advocates “*epistemic relativism*,” in other words, “there is no absolute warrant for any belief – that rational warrant makes sense only relative to culture, or an individual, or a paradigm” (Kukla, 2000, p. 4). Drawing from this idea, it can be argued that in order to understand human activity, research must focus upon the social, cultural, and historical context where meaning is

shared and co-constructed with others. Inquiry must understand how meaning is constructed and how people make sense of their lives within specific social contexts.

4.1.3 The Personal Philosophy of the Researcher

As the researcher, my position is that all research is “value-bound” (Lincoln & Guba, 1985, p. 38); that is, data is not discovered, but rather it is produced (Dey, 1993) by an ideologically positioned subject (Lincoln & Guba, 1985; Sarantakos, 2005) operating as the primary instrument for data collection and analysis (Merriam, 2002). Behind the research process stands “the personal biography of the researcher, who speaks from a particular class, gender, racial, cultural, and ethnic community perspective” (Denzin & Lincoln, 2003, p. 29). It is essential to take account of this “personal biography” – the beliefs, values, and expectations which lie behind research decisions – rather than charge blindly onwards in ignorance (Lincoln & Guba, 1985; Merriam, 2002). In the spirit of researcher reflexivity, I will briefly state that my current thinking is slanted towards the belief that reality is multiple and constructed. In my opinion, gaining greater understanding of human activity has to involve revealing the meanings individuals ascribe to their experiences as they participate in the world.

In summary, three contextual factors have been briefly discussed – the research question, the sociocultural framework of the study, and the researcher’s personal perspective – in order to lay the groundwork for the selection of a theoretical framework for the methodology. The next section will examine theoretical considerations to provide more evidence to justify research design decisions in relation to the theoretical framework.

4.2 Theoretical Considerations

Research methods are “not simply neutral tools,” they are shaped by the ontological and epistemological beliefs which underpin them (Bryman, 2004, p. 4). Ontological, epistemological, and methodological beliefs are “packaged” together into paradigms – a paradigm being defined as “a set of propositions that explain how the world is perceived” (Sarantakos, 2005, p. 30). By choosing a particular methodology, the inquirer chooses a particular way of viewing the world and commits to certain ways of knowing it. Acknowledging this, the next section briefly reviews the philosophical underpinnings of qualitative and quantitative approaches. While there are varied ways of defining research approaches (Lincoln & Guba, 2000; Neuman, 2006), I have found Bryman’s (2004) two-way division of ontological beliefs into positivism and interpretivism, and epistemological beliefs into objectivism and constructionism to be helpful, albeit potentially simplistic. In addition to matters of ontology and epistemology, the next section also considers issues around action research in relation to this inquiry.

4.2.1 Ontological Considerations

In social research, two broad ontological positions exist: objectivism and constructionism (Bryman, 2004; Sarantakos, 2005). The objectivist position asserts that reality is fixed, exists independently from human consciousness, and is uniform, generating the same meanings for all people which can be discovered by a researcher (Sarantakos, 2005). In contrast, the constructionist position rejects this assertion that meaningful reality is objective and fixed awaiting discovery, arguing that reality is constructed by people and comes into existence as they engage with the world (Crotty, 1998; Sarantakos, 2005). A key implication of this constructionist stance is that reality is perceived as “subjective, constructed, multiple, and diverse” (Sarantakos, 2003, p. 41) and is in a continual state of flux as it is constructed and

reconstructed (Bryman, 2004). There is an additional dimension within this ontological stance which emphasises the centrality of social process in creating reality. *“All knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context”* (Crotty, 1998, p. 42, italics in original). Therefore, individuals do not individually create meaning rather they construct their reality as they collectively share the lens of a particular culture as a meaning-making tool (Sarantakos, 2005, p. 39).

4.2.2 Epistemological Considerations

Within social science research, there has been much debate focused on whether the social world can be understood using the same principles and approaches as the natural sciences (Bryman, 2004). Two broad epistemological positions can be identified: positivism and interpretivism (Bryman, 2004). The positivist draws upon empiricism to assert that knowledge comes from sense experiences, thus, observation and experience are valued in the acquisition of knowledge (Bryman, 2004). In contrast, the interpretivist position contends that the social world cannot be understood using the same procedures and is based on a need to understand rather than explain (Bryman, 2004). Adopting a subjectivist ontology (the belief that reality exists in the minds of those who create it) entails the view that reality is multiple – no one reality is necessarily more valid than another (Crotty, 1998). Thus, knowledge originates from accessing and studying subjective meaning and understanding how the subject makes sense of their world as they experience it. In addition, an interpretive stance requires that the researcher must engage in natural settings with a mandate to examine “culturally derived and historically situated interpretations of the social life-world” (Crotty, 1998, p. 67) and it is accepted that knower (the researcher)

and known (the researched) inherently influence each other in the co-construction and negotiation of meaning.

4.2.3 Action Research Considerations

By combining the generation of knowledge with the desire to improve social activity, action research is concerned with “working towards a resolution of the impetus for action with the reflective process of inquiry and knowledge generation, to generate new practices” (Somekh & Zeichner, 2009, p. 18). The “call for action” (Lincoln & Guba, 2000, p. 174) advocates a movement away from simply understanding and interpreting the social world towards action – it is not enough just to describe, the researcher must act as well.

Adopting an action research framework was a consideration for this study. Indeed, acknowledging the Marxist roots of activity theory, it could be argued that using activity theory in research inherently entails a commitment to social action. Jensen (1999, p. 97) observes that “philosophical activity was, for Marx, to reflect critically upon the concepts and theories being used in practice and at the same time to take part in practices in order to attempt to overcome limitations and contradictions in practice.” More forcefully, Wertsch, del Rio, and Alvarez (1995, p. 29) argue that “sociocultural studies should be involved in *changing* and not just examining human action and the cultural, institutional, and historical settings in which it occurs.” Their uncompromising stance challenges us to define what “using” activity theory for social research actually means. Is it consistent to use activity theory as a descriptive tool and ignore an obligation to directly transform social practice?

There are compelling reasons to position this study within an action research framework and use the findings to transform local teaching and learning practices. It may seem curious that this was not an explicit objective of the study. This research meets the criteria of a “basic interpretative qualitative study” as defined by (Merriam, 2002, p. 6) because attention is directed toward how individuals attribute meaning to situations and/or phenomenon; the researcher acts as the primary research instrument; an inductive approach is employed; and a descriptive outcome is realised. In justifying this decision to describe rather than transform, it is argued that we must first understand a learning context before we can transform it. Thus, this study positions itself as contributing to understanding so that later research (conducted by the researcher or others) can build on these findings to improve eLearning practice.

However, upon reflection, this issue is more complex than it appears and is shaped by factors relating to the teaching and learning contexts under study, institutional factors, and the personal history of the researcher. The following discussion unpacks this complexity.

First, in terms of the local teaching and learning context, particular factors thwarted a transformational agenda. In Case Studies One and Three, the findings were shared with the lead teachers; however, at the conclusion of the papers, both teachers accepted different positions within the institution and were no longer responsible for the learning activity. Thus, the opportunity to continue to work with the teachers and apply insights gained from the research evaporated. The only tangible possibility of transformation occurred in Case Study Two as the same teacher did conduct the same paper (and learning activity) during the following semester. However, while the findings were shared with her on several occasions and vigorous discussion had ensued, they did not appear to result in much change in her pedagogy. It appeared that migrating the paper to a new virtual platform which occurred between the first

paper in Semester A and the repeat of the paper in Semester B had occupied much of her attention, and the teacher was unable or unwilling to consider changing the learning activity based on the findings. Clearly, action research involves a time commitment from the researcher and teacher which may extend over several semesters/terms or even over several years. It also assumes that the same teacher will have the same course over a period of time and that she will have the time and energy to devote to her learning activity. In addition, it assumes that the researcher will be committed to an extended period of data collection; however, this may not be an attractive proposition for a doctoral student. The main point being argued is that a transformative agenda assumes that opportunities for transformation will be present within the research site.

Second, in relation to broader institutional factors, there appears to be an acceptance in academic institutional settings that research does not necessarily have to affect the social world beyond academia and that “the bulk of university-based social research has a decidedly antipraxis orientation built deeply into the current structure of the academic social sciences” (Greenwood & Levin, 2000, p. 86). While conceding that some social scientists do succeed in merging practice with theory, Greenwood and Levin (2000) argue that much academic activity is inwardly directed towards conversations with colleagues in specific disciplines rather than outwardly directed towards the social world. Thus, the products of doctoral research activity (for example, theses, conference presentations, and publications) can be encapsulated objects, consumed by the academic community, but not the general community. In contrast, outwardly directed research pursuing social change can create a product which can be consumed by the wider society. These distinctions are undoubtedly simplistic; however, they implicate wider issues pertaining to the role of the university in society.

Finally, in relation to my personal situation as a researcher, I lacked an historical connection with the learning contexts and the teachers involved. Having just met the teachers, I did not feel in a position to pursue a transformative agenda. It was challenging enough to obtain access to the few papers that met the criteria for the study and I was present simply through the goodwill of the teachers. I was allowed access to the papers on the understanding that I would be exploring rather than helping to transform teaching and learning experiences. Also, I was acutely aware that a transformational agenda could place an extra workload on teachers as they considered the findings, and reflected upon and modified their pedagogy. It seems that for action research to proceed there has to be some level of trust and rapport between researcher and teacher – which I lacked. Thus, the initial intent of the study leaned towards description rather than transformation. However, as I established rapport with the teachers, possibilities for transformation began to emerge as the inquiry progressed. At times, teacher-researcher interviews became a source of mutual exchange of information as I sought information from the teacher, and the teacher sought my opinion about the design and implementation of the learning activity. My role oscillated between researcher and teacher-resource, and the study started to take on characteristics of action research. Admittedly, this situation only endured for the length of the paper/course (approximately five months) in all three case studies, but nonetheless, dialogue did occur between teacher and researcher about opportunities to improve the learning activity.

It is interesting to reflect upon how a study not positioned within an action research framework evolved into a form of informal action research through ongoing relationships between the researcher and teachers. Sustained social interaction facilitated the development of rapport and trust which allowed our interviews to become a site for generating understanding but also improving teaching and learning practice. In addition, my experiences caution against simplistic and potentially premature views of transformation which may measure it in direct and immediate

terms. Human activity is complex and transformation may not occur immediately but can percolate in the teacher's mind for some time before action (if any) is taken. Research findings may be digested, rejected, revisited and, over time, lead to a transformation in teaching practice in subtle or more significant ways. For example, in terms of Case Study Two, it is possible that when less busy, the teacher will have time and motivation to reflect upon the task design and pedagogical outcomes. While a transformational agenda has not been explicitly built into this research design, characteristics of action research have emerged from dialogue between researcher and teacher, and it is possible that changes in the teachers' perspectives may occur in subtle or indirect ways over time.

In summary, ontological and epistemological underpinnings of qualitative methodologies have been considered in order to lay the groundwork for the following section where the selection of a theoretical framework for this study will be discussed and justified. In addition, considerations pertaining to action research have been discussed, revealing the complexity and emergent nature of this study.

4.3 Selecting a Qualitative Paradigm

In previous sections, key features of the research context (the research question, the use of activity theory, and the personal philosophy of the researcher), issues around action research, and the theoretical foundations which underpin quantitative and qualitative methodologies have been considered. This section draws these elements together to explain the rationale behind the decision to select a qualitative methodology for this study. It should be emphasized that this is not a debate about which approaches are more legitimate but which approaches are best suited for the task at hand (Creswell, 2003).

The intent of the study is to explore interactive learning activities which use a form of ICT to communicate, inductively building understanding of teacher and student participation and employing a flexible and emergent research design. Therefore, it is appropriate to choose a qualitative methodology. The use of a social constructivist perspective further reinforces this decision as the qualitative paradigm and activity theory share similar ontological and epistemological beliefs by recognising that individuals play an active role in constructing their reality within specific social and cultural contexts. A final justification for the selection of a qualitative methodology comes from the alignment of my perspective as the researcher and primary research instrument for this study with a constructivist orientation. Both positions adhere to a “relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures” (Denzin & Lincoln, 2000, p. 21).

This discussion has interwoven the previous sections and presented an argument justifying the choice of a qualitative methodology for this study. Through an alignment of contextual factors (the research question, a sociocultural theoretical framework, and the personal perspective of the researcher) with the ontological and epistemological foundations of qualitative approaches and social constructivism, it is argued that this study displays “value resonance” as these key elements are “consistent and reinforcing” (Lincoln & Guba, 1985, p. 178).

4.4 Methodological Considerations

Methodology is defined as “a research strategy that translates ontological and epistemological principles into guidelines that show how research is to be conducted” (Sarantankos, 2005, p. 30). Therefore, this methodology translates a constructivist ontology and an interpretivist epistemology into a practical plan for data collection

and analysis. In other words, the purpose of this qualitative methodology will be to reconstruct a multitude of individual constructions and examine how teachers and EAL learners attribute meaning to their experiences in eLearning contexts.

Defining the term *qualitative* is problematic as it encompasses a diverse range of research practices with no one method privileged over another (Denzin & Lincoln, 2000). While acknowledging the complex history and diverse nature of various manifestations of qualitative research, Denzin and Lincoln (2000) offer the following definition:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of meanings people bring to them. (Denzin & Lincoln, 2000, p. 3)

Merriam (2002, pp. 4-5) suggests four key characteristics of qualitative research: a focus on understanding how people interact and experience the world and the meanings they have constructed, the use of the researcher as the primary tool for data collection, the use of induction to build concepts, hypotheses, and theories, and the production of complex and layered descriptive data. Lincoln and Guba (1985, pp. 39-43) offer an expanded list which includes the use of the following strategies: purposive sampling, emergent designs which adapt to the data, idiographic interpretation rather than generalization, case study approaches, and special criteria to establish the credibility of the research.

This study incorporates most of the characteristics from the above lists. It is concerned with studying an educational phenomenon within its natural context through the experiences of teachers and EAL learners. It focuses on three particular manifestations of eLearning and uses a variety of data collection methods which transform participant experiences into rich and multi-layered descriptive representations such as interview transcripts or screen shots of online activity. This research is informed by the concept of “emergent design” which encourages the “unfolding of the design,” namely, that the research design is not a literal blueprint that must be strictly adhered to, but rather a broader plan of action which changes and adapts to conditions on the ground” (Lincoln & Guba, 1985, p. 259). Therefore, it uses an iterative cycle of data collection informing analysis, an open approach to sampling whereby key informants can be added during the study, and an inductive strategy for the data analysis. The researcher is viewed as an instrument (Lincoln & Guba, 1985), able to adapt to data as it is generated.

The following discussion will specifically examine the influence of three approaches on the methodological design of this study – ethnographical, phenomenological, and case study perspectives.

4.4.1 An Ethnographical Perspective

By using activity theory as a research tool, the minimal unit of analysis for this study becomes mediated activity within an activity system. This focus on socially-situated and culturally-mediated activity is aligned with a key objective of ethnography to “come to a deeper understanding of how individuals view and participate in their own social and cultural worlds” (Harklau, 2005, p. 179). This is achieved by describing a culture and understanding it from an insider’s perspective (Neuman, 2006). Culture is defined as “*knowledge* that is learned and shared and that people use to generate

behavior and interpret experience” (McCurdy, Spradley, & Shandy, 2005, p. 5). Thus, by focusing upon the exploration of social phenomena and on “the meanings and functions of human actions” (Atkinson & Hammersley, 1998, p. 248), an ethnographic approach is consistent with and useful for the implementation of an activity theory approach.

Ethnography is a form of research originating in anthropology and sociology (Harklau, 2005) and more recently adopted by qualitative researchers (Creswell, 2003). The definition of ethnography has been contested (Atkinson & Hammersley, 1998) and significant variations in research practices have been observed (Harklau, 2005). Ethnography does not own a particular set of methods (Sarantakos, 2005) but, generally speaking, ethnographic studies are characterised “by first-hand, naturalistic, sustained observation and participation in a particular social setting” (Harklau, 2005, p. 179).

The ethnographer participates, overtly or covertly, in people’s daily lives for an extended period of time, watching what happens, listening to what is said, asking questions; in fact collecting whatever data are available to throw light on the issues with which he or she is concerned. (Hammersley & Atkinson, 1983, p. 2)

Through an involvement in the natural setting as a participant observer, the researcher gains data about the social context but also influences it as well in varying ways depending upon the level of participation (Flick, 1998).

This study incorporates some key characteristics of ethnography as identified by Atkinson and Hammersley (1998, p. 248). It explores a social setting; it works with unstructured data; it concentrates on a limited number of cases; and it analyses the meanings that people ascribe to their experiences. This study is not claiming to be a full ethnography rather it employs ethnographic methods and strategies as tools in

order to elicit data about social and cultural components of teaching and learning contexts (Atkinson & Hammersley, 1998). A three way distinction between “doing ethnography,” an “ethnographic perspective,” and “using ethnographic tools” has been provided by Green and Bloom (1997, p. 183). The first two approaches involve a commitment to anthropological and/or sociological theory. The last category involves using methods and techniques employed in field work (for example, observations, interviews, and artefact analysis) without necessarily entailing a commitment to cultural theories. This study will be adopting the latter approach.

4.4.2 A Phenomenological Perspective

The tradition of phenomenology underpins qualitative approach (Merriam, 2002). It focuses on identifying the “essence of human experiences about a phenomenon, as described by participants” (Creswell, 2009, p. 13). It is important to differentiate between two uses of phenomenology: a general preoccupation with experience and understanding, and a more specific use of particular tools of inquiry employed within the school of phenomenology (Merriam, 2002). This study proposes to take the former usage by using unstructured accounts as an interview tool to elicit the immediate and lived experiences of the participants without necessarily taking on board the philosophical underpinnings of phenomenology. This reluctance to become entwined within a truly phenomenological approach stems from its epistemological perspective which does not appear to be consistent with sociocultural theory. As a key figure in the phenomenological tradition, Husserl (1931) writes:

That we should set aside all previous habits of thought, see through and break down the mental barriers which these habits have set along the horizons of our thinking, and in full intellectual freedom proceed to lay hold on those genuine philosophical problems still awaiting completely fresh formulation which the liberated horizons on all sides disclose to us. (Husserl, 1931, p. 43)

Under this view, attention should centre upon describing “things in themselves, to permit what is before one to enter consciousness and be understood in its meanings and essences in the light of intuition and self reflection” (Moustakas, 1994, p. 27). In opposition to these beliefs, sociocultural theory maintains a radically different stance claiming that thought is mediated by cultural artefacts; thus, the focus of study should be upon how thought is shaped by these cultural factors. The concept that one can somehow sidestep ways of thinking and view things as they truly exist is untenable within sociocultural theory. Therefore, in order to maintain consistency in the research design, phenomenological tools are used but underlying philosophies are not espoused.

4.4.3 A Case Study Approach

A case study can be defined as “an intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community” (Merriam, 2002, p. 8). It is a “functioning specific” (Stake, 2003, p. 135) which allows the inquirer to gain a detailed understanding of a phenomenon. Stake (2003) claims that the use of a case study does not involve decisions of methodology, but a decision about what is to be studied or what the inquirer can “fence in” (Merriam, 1998, p. 27).

Case studies are useful for studying complex social behaviour (Yin, 1994) and they can provide a number of benefits for social research including the ability to acquire detailed, rich, and holistic descriptions of the unique characteristics of a case which aids in the transfer of the findings to other contexts and consistency with a relativist epistemology by recognising the complexity of multiple realities (Lincoln & Guba, 1985). Additionally, a case study bounds the data collection process by focusing attention upon a unit of analysis (the phenomenon which is to be studied). Therefore,

it guides decisions around sampling and data collection; it determines the field of vision (what is noticed and what is overlooked); and it allows the inquirer to employ a wide variety of data collection methods (Yin, 1994).

Given that the research is focused on describing and exploring complex social activity within real-life educational settings, a case study method appears to be a natural choice for this study. By focusing intently upon the situated experiences of students and teachers as they engage in an online learning activity, the worlds of others can be entered in order to discover the rich meanings people attribute to their experiences. A case study bounds the data collection process, acting as an anchor and providing a sense of focus and a feeling of containment. However, unlike conventional approaches which may use a person, group, or institution as the unit of analysis, this study proposes to use an activity system as the case study unit of analysis. This activity system is directed towards an object (for example, completing a learning task such as posting a discussion message to the website) and the subjects can be defined alternatively as the teacher(s) or EAL students engaged in this learning activity. The process of transforming the object (engaging in the learning activity) is mediated by many tools including physical tools (for example, computers, books, and pens), virtual tools (for example, the website interface), pedagogical tools (for example, the task design), and psychological tools (for example, learning strategies).

Van Lier (2005, p. 196) observes that the “social, distributed side of behaviour, cognition, and interaction” can blur the boundaries of a case study. This vagueness can be problematic when identifying the boundaries of an activity system and ascertaining where the case study begins or ends. For example, learning activities are embedded within larger activity systems at the programme or institutional level. Participants can be simultaneously members of a number of communities including the immediate student group engaged in the learning task, the larger group of students

in the programme, social groups such as family and friends, and the target communities of practice. This uncertainty about boundaries is observed by Barab et al. (2002, p. 79) who note that “an activity system is made up of nested activities and actions all of which could be conceived of as separate activity systems or other instances of the same system depending on one’s perspective.”

In response to this complexity, it has been recognized that a case study which uses an activity system as the unit of analysis cannot be a fixed entity with rigid boundaries but rather a permeable and flexible frame of reference. The learning task or object has been used to anchor the data collection as the unit of analysis. Information relating to the local context (for example, the website interface or roles in the learning activity) and the broader context (for example, details about a learner’s paid employment or institutional support for the professional development of teachers) has been recorded as data if it affects the learning activity in some way.

4.4.3.1 Multiple case studies.

There are three types of case study: an intrinsic case study is undertaken because a particular case is inherently interesting; an instrumental case study is a means to an end, undertaken to understand a particular so that a more general phenomenon can be explored; and a collective case study examines more than one case in order to better understand a phenomenon under investigation (Stake, 2003, pp. 136-138).

In order to address the research question, a collective cross-case analysis has been performed which generates interpretations spanning more than one case (Stake, 2006). It is intended that each case study can be read as a complete unit in relative isolation offering a different angle of vision upon eLearning as experienced by EAL learners and their teachers (an intrinsic study according to Stake, 2003), but it is also

intended that common themes be identified in the data so that global perspectives can be generated. Stake (2006, p. 39) warns that the unique nature of a single case study can become “mangled in a cross-case analysis” as the focus of vision moves from the particular features of the case to what is common between the cases. Heeding this warning, the findings are presented in Chapter Five as individual case studies – each of which can be read independently as an holistic unit. A cross-case analysis is presented at the end of the chapter, synthesising key ideas and foreshadowing further development in Chapters Six and Seven. As discussed later in this chapter, the use of multiple case studies allows a degree of diversity into the study which may provide the reader with opportunities to identify commonalities between the study and their own teaching and learning contexts, thereby facilitating the transfer of the research findings.

In summary, the preceding section has discussed the selection of a qualitative framework for this study and has considered a number of methodological implications. Ethnographic, phenomenological, and case study approaches have been discussed in relation to this inquiry. In the next section, specific research methods supporting the qualitative paradigm will be discussed in relation to the practical implementation of the research design.

4.5 Research Methods

As noted previously, this study draws upon the fields of ethnography and phenomenology in order to understand and explore the meanings people give to their experiences within a sociocultural context. Through the process of participant observation which is “a mode of being-in-the-world characteristic of researchers” (Atkinson & Hammersley, 1998, p. 249), the case study sites were entered and material collected from a variety of sources including interviews, online and face-to-

face observations, and documents. From an ethnographic perspective, the researcher entered the participants' teaching and learning worlds, talked with them, and watched them in an attempt to understand the social and cultural context from an insider perspective.

The research methods are summarized below in tabular form (Table 4.1).

Table 4.1***A Summary of Research Methods in this Inquiry***

Research Method	Description	Frequency
Interviews	Semi-structured face-to-face interaction where questions act as a guide, but the ability to deviate from the schedule is permitted.	Undertaken at least three times during each paper/course at the beginning, middle, and end. For the students, a group interview occurred at the conclusion of the course. All the teachers were interviewed individually.
Accounts	Minimally structured evocative accounts where subjects are prompted to “re-live” their experiences.	Undertaken several times (at least four times per participant) during the paper/course and scheduled as close as possible to participation in the learning activity so recollections were clearer.
Face-to-face observations	Field notes were taken during lectures, tutorials, teacher meetings, and workshops during the paper.	At a minimum, face-to-face encounters occurred at least weekly. Often, observations were made two or three times a week as appropriate.
Online observations	Screen shots were obtained of the posting areas in the relevant pages within the learning management system. Also, student postings were cut and pasted into Word documents.	The frequency of these observations varied between cases depending on the degree of activity. The website was checked several times a week with screen shots being obtained after posting activity was observed.
Artefact analysis	Paper artefacts produced by the teacher were collected for analysis. These artefacts included course outlines, marking schedules, and resources for students.	Paper artefacts were often collected on a weekly basis depending on the case.

Interviews played a major role in the data collection process by helping the researcher to access the inner worlds of participants. The term *interview* is defined as a “specific professional form of *conversational technique* in which knowledge is constructed through the interaction of interviewer and interviewee” (Kvale, 1996, p. 36). In qualitative research, semi-structured and unstructured interviews are the tools of choice (Bryman, 2004) as they allow the participant to articulate their perspective, and also give the researcher flexibility to depart from pre-existing questions to respond to new directions suggested by the subjects. In this study, three types of interview were used: minimally structured evocative accounts, semi-structured interviews, and group interviews. These are discussed below in more detail.

4.5.1 Minimally Structured Evocative Accounts

In preparation for conducting accounts, Howard (1994) and Light (2006) were consulted as both authors had used phenomenological techniques to examine computer-mediated social settings. Light (2006), citing the work of Vermersch (1994), has described an interviewing technique which centres upon inducing a state of evocation with interviewees. The interviewee is encouraged to identify a particular past episode and enter a state of evocation to describe the experience (Light, 2006, p. 180). For example, the researcher might ask the interviewee to “put yourself back into the situation and tell me exactly what you did.” By entering a state of evocation, the researcher may elicit a stream of consciousness from the interviewee which can provide a rich and detailed account of their thoughts, feelings, and behaviours during a particular past event. The interviewer uses prompts to encourage the responder to remain in that moment of time asking for clarification and/or detail, but allowing the responder to select what is meaningful to them (Light, 2006).

In addition, Spradley's (1979) question types (for example, grand-tour, mini-tour, and structural questions) were used to extend the range of the prompts given by Light (2006). This decision to inject more structure into the account format diverged from Light's (2006) less structured approach. The rationale for this decision was based on balancing the need for less structure so that participants would have the ability to define what participation meant for them with the need to use descriptive questions to exert some control by the researcher. By using descriptive questions at appropriate moments, interviewees could be gently encouraged to disclose more detail about their thoughts and experiences.

In contrast to the semi-structured interviews, accounts tended to be shorter "bites" of experience and took approximately 15-20 minutes. They were conducted with all participants at regular stages of the paper (approximately four times per participant) and meetings took place in a variety of settings including offices, cafés and student dormitories. As it was important that I meet with the participants as soon as possible after they had engaged with the learning activity, I was technically "on call" and willing to meet with them at their convenience, day or night. In practice, meetings with students were arranged using text messages via mobile phones; they usually occurred late in the afternoon or evening; and they were conducted face-to-face. Meetings with teachers were usually arranged via email. Some participants were more proactive than others, contacting me immediately after engaging with the learning activity so we could talk, while others delayed contact. This delay was frustrating for me and the research participants were frequently reminded of the importance of talking with me as close as possible to the time they had worked on the learning activity. All accounts were recorded using a digital device, transcribed in full within twenty four hours, and participants were identified by a pseudonym on the recording and transcript. Examples of the types of questions and prompts used to guide the accounts can be found in Appendices E, F, and G.

It was anticipated that Voice over the Internet Protocol (VoIP) technology such as Skype (<http://www.skype.com>) would be used to conduct the accounts. VoIP software is a telephony tool which permits voice conversations to be sent over the Internet. It was expected that the students would contact me as soon as possible after engaging with the learning activity so that they could render their account of the experience via the Internet using their own computer. Memory recall could be optimised using this method as participants would have only recently worked on the activity. Also, the use of VoIP would liberate me from having to travel to the participant's location and would allow the account to be acquired at any time convenient to the participant. The ability to use instant messaging and a webcam were also perceived to be useful tools to enhance communication, particularly with EAL students who might struggle to comprehend speech at times.

However, in practice, a number of constraints emerged with the use of VoIP technology. Undertaking VoIP from the institution was problematic for students as they were not allowed to download applications from the internet. Due to this restriction, using student equipment was the only viable option, but some students were reluctant to download the VoIP software onto their own computers. Also, they had to acquire a microphone and webcam if these tools were not embedded in their computers. Finally, VoIP tools require a broadband connection which can provide adequate bandwidth speeds to transmit audio and visual material. Slow broadband connection speeds at my home were unable to support audio and visual communication. It was difficult to establish connections with the students, and even if successful, the audio was of very poor quality and video was non-existent. Due to these constraints, VoIP technology was quickly rejected as a viable research tool. The many advantages of VoIP voiced earlier disappeared and the technology became an impoverished and fickle medium, particularly when compared to face-to-face interaction. After experimenting unsuccessfully with

conducting the accounts by telephone, face-to-face meetings were used to conduct the accounts. Certainly this decision sacrificed some immediacy which was a prime factor in conducting the accounts via VoIP, but clarity and establishing rapport were deemed more important.

My experiences gathering data through accounts were mixed. The ENL (English as a native language) teachers often took the floor and spoke at length about their experiences designing and implementing the learning activity. They were able to identify a specific episode in time and describe it in detail. At times, both students and teachers stopped recounting specific episodes and began generalising about their experiences – leaving the “moment.” Sometimes, I was complicit in this by asking general questions. Even though I had practiced the evocation technique beforehand, my skills were still developing. In my journal, I criticised my overuse of prompts which gave unwanted structure to the accounts; but, in contrast to the teachers, many of the EAL learner participants appeared to need regular stimulation to talk and found extended monologues difficult to maintain. Students often gave short responses to my prompts and then waited expectantly for the next question. One could speculate that the concept of a “stream of consciousness” may not have been fully understood by some of the students. Also, the concept of an account may have represented a “violation of situational experiences” (Flick, 1998, p. 103); that is, the students had specific expectations of what “an interview” would entail. The students may have assumed that the researcher would take a more controlling role, posing many questions and directing the interaction. They may have felt uncomfortable with dominating the discussion by “telling their story” about their experiences (Flick, 1998, p. 103).

Certainly, the account method has profoundly enriched this study by providing access to the immediate thoughts, feelings, and experiences of participants on a

regular basis; nonetheless, this method was challenging to undertake and not entirely successful.

4.5.2 Semi Structured Interviews

The semi-structured interview consists of questions or specific topics which guide the interviewer, and yet, the ability to deviate from the schedule is maintained (Bryman, 2004). Semi-structured interviews are useful when the inquirer “*does not know what he or she doesn’t know*” (Lincoln & Guba, 1985, p. 269, italics in original) about a phenomenon. In contrast to the accounts where a freely flowing stream of consciousness was valued, a degree of structure was necessary during interviews in order to assert some control over the direction of the interview. This control was needed to “take stock” of the situation, to clarify and expand upon material previously collected, to validate the researcher’s reconstructions of the participants’ constructions, and to explore avenues of thought.

Like the accounts, face-to-face interviews with students and teachers were conducted at intervals during each course/paper in each case study (approximately a five month period). Three sets of student interviews were undertaken at the beginning, middle, and end of the course/paper. The first two interviews were conducted with individual students and the last interview was conducted with groups of students. The teachers were interviewed three times with the addition of a fourth interview occurring a few months after the course had finished. The duration of the interviews was usually at least half an hour with teacher interviews extending to one and a half hours at times. Meetings with participants were conducted in a variety of settings that were convenient for the participants. Like the accounts, all interviews were recorded using a digital device, transcribed in full within twenty four hours, and participants were identified only by a pseudonym on the recording and transcript.

To prepare the interview questions, an ethnographic perspective was gained by consulting Spradley (1979) and Schensul, Schensul, and LeCompte (1999). These authors described various techniques for conducting ethnographic interviews which facilitated the creation of descriptive, exploratory, and open-ended questions. In the spirit of emergent design (Lincoln & Guba, 1985), the content of the questions was influenced by the material obtained from preceding accounts and observations. Additionally, while these types of questions gave some structure to the interviews, they could be adapted to the participant's responses and each interview became a unique experience – an exchange of information between two people at a specific moment in time which could open up new avenues for exploration. This is consistent with Fontana and Frey (2003, p. 62) who contend that “interviews are not neutral tools of data gathering but active interactions between two (or more) people leading to negotiated, contextually based results.” As the study progressed and rapport grew between the participants and me (as the researcher), the interviews became a site for the mutual exchange of information as students asked for study advice or teachers solicited opinions about the task design. Relationships between the researcher and the researched were not predetermined and fixed, but were dynamic and evolved over time (Angrosino & Mays de Perez, 2003). Examples of questions asked in the interviews can be found in Appendices H and I, and a list of descriptive-type questions which informed the interviews can be found in Appendix J.

Reflecting upon the interviews, it is evident that they were less problematic than the accounts. Indeed, my expectations were often exceeded by the degree of candour expressed by both teachers and students. Over time, I was able to establish rapport with the participants by projecting a friendly demeanour and showing interest in their experiences, and participants were actively encouraged to correct my understandings and/or disagree with me. However, like the accounts,

some student participants gave brief responses to questions or were simply unable to respond. In these situations, I had to use prompts to stimulate the student by rephrasing the question or giving more information about the question. By introducing more structure into the interaction through the use of prompts, I was concerned that I might be complicit in asking leading questions. My frustrations are revealed in a journal note written during the early stages of the interviews:

I still feel as though I'm leading them as they search for words [in the interviews]. Sometimes their answers seem quite crude or blunt – they lack the English ability to express themselves with precision ... how can I accurately and consistently reconstruct their constructions if they cannot communicate their realities to me in an accurate way? (Reflective Journal Entry, 21/2/07).

The English language competency of the EAL students in Case Study One was clearly an issue here (this was less of a concern in the other cases where student proficiency in English was higher). I was concerned about their ability to accurately convey their understandings and was worried that by helping them to comprehend the question (for example, by restating the question or providing more context), I might be imposing my voice (my constructions) upon them. There was clearly a tension between the need to help the students understand the question and the need to give them space to express their understandings in their own words.

4.5.3 Group Interviews

In all three case studies, group interviews were conducted at the conclusion of the course. The groups ranged in size from two to four participants depending upon who could attend at specific times. The main purpose of group interviewing was to collect data from the interaction between the group members as they discussed a topic (Cohen, Manion, & Morrison, 2000). Thus, my intent was to act as a moderator, stimulating the group with questions when necessary and then

stepping back to observe what transpired. In practice, the group interviews were an effective tool as the students stimulated each other to generate richer data than the individual interviews. Possible disadvantages, such as imitative group thinking or domination by one person as suggested by Fontana and Frey (2003) were not evident. Group members knew each other from the paper and appeared to be comfortable in each other's presence. While some students were quieter than others, everyone participated to various degrees.

4.5.4 Observations of face-to-face and virtual settings

In addition to interviews and accounts, observations of activity were conducted in face-to-face and online settings. Observation is a research method which uses vision as its main perceptual tool in order to understand the characteristics of the phenomenon under study (Cohen et al., 2000). In social research, this involves joining a social group under study and viewing it from the perspective of an insider (Sarantakos, 2005). Critics of observation claim that the technique can be subjective and selective; however, as a research tool, it offers a first-hand way to engage with the phenomenon directly instead of through second-hand interview accounts (Merriam, 1998).

Flick (1998, p. 137) has delineated four dimensions of observation and these will be considered in relation to this study. These dimensions are covert versus overt, non-participant versus participant, systematic versus unsystematic, and natural versus artificial settings.

Across the three case studies, both covert and overt observations were made. For example, while observing the lectures in Case Studies One and Two, only the core group of online students (between ten and twenty five students) and the teacher

knew that I was collecting data. To the other students, I appeared to be another student taking notes during the lecture. The degree of participation varied between learning settings; however, generally, I adopted a “moderate participation” role; in other words, “seeking to maintain a balance between being an insider and an outsider, between participation and observation” (Spradley, 1980, p. 60). As an outsider, I attempted to be a “fly on the wall” in large social groups such as lectures, and over time, even the smaller groups of students in tutorials and workshops appeared to accept my quiet presence. As an insider, my role became more participatory at times when I was positioned as a resource; for example, students requested advice about their studies and teachers requested my feedback about the learning task. In agreement with Angrosino and Mays de Perez (2003, p. 124) who challenge the assumption that observational objectivity is achievable or valuable, I “negotiated a situational identity” with the participants during the course. My relationship with the participants was a dynamic process which evolved from formal and guarded interactions in the early stages of the research to relaxed and candid exchanges of perceptions and experiences later in the course. While, I did not actively participate in the learning activity as a student or teacher, I negotiated the varied roles of researcher, teacher resource, mentor, and confidant.

The final two dimensions of observation as stated by Flick (1998) are systematic versus unsystematic and natural versus artificial settings. In the exploratory spirit of this research, an unsystematic approach was used whereby I handwrote field notes, freely describing my observations in lectures, tutorials, workshops, and teacher meetings. A systematic or structured approach employing pre-determined procedures and categories would impose preconceptions about the type of data to be collected, and hinder the open-minded orientation of a qualitative study. My intention was to suspend judgment and to view the context in an open and inductive manner. Finally, face-to-face activity in natural settings was observed

on a frequent basis throughout the papers during the weekly lectures, workshops, tutorials, and teacher meetings.

In addition to face-to-face observations, online observations were also conducted on a regular basis at least once or twice a week by logging onto the paper website and recording the website interface and posting behaviour. The process of conducting observations in the field was informed by a number of authors (Angrosino & Mays de Perez, 2003; Jorgensen, 1989; Neuman, 2006; Sarantakos, 2005; Spradley, 1980). The exponential growth of the Internet has created new opportunities for researching these virtual settings (Hine, 2005; Mann & Stewart, 2000) and there has been a growing recognition that the Internet is a “cultural context” requiring ethnographic approaches (Hine, 2005, p. 7). Therefore, in order to understand the nature of the online sociocultural context, screen shots were obtained of the web pages associated with the learning activity and online texts were also copied and pasted into Word documents. In some ways, the online observations were more akin to document analysis as I was obtaining copies of online texts to analyse; however, unlike hard copy documents, the web pages were dynamic artefacts and changed as students posted replies or the teacher gave feedback. Bryman (2004, pp. 312-315) defines visual ethnography as the use of visual materials, such as photographs and images, as sources of data in research, and while he does not specifically refer to research involving the Internet, I was struck by how my online observations were akin to visual ethnography. As a “photo” of a website, screen shots functioned to freeze a phenomenon at a particular moment in time and helped me to record the format of the learning activity’s web pages. Finally, another aspect of the online observations was a user walk-through whereby I sat alongside the student or teacher in front of the computer and ask them to demonstrate how they would normally encounter the website. In order to record the walk-through, I took notes and recorded comments as the participants articulated their thoughts and feelings as they moved around the website. These notes were then typed up within twenty four hours of the

observation. This observation of online activity provided valuable data pertaining to the mechanics of navigating through the website, viewing and uploading texts, and was very useful in revealing how the website shaped participation.

4.5.5 Document Collection

In each case study site, it was observed that the teacher would distribute paper or virtual resources, for example, course outlines, models of texts, and tutorial plans to other participants engaged in the learning activity. These artefacts were collected throughout the course and included in the data set as they could provide important insights into the culture which surrounded the learning activity. At times, they could also be used as prompts to stimulate participants during interviews.

In summary, this section has discussed the varied research methods employed in this study. Employing an ethnographic approach, information about the learning activity has been collected through accounts, interviews, observations (face-to-face and virtual), and document collection. The implementation of these methods has been described and important issues identified and discussed. The next section details the sampling methods used in this study and provides a description of the three case studies.

4.6 Sampling Procedures

Sampling procedures can vary considerably; however, the two primary classifications are probability and non-probability sampling (Sarantakos, 2005). Probability sampling is often associated with quantitative research and employs procedures to ensure that a representative sample is chosen from the population

under study. This in turn allows the researcher to make generalisations from the sample to the population it represents. In contrast, non-probability sampling is favoured by qualitative researchers as it does not require the selection of a large sample and random sampling procedures. Statistical generalisation is not a goal of qualitative research, and indeed, the concept of generalisation must be understood differently (Merriam, 2002). In this study, the intent is to describe the particular, to provide idiographic information relevant to one context, and to reflect different angles of vision upon the phenomenon. The sampling approach used in this study is consistent with Sarantakos' (2005, p. 155) description of non-probability sampling; namely, it uses small samples which can be chosen before and during the research and sample size is not determined statistically.

Cohen et al., (2000, pp. 103-104) list a number of non-probability methods including convenience, quota, purposive, dimensional, and snowball sampling. In this study, convenience sampling was employed. This sampling strategy selects individuals who are easily accessible to the researcher and it is a strategy often employed within educational research when selecting participants from a classroom setting (Cohen et al., 2000). Additionally, guided by the concept of "emergent design" (Lincoln & Guba, 1985, p. 259), an open approach to sampling was adopted whereby new participants were included as the research progressed. This allowed differing perspectives to be obtained from support staff, other teachers and students, and learning technologists.

Merriam (1998) observes that the selection process in qualitative research often requires two steps – selecting a general case to be studied and then sampling from within the case. Similarly, in this study there were two primary phases in the sampling process. First, a context for the case study was chosen from those learning settings which met the criteria for entry into the study, and second a

specific group of EAL students were identified and asked to become participants in the study.

4.6.1. Phase One: Selecting a Case Study Site

In Phase One, the intent behind the sampling strategy was to locate a learning context which could potentially provide the specific case study unit of analysis; that is, a learning activity within tertiary education requiring student-to-student social interaction and mediated by ICT. Additionally, the target population, a teacher(s) and a critical mass of EAL students (ideally ten to allow for non-participation and attrition) had to be present. Negotiable criteria that would inject some diversity into the study included differing levels of English language proficiency, diverse pedagogical approaches, variation in discipline and level of study, variation in modes of delivery (fully online and blended classrooms), variation in teacher expertise, and a range of ICTs.

In practice, Phase One occurred over several months and was subject to pragmatic constraints. It was a complex process of identifying and evaluating a possible paper for inclusion, gaining the informed consent of the teacher, and then approaching the institution for approval. Almost immediately it became clear that finding a case study context would be challenging. Within my own institution, I observed that most instances of eLearning utilised ICT to transmit content rather than to support social interaction. Eventually, three papers were identified – two papers at my own institution and one paper at a local tertiary provider. All three case studies used blended modes (combining face-to-face and online components) and all three used asynchronous online technologies to mediate social interaction. It was not a deliberate decision to have this uniformity; it was simply adapting to conditions in the local context. The original criteria (listed above) guiding the case study selection had been relaxed to reflect the paucity of appropriate virtual

learning activities and the three papers met the basic criteria – they were tertiary-level papers; they had a teacher who expressed a commitment to the study; they had a critical mass of EAL students; and they had an interactive activity supported by ICT which required student-to-student social interaction. Having said this, the three case studies offered a degree of diversity as they employed varied curriculum designs, incorporated a range of teacher competencies with computers, included different disciplines (nursing, management, and applied linguistics), and examined undergraduate and postgraduate perspectives.

4.6.2 Phase Two: Selecting the Specific Unit of Analysis

After Phase One was complete, the study had acquired a context and a lead teacher participant but lacked a specific activity system or case study. Guided by the case study unit of analysis which focused upon the “doing” of an interactive learning activity by EAL students and mediated by ICT, a specific group of students was sought. Potential online groups were identified and, with the teacher’s permission, students were approached as a group in the classroom, the study was explained, information and consent sheets were distributed, and student participation requested. Further information is included in Appendices A, B, C, and D.

In terms of sample size, there is “no clear-cut answer” which determines the number of participants to be included in a study (Cohen et al., 2000, p. 93). Decisions about sample size can be informed by a number of factors which include the methodology employed, available time and resources, the purpose of the study, and the intensity of the study (Sarantakos, 2005, p. 171). As the intent behind the research was to gain an intensive, holistic understanding of a particular activity system over time by collecting and analysing rich and detailed descriptions, it was believed that the selection of between four and six student

participants and at least one teacher participant per case would be appropriate to explore the research topic.

In practice, Phase Two of the sampling process proceeded fairly smoothly. Participatory expectations were met in Case Study One and exceeded in Case Study Three. Less enthusiasm was displayed in Case Study Two from tutors and students. While the lead teacher was enthusiastic, the actual tutor who was interacting face-to-face with the online group was concerned about her time commitment to the study. Gaining student participants was also challenging with little interest shown by the first year students necessitating the decision to take four EAL students spanning two separate classes.

My experiences during Phases One and Two of the case study selection process as detailed above contrast sharply with advice given by Stake (2003, p. 152) that the researcher take great care in choosing a case study site and choose sites based upon “opportunities to learn.” Certainly, obtaining case study sites which offered different perspectives on interactive eLearning activities was a prime concern. However, his statement appears idealistic and fails to acknowledge the complex negotiations which may occur between selection criteria and learning contexts. Factors such as the size of online groups, teacher approachability, student commitment, perceptions of the researcher as an “outsider,” and numbers of EAL students enrolled in the papers significantly shaped the selection process in this study. In light of my experiences, case study selection was a messy, complex, and, at times, emotionally draining experience.

4.6.3 A Description of Case Study One

The learning activity under study was embedded within a course offered at a large tertiary institution in a major New Zealand city. The institution focused on offering vocationally oriented programmes in a variety of areas including science, engineering, information technology, health education, human services, and education. Students could attain a range of qualifications from certificates and diplomas to bachelor and postgraduate qualifications. The institution attracted a significant number of international students, many of whom majored in business and administration, English language studies, and information technology. Since 2004, the institution had used Moodle (<http://moodle.org>) as its learning management system (LMS – see the glossary of terms for more information) and the learning activity under study was supported by an asynchronous discussion forum tool embedded within the LMS.

The learning activity under study was located within a second-year nursing course which was a compulsory component of a three-year nursing degree and ran for 15 weeks during the first semester (February to June 2007). The general aim of the course was to help student nurses develop theoretical understandings and practical skills in relation to decision making processes in clinical practice. The course blended face-to-face and online components (called e-tivities) by incorporating weekly lectures and tutorials and online learning activities. In addition, clinical rotations in nursing homes, clinics, and hospitals commenced one month after the course began.

There were four e-tivities in total during the course and their combined worth was 50 per cent of the course grade (students submitted an essay for the remaining 50 per cent). Each e-tivity was focused on a particular topic (for example, the use of research to aid clinical decision making) and spanned a three week period. The

three week cycle was composed of a reading week (week one), a response to reading week (week two), and a discussion between the students (week three). In the reading week, students were expected to locate and read one or two articles relevant to the topic under study that week. In the response to reading week, students were expected to post an online text discussing the reading in relation to an issue identified by the teacher. These postings were read only by the teacher and allowed her to assess the student's understanding individually before they entered an interactive environment. Also, they provided a safe space for the student to articulate their ideas away from the communal forum and a private channel for teacher feedback. Finally, in the discussion week (the focus of this study), prompted by a quote and some instructions and drawing from the work they had completed in weeks one and two, students were required to enter the online discussion forum (which they shared with ten other students) and post at least one text. In terms of assessment, the teacher intended to provide a general comment to the group in the forum and also assign an individual (private) grade to each student.

The 80 enrolled students were assembled into eight groups of approximately ten students who interacted online together. This study followed one of these online groups which was composed of six ENL (English as a Native Language) students and four international Chinese students. Specifically, the study followed the four core Chinese students and their teacher who were interviewed and observed repeatedly over a four month period. In addition, key informant interviews from a learning technologist and learning support tutor combined with observations of ENL student activity offered useful perspectives.

The teacher trained as a nurse in 1978 and joined the institution as a nurse teacher in 1984 after working as a practicing nurse. In addition to her nursing qualifications, she had a Diploma in Adult Teaching. Computers were not an

integral part of the teacher's private life and she used a computer only to send personal emails. However, at work, the teacher believed the computer was an indispensable tool which offered many useful functions including word processing, access to nursing journals, and email communication. The teacher was positive about Moodle and believed it facilitated communication between the students and teachers, but while she felt able to function at a basic level using Moodle (having previously worked as a tutor), she felt her knowledge and skill base was lacking in her new role as lead teacher, particularly in relation to online interaction.

Details of the student participants are given in tabular format in Appendix L.

4.6.4 Case Study Two

The learning activity under study was embedded within a paper offered at a large tertiary institution in a major New Zealand city. The institution offered academically-oriented papers across a wide range of subjects including the natural sciences, computer studies, education, and the social sciences. Students could enrol in a number of qualifications encompassing pre-degree, undergraduate, and postgraduate levels of study, and a significant number of EAL students were present.

The institution was an early leader in eLearning during the 1990s, displaying much innovation in developing online resources, and a learning management system (LMS) was designed and implemented across the campus. After this initial period of innovation, the LMS was commercialised by the university, core support personnel left the institution, and interest in the tool wavered. Eventually, the LMS became viewed as an end-of-life product which led to a lack of research and development, and various performance issues were evident such as system

failures and slow running speeds. By 2007 (when this study was conducted), use of the tool was patchy across the institution and central support was scant.

The learning activity under study was located within a first year management paper with an enrolment of approximately 260 students – ten per cent of whom were EAL students. The 260 students were divided into groups of approximately 22 students and these groups consisted of the same students who attended the face-to-face workshops and interacted online each week. While a number of students took the paper out of interest, the paper was compulsory for many students who did not meet the School's entry requirements for English. The duration of the paper was approximately four months and was offered in both Semesters A (February to June) and B (July to November) in 2007. The overall aim of the paper was to improve the writing skills of students, and to this end, it addressed both business and academic writing. The course blended online and face-to-face components by including weekly lectures, weekly workshops, and online learning activities. Students were required to submit three main writing assignments – an argumentative essay, a critical review, and a report – for assessment purposes.

The actual learning activity was supported by an asynchronous online technology which allowed students to see their peers' work and then upload their response to the communal web page (similar to an online discussion). The objective of the online component was to require the students to create drafts of their writing and engage in giving and receiving formative feedback with their peers. The online component was worth 35 per cent of the total grade and was composed of a weekly writing task (worth 10 per cent), a peer feedback on the writing task (worth 15 per cent), and a journal activity (worth 10 per cent). The journal activity was not examined in this study. The peer feedback task was the focus of this study although the writing task has been included in the analysis as it

provided the input for the response. There were seven weeks of online learning activities and each week represented one cycle – students uploaded their weekly writing task by Monday (for example, the introduction of an essay) and by Wednesday they chose another student’s writing task and gave feedback in open forum. Through the use of explicit procedural instructions about how to give feedback and specific criteria to evaluate differing texts, the teacher created a tightly structured activity for the students where student activity was prescribed. In terms of assessment, the tutors allocated three basic grades – a grade of 100 indicated the work was of a reasonably high standard; a grade of 50 indicated the work was an acceptable standard; and a grade of 0 was given for work of poor quality. Importantly, no written feedback was given by the teacher and instead it was given by the students.

The lead teacher/lecturer (referred to as the teacher) had a PhD in Business Communication and had convened the paper since its inception in 2002. She originally designed the learning activity and had used it, with only minor alterations, for five years. Historically, in addition to convening the paper and running the lectures, she had also taught a limited number of students. However, during this occurrence of the learning activity, she ceased these direct teaching duties and her primary responsibilities consisted of presenting the lectures, administering the paper, and assisting with the marking of student assignments. The teacher had a background in English language teaching and business communication. As an end-user of technology, the teacher expressed little interest in the technical aspects of online learning and described herself as a “technophobe” (Teacher One/Interview One) who avoided using the computer in her personal life.

In the running of the paper, the teacher was supported by four tutors who implemented the workshops, interacted with the students, and assessed student

work. Two tutors participated in this study – Tutor One and Tutor Two. They had worked together previously for two semesters and both had postgraduate qualifications. In this study, Tutor One was a core participant who was responsible for the two online groups under study and was interviewed repeatedly throughout the paper. She had a background in English language teaching and had taught in the course for two semesters. In terms of technology, Tutor One used email and word processing applications, but she had little experience using computers to teach and recounted one negative experience as a student in an online paper. In addition to the teacher and Tutor One, Tutor Two functioned as a key informant in this study who was responsible for several groups of students and agreed to be interviewed once. She had extensive experience in teaching at secondary and tertiary level, had a PhD in Literature, and had worked as a tutor in the paper for two semesters. Prior to her involvement with the course, she had not encountered eLearning as a student or teacher. In addition key informant interviews with a learning technologist, an information technology (IT) project manager, and another EAL student (Student Four) combined with observations of ENL student activity offered useful perspectives.

Details of student participants are presented in tabular format in Appendix M.

4.6.5 Case Study Three

Case Study Three was conducted at the same institution as Case Study Two. As a point of difference with Case Study Two, this case study captured a unique period in the history of eLearning at the institution as it transitioned from one centralised LMS to another (Moodle). The paper under study was actually one of 28 Moodle pilot papers running alongside the existing LMS platform in the latter half of 2007. Moodle (<http://moodle.org>) is an open-source learning management system which is freely downloadable from the internet and can support a broad range of

pedagogies. The learning activity was supported by an asynchronous discussion forum tool which allowed students to create discussion threads to display their work and then post a response beneath each other's work.

The learning activity was embedded in an elective paper offered within a postgraduate applied linguistics programme which examined assessment issues in second and foreign language teaching and learning. The course ran for one semester (approximately four months) and blended face-to-face and online components by combining weekly lectures, weekly presentations, and their ensuing discussions with an online component. Students were assessed on the online component (worth 40 per cent), their in-class oral presentations (worth 20 per cent), a summarisation report (worth 15 per cent), and a final report (worth 25 per cent).

The online component required the students to draw on the reading material (usually two assigned readings per week) and post an online text called a "DIQ" each week. The weekly DIQ activity occurred eleven times during the paper. The structure of a DIQ consisted of a discussion summary which succinctly reviewed the article, an impact statement which showed how the article influenced the student's thinking, and two questions which encouraged reflection and online discussion with classmates. The DIQ text was posted by Thursday each week and then students were required to re-enter Moodle, select a classmate's questions, and respond to them by Monday. There was no grouping and students were free to interact with their eleven classmates. The online component was followed by student presentations during the week where key issues raised in the online interaction were discussed face-to-face. After this, students were required to create a "summarisation report" which synthesised issues and concepts raised by the readings, lectures and online interaction, and finally, the students submitted a final report.

The paper was taught by a teacher who had a long and extensive history of using and studying technology in education extending back to the early 1980s. In terms of utilising computers, the teacher used computers frequently on a daily basis to research, communicate, and run the online course, and she was an active researcher in the area of computers and education. A total of twelve students were enrolled in the programme – four of whom were native English speaking domestic students and eight of whom were from a variety of countries including Malaysia, Thailand, Korea, and China. In addition, key informant interviews with a learning technologist and observations of other student activity offered useful perspectives. Details of the student participants are given in tabular format in Appendix N.

In summary, this section has described the sampling methods used in this study in relation to the selection of a case study site and the specific activity system for analysis. Also, it has provided a detailed description of the three case study sites and the research participants. In the next section, issues pertaining to the evaluation of qualitative research will be discussed.

4.7 Evaluating Qualitative Research

Ensuring that a study's findings can be trusted is a key concern of every researcher; however, concepts such as validity and reliability can be conceptualised differently depending on the methodology used in the study (Merriam, 1998; Neuman, 2006). In quantitative studies, researchers are concerned with validity and reliability, namely, does the research instrument measure what it purports to measure and does it generate the same results every time it is used (Bryman, 2004; Sarantakos, 2005). Within qualitative research, the relevance of these terms has been questioned and it has been stated that they are not congruent with the underlying ontological and epistemological assumptions of

a qualitative approach. Specifically, the concepts of validity and reliability seem uncomfortable within an idealist philosophy which rejects the notion of a single, objective account of a social reality awaiting discovery by the researcher (Bryman, 2004). Indeed, Lincoln and Guba (1985, p. 290) argue that qualitative research must be evaluated according to different criteria which redefine the conventional notions of internal validity, external validity, reliability, and objectivity. They contend that these conventional criteria are inappropriate within the naturalistic paradigm and that the concepts of credibility, transferability, dependability, and confirmability should be used to determine the value of a qualitative study (Lincoln & Guba, 1985, p. 300). These elements are now examined separately in relation to this study.

4.7.1 Credibility

As conventionally defined, internal validity is concerned with whether the findings are “congruent” with reality (Merriam, 2002, p. 25). Interpreted within the qualitative paradigm which asserts that reality is multiple and constructed by individuals, this term transforms into the concept of credibility which asks whether the participants’ constructions of reality have been accurately understood and reconstructed by the researcher (Lincoln & Guba, 1985, p. 296). Merriam (2002, pp. 25-27) suggests several strategies to enhance the credibility of qualitative research including member checks, peer review, researcher reflexivity, prolonged engagement, and triangulation. For this study, the main strategies employed were member checks, peer review, prolonged engagement, and triangulation.

By conducting member checks, the researcher asks participants to comment on researcher interpretations to ascertain if they “are *credible to the constructors of the original multiple realities*” (Lincoln & Guba, 1985, p. 296, italics in original).

In this study, member checks were interwoven with the strategy of prolonged engagement as they occurred over the duration of the paper. While accounts and observations generated data, the interviews were key tools to clarify issues, pursue interesting leads, and check that researcher understandings (or constructions) were credible reconstructions of the participants' constructions. Informed by Miles and Huberman (1994), preliminary interpretations were discussed with the participants and their opinions sought. This member-checking process was strictly an oral event, in other words, written interpretations were not shared. There was a balance to be met between the research goal of collecting as much credible data as possible and ethical concerns that asking teachers and students to read transcripts and comment on the content would inevitably add to their workload and might increase stress and anxiety.

The second strategy to enhance credibility was through a process of peer review conducted with my supervisory panel on a regular basis, at professional conferences, and with a paid peer reviewer. Interactions with others gave differing perspectives on the data which challenged me to justify my interpretations and, at times, to reconsider them. In terms of the peer reviewer, I developed a procedure based on the concept of "check-coding" (Miles & Huberman, 1994, p. 64) which required the peer reviewer to examine approximately ten per cent of the data in the study. While Miles and Huberman (1994) provided useful input into the process of peer checking, their guidelines appeared to have realist undertones; in other words, I felt they were suggesting that through peer checking, the researcher and peer reviewer might come to the same interpretation of the data. This position conflicts with the constructivist underpinnings of this study that adhere to a relativist ontology which both accepts and indeed embraces the fact that interpretations of reality will vary between individuals. In response to this, I deviated from Miles and Huberman (1994) and, drawing from Lincoln and Guba (1985), I asked the peer reviewer to establish, to her satisfaction, if my interpretations were credible to her – in other words, did

they make sense. During our discussions, she consistently agreed that my interpretations were credible, or on occasion, challenged me to justify my position. These interactions were invaluable in determining the strength of my interpretations, helping me to articulate my own thoughts about the data, and enhancing the credibility of the study.

The third strategy employed to enhance credibility was prolonged engagement. In each case study site, data were collected over a four to five month period for the duration of the learning activity. Weekly lectures and workshops were attended, interviews and accounts were conducted, and online activity was observed. In addition, a final separate interview occurred with each teacher after the paper had concluded. This prolonged engagement greatly enhanced the credibility of the study as it offered the opportunity to gather a significant amount of data, check and recheck my interpretations, and to increase rapport and trust with the participants.

The fourth strategy suggested by Merriam (2002) employs triangulation to enhance credibility. Triangulation is defined as employing multiple research tools in order to “view a particular point in research from more than one perspective, and hence to enrich knowledge and/or test validity” (Sarantakos, 2005, p. 145). Sarantakos (2005, p. 145) lists a number of forms, including method triangulation whereby several methods are used, time triangulation whereby data can be collected at different times, paradigm triangulation whereby qualitative and quantitative methods could be used together, investigator triangulation whereby a number of investigators are used, and sampling triangulation whereby two or more samples (for example, an experimental and control group) are used to test causal relationships. Using Sarantakos’ (2005) categories, this study employs both method and time triangulation as the data collection used multiple methods and data were collected at several points during the learning activity. Having said

this, there is a sense that the concept of triangulation lies uncomfortably within this qualitative study. While observing that qualitative research does employ triangulation, Merriam (2002) notes that this practice has been contested from a post-modern perspective. Richardson (2003, p. 517) challenges the use of a triangle metaphor as it carries with it the assumption that there is a fixed point or one specific reality (or construction of reality) to be discovered. Richardson (2003) prefers to use a crystal metaphor which “reflect [s] externalities *and* refract [s] within themselves, creating different colors, patterns, and arrays, casting off in different directions. What we see depends upon our angle of repose” (Richardson, 2003, p. 517). Using the metaphor of the crystal, we can re-view the use of multiple sources of data collection at multiple times from multiple participants as providing differing perspectives on the eLearning phenomenon. These “colors, patterns, and arrays” (p. 517) enrich understanding without suggesting that there is some fixed point to focus on. Drawing from this conceptualisation of triangulation, the intent of this inquiry is to employ multiple methods to provide differing perspectives or angles of vision on the phenomenon of eLearning without assuming that a fixed reality exists.

4.7.2 Transferability

The conventional equivalent of transferability is external validity which refers to the extent a study is able to generate statistical generalisations from a random group to a wider population (Sarantakos, 2005). In contrast, a key strength of qualitative research is its ability to explore the particular qualities of phenomena rather than extrapolate findings to wider populations. External validity as conceptualised in a statistical sense is not congruent with a relativist ontology and the term must be considered differently within a qualitative paradigm (Merriam, 2002).

Lincoln and Guba (1985, p. 297) assert that only “working hypotheses” can be made which may allow some transfer between contexts depending on the degree of similarity between them. They argue that the extent to which findings can be transferred from one context to another depends on the reader rather than the investigator. Only the reader knows the receiving context; thus, the responsibility of the investigator is to describe the study in “sufficient descriptive data” (Lincoln & Guba, 1985, p. 298) so that the reader can decide if the sending and receiving contexts are similar enough for the findings to be transferred. The researcher’s role is to provide enough description “so that readers can vicariously experience these happenings and draw conclusions (which may differ from those of the researchers)” (Stake, 2003, p. 141). Firestone (1993, p. 22) agrees that case-to-case transfer is legitimate, but he warns that by passing responsibility from investigator to reader any generalisations are inherently weak.

In order to enhance the transferability of this research, context descriptions and interpretative commentaries have been provided and a multi-case approach has been used. In terms of context descriptions, a detailed description of each case study site, the learning activity under study, and the research participants has been provided in this chapter and in the appendices, and also a brief description prefaces the findings. In terms of interpretative commentary, the findings have been accompanied by a commentary (Erickson, 1986) which surrounds the data and reveals deeper levels of meaning. In addition, this commentary provides contextual information about the case and offers a window into the researcher’s interpretative processes, thus revealing the origin of and evidence for particular interpretations. Finally, a multi-case approach has been used in order to enhance transferability as it gives the reader a selection of contexts to consider. Each case study provides variation in discipline, class size, level of study, curriculum design, and teacher experience. It is hoped that within the case studies, the reader will discover contexts which they can identify with and these similarities will facilitate the transfer of the findings.

4.7.3 Dependability

The conventional equivalent of dependability is reliability which is concerned with establishing whether the findings are stable, consistent, predictable, and replicable (Lincoln & Guba, 1985). However, in qualitative research the concept of reliability is problematic as human behaviour is in a constant state of flux and replication of the study will not provide the same results (Merriam, 2002). Of greater importance is “*whether the results are consistent with the data collected*” (Merriam, 2002, p. 27, italics in original); namely, would others agree that the results make sense from an examination of the research process. Merriam (2002, p. 27) suggests several strategies to increase the dependability of a qualitative study including triangulation, peer review, and an audit trail. Triangulation and peer review have been addressed earlier, and the following section discusses the generation of an audit trail.

An audit trail as described by Lincoln and Guba (1985, p. 319) is a “residue of records stemming from the inquiry”. More specifically, it is a record of the data collection process and data analysis procedures and decisions made during the study (Merriam, 2002, p. 27). Guided by Lincoln and Guba’s (1985, pp. 382-384) comprehensive description of an audit trail (which is based upon Halpern, 1983), an audit trail was generated in this study. Data such as the original digital recordings, transcripts, and handwritten field notes have been kept and an historical record of various research processes (for example, early drafts of the data analysis) has been preserved in virtual formats. It is often tempting to discard paper drafts or write over digital documents; however, by doing so, the audit trail disappears. Therefore, I have resisted the temptation to discard procedural evidence and have kept much material including “scribbled on” transcripts, copies of the research instruments (for example, interview and account schedules), copies of ethical approval letters from relevant ethics boards,

participant and institutional consents, and a handwritten journal. The journal is particularly worthy of mention as a record of my experiences conducting the research. Following Lincoln and Guba (1985, pp. 382-384), the journal included day-to-day information such as appointments with participants, personal information such as my developing thoughts and feelings, and methodological information such as decisions about case site selection. This journal has not only functioned as a trail showing others how I arrived at my results, but it has also proved to be useful as a memory stimulant in the writing of this methodology.

4.7.4 Confirmability

Confirmability is the equivalent of objectivity in conventional research (Bryman, 2004). According to Sarantakos (2005, pp. 92-93), the concept of objectivity is conceptualised differently in quantitative and qualitative paradigms. In quantitative research, “value neutrality” requires that inquirers ensure personal bias does not influence the process, while in qualitative research, “normativism” asserts that research is not value-free and that the inquirer should disclose this inevitable bias rather than pretend it does not exist.

Researcher reflexivity is a valued strategy in qualitative research (Merriam, 2002). The disclosure of researcher beliefs, assumptions, and expectations, and the use of interpretative commentary describing changes of perspective in the researcher’s point of view are valuable strategies. In this study, three approaches to researcher reflexivity have been adopted. First, I have written this methodology from a personal perspective by articulating my experiences designing and implementing this inquiry and making explicit the thinking behind key research decisions. Pertinent issues or problems encountered during the design and/or implementation of the methodology have not been glossed over but have been discussed in detail. For example, I have discussed issues concerning action research and the

frustrations encountered when conducting accounts. Second, I have employed “the practice of rigorous self-reflection about one’s own preferences, prejudices, hopes, and concerns” (LeCompte, Schensul, Weeks, & Singer, 1999, p. 66) to the best of my ability as I have conducted this study. The use of activity theory has sensitised me to the mediation of historical factors such as beliefs, expectations, and previous experiences which can shape experience and, throughout the study, I have challenged myself to justify decisions and assumptions. Finally, through the process of peer review, others have given me opportunities to reflect upon the role my biases played in shaping the research project by challenging and questioning my decisions and assumptions.

In summary, this section has considered the trustworthiness of this study in relation to the concepts of credibility, transferability, dependability, and confirmability.

4.8 Ethical Considerations

Cohen et al. (2000, p. 47) observe that educational research is “an inescapably ethical enterprise ... to be conducted rigorously, scrupulously and in an ethically defensible manner.” In the light of this statement, ethical approval was obtained from both institutions before the research commenced. Additionally, ethical issues have been considered at every step of the research process and the ethical standards of the University of Waikato have been followed (<http://calendar.waikato.ac.nz/assessment/ethicalConduct.html>).

4.9 Data Analysis Procedures

Lincoln and Guba (1985, p. 332) claim that “data are, so to speak, the *constructions* offered by or in the sources; data analysis leads to a *reconstruction*

of those constructions.” Acknowledging this statement, this section will describe the procedures employed in this study to transform the participants’ constructions into new constructs shaped by a sociocultural perspective. However, before embarking on a discussion of data analysis procedures, it must be made clear that it is only for organisational reasons that this section is separate from the previous description of the data collection methods. This may give the reader the false impression that the research process was linear, that is, data collection was followed by data analysis. This was not the case as data collection and analysis occurred concurrently – a defining characteristic of qualitative research (Merriam, 2002; Sarantakos, 2005).

4.9.1 Theoretical Considerations

Acknowledging the “highly idiosyncratic and intuitive” (Merriam, 2002, p. 21) nature of qualitative data analysis and the argument that grounded theory methods can be used as “flexible, heuristic strategies rather than formulaic procedures” (Charmaz, 2000, p. 510), this study has drawn upon two analytic strategies – the Constant Comparative Method (Glaser & Strauss, 1967; Lincoln & Guba, 1985) and a form of typological research discussed by Goetz and LeCompte (1981). While the exploratory nature of the research questions supports an inductive approach to analysis, the use of activity theory as an interpretative tool has imposed a sociocultural perspective onto the data. Activity theory has functioned as a form of typology generating pre-existing categories of subject, tool, object, outcome, community, rules, and division of labour, and defining their properties in advance (see Appendix K). The activity theory-based categories do not emerge from the data but are imposed upon it; thus, the study deviates from inductive methods such as grounded theory which requires categories to emerge from the data.

Goetz and LeCompte (1981) contend that the place of theory determines where a study lies on the inductive-deductive continuum. At one end, purely inductive research starts with data and builds to general theories or propositions while at the other end, deductive research begins with a theoretical system and brings it to bear on the data. Generative research which is concerned with discovery rather than verification (as this study is) can be informed by theory; however, it lies in the centre of this inductive-deductive continuum. Similar thoughts are echoed by Miles and Huberman (1994, p. 61) who discuss a coding strategy which lies between “a priori and inductive approaches” and which consists of a “general accounting scheme for codes that is not content specific, but points to the general domains in which codes can be developed inductively”. Likewise, in this study, activity theory-based categories pre-exist the data as “general domains” (Miles & Huberman, 1994, p. 61) in which sub-groups have been developed inductively. Once data has been placed within an activity theory domain, the Constant Comparative Method (Glaser & Strauss, 1967; Strauss & Corbin, 1990) has been used to compare a unit of data with other units in the same category. For example, initially, the category of *subject-tool-object*, a typological element (Goetz & LeCompte, 1981) or general domain (Miles & Huberman, 1994), was used to code data which met the criteria for membership in that category as defined by the decision guidelines document (Appendix K). However, as data were amassed in the category and comparisons made between units of data within it, variations within this category of tool emerged inductively. This led to subdivisions within the category such as the English language and the computer interface. Additional information about coding decisions is included in Appendix K.

The preceding discussion has outlined general theoretical considerations for the data analysis in relation to inductive processes and typological analysis. In the following section, more concrete details about the practical implementation of the data analysis process are provided.

4.9.2 Implementing the Data Analysis

Within the data analysis process in this study, there were two distinct phases: Phase One which was concurrent with the data collection and Phase Two which occurred after the data collection period had ceased.

Phase One was characterised by an informal analysis of the data concurrent with data collection. Using the concept of “emergent design” (Lincoln & Guba, 1985, p. 259), an iterative cycle of data collection informing data analysis was undertaken (Merriam, 2002; Sarantakos, 2005). Key themes, concerns, and issues were identified in the existing data and then revisited and explored in the subsequent collection of data. Both the accounts and observations kept a steady stream of material coming into the study for interpretation and analysis which was then used to generate questions for the next round of interviews. This iterative approach sharpened attention and directed it toward specific themes which had been identified by the participants, and it provided a site for initial understandings to be tested and challenged. Rather than impose rigid categories on the data at this tender stage, a flexible and informal approach was adopted whereby hunches were followed and explored based on activity theory concepts.

Phase Two of the data analysis occurred after the data collection had been completed. In this phase, text units deemed relevant to the study were selected and categorised using activity theory as a form of typology. Essentially, Phase Two was a process of disaggregating the data into units and then reassembling these units into new structures with newly acquired meanings (Dey, 1993). This is a form of “latent coding” (Sarantakos, 2005, p. 305) in which the text is read, interpreted, selected, and labelled as a particular semantic unit. Textual units were selected from the material obtained from the data collection methods. Boyatzis

(1998, p. 63, italics in original) refers to this “unit of coding” as “*the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon.*” The actual size of the text units could be as small as a phrase; however, as a general rule I tended to select more text rather than less in order to preserve some of the context surrounding it. Krippendorff (2004, p. 101) refers to this material as “context units” which surround the actual unit of data being selected and give it meaning.

As the case study unit of analysis was the activity system which was directed towards the interactive online learning activity as experienced by the selected EAL students and their teacher(s), any data that were perceived to be connected to the learning activity were selected. Data included local and global perspectives. For example, local data might take the form of a student discussing her thoughts about what the learning activity entailed while more global perspectives might focus on a teacher’s perception that eLearning was poorly supported at the institution. Like layers of an onion, the learning activity under study did not stand in isolation, but intersected with and was embedded within other activity systems.

However, some material from the collection process was rejected for a number of reasons. First, it was discarded if it had no obvious relevance to the unit of analysis (for example, off-topic comments which appeared on the recordings). Second, material obtained through the use of poor interviewing techniques such as the use of leading or closed-ended questions was often excluded as the purpose of this inquiry is to understand the participants’, not the researcher’s, constructions of reality. Third, if a lack of comprehension was suspected, then material was not selected. This was a genuine concern when interviewing EAL students as there were several occasions when a tangled or inappropriate response was given suggesting the participant did not understand the question or could not communicate the desired response.

After selecting a text unit from the data set, this material was reconceptualised into new constructs based on activity theory. It was a process of categorisation which “define[s] units by their *membership in a class or category – by their having something in common*” (Krippendorf, 2004, p. 105, italics in original). As a form of coding, it creates “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study” (Miles & Huberman, 1994, p. 56). This stage of the analysis was supported by the creation of an analytic tool entitled “decision guidelines for data analysis” (see Appendix K).

In the creation of the decision guidelines tool, some of the literature surrounding the use of activity theory as a conceptual tool was consulted (Brine & Franken, 2006; Gillette, 1993; Hewitt, 2004; Issroff & Scanlon, 2002; Jonassen & Rohrer-Murphy, 1999; Kaptelinin, Nardi, & MacCauley, 1999; Nardi, 2005; Van Aalst & Hill, 2006; Yamagata-Lynch, 2003). Drawing from these authors, decision guidelines were developed which provided categories or groups into which data could be placed and “clear operational definitions” so that data could be coded in a consistent manner by myself and others over time (Miles & Huberman, 1994, p. 63). The guidelines conceptualised the learning activity from a sociocultural perspective and enhanced the data analysis by improving the consistency of coding decisions.

In addition to mapping activity theory onto the learning activity, the concepts of contradiction (Engeström, 2001) and affordances (Gibson, 1979) were brought to bear on the data, enriching the analysis. Informed by research which focuses on contradictions (Barab, Barnett, Yamagata-Lynch, Squire, & Keating, 2002; Engeström, 2001; Murphy & Rodriguez-Manzanares, 2008; Russell & Schneiderheinze, 2005), the data were considered in relation to tensions and

stresses between various contextual factors and how these conflicts affected outcomes. The concept of affordance (Brine & Franken, 2006; Gibson, 1979; Hutchby, 2001; Steel, 2009) was also used to consider how the mediation of the computing technology shaped the learning activity. Gibson (1979, p. 127, italics in original) states “the *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill.” Also, affordances have functional, relational, and cultural aspects (Hutchby, 2001). As functional entities, they have properties which “allow certain actions to be readily performed with them, and which therefore push behaviour in certain directions” (Tolmie & Boyle, 2000, p. 120). However, the affordances of an object are also relational in that they may vary for different individuals. For example, a small rock in the Australian desert can offer a lizard protection from the sun, but not the larger kangaroo. In the human domain, affordances can also be shaped by cultural factors. Objects can be associated with values and conventions which control how they are used; therefore, affordances do not necessarily have to be based on the natural features of an object (Hutchby, 2001). It follows from this that activity is not deterministic, solely shaped by the affordances of a tool. Rather, understanding the concept of agency – the way a person uses a tool – is central to understanding the concept of affordance and the nature of participation.

The final stage of the analysis in Phase Two was characterised by a cross-case analysis which identified similarities and differences across various manifestations of the phenomenon (Stake, 2006). This was a process of comparing the data across the three learning activities in the nursing, management, and applied linguistics papers, and synthesising the data into more global descriptive perspectives.

4.10 Chapter Summary

This methodology chapter has covered a number of issues and highlights the complexity of the research process in this study. This chapter has argued that the exploratory nature of the research questions coupled with a sociocultural theoretical framework are consistent with the use of a qualitative paradigm. By adopting an activity system as the unit of analysis, ethnographical and phenomenological approaches which aid in the description of the social, cultural, and historical context were indispensable components of the methodological toolbox. In addition, this chapter has covered important topics such as action research, ethical considerations, and evaluative issues concerning the trustworthiness of this study. Remaining cognisant that the research design is a cultural artefact mediating the study, the implementation of various research methods such as interviews, observations, sampling procedures, and data analysis methods has been discussed in relation to the study's outcomes.

In the next chapter, the research findings for each case study will be presented individually, and then synthesised into a cross-case perspective. The findings will be grouped and given meaning using activity theory as an interpretative tool and the interpretative commentary will draw upon the concepts of affordances and contradictions to enrich understanding.

CHAPTER FIVE: FINDINGS

5.0 Introduction

The intent of this chapter is to present the findings from the three case studies in the form of description, data, and an interpretative commentary. This chapter has been divided into five main sections. After articulating the approach employed in the reporting of these findings, the following three sections will present the findings from each case study as an individual holistic unit. The final section will briefly present the cross-case analysis which will synthesise the findings into global perspectives to the extent that this is possible while still maintaining the integrity of the cases. These perspectives will foreshadow further development and an extended discussion of particular issues in Chapters Six and Seven.

5.1 Considerations in the Reporting of these Findings

A key belief of activity theory is that “activity is a historically developed phenomenon” (Jonassen, 2000, p. 108); therefore, it is not enough to simply describe a phenomenon, one must also understand its history or how that phenomenon has emerged and developed over time (Cole & Engeström, 1993; Lantolf & Appel, 1994). Acknowledging the importance of historicity, the reader is referred back to descriptions of the case study contexts provided in the Methodology Chapter (Chapter Four) and in Appendices L, M, and N. These descriptions outline the history preceding the learning activity and assist the reader in forming a richer understanding of the learning context. In this chapter, only brief summaries will preface the findings from each case study.

In terms of the content of this chapter, drawing from the work of Erickson (1986, pp. 151-152), these findings will include data such as direct quotes from participants, general descriptions that comment as to whether the data are typical or atypical of the data as a whole, and interpretive commentary that may precede or follow these elements. This interpretative commentary performs several functions: it surrounds the raw data and “guide[s] the reader to see the analytic type of which the instance is a concrete token;” it focuses attention upon the “meaning-interpretations” of the author; it draws attention to deeper levels of meaning that may be overlooked by a cursory reading of the text; and it provides additional information to help contextualise the data (Erickson, 1986, p. 152). Moreover, this commentary may help the transfer of the findings and enhance the credibility of the study. In terms of transferability, it may assist the reader in making comparisons between the research context and another context, thus, facilitating the transfer of the findings beyond the bounds of the specific case study. In terms of credibility, the commentary goes beyond the raw data and provides a window into the researcher’s interpretative processes, revealing how the researcher might have come to an interpretation of a particular instance of data.

Canagarajah (1996) contends that qualitative researchers have a tendency to slip back into traditional reporting conventions, ignoring the subjectivity of the researcher to shape the research process when reporting the findings. Factors such as the complexity of the research, power relations between the researcher and participants, and the transformation of the researcher are often concealed in the final report of the findings. He claims that “this convention hides the manner in which the subjectivity of the researchers – with their complex values, ideologies, and experiences – shapes the research activity and findings” (Canagarajah, 1996, p. 324).

Acknowledging the validity of Canagarajah's (1996) comments, it is pertinent to make explicit the manner in which I (as the researcher) have shaped these findings. These findings have been constructed, deconstructed, and reconstructed over the period of a year, and the process has often been a cognitively and affectively painful experience of interpreting and reinterpreting the data as my understandings have grown, and in particular, my understanding of activity theory. Through the use of a peer checker and my supervisors, I have taken steps to ensure that my interpretations are credible, but ultimately I as the author have determined the form of the findings. In terms of what I have chosen to report here, it should be made clear that these findings represent only a portion of the data collected. A myriad of factors have shaped learning in these educational contexts and these factors implicate not only the technology or the pedagogy, but also issues around teacher and learner beliefs, the influence of past experiences, the organisation of teaching and learning practice, social rules of interaction, and broader issues relating to institutional support for eLearning and the values embedded within communities of practice. Limited space precludes me from including all these aspects and I am driven by the need to report findings which will make a contribution to understanding. Therefore, data have been excluded from these findings including material relating to the mediation of the computing tool (for example, access to computers and broadband connections), the mediation of the online interface (for example, the format and navigational aspects of the online space), and social rules of engagement (for example, norms and conventions which regulate social interaction). In addition, a number of factors in the wider context have been excluded including issues surrounding institutional support of eLearning and central learning support for students. This selection process may obscure the multilayered and complex nature of the findings that encompass both macro (broader institutional factors) and micro (local factors specific to the learning activity) level elements.

The following reporting of the findings uses two activity theory-based categories to structure the discussion: *making sense of the learning object* and *occupying the role of knowledge resource*. The first category has emerged from the concept of object orientedness and examines the ways in which the participants related to the learning object and ascribed meaning to it as they engaged in the activity. The second category has emerged from the concept of the division of labour and considers how the work involved in transforming the learning object into an outcome was organised amongst the teacher(s) and students. These categories are not described here and the reader is referred to Chapter Three for a fuller description.

5.2 Case Study One Findings

5.2.1 A Brief Description of Case Study One

This case study represents a learning activity embedded within a clinical decision-making course in a blended second-year nursing programme at a tertiary institution. The learning activity/learning object under study was called an e-tivity and occurred in the third week of a three week cycle. In the first week, students located an article(s) in relation to a topic; in the second week, the students uploaded an essay-like text to the teacher about the topic; and in the third week (the focus of this study), the students were asked to participate in an online discussion with their peers by responding to a quote and/or instructions related to the topic. The three week cycle was repeated four times during the paper and each cycle was worth approximately 12.5 per cent of the total grade. The core participants were a teacher and four EAL (Chinese) students who were members of a mixed (both EAL and ENL) group of ten students. In addition key informant interviews with a learning technologist and a learning support tutor combined with observations of ENL student activity offered useful perspectives. Further information about the context can be found in the Methodology Chapter and appendices.

5.2.2 Making Sense of the Learning Object

As the participants engaged in the e-tivity and the learning object was transformed, the data suggest that the teacher and students related to the object in differing ways by bringing their previous experiences and understandings to bear on the learning object. These historical factors shaped the way they ascribed meaning to the learning object and influenced how they engaged with it. Specifically, these factors led to the emergence of stresses, conflicts, and internal contradictions within the learning object. In this section, internal contradictions within the learning object are examined from three perspectives: the teacher's generation of two versions of the object, the prevalence of limited forms of cooperation, and the dominance of the objective of safe practice. The final section explores the relationship between the students and learning object in terms of reciprocal transformation; namely, as the object was transformed, so too were the students.

5.2.2.1 Two representations of the learning object

This discussion considers the emergence of two versions of the object and the influence of historical factors on the resolution of this tension. As the teacher engaged in the e-tivity discussion, the data suggest that she projected two representations of the learning object as both a dialogue and a monologue.

The representation of the object as a dialogue was advanced by the teacher in a number of ways as she engaged in the learning activity. First, the functionality of the online discussion forum afforded dialogic interaction in that students could start new discussion threads to create web-type interactive structures, reply to other postings, and respond multiple times. Second, the teacher's instructions on the webpage

alluded to dialogue through the use of terms and phrases such as “*participate,*” “*discussion,*” “*discuss this statement with your group,*” and “*feel free to reply to anyone’s postings as interaction is important here*” (Online Observation 12). Moreover, in the face-to-face tutorials, the teacher encouraged the students to “*argue, bring up new ideas, encourage others to have new ideas*” (Classroom Observation 2) and “*enjoy the tooing and froing [sic]*” (Classroom Observation 6). Finally, the task was represented as dialogic in the marking criteria (albeit minimally) with the terms “*multiple messages accepted,*” “*300-500 words each entry,*” and “*respectful dialogue.*”

However, while some of the data suggest that the teacher represented the learning object as a dialogue, other examples suggest that another, more dominant representation was present. Under this representation, the learning object was defined as a type of responsive monologue whereby the students posted a lengthy text which connected to their classmates’ work in a minimal way and functioned predominantly as an individual display of understanding. The teacher used three key pedagogical tools – the website instructions, the marking criteria, and the course outline – to represent this version of the learning object to the students.

In relation to the website instructions, the teacher did not clearly differentiate between the previous learning object (the response to reading text which was an essay to the teacher undertaken in the previous week) and the e-tivity discussion learning object. She used the term *discussion* to refer to both text types even though they were clearly different forms of discourse. Also, in the marking criteria for the online discussion, formal conventions of writing were emphasised. For example, the criteria stated that the discussion text would have few grammatical errors; a referencing system would be used; and the text would be “*polished*” with a “*consistently professional approach.*” The marking criteria hinted at multiple dialogic postings by stating “*300-*

500 words each entry” but then followed this with “one entry required.” As a key pedagogical tool, the marking criteria communicated valued aspects of the task from teacher to student, and in this case, it appears that a single text which used formal academic writing conventions was valued and rewarded with marks. Spontaneity, multiple postings, or collaboration with others, were not identified as being valued aspects of the task. Finally, in relation to another pedagogical tool – the course outline – the learning outcomes of the activity were primarily individual rather than collective. For example, a stated outcome such as “*identify the characteristics of effective clinical decision makers*” focused upon individual understanding and did not explicitly recognise that group collaboration and knowledge construction were desired or valued outcomes. Thus, through the use of various pedagogical tools, the teacher represented the learning object as an individual, rather than a collective endeavour.

From an activity theory perspective, the presence of two representations created an internal contradiction in the learning object. While this situation could be problematic in this activity system, in practice, this was not the case. Interestingly, as the subjects transformed the learning object, the tension between the two learning objects was relieved as one subsumed the other. The teacher revealed the actual learning object in the following excerpt:

The only hassle, the only drawback with that is that we’re only marking their first entry because that’s not the main thing that we want. If we were wanting the interaction, we would mark it accordingly, but we are just wanting them to put their thoughts out into the public which will be their group members. (Teacher 1/Interview 2)

Thus, the teacher’s actual objective was to require the students to display their understanding rather than engage in any substantive way with their peers. She noted “*the interaction is there for those who wish to engage, the brighter students, but even they know that they’re not going to get anything more from it so quite wisely they save their time*” (Teacher 1/Interview 2). Although a dialogic discussion between

students was advanced by the teacher, it was optional and not specifically rewarded with marks. In practice, the real objective of the activity was to generate a text which displayed individual understanding for teacher assessment and conformed to conventions associated with written academic text forms. By projecting a dialogic veneer which is, in practice, not expected or required, the teacher created a quasi-object.

There is a significant amount of data which suggest that four historical factors played key roles in relieving the internal contradiction in the learning object and enabled the monologue text to become the dominant representation by subsuming the quasi-object. These factors are the teacher's lack of knowledge of eLearning pedagogy, the teacher's negative experiences as an eLearning student, the students' previous experiences as participants in an online discussion, and the teacher's beliefs about learner abilities.

First, the teacher's lack of knowledge concerning eLearning pedagogy, particularly in relation to online discussions, was a key factor. When asked about the learning philosophy which supported the e-tivity discussion, the teacher appeared flustered and then advanced a view that resembled a constructivist approach. What is interesting here is that she did not articulate a familiarity with social theories of learning.

Researcher: Could you give me your thoughts about the learning philosophy that sort of underpins the discussion?

Teacher one: That's a good question!

(Teacher one laughs and then sighs)

Teacher one: And I'm actually quite flummoxed by it really, I hadn't thought that through, I can only talk from a personal perspective...I like to introduce students to new ideas. I'm a little influenced by Piaget's ideas where you introduce ideas to students or to people and then their thinking becomes more complex as time goes by when they keep revisiting that um initial idea...and I, I like to think that this paper has got my students thinking more about from that same perspective in that if we hadn't kept talking about decision making over and over again, they

would had never had realised they were doing it. And that therefore has made their thinking itself more and more complex. (Teacher 1/Interview 3)

She appeared unsure about how to practically assess dialogue in a discussion:

The logistics of how we actually organise the marking if we do that [require dialogues between students], what constitutes a good mark, is it the amount of times you respond, what about the quality of the response, etc, etc, so maybe all that's in the too-hard-basket that could be one of the reasons why I'm not very keen on that idea. (Teacher 1/Interview 2)

Her lack of pedagogical knowledge was further compounded by confusion about the learning outcomes of the course.

The fact that we didn't fully understand what we were doing three years ago has made our pathway to understanding what we really want from the students, it's been a bit fraught, and we're just getting to the stage now where we think we know what we want from the students. (Teacher 1/Interview 1)

Moreover, while she had performed in the role of online tutor in the past, the transition to lead teacher was a major one, demanding new understandings of eLearning pedagogy which she lacked.

We have to um learn more about online work for starters. I think that is the problem, um, we haven't got enough experience ourselves to actually move this on. It's not a Moodle thing, it's how to conduct online courses, um, yeah, if I'm still in that paper next year, that can be one of our professional development aims I think, and even for my own second semester this year, I think I might see if I can find anything that's going on that talks about how to actually construct online courses over and above the actual Moodle courses. (Teacher 1/Interview 2)

Based on these historical factors, it is perhaps unsurprising that the teacher generated an internal contradiction in the learning object. By moving into the role of lead teacher, she had inherited an interactive discussion activity without a deeper understanding of social theories of learning in relation to curriculum design. This situation was further aggravated by the presence of historical confusion around the objectives of the course.

The second historical factor pertains to the teacher's previous experiences as a student participating in an online discussion. From her remarks, it was clear that this experience deeply affected the teacher, instilling a reluctance to use dialogue in her pedagogical approach and a fear that online discussions might degenerate into superficial exchanges between students. When recounting her experience, she recalled students "*who just pontificated on and on and on, so that the amount of reading was hopeless.*" She added that:

You just did the minimum to actually pass the course. You had to put your two responses in yourself, well I think it was the day that um, the chap who worked in the Boeing factory was just about crying into his computer because it had been one of his planes that had hit the towers...so I sent a nice sympathetic thing to her, that to him, that counted as one of my responses (laughter). So really from an educational point of view it was a bit hopeless. (Teacher 1/Interview 1)

It is interesting to note that the teacher did not reflect upon the pedagogical design of this online discussion. There was no critique of, for example, the way the student interaction was structured or modes of assessment. Rather than unpick the mediation of the pedagogy, the teacher condemned the use of online discussions out of hand. During a later interview, the teacher expressed similar sentiments when she offered a fairly bleak picture of the efficacy of student-to-student interactive learning activities:

Now I run lots of tutorials as well face to face, and I can put people into groups and do all sorts to get them to talk to each other but the quality of what they do is sometimes pitiful right through the whole 15 weeks anyhow. So, to compare online interaction with face to face interaction, you've got to be very honest. It sounds good that you can put people in a circle and make them talk to each other. In practice they really don't. They are just forced to say some words but for me that's not proper interaction. Um, all you can hope for is over 15 weeks that you gradually get those very very quiet ones to actually speak up and say one or two sentences to the whole group because of different personalities that you've got, and the powerful ones will overpower the quiet ones anyhow. (Teacher 1/Interview 3)

In this passage, expressions of helplessness and resignation infuse the teacher's comments. Once again, she fails to deconstruct these experiences by identifying specific problems and suggesting an alteration in pedagogy such as changing

assessment practice which may stimulate communication between the students. As observed earlier, a lack of pedagogical knowledge is implicated here.

The third historical factor that contributed to the dominance of the monologue text pertained to the students' past experiences in an online discussion (in another nursing course) which were drawn upon as powerful frames of reference to inform their understanding of the learning object. During interviews, the students expressed the belief that the term *discussion* meant a linear progression of predominantly encapsulated monologues, limited interactivity between students, and the use of formal stylistic features. Additionally, three of the four EAL students articulated an individualistic conception of the discussion; for example, Student Three believed the purpose of the discussion was to "*have your own learnings from the discussion*" (Student 3/Interview 1). In the face of internal contradictions in the learning object, these previous experiences functioned as powerful mediators to assist the process of meaning-making or determining what "doing" the learning object entailed for the students. It is hardly surprising that the reproduction of past behaviours which had previously been successful was the learning strategy of choice

The fourth historical factor which supported the dominant representation of the learning object stemmed from the teacher's belief that pedagogy was constrained by pragmatic considerations. She was sympathetic towards the EAL students, believing that they were "*working horrendously hard*" (Teacher 1/Interview 2), and "*juggling their priorities*" (Teacher 1/Account 4). She noted:

You've got to be pragmatic about this. This paper is assessed throughout the fifteen weeks. Ok, they are not interacting with each other as well as the educational theorists would want, but they have a job to do, they have very busy life as students and they will adopt student behaviour which is 'do what you have to do to get through and still have a laugh,' and I've got some sympathy with that idea even though I'm the one who's pushing them at this end. (Teacher 1/Interview 3)

In the passage above, the teacher lowered her expectations of the quality of online interaction, arguing that learning is a compromise between optimal pedagogy and practical real-life conditions. Thus, while dialogue may be the ideal, it was invariably constrained by day-to-day concerns as the students focused on the practicalities of negotiating their various home, school, and work commitments. As the teacher related to the learning object, she drew upon this powerful belief about the students to make sense of the object.

In summary, this section has considered the data in relation to an internal contradiction which existed in the learning object and the influence of historical factors (previous beliefs and understandings) in shaping the way the teacher and students related to the object. The findings show that tensions existing between the two representations of the learning object disintegrated as the quasi-object (representing the co-construction of knowledge amongst the students) was subsumed by the belief that the learning object was predominantly an individual assignment displayed for assessment in order to further the individual's progress as a nursing student.

5.2.2.2 The prevalence of limited forms of cooperation

This discussion considers the findings in terms of the objectives that were embedded within the object's meaning and how these objectives shaped the process of meaning-making for the EAL students as they participated in the learning activity. The data suggest that, in contrast to the interactive nature of discussions where students may cooperate and collaborate together to further individual and group understanding, the objective of the learning task for the students was focused on individual performance. While the students certainly expressed interest in their peers' work, this interest tended to focus on using their peers as resources to stimulate their own thought so they could undertake their individual posting. Their individualistic goals appeared to

represent a limited form of cooperation rather than collaboration. This distinction between cooperation and collaboration is taken from Lewis (1997, p. 212, italics in original) who defines the former term as “a supportive community of actors who agree to help one another in activities aimed at attaining the *goals of each person involved*” and the latter term as “the establishment of a common meaning and language in the task which leads to the community setting a *common goal*.” This individual preoccupation is suggested by Student Five who quickly moved through a limited number of postings in order to complete her work. She observed:

Oh, I don't really read lots of people's posting. I just read the first one, the second one, and the third one. And for the first one, actually I found that I couldn't understand so I didn't read it, I did not spend lots of time on it. (Student 5/Account 3)

Furthermore, the comments below suggest that the students viewed the learning object as a vehicle to display their own understanding rather than a site to interact and build common understandings with peers.

Most of time I didn't participate fully with other people because, you know, I will like, I will say I agree with somebody and I will provide reason and I will put my stuff there and then I will never look at back, you know, go back, return to the posting again. (Student 4/Group Interview)

I think the postings are mostly about your own personal opinions of experience, so I just write my own opinions. I don't interact well with the other student. (Student 3/Group Interview)

There is a strong sense here that both students perceived the learning object as a singular event with no prolonged engagement with peers. There was no intent to negotiate meaning, contest knowledge with their peers, return to the forum to re-engage with the group, or experience a transformation in their understandings from this type of interaction. The data suggest that, for the students, the objective of the activity was to complete their discussion posting as expediently as possible in order to gain marks for themselves and progress to the next assignment. The communicative intent was to exchange information once in order to complete the posting, and the objective was to cooperate with others in a limited manner to attain

individual goals rather than to interact in deeper ways to negotiate meaning with the group.

Two factors appeared to exert a powerful influence on the students' intentions as they engaged in the transformation of the learning object. First, the perceived relentless pace of the semester and the pressure of being fully enrolled in five concurrent nursing courses placed heavy workload demands on the students, and they frequently expressed feelings of anxiety during interviews. In response to this, the EAL students narrowed their focus onto the essential criteria of the learning object and became targeted in their approach. For example, Student Four observed "*to be frank, when I have no time, you know, I just post, I just say, 'well I agree with somebody' and I post my stuff there*" (Student 4/Group Interview). As noted earlier, the students did not linger in the forum, seek a dialogue with others, or dare to challenge and critique, but instead posted their text and left the forum. Clearly, there are tensions here between the constricting effects of the semester artefact which forces the participants into a pressured environment with multiple commitments to be met in a short space of time and the concept of a discussion as extending over a period of time at a more intellectually leisurely pace.

Second, student activity was significantly shaped by the teacher's assessment practices, particularly in relation to the marking criteria and feedback to students. As Student Five noted "*if you make more than one posting ... it will be useless 'cause the teacher is not going to mark it*" (Student 5/Group Interview). As the production of monologue-type essays which displayed individual understanding was rewarded by marks, the students regularly posted one text of approximately five hundred words in which they developed general ideas identified by previous postings, included references to theoretical concepts, applied theory to practice, showed evidence of their thinking, reflected on their practice, and revealed transformations in their thought. The postings adopted a formal style as shown by the use of APA

referencing, paragraph and essay structures, complex syntax, and formal vocabulary. In terms of connecting with peers, the EAL students acknowledged their peers at the beginning of the posting (reminiscent of pre-genre scripts which frame a more formed genre – see Swales, 1990) and identified areas of agreement before expressing their ideas and experiences; however, they avoided deeper and prolonged interaction such as an exchange of postings with other students or simply returning to the forum after they had posted to view others' ideas. In essence, the data suggest that the term *discussion* really meant a *long turn* for the participants – the display of their own thoughts and understandings with minimal interaction between peers.

In summary, as the EAL students transformed the learning object, their intentions towards the learning object were manifested. Pressured for time and influenced by the perception that additional interaction with other students was not rewarded by the assessment criteria, they made sense of the learning object as a form of limited cooperative behaviour.

5.2.2.3 The influence of the objective of safe practice

The objective to produce nurses who adhere to safe practice was a powerful historical goal which was of paramount importance to the teacher and the nursing programme. As she related to the learning object, the teacher was influenced by an obligation to protect the health and welfare of the general public by producing student nurses who were capable of practicing safely. Thus, she understood the discussion activity to be a task whereby students displayed thoughtful understandings in a cautious manner and avoided advocating practices which might be considered unsafe. Among the students, this reinforced the belief that certain material could be classified as *right* and other material as *wrong*. Terms such as “*the right track*” (Student 4/Interview 1), “*dangerous*” (Student 4/Account 4), “*error*” (Teacher 1/Account 3) and “*illegal*” (Teacher 1/Account 3) were used quite frequently by the participants.

These beliefs suggest deeper epistemological understandings which shape how knowledge was viewed within the nursing course. While the teacher emphasised the importance of training nurses to be flexible thinkers who were able to adapt to their patients' varied needs, there was a sense that knowledge was in some ways fixed, closed, and uncontested. This view was articulated by the teacher:

We've seen a few that crash, or get themselves into trouble because they're just too full of it and too into it, and softly, softly sometimes is a better way for a student to go and it gives them thinking time and they understand what's actually going on around it in that way...there are some who will go in boots and all with some new idea without having thought it through and then putting that on paper leads the others in the wrong direction. (Teacher 1/Account 4)

There is a tension here between this constrained view of knowledge and an emergent view of knowledge as evolving, contested, and uncertain. A discussion characterized by the free flowing exchange of ideas, spontaneous outbursts, or the exploration of alternative nursing practice sits uncomfortably within this epistemology.

Additionally, the asynchronous mode of communication which required students to read and transcribe to communicate appeared to heighten fears of unsafe practice. Within this nursing context, there was an additional concern that ideas reified in text may have increased authority, therefore, there had to be a degree of caution in posting behaviour.

We try so hard with their other written work to have their writing fairly rigorous so that, you know, there's no copying, plagiarism, rubbish that gets spoken that others might pick up as gospel and it's the danger with nursing, somebody has to just have to make a statement that's totally wrong, if everybody else has read it, there will always be one person who actually believes that that is what they're supposed to have learnt and that's dangerous so we try to encourage them to be very formal to prevent that sort of thing from happening. I think we need to keep it fairly, from my own perspective, I think we need to keep it fairly formal. (Teacher 1/Interview 2)

A tension existed between the need to ensure that discussion postings adhered to safe practice and the concept of a discussion to examine a topic from a number of

perspectives and potentially critique and challenge existing beliefs. There was the potential that a discussion unencumbered by concerns of safety might explore dangerous (unsafe) territory which would be displayed permanently in text and read by the group of nursing students. This tension hints at a deeper epistemological conflict pertaining to how knowledge is viewed within the nursing course. This issue is revisited later in the “safe practice” section of this chapter.

In terms of the students, the data suggest that they were acutely aware of the importance of advocating safe practice. For Student Five, this awareness manifested itself as a form of self-censorship to protect her from failing the course.

But sometimes just make you really uncertain, just not safe to speak cause we always have to close our mouths in the class, keep shut ... we don't really want to say something wrong to the tutor or to this things which will make you pass or fail...yeah, just not safe. We don't want to pay really expensive price for saying something wrong and then you fail. (Student 5/Group Interview)

Thus, as she engaged in the discussion activity, she posted cautiously or remained silent to ensure her safety (and continued presence) in the programme. Moreover, the fear of being “wrong” encouraged all the EAL students to adopt roles of responders as it was considered dangerous to initiate a discussion and safer to follow. This was suggested in the following quotes:

Researcher: Did you think about starting your own discussion?

Student Four: Er no, because I'm not, I think it's very dangerous to make sure that I'm not on the right track so after I see (student lists three native English speaking students), I think Ok, I write on the right track. (Student 4/Account 4)

You gonna wait for other people to post their stuff and then you can get, um, you will feel more safe to write your things which will not off the track, and then you have to wait. (Student 5/Group Interview)

It is interesting to reflect upon the compatibility of online discussions within a course focused upon preparing undergraduate students to enter nursing practice. Risk-taking behaviours such as expressing spontaneous comments and playing devil's advocate

which often fuel the messy process of building consensus and negotiating meaning may not be appropriate within this context and could endanger a student's continued enrolment in the programme. Knowledge is not emergent and uncertain in this context, but rather, there is a sense that it is fixed and uncontested, and there is a strong sense that the concept of discussion is at odds with the underlying values of the educational context.

In summary, as the participants related to the learning object and engaged in its transformation, they were profoundly influenced by the need to adhere to safe practice. For the teacher, this manifested itself as an expectation that the postings would display cautious and thoughtful understandings of nursing practice. For the students, this belief manifested itself as an extreme reluctance to express ideas they were unsure about and to initiate discussions by posting first. In some ways, an appreciation for safe practice was a highly desirable attribute to foster in a nursing student, however there was a sense that this belief dampened critique and spontaneity and favoured the production of cautious and formal writing during the learning activity.

5.2.2.4 Reciprocal relationship of subject and object

A recurring theme in the case study was the connections forged between the learning activity and the target practice of nursing. Through clinical experiences in nursing homes, clinics, and hospitals, the students encountered authentic nursing practices and engaged in a form of limited participation reminiscent of legitimate peripheral participation (Lave & Wenger, 1991). The learning activity provided a space for the students to reflect upon these experiences in relation to the literature and in the company of their peers. In addition, the learning activity developed valuable nursing skills, dispositions, and attitudes; for example, the students were encouraged to manage their workloads independently by using flexible due dates.

The learning activity reached out to the target practice in deeper and more profound ways which implicated issues of personal identity. Students were not just expected to acquire the core skills and knowledge base of nursing; they were expected to show a shift in their ways of thinking, doing, and being as they moved from student nurse towards a practising nurse. Early in the course, the teacher articulated the objective that the students be transformed through their engagement in the activity. While marking an EAL student's work she complained that:

Her last statement was total rubbish and I realised then that she hadn't been internalising what she was writing she was just transcribing it as it were. She wrote about nursing work is using knowledge but not using skill ... she wrote down all the words that she had been writing about previously but the way she had put it together didn't make any great sense at all – a language problem really ... and again that student's playing the game, they are doing what they think is the right thing to do not what they believe ... she couldn't have written that if she had believed what she was writing. (Teacher 1/Account 1)

The teacher went onto elaborate that:

They can only show that they are doing it truly when they get into, as Canper 1978 [name of nursing article] describes it, knowing themselves, learning who they are, and knowing what it is they have read, knowing what they read really applies to them in their practice, and I think the playing of the game and not getting into it properly is just skimming through that from our point of view. (Teacher 1/Account 1)

Through these comments and others, the teacher articulated the goal that the students integrate theory and experience. By engaging in the learning activity and making the course content meaningful through the lens of their own experiences, it was anticipated that the students would begin to internalise key nursing concepts and ideas and be transformed in the process. Student Five insightfully observed that “*if ... I use my personal experience that means these things are from my heart ... and I understand it, I accept it, and am going to apply it to my practice (Student 5/Account 4).*

It is interesting to note that, as the course progressed and the students commenced their clinical rotations in nursing homes, hospitals, and clinics, they appropriated these experiences as resources to make the theoretical content meaningful in the context of their own lives. This is illustrated by the following quote where Student Four recounts her recent experiences in the clinical setting and integrates the theoretical course content with practice:

For instance, I am in the detox for clinical placement. There was a client who attempted to commit suicide few days before she admitted in the detox. I was curious about that, such as “Why excessive drinking people will deliberate harm themselves? Is there anything I need to pay attention when caring this person?” After reading some reports, I found that Alcohol dependence and misuse are strongly associated with suicidal behaviour (Bale, Casey, Haw, & Hawton, 2005). I need try to talk with the client and encourage patients to express their feelings in order to help her build up self-esteem (Sinclair & Green, 2005). The application of research evidence may clarify the rationale for clinical decisions (Thomas, Wearing & Bennett, 1990). (Student 4/Online Observation 16)

Through their participation in the e-tivity discussion postings, the students expressed new ways of thinking and doing which were aligned with common practices in nursing. In the quote below, Student Three articulates new understandings and describes how her nursing practices are changing:

At this stage in my clinical practice, I am forming a habit to read my patients’ notes before I start my shift to obtain a basic outline of my patients’ health conditions. I am also learning how to write nursing notes, how to document well so that it is much easier for the nurse from next shift to read and make appropriate decisions. By reflecting on my clinical practice, I understand the real meaning of documentation. It is not only writing something down on the paper, it actually influences the continuing of delivery of quality care in the future. (Student 3/Online Observation 18)

As they participated in the learning activity, the students not only experienced changes in their ways of thinking and doing, but also changes in their sense of identity. At times, participation became more than simply writing a text – it became an expression of identity transformation and an articulation of an ontological shift in the student’s ways of being which must occur if she is to move from lay person to nurse. Student Five insightfully articulates a changing sense of identity from the

frivolity of a young woman who has to decide what to eat for lunch to a nurse making serious decisions for her patient.

It's different, you make a decision as a girl, as a classmate from like as a nurse, nursing student ... as a person I only take responsibility for myself, but as a nurse you might need to take responsibility to your patient, to your client, to your colleague, to your hospital, to your things you have here (points to heart) ... not only for yourself. You can like I can choose am I going to have lunch or not ... it's a huge thing. (Student 5/Interview 1)

In summary, the data presented here show a reciprocal relationship existing between the students and the learning object – as the object was transformed, so too were the students as they began to inhabit new ways of thinking, doing, and being.

5.2.2.5 Summary

To summarise, this section has examined the concept of object orientedness – or how the participants ascribed meaning to the learning object – in relation to Case Study One. Four aspects have been explored: internal contradictions in the learning object, the prevalence of limited forms of cooperation, the influence of the objective of safe practice, and the reciprocal relationship of subject and object. The analysis of the data suggests that the subjects' relationship with the learning object was both rich and complex. This richness stems from the omnipresent element of historicity which precedes and shapes activity. As they transformed the learning object, the teacher and students were influenced by historical factors that affected the nature of their relationship with the learning object and the manner in which they engaged with it.

5.2.3 Occupying the Role of Knowledge Resource

This category considers the data in relation to how the work involved in the transformation of the learning object or engaging in the e-tivity discussion was distributed and managed amongst the group. A prominent theme in the data has

centred on how the role of resource was occupied during social interaction and how this shaped the nature of participation. Two major points will be examined: issues relating to the teacher's role and the spontaneous adoption of initiator and responder roles by the EAL students.

5.2.3.1 The teacher's role

The data analysis suggests that the teacher's role was manifested in inconsistent ways as the participants engaged in the activity. During the first half of the course, the teacher adopted the dual roles of both assessor and contributing participant by assigning a numerical grade to student work and also posting a message at the conclusion of the forum which revealed her thoughts about the topic and offered resources for students. The teacher explained her behaviour in terms of being “*partners*” with the students in their learning (Teacher 1/Account 4) and wanting to “*give them that sense of sharing*” (Teacher 1/Interview 2). She added that:

I wanted to be encouraging, I wanted to have them thinking I was part of the group as well ... that I had done a little reading, that I had picked up, I wanted to say what I had thought, what I had said to them was genuine about how good I thought they were. (Teacher 1/Account 2)

The teacher perceived there were both cognitive and affective aspects to her role – as providing her own perspective on the topic and identifying useful resources, but also offering support and encouragement. The timing of the teacher's posting was also significant. The teacher told the students in a tutorial that she would “*guide the group*” and “*suggest avenues of thought*” (Tutorial Observation 6); however, by posting after the students had finished, she appeared to understand this role as summative not formative in nature. She did not see her role as ongoing in terms of prompting, provoking, and generally stimulating students while the discussion was occurring. Indeed, her participation was strictly a singular event – entering the discussion forum once after the students had finished posting. She was fearful that

her intervention might alter the course of the discussion, invoke teacher-pleasing behaviour, and generally be detrimental to the students' learning:

What can happen, um, is that I will then throw them off their thoughts and they will follow my thoughts ... Because that's what they do, the teacher said it. Especially with the non English speaking students if the teacher said it, it must be right. And so if I went in with something that was a little bit from left wing just to make them think I could throw those ones badly. (Teacher 1/Interview 3)

What is interesting here is that she did not consider different forms of teacher participation that might not evoke these student responses. She dismissed her role as an ongoing participant "out of hand." The teacher's lack of pedagogical understanding emerges here again as she appears to lack a pedagogical "tool box" so to speak. For example, she showed a lack of awareness of moderating techniques which might have allowed her to prompt, coax, and provoke students without necessarily imposing her viewpoint.

Reinforcing the teacher's belief that acting as an ongoing participant would be detrimental was an underlying perception that the students were autonomous agents who could manage their own learning. Drawing upon her past experiences as a nursing student, the teacher defined her role as an opportunity creator and guide, believing that learning should be managed by the students, not by the teacher.

We are here to guide them, they'll get through in spite of us, not because of us and the quality of the nurse they become will sometimes depend on how much we back off and let them be themselves. I look back at my own time here and I can think of tutors who didn't ever hassle me, but they were always there if I needed them and they just let me make my own minor mistakes and that was great, that was great. And those people I still hold in great respect. (Teacher 1/Interview 3)

She added in a later interview that:

They are again mature adults and the choices are there for them to make. If they have an opportunity to interact and to read what other people have said, and they turn that down, that's not my problem. It's for me to give them as a facilitator to give them opportunities. I've had to learn this over the years, I am not God, I am just there to put something before them which they may take up. (Teacher 1/Interview 3)

Her comments touch upon a crucial issue of how the teacher relates to adult learners. In the excerpt, the teacher has suggested that adult learners are autonomous agents, capable of effectively managing their own learning. However, the findings from the data suggest that students may choose the path of least resistance in an effort to complete a learning task as quickly as possible. The students in this study often bypassed their peers' work, only reading postings that helped them complete their work. It appeared that they were motivated less by the desire to learn from their peers and more by the desire to quickly complete the task and gain marks. A tension is suggested here in the teacher's role between the need to respect these adult students as autonomous agents and the need to ensure that their learning is supported in optimal ways. This issue raises important questions about where the teacher's responsibility ends and the students' begin.

Moreover, the findings question whether the students were cognitively and affectively capable of extending each other without the teacher. For example, the student-to-student interaction was infused with a sense of congeniality as students identified commonalities with their peers and expressed goodwill, yet avoided challenge or critique. There was a sense of uniformity in the postings noted by Student Four who said "*I feel everyone tell similar things except the examples and clinical experience*" (Student 4/Interview 3). Observations from student interactions show that no students in the online group (both ENL and EAL) attempted to conduct a dialogue with their peers to negotiate understanding. In addition, the EAL students adopted a form of self-marginalisation by adopting responder rather than initiator roles in the forum (to be discussed in the following section). One is left to speculate as to the nature of the participation if the teacher had altered assessment practice to reward dialogue or had been actively involved in provoking, stimulating, and generally encouraging the students to advance their own ideas and challenge the assumptions of their peers. However, this activity may have jeopardised the maxim to adhere to safe practice.

Significantly, during the second half of the course, as time limitations affected her participation, the teacher ceased to post a message to the forum except to assign individual marks for the students. It appears that the text-based nature of the communication combined with the expectation of formal writing was time consuming and demanding for both the students and the teacher. When asked why she was not posting a message, the teacher responded:

... because I'm just trying to get the marks to them at this stage and it does take a few minutes to write up a reply so that's at the bottom of my priorities, but that's what I intend to do. (Teacher 1/Account 4)

The use of the phrase “*bottom of my priorities*” is significant, suggesting that acting as a contributing participant who engages with the students was optional. It indicates that ultimately the teacher perceived her role as assessing student work and assigning a grade. In addition, even if the teacher wanted to actively contribute to the discussion on an ongoing basis, this would have been difficult. Dialogues inherently demand time to read others’ work, negotiate meaning, and formulate responses, and this has to be factored into workloads.

5.2.3.2 The spontaneous adoption of responder roles

During observations of online activity, it was observed that the same students tended to post first each week and they were always ENL students. These early postings were often descriptive, personal, engaging, and functioned to stimulate contributions from other students. During all four occurrences of the learning activity, the EAL students never posted first, but rather they waited until after others had posted. In their postings, they usually acknowledged other students and then developed ideas identified by the early posters. As the later posters, their postings were almost never responded to by their peers.

The asynchronous nature of the online discussion afforded the ability to delay postings until others had submitted their texts. Generally speaking, the EAL students perceived this situation as advantageous as the nature of participation was modelled for them by others (for example, the form and/or content of the posting) and their thought was stimulated by the engaging nature of earlier postings. This is noted by Student Four who states:

I can read other students' post so I can see that, wow, [inaudible] that student got more interesting points that I want to discuss ... you can read other people, other students' work that gives you more ideas and you can choose to write.
(Student 4/Account 2)

In addition, the slowed communication gave the EAL students more control over who they wanted to respond to. They were able to bypass those postings they did not understand and wait for other postings. To a degree, this served to lessen the effects of comprehension issues they encountered as non-native speakers of English.

Due to the asynchronous mode of communication, interaction was delayed between the students. This delayed engagement appeared to give the EAL students a degree of comfort and security, and during interviews they expressed contentment with their role as followers in a type of self-imposed marginalisation. By avoiding the role of initiator, they forced other students to exemplify the posting and determine which topics were significant. This behaviour was consistent with their views about being safe during the task – they did not want to risk going first and posting information that could be considered irrelevant, inappropriate, or (the worst case scenario) unsafe.

The students explained their behaviour by drawing on the belief that their peers were credible and valuable knowledge resources. Several of the group members were older women, and the EAL students (who were aged in their twenties) viewed these peers as bringing valuable life experiences to the forum, providing linguistic models

of the desired text, identifying key ideas to stimulate thought, and generating new perspectives on the topic. Student 4 describes how she felt towards her classmates:

I think they're [other group members] so great and that's another reason why I need to see their posting, I think they've got more idea, they've got more very good, great idea than me, so I want to see their ideas...they've got more life experience than me, so lots of things I can study, learn from. (Student 4/Interview 2)

However, while the responder role was perceived to offer many affordances, the data analysis suggests it also constrained participation by reinforcing feelings of inadequacy. Student Three exhibited a lack of confidence stating that her clinical experiences were not “*a big thing*” and that she lacked “*clear opinions to support ... my ideas*” (Student 3/Account 4). Student Five expressed feelings of dependency as she waited on her peers to submit work so that her thought could be stimulated (Account 3). Also, she believed she could never post first as she could not clearly convey her ideas in English. Students Two, Three, and Four expressed feelings of inadequacy about their work, and the practice of relying on other students for guidance seemed to intensify these feelings. Explaining her behaviour, Student Four said:

That's my habit and I'm not sure whether I wrote is correct or wrong so, well I can say I was not confident enough, so I want to see what did other people say about this topic and want to improve me. (Student 4/Interview 2)

Another issue with the responder role was that, as later posters, the EAL students were rarely responded to themselves and their contributions remained unacknowledged. Students articulated mixed reactions to this situation. Student Two downplayed the value of peer responses by saying that they could lack depth and “*just say some sentence polite*” (Student 2/Account 4). Moreover, receiving a response could be seen as a liability by revealing one's imperfections. Student Four observed that “*if I got response maybe my article will be critiqued by someone ... maybe will remind the tutor, oh she got the wrong point*” (Student 4/Account 4). At other times, however, the students expressed a desire to receive a response from their peers to reveal which points in their posting were interesting (Student 4/Interview 1)

or simply to be noticed by others (Student 2/Etivity 2). Student Five expressed embarrassment over failing to receive a response and expresses an affective need to receive one below:

Researcher: ... it does bother you [not receiving a response]?

Student Five: Yeah it does sometimes, if I really, I think I really um contribute my thinking, my ideas, but no one agree with me or if I really, try really hard to brainstorming, to bring my ideas to the posting, but no one responds to me. (Student 5/Group Interview)

Thus, while adopting responder roles did afford a sense of control and security for the EAL students, it came at a price. This form of self marginalisation reinforced a sense of inadequacy and dependence on others, limited the possibility of receiving a response from others, and diminished the EAL students' voices within the online classroom. There is a clear tension here. On the one hand, the unstructured nature of the task design and lack of teacher engagement allowed the EAL students the freedom to define participation on their own terms and this situation afforded a welcoming and non-threatening space for them to express their understandings. On the other hand, by adopting responder roles, the students chose the safest route, remaining firmly rooted within their comfort zone. One can speculate that a more structured design with enforced roles, altered forms of assessment, and/or greater teacher engagement may have encouraged the EAL students into new modes of participation which, while uncomfortable and threatening, may have enhanced their learning experience.

5.2.3.3 Summary

To summarise, the findings indicate that there were unresolved tensions around the roles participants assumed in the e-tivity discussion activity. The teacher's role seemed uncertain as she displayed inconsistent behaviour by relinquishing her contributor role for an assessment role. Her beliefs that the teacher's ongoing engagement would be detrimental and that the students were capable of managing

their own learning were powerful factors which, when combined with her heavy workload, led to her diminished role as a resource in the discussion. The recurring theme of her limited pedagogical knowledge emerges again in this context as the teacher appeared to lack a clear understanding of the nature of her role or how to engage with students in a non-detrimental manner. In terms of the EAL students, the spontaneous adoption of responder roles both afforded and constrained their full participation in the learning activity. They gained a sense of security by allowing other voices to be heard before theirs, but in the process their voices were diminished. By having the freedom to choose the nature of their participation, they limited their engagement by operating within their comfort zones. Like water running downhill, they took the path of least resistance.

5.3 Case Study Two Findings

5.3.1 A Brief Description of Case Study Two

This case study examines a learning activity embedded within a first year business and academic writing paper at a tertiary-level institution. The learning activity under study is focused on a peer feedback activity whereby students upload a text to the online forum (such as an introductory paragraph or a simplified report) by Monday (worth 10 per cent of the overall grade) and then give written feedback on another student's text by Wednesday (worth 15 per cent of the overall grade). The activity is repeated seven times on a weekly basis during the paper. The core participants are one teacher/lecturer, two tutors, and four students. In addition key informant interviews with a learning technologist and another EAL student combined with observations of ENL student activity offered useful data. Further information about the context can be found in the Methodology Chapter and the appendices.

5.3.2 Making Sense of the Learning Object

As the participants engaged in the peer feedback activity and the learning object was transformed, the data suggest that the participants related to the object in varied ways. They brought their previous experiences and understandings to bear on the learning object and these historical factors shaped the manner in which they transformed it into an outcome. In particular, the credibility of the learning object as a pedagogical tool to realise the teacher's learning objectives was contested by both the tutors and students. By challenging the credibility of the learning object, the connection established by the teacher between the object and its learning objectives was weakened and internal contradictions arose within the object. This situation is examined from three perspectives. The first perspective explores the way historical beliefs about the teaching and learning of writing shaped relationships with the learning object and how these unique relationships generated contradictions in the object. The second perspective considers the teacher's disconnection from the learning activity and the third perspective examines the prevalence of limited forms of cooperation which were focused on instrumentalist objectives.

5.3.2.1 Teacher beliefs about teaching and learning

The data suggest that the teacher and tutors related to the learning object in markedly differing ways which led to an internal contradiction in the learning object and subsequent conflicts during the transformation of the object. The following section will examine these findings.

The teacher articulated clear objectives around the learning object and believed that, through activity, certain learning objectives would be realised. She drew on constructivist and social constructivist theories of learning to design and implement the learning activity. In terms of constructivism, the teacher viewed learners as active

participants in their learning, believing that they should be engaged in constructing meaning rather than being inactive receptacles for knowledge. The peer feedback activity was a tool to encourage the students to write and reflect upon their writing, and develop an awareness of writing in both business and academic contexts. Students were required to deconstruct and then reconstruct texts; for example, they were introduced to a critical review text in lecture, re-encountered it and developed their understanding in face-to-face workshops, consolidated and extended their understanding with their peers online, and finally generated a critical review text for teacher assessment. It was an iterative process composed of many steps which required students to develop drafts and then polish them in different contexts. Informed by social models of learning, the teacher envisioned the students developing their understanding of business and academic writing with their peers in a community rather than in isolation. Through social interaction and the process of giving and receiving feedback online, the students would present their writing to each other, make comparisons between others' work and their own, encounter a range of experiences around the text, become sensitized to characteristics of the text, and enhance their understanding through reflection and critical evaluation. Thus, social interaction was used as a tool to support individual learning.

They're in a university, part of their university learning is this working together, learning to, I mean for me, I suppose I'm coming from the idea that learning is valuable when you think about what you're doing and why you're doing it and how you're doing it, so the peer feedback is really to get them to think about what was required in the task and how to do it ... it's really to develop in them a more cooperative co-constructed learning approach to their writing which is what they're going to have to do in groups, when they're doing group work in this school and also in the workplace when they collaborate with others. (Teacher 1/Interview 1)

The purpose of [name of learning management system] is to get the students to write to one another and to get them writing so that others are reading their work. I don't want to mark this work at all I just want them to use this platform to put their work up and get feedback so they're thinking about what is good writing and in the process of giving feedback they're actually having to deconstruct someone else's writing. (Teacher 1/Interview 1)

Influenced by the belief that students could act as knowledge resources for each other, the teacher conceptualised the peer feedback activity as a student-only space where social interaction occurred amongst the students and the voice of the tutor was essentially absent. In this activity, the role of the tutor was to provide a blunt assessment by assigning three types of grades (0, 50, or 100) to verify work had been completed rather than offer direct and detailed feedback on the students' work. Thus, feedback came from students, not the tutor.

So I tell the tutors this is not your place to give feedback, this is not where it's happening. This is just a tool to get the students writing, looking at one another's work actually focusing on their own writing and presenting it so others can read it. Um, you're not paid to give feedback. If you start giving feedback it will take a long long time dealing with all this work and you're not paid for that. Sure I'd love them to give feedback, but again we don't have the resources to pay them. I know when I set [name of LMS] up that this was not going to be a requirement. The tutors found this really hard and they still struggle with it. And (name of tutor), you might have heard her say at the meeting the other day "I don't give feedback." whereas others are wanting to give comments. (Teacher 1/Interview 1)

There is a hint in the above excerpt that the decision to use student rather than teacher feedback in the online activity may have been influenced by resourcing issues. The context of this learning activity cannot be ignored – five teachers are responsible for the writing development of 260 first year students. By asking the students to give regular direct feedback instead of the tutors, inevitably the tutors' workload was reduced. However, regardless of this contextual factor, the learning activity was predicated on the belief that the students could function as resources for each other in the development of writing.

In contrast to the lead teacher's beliefs, Tutor One and Tutor Two did not relate to the learning object in the same way. In particular, they were concerned that many students were not capable of offering guidance and advice about writing to their peers. Their pedagogical perspective viewed social interaction between the students as an ineffective tool to realise stated learning objectives. In place of the student

voice, they believed that targeted individual feedback from the tutor-as-expert should be given. Tutor Two questioned the efficacy of independent learning in this context:

I don't think they get enough help. I think they're expected, the focus on them learning independently is not practical when you're trying to undo the previous 10, 12 years of experience writing. That it is not a course where you say, where they have to do this for themselves or they have to learn the grammar for themselves or they have to, you know, they come to the lecture and they have to apply it to their own writing. They aren't capable of that in that stage of their writing process, they're just not. (Tutor 2/Interview 1)

I don't think they're quite ready for it [students working together without the teacher]... I think they still need someone to hold their hands and tell them where to put an apostrophe. (Tutor 2/Interview 1)

Tutor One's beliefs were reinforced by a negative experience as a student participating in an online discussion which she described as “*sheer hell*,” particularly in relation to being dependent on others to complete her work. Additionally, in her teaching practice, she had used the LMS in the paper twice before and viewed it as “*clunky*,” and she questioned the validity of the learning activity.

When you ask people to put things online, because you want them writing, you're not testing their writing, you're testing their computer skills first, which sets up a whole lot of discomfort I think for some, perhaps not for all, but it sets up a whole lot of discomfort and makes the writing more difficult. If you can't type, then, you know, you've got that's a barrier before you can even start thinking about what you're going to write. (Tutor 1/Interview 1)

Based on these negative perceptions of pedagogy and/or the tool, the tutors perceived that the learning object was flawed. Under an activity theory interpretation, these beliefs can be conceptualised as historical factors which were imported into the learning activity and shaped the tutors' engagement in the transformation of the learning object. As the tutors participated in the learning activity, these beliefs were reinforced as they observed some students struggling to offer feedback to their peers. There was a sense of the blind leading the blind:

They're struggling to do what they're supposed to do, but they don't understand it. I mean, some of the feedback, you see, you think, oh my balls and whiskers, why do you think that? What little fantasy have you got to overcome, um and so if

they're giving feedback which is wrong to people who have got no idea what they're doing anyway, their usefulness is limited. (Tutor 1/Account 2)

The transformation of the learning object lacked meaning for the tutors in the same way that it had meaning for the teacher. From the tutors' perspective, the coupling of the learning object with the teacher's objectives was problematic as they believed that student-to-student interaction would not necessarily result in developing the students' understanding of writing. This situation created an internal contradiction in the learning object by fracturing the connection between object and objective. This fracture eroded the value of the task for the tutors and aggravated tensions in the relationship between the tutors and the teacher.

These tensions between the teacher and tutors were exhibited during the weekly meetings (attended by the teacher, the four tutors, and the researcher) in which teaching and learning were planned. Motivated by the belief that the pedagogy was flawed, Tutor Two often asserted control over the workshops by distributing teaching resources and giving advice. As the other tutors were focused on the practicalities of teaching the students that week, this functional orientation to the meetings was welcomed and the tutors tended to perceive Tutor Two as the expert rather than the teacher. In addition, resources supplied by the teacher (for example, the tutorial plan and student worksheets) were often radically modified or rejected out-of-hand by Tutor Two.

In her teaching practice, Tutor Two resisted the teacher's representation of the peer feedback task (learning object) by posting her own written feedback. She brought her voice to bear in the virtual space which had been designated a student-only space by the teacher. Additionally, Tutor Two devoted extra time for face-to-face interaction with individual students to ensure they received tailored assistance. In essence, she created a new representation of the learning object in which her voice was heard;

however, by doing so, she experienced a significant increase in her workload and this led to feelings of resentment.

In contrast, whereas Tutor One did resist the teacher's representation of the object, her resistance was manifested in more subtle and indirect ways. She distanced herself from the learning object by rarely discussing the LMS or the peer feedback task in the weekly face-to-face workshops. In addition, she emphasised the importance of teacher feedback – circulating around the class offering comments on student work and encouraging the students to meet with her face-to-face. Unlike Tutor Two, she did not interject her voice into the online peer feedback activity, but bounded her practice by saying that her role is “*not part of the planning, I just do the teaching that's provided*” (Tutor 2/Interview 1). She added:

But I'm not writing material for this, this is not run in the way that I would, it's not organised in a way that I would organise it if I had any input, and I don't have any input because I'm um you know contracted in every semester, it's not appropriate, I'm not asked, so I take my money and I do the, well, I like to do the best I can, sometimes it is, sometimes it isn't. But I would try and bring my students up to a standard, I'm not sure if I succeed or not um, so, in one sense I have no investment in it. I'm not paid to be invested in the course, it's not appropriate at all. In another you work with the students, you have an investment in them. (Tutor 1/Interview 3)

Tutor One had misgivings about the pedagogy and expressed feelings of frustration that she was unable to give the students feedback, and yet she was content to “*trot along behind*” (Tutor 1/Interview 1). One can speculate that, as an experienced teacher employed as a sessional assistant, she may have felt undervalued and lacked a tangible investment in the paper. This is suggested by her passionate response when the interviewer incorrectly used the term *tutor* to refer to her role:

We're not tutors, we're scumbuckets, we're sessional assistants, we're not tutors. (Tutor 1/Interview 3)

(A sessional assistant is usually a postgraduate student who is employed at a fairly low rate of pay to assist the lecturer, for example, engage with students during tutorials or mark portions of student work).

It is interesting to consider how the relationship between the tutors and the learning object implicated issues of identity. Tutor One was able to engage in the transformation of the learning object even though it lacked meaning and credibility for her. By invoking her limited role as a sessional assistant, she sidestepped responsibility to address the situation because it was not perceived to be within the bounds of her practice. There is a sense that her personal identity was not invested in or affected by the “doing” of the learning object. In contrast, Tutor Two appeared unable to separate her “doing” from her “being.” Her teaching practice was interwoven with her sense of self and her sense of responsibility to the students. By being associated with a learning activity which represented less-than-adequate pedagogy for her, the data suggest that Tutor Two experienced a degree of moral angst which threatened her identity as a teacher with an obligation to provide optimal learning opportunities for her students.

I've been doing it long enough for now to see how it really ought to be done and to resent having to carry out things that are poorly done. It's just not OK for me to go in, cause I'm the one who has a personal relationship with those students, [name of the teacher] sees 200 of them at a time, she never goes to tutorial, but they don't go to her office hours because she's scary, and you know, they're not going to go anywhere near there. And I can't, it's hard for me to say things that are inaccurate or not true. (Tutor 2/Interview 1)

In summary, the preceding discussion has conceptualised the tutors as socio-historical agents and has explored how their beliefs about teaching shaped their relations with the learning object and members of the community, and led to the creation of an internal contradiction in the learning object. In addition to these beliefs, two additional historical factors played a significant role in shaping participation – the teacher's feelings of being desensitised to the learning object and the prevalence of

expedient student behaviour which led to limited forms of cooperation. These are now examined in the following discussion.

5.3.2.2 The disconnection of the teacher from the learning activity

After teaching the paper for five years, the teacher expressed feelings of being desensitised towards the learning object:

Yeah, because I've been doing it so long, I've become desensitized. I think that what happens when you, the first time around you're alert to all of the issues and problems and 'how's it going' and 'how are you finding it,' because when I set it up, I was really gung ho about it and I thought 'wow this is fantastic and this is, I'm going to try this,' and I really was enthusiastic and I thought this is going to be a really, another dimension to this paper that makes it different and interesting for the students and they're be far more involved. I was really hopeful for it. Um I think in talking with you now I just want to say, 'forget it' because so many, after so many renditions of it, I've become quite, not blasé, but I'm less critical of it. (Teacher 1/Interview 3)

The teacher had lost the critical perspective to evaluate the learning object and reflect upon whether learning objectives were being realised. This critical perspective entails an:

... anxiety that comes with doing something new. Of using a new tool and teaching, it doesn't really matter what new tool it might be. You know, when you try something new you want to know how it's going to work and whether learning has taken place and how effective it's been. (Teacher 1/Interview 3)

This sense of desensitisation appeared to distance the teacher from the day-to-day implementation of the learning activity. In addition, the mutual decision (made between the tutors and the teacher) that the teacher would lecture and undertake some assessment duties without being involved in any online work further removed her from engaging with the peer feedback activity. The teacher had designed the peer feedback activity and was ultimately responsible for the paper as the “overseer” (Teacher 1/Interview 2) and yet she rarely observed the online activity and appeared somewhat disconnected from the practicalities of running it. This disconnection was sensed by others and Tutor One suggested that the teacher’s attention was directed

more towards research rather than teaching. She noted that the teacher displayed a lack of understanding of the “coalface-stuff,” and had made a “willing abdication of that [teaching] role” (Tutor 1/Account 3). In the excerpt that follows, Tutor Two expressed a degree of sympathy for the demands placed on the teacher. She suggested that being responsible for a vast number of students was both unreasonable and overwhelming:

I like her, I think she's, there is not a fair set up for her, she's got other classes to teach, this is a huge class, it should count as two classes for her, not one. It's too big, it's got too many, it's impossible to deal with all the administrative stuff, all her concern goes to that end. She doesn't have time to worry about um whether or not they understand apostrophes, that's, she just can't. There's 260 people saying, "I'm sick, I can't turn in my paper, my computer blew up, where's this, can you post the lecture notes can", that by itself is a job. So it isn't, it isn't realistic that she be responsible. (Tutor 2/Interview 1)

The teacher's feelings of being distanced from the learning activity were exacerbated by her belief that she was unsupported in her eLearning practice. She had received some technical assistance from central eLearning support to help re-create the learning activity each year, but there was little evidence of review, critique, modification, and experimentation. Without interaction with others in the same field and the injection of fresh perspectives, the teacher tended to reproduce the same design each year and there was a sense of stagnation in the learning activity.

But um basically yeah it would be really nice to have a community, well I suppose there is a community as I actually gave a paper um at the invitation of the IT people, and they thought they were going to set up a series of seminars where people would give papers where they'd been using online ... but those seminars never continued, and um there don't seem to be too many seminars or discussion groups on online learning, and actually if there were, while I feel like I do I am working in a vacuum, unless it were very specific, I wouldn't want to go because I don't really want to hear about how other people are using discussion threads and blah blah blah I want to hear how people are using it to improve students' writing. But there's no forum like that around the school because no one else uses it in this way. So I suppose I don't go to conferences or look for conferences because it's not a key research area, but I do feel as I said that I'm sort of working in a vacuum. (Teacher 1/Interview 1)

In summary, distracted by the demands to undertake research, isolated in her eLearning practice, desensitised by reproducing the same learning activity year after year, and overburdened by the needs of a large number of first year students, it is perhaps understandable that the teacher may have been distanced from the practical implementation of the learning activity.

5.3.2.3 The prevalence of limited forms of cooperation

The third factor which appeared to shape how the participants related to the learning object pertains to student objectives. The data suggest that two primary objectives drove student participation – a weaker goal to help others with their writing and a stronger, more dominant objective to cooperate in limited ways in order to complete the task to gain marks.

The first objective, to help others with their writing, is mentioned by both female students as motivating their participation. This intention was aligned with the teacher's expectations that the students would work together in an online group to build understanding of academic and business writing. However, this sense of collaboration was short lived and appeared to be subsumed by the stronger objective to gain marks for individual performance. The students often expressed a sense of disengagement from the activity; for example, Student Three (Group A), frustrated that he had been forced (in his opinion) to enrol in the paper even though he had excellent levels of English, approached the learning activity with the main goal of passing the course to gain the required credits to proceed with his studies. During interviews, he expressed little interest in helping his peers. He claimed "*I care about my writing, or what I'm writing in the [LMS], er only in the sense that I'm aware and I know that my tutor will read it*" (Student 3/Account 4). Similarly, even though the other three students had chosen the paper voluntarily in order to improve their English writing, their actions suggested that they were driven by the motive of

expedience; namely, to complete the task as quickly as possible to gain marks. Student One (Group A) claimed “*my aim is to get marks, not to do any reasonable things to that person’s writing, honestly*” (Student 1/Interview 3).

The data suggest that this individualistic focus on performance and achievement affected how the EAL students participated in terms of the value they placed on the task and their commitment to others. For example, the students limited their exposure to others’ texts by reading as few as possible in order to select a text and quickly complete the feedback task. The students expressed little interest in enhancing their peers’ understandings or having their own understandings advanced by their peers and felt a two-way lack of commitment.

Student 2: *People don’t give honest answers or comments*

Student 1: *Yeah and they don’t ... they don’t put effort into it*

Student 2: *Just like me, I don’t put much effort into it.* (Final Focus Group)

The students demonstrated a form of cooperative behaviour (Lewis, 1997) whereby they engaged in limited social interaction to meet individual goals. Students “went through the motions” of giving feedback; but ultimately, social interaction was meaningful to them as a means to gain individual marks rather than to interact with others to advance their own and others’ understandings of writing.

In contrast, there was a sense that the teacher’s objectives had both collaborative and cooperative dimensions. She anticipated that the students would work together in a “*continuous process of building up in a community rather than in isolation themselves as writers*” (Teacher 1/Interview 1). Through the process of giving feedback, the students would gain a greater awareness of their peers’ development and also reflect upon their own writing development within the group:

People will be able to see “oh yes, look how far that person’s come in terms of this task that we did in that tutorial, I haven’t come that far.” Or yeah, so they will be able to be much more evaluative of people’s performance and their own

performance because they'll have a benchmark from their own tutorial work.
(Teacher 1/Interview 1)

The findings suggest that the students and teacher related to the learning object/peer feedback task through a blend of varied motives, and made sense of the learning object in differing ways. Social interaction was meaningful as a way to gain individual marks, to develop individual understanding, and to advance group understanding.

5.3.2.4 Summary

In summary, this section has considered how the participants related to the learning object as they transformed it. The data suggest that the process of ascribing meaning to the object was influenced by historical factors such as previous teaching and learning experiences, pedagogical beliefs about the teaching of writing, and the division of the teaching workload. Social interaction was meaningful to the participants as a tool to realise differing objectives. Influenced by these factors, the participants related to the learning object in markedly differing ways, causing internal contradictions to arise within the learning object which eroded the credibility of the learning activity as a means to develop student understanding of business and academic writing in a learning community.

5.3.3 Occupying the Role of Knowledge Resource

The data in this category pertains to how participation in the learning activity was organised amongst the EAL students and teachers. As observed previously, the belief that students can act as resources for each other was highly contested amongst the participants. The teacher believed the students were capable of offering feedback to their classmates about their writing; however, the tutors and students had serious reservations about the students' ability to act as resources for each other without input

from a teacher. While this conflict caused contradictions within the object, it also led to contradictions within the division of labour. In the following section, beliefs pertaining to student and teacher roles will be explored in relation to how they influenced the transformation of the learning object.

5.3.3.1 The credibility of students as peer resources

The findings indicate that there was clearly some pedagogical value in exposing the students to a range of perspectives and experiences around the text under study (for example, a critical review or argumentative essay). In terms of receiving feedback from her peers, Student One (Group B) expressed an appreciation for receiving feedback from other students and there were instances when she received thoughtful and detailed feedback comments from her peers which she found valuable. Even though the students often devalued comments from their peers, they reported reflecting upon the merits of feedback comments against their own understanding. Additionally, by expecting the students to create their own text and then critique the work of a peer, the learning activity raised student consciousness about the pertinent characteristics of the text. All these opportunities led to a degree of processing of course content by the students as they viewed and reviewed key characteristics of texts such as reports, proposals, and critical reviews.

In addition, the students functioned as useful resources by providing models of the text under study and of peer feedback. Students One and Two (Group B) examined texts posted by other students for both content and structure.

Researcher: *And what did you learn from looking at other people's feedback*

Student Two: *It's, I think all their structure is the same, they start with a good like 'oh it's good and good' and then they start with, and then they go onto improvements, and then they finish with "I think it will turn out to be a great essay." It's always the same, so I just did the same thing. (Student 2/Account 1)*

Thus, there is data to indicate that the students did consider their peers to be credible in the role of resource.

However, the data analysis offers mixed findings in relation to the credibility of students as resources. The peer feedback learning task (learning object) was characterised by a distribution of cognition amongst the students. As the teachers moved from the centre to the sidelines, the students were expected to occupy the role of resource for each other.

The requirement is that you too are not just a student, but you are also moving into this role of taking the responsibility of giving useful feedback which is more than a student role in a sense, you're not a teacher either, but in a collaborative writing context, which may well happen in the work place, you know, you work collaboratively. (Teacher 1/Interview 2)

The teacher's pedagogy was predicated on the assumption that the students would view their peers as having something to contribute that they lacked; however, a significant amount of the data suggest that this assumption was problematic. At best, the students held mixed feelings about their peers' ability to give them useful feedback; at worst, they discounted the peer feedback task as a worthless exercise. Students One and Three (Group A) viewed themselves as being in the middle to top of the class in ability, and, perhaps unsurprisingly, showed a tendency to discount work from other students. Student One believed feedback should come from a "superior," namely, a person who is perceived as more expert such as a teacher.

Perhaps I'm not prepared to use the, because I don't have any trust on that person [another student] ...because psychologically I also feel he's also in my, we all in the same boat studying, I'm not perhaps prepared to accept the feedback of that person. (Student 1/Interview 2)

Likewise, Student Three appeared quite detached from the process of feedback, believing that his writing competency was higher than his classmates and they had little to offer him in the way of new information. He showed scant interest in reading

feedback given to him by other students, particularly in relation to positive or vague feedback comments.

When I do receive feedback, it is usually positive, with the phrases “nice work” and “your essay shows clear structure” given in mostly all feedbacks. However, I feel that the feedback I receive is not effective at all. The criticisms I receive are not specific enough and usually I disregard the feedback as a whole. (Student 3/Reflective Task/Week 6)

Student Two (Group B) echoed Student Three’s sentiments, expressing particular irritation with positive feedback from peers which lacked any critical component. Even Student One (Group B), arguably the student who valued the feedback task the most, became cynical as the course progressed – questioning the commitment of her peers.

Researcher: *You feeling OK about [the LMS] overall?*

Student 1: *Not really, at first I think it quite good idea, but then I realise that not all the people are doing it. I’m not sure they can’t be bothered or they just don’t know and yeah. (Student 1/Group B/Account 3)*

The expectation that the students could function as resources for each other was threatened and the credibility of the peer feedback activity was diminished if the students did not believe their peers capable of contributing understandings of writing which they lacked. The data suggest that the students struggled to consider their peers as more experienced or more knowledgeable others who could provide trustworthy information to support their learning.

Not only did the students distrust their peers in the role of resource, they also expressed insecurities in their own abilities:

I don’t really like doing peer feedback ... because I don’t know, I don’t mind reading other people’s stuff, but I don’t like giving them comments about it ... because there’s just nothing to say and you have to find something to say ... sometimes theirs is just too good and you can’t think of anything bad to say ... and you have to make something up, and sometimes theirs is just too bad that you can’t comment on anything good about it ... yeah, it’s hard. (Student 2/Group B/Account 1)

Similar sentiments are expressed by an ENL (English as a Native Language) student (not a core participant) who asserted “*I don’t like to give feedback on people’s work because I barely know what I am doing myself and am definitely not qualified to tell someone else they are doing it wrong*” (Online Observation 9). Perhaps unsurprisingly, the degree of insecurity felt by the students appeared to be directly related to their confidence levels regarding the text under study. For example, they felt more confident giving feedback on the proposal text which had a formulaic structure rather than giving feedback on the critical review which involved the interweaving of summary and critique

In addition to the cognitive demands of offering and receiving feedback, the students appeared to struggle affectively. Three of the four student participants were concerned about providing incorrect feedback, being misinterpreted by others, offending other students, and potentially jeopardizing relationships. Student One (Group A/Interview 2) stated to his peers “*I don’t like to say bad about you and I feel really embarrassed.*” During observations of online activity, it was noted that a congenial atmosphere prevailed and was manifested by the use of softening devices such as hedges (for example, “*I think*” and “*just*”), expressions of goodwill (for example, “*keep up your good work*”), and positive comments with an absence of constructive comment. An example of a lack of critique is illustrated below:

hey (name), i think your critical review was really good. you had a very good introduction where you included a thesis statement and stated the points you will be making about the article, you gave a good summary of her points and then gave your opinion about them, backing up your comment with good examples. Your conclusion is just as good as your intro. once again restating your opinion and review of the article. (Online Observation 7/Student 2 – Group B/Week 6)

This struggle to offer critique was noted by Tutor One:

They had to critique somebody’s outline ... most of them are not very good at the specific detail, you know a specific critique ... at all. Some of them did general “gosh that was absolutely amazing, I hope you do well in your essay.” Some of them were

general, you know “you’ve done a good job, I liked your ideas, perhaps that idea won’t work.” (Tutor 1/Account 1)

She added:

The peer feedback, we don’t teach them enough about peer feedback and they’re not critically aware enough for that to be of real value. And they have, well, that’s possibly not fair, that may develop to become more valued, but they’re all very scared of saying things that aren’t nice. And the idea of, you know, telling someone they’ve made a mistake is very difficult for them. (Tutor 1/Interview 1)

The data suggest a tension between the need for the students to maintain social relationships both inside and outside the classroom, and the need to offer a critical perspective that provides constructive and substantive comments. This tension was aptly described by an ENL student (not a key participant).

With the class forum posting system, where every class member sees your feedback, I neither want to sound like a nagging know-it-all (knowing that my own writing is definitely not free of error) nor a Two-thumbs-up smiley face. I am convinced that I am not the only student sharing these sentiments; it is very possible that the student who provided me with feedback was merely being diplomatic. While class forum does have some positives, I believe the social diplomacy stands in the way of the system realising its full potential. (Reflective Journal Week 6)

The use of the term *social diplomacy* is interesting, alluding to less sophisticated beliefs about the notion of critique. By advancing a dichotomy between the “*nagging know-it-all*” and the “*two thumbs-up smiley face*,” there is a sense that the student lacked a deeper and richer understanding of critique. The student revealed an acute sense of vulnerability, reluctant to offer critique when she does not consider herself qualified to do so, but also reluctant to avoid critique and paint an overly positive (and potentially inaccurate) picture of another’s work. Moreover, the comment suggests that this sense of vulnerability was heightened because of the online environment which publically displayed the feedback. A tension existed between the intimate nature of giving candid and honest feedback to another student and the teacher’s objective to provide access to a range of experiences around the text under study through the virtual communal space.

As discussed above, the students often struggled with the cognitive and affective demands of giving useful feedback to their peers. In addition, a number of students dampened the collective spirit of the learning activity by providing multiple feedback postings to the same student (rather than selecting a different student who had received no feedback as the teacher expected). This led to some students receiving many feedback comments for their work, while some students received none. It was rare for the EAL students to give feedback to someone who had received it; however, they were all affected by this practice through the actions of their classmates. For example, in weeks four, six and eleven, Student Two (Group B) did not receive feedback. In contrast, during Week Six, Student One (Group A) received five feedback postings in one week. It was apparent that some students were unhappy when they did not receive feedback. Student Four (an EAL student who was not one of the four core EAL student participants) received erratic feedback and expressed feelings of marginalisation and inadequacy in her journal posting.

Because it is already week five, and no one has done any feedback on me ... I have not gotten any feedback from anyone, so I can not say how regular it is and how effective it is. The reason people do not give me any feedback probably they think my English is bad, which I think it is true. (Student 4/Week 6/Reflective Journal)

The practice of multiple postings to the same individual was another eroding force which affected the credibility of the task for some of the students. The reciprocal nature of the learning activity – the giving and receiving of feedback – was violated. Students would provide feedback to others, and yet they may not receive feedback in return. Moreover, the practice was tolerated by Tutor One who did not intervene and continued to award marks to the students.

In summary, while the findings indicate that the students did, at times, value each other as resources, the findings often show that the students were unable or unwilling to share or build understanding with other students in the peer feedback activity. A

significant amount of data suggests that the students were simply not credible in the role of resource.

5.3.3.2 The role of the teacher

As noted earlier, the data suggest that the students often doubted their own abilities or the abilities of their peers to act as resources. They missed the “expert” voice of the tutor in the feedback process.

Student 1: I think it would be great that if the tutor also give some feedback instead of just giving marks

Researcher: Yeah. What type of feedback would you like from the tutor?

Student 1: Um like just telling us if we are on the right track or one or two things that we might be able to improve. I know they have a lot of student, but yeah at least reassure us that we are on the right track. (Student 1/Group B/Account 3)

These thoughts were echoed by Student Two (Group B):

I actually want to hear improvement from the teacher, not the student, that's more important ... because she's the tutor, she knows more than us students. (Student 2/Group B/Account One)

Similarly, both tutors felt a need to interject their voice into the feedback task, and indeed Tutor Two modified the task to allow her to do so. This practice was in opposition to the teacher who believed that the tutors' voices would demote the student feedback.

Students would look for the teacher feedback ... I think it would be de, what's the word, de-empowering, because it would allow the teacher voice to come in much more and it would, it would detract from their position as giver of feedback that I'm trying to instil in them. (Teacher 1/Interview 2)

Assessment practices played a key role in muting the voice of the tutors. The tutors were expected to assign a mark of 0, 50, or 100 with no written comment – the lower marks reflecting some kind of deficit; for example, a lack of thought or grammatical inaccuracy. This blunt system gave students a vague idea of whether they had met the tutor's expectations but did not provide substantive feedback on their work. In addition, the ability of the tutors to evaluate the quality of the student feedback was greatly constrained due to under-resourcing and workload issues. For example, Tutor

One had to work through the submissions of over 80 students each week and she lacked time to directly compare the student feedback with the original text being critiqued to check for accuracy. Essentially, the tutors' role was to verify that the students had produced feedback which *looked* appropriate; in other words, students were rewarded with marks if their feedback displayed the required ingredients (two positive comments and two critical comments conveyed in a sincere manner). Tutor One noted "*this thing [the learning activity] is not about whether they're right or wrong but the fact they've actually tried*" (Tutor 1/Account 1). The tutors' voices were distorted by the blunt form of the assessment tool which rewarded feedback postings which *looked* accurate rather than *were* accurate. This situation further eroded the credibility of the task as some students felt they had no way of trusting the accuracy of feedback received from others.

The preceding discussion has indicated that the nature of participant roles in the peer feedback activity was highly contested amongst the students, tutors, and teacher. A contradiction existed in the way the work of transforming the learning object was organised and divided up between the participants. As designer of the task, the teacher believed the students could build understanding themselves without the tutor; however, these beliefs were not necessarily shared by the tutors and students. Being required to critique another's work and act as a knowledge resource, the students were encouraged to inhabit new ways of thinking and being. In terms of student resistance to this new role, the findings show them expressing feelings of vulnerability and uncertainty about giving or receiving feedback. The students struggled with the affective and cognitive demands of this new role and questioned whether they could co-construct knowledge without the direct intervention of the teacher. Moreover, these feelings appeared to be intensified by the online platform which displayed their work for the group to view. Participating in the peer feedback activity required transformations in ways of thinking and being (both for the students and the tutors) and it could be argued that the teacher may have failed to appreciate

the ontological and epistemological shifts she was expecting the participants to undertake.

5.3.3.3 Summary

The learning activity was predicated on the belief that the student voice was a credible resource to build understanding of business writing. In some ways, the students did function as resources – offering useful comments to their peers, giving affective support, and providing models for each other. It cannot be denied that the students did encounter a range of experiences around the texts under study which did contribute to their understanding. However, without direct and substantive input from the teacher, the students struggled to assume the role of resource. They often offered praise and encouragement without constructive comment and showed a preference for maintaining social relationships rather than providing robust critiques. By tolerating or actively participating in the practice of multiple feedbacks, they violated the agreement that one would both give and receive feedback. Clearly, uncertainty around the ability of students to share and build understanding was an eroding force that diminished the credibility and value of the peer feedback activity.

5.4 Case Study Three Findings

5.4.1 A Brief Description of Case Study Three

This case study represents a learning activity embedded within a tertiary-level postgraduate paper concerned with language assessment and evaluation. The learning activity/learning object under study was called a “DIQ” and there were a total of eleven weekly DIQs in the paper. Each week the students were required to submit a DIQ assignment whereby they read two academic articles, and then wrote and uploaded a DIQ (a summary, impact statement, and two questions for their peers) for each article to the paper website. Later in the week, the students were required to

choose a peer's DIQ and answer all their questions (four in total – two for each article). The core participants were a teacher and six EAL students. In addition, a key informant interview was conducted with a learning technologist and the activity of other students in the class was observed. Further information about the context can be found in the Methodology Chapter and Appendices.

5.4.2 Making Sense of the Learning Object

As the participants engaged in the DIQ learning activity, the data suggest that they related to the object in differing ways. They brought their previous experiences and understandings to bear on the learning object and these historical factors shaped the manner in which they transformed the learning object into an outcome. Moreover, these unique relationships between the subject and object led to contradictions within the learning object which are examined in the following discussion.

5.4.2.1 Convergent understandings of the learning object

A prominent theme in the data from this case study is the early alignment of teacher and student beliefs about participation in the DIQ learning activity. The participants appeared to relate to the object in similar ways, ascribing equivalent meanings to it. Certainly there was a period of adjustment as the students were introduced to the concept of a DIQ and initially some students expressed confusion about what was required; however, as they started to receive feedback from the teacher, they began to align their beliefs about the nature of participation more closely with the teacher's expectations.

Teacher feedback was greatly valued by some students as a tool to articulate the teacher's expectations. Student Three said:

I really want to see what she think and what shall we improve and what point maybe too specific or too general or stuff like that, I really want her opinion. (Student 3/Account 1)

Student Five was reassured by the feedback which confirmed that her understandings of participation were aligned with the teacher's beliefs.

Yeah, maybe at the beginning, we, I was very, very nervous if my job is better or not, but later I think it's, after I, after I look at the score and the teacher give me and I think it's not so difficult to finish the assignment. (Student 5/Account 3)

As the paper progressed and the students gained more experience producing DIQs, the data suggest that this alignment continued. The EAL students read the articles, summarised the readings, integrated theory and experience, posed questions based on the readings, and answered questions from their peers in a useful manner. Generally speaking, from an early stage in the paper, there was significant alignment between the teacher's expectations and the students' transformation of the learning object. This similarity in understanding could be considered quite remarkable as four of the six EAL students had not encountered eLearning or pedagogies based on social theories of learning before. Student Five contrasts her previous teaching and learning experiences in China with the DIQ activity:

The DIQs I think it's very useful and important, you know in China, when we give some, some students some assignments, assignment we only ask them to write down something, and maybe, you know, we have our note, our own textbooks and at class we only read this, as a teacher we only need to teach them the knowledge on the text books and all the questions and the answers are on the textbooks, but here we need to produce our questions and we need to look at answer other, other students' questions, it's very useful. (Student 5/Interview 1)

Moreover, the DIQ itself was a fairly complex learning object as it was multi-part and demanded different types of cognitive engagement. For example, the summary required the ability to identify key points; the impact statement required the ability to integrate concepts with experience; the questions required the ability to identify relevant and interesting issues; and the answers required students to respond appropriately to their peers' questions.

The data suggest that the design of the DIQ task (which included detailed descriptions of tasks, models of student postings from previous years, explicit instructions about participation, explicit teacher feedback, and face-to-face weekly interactions) may have played a major role in clearly defining what “doing” the activity meant. In the excerpt below, the teacher described the form of her written feedback to students about their DIQ work, illustrating the way in which the learning object was repeatedly described and student participation was tightly scripted.

I'll say, your questions, this part was good, this part was satisfactory, but not fantastic, this was too long, this was too short, vice versa, um your impact statement told me how you felt about the article, I'm glad you liked it or I'm sorry you didn't like it, but it's irrelevant. Very specific feedback and then I will tell them, your questions however were not adequate for the task, they were multi part, they didn't link back to the ideas, they weren't answerable by, what's it the, you know, they were too this or that. So they get very clear feedback and I say if you do such and such on the next, if you do this and that, it could improve, it could improve the next assignment. And now I'm saying these are good questions, this was a good question, this was a good question and then the global sort of comment. (Teacher 1/Account 1)

Perhaps not surprisingly, the structured nature of the learning activity and the alignment of student and teacher understandings appeared to lead to the realisation of the teacher's learning objectives. The main objective of the DIQ activity was to focus student attention on the readings “*in a very powerful way*” and ensure students did the readings and came prepared to class. However, this objective had expanded over the years to provide the students with multiple opportunities to engage with course content – to encounter and re-encounter ideas individually, socially in an online context, and socially in a face-to-face context. The activity represented a range of critical approaches by encouraging the students to examine conceptual content in varied ways – applying it to themselves, discussing it with others, and considering how it relates to theory. This iterative approach encouraged the students to think about the course content in varied ways and come to the face-to-face setting well prepared to discuss key concepts with others.

Indeed, observations of online activity suggest that these learning objectives were often realised. The EAL students encountered and re-encountered course content as they wrote their DIQ texts, reflected upon their experiences in relation to the literature, and discussed transformations of their understanding and teaching practice around language assessment and evaluation. For example, the excerpt below shows the student considering her past teaching experiences in relation to issues of validity in language learning:

I had seen many cases that teachers rushed to pick up some items from text books or other resources without considering the purpose of the test. For example, simply requesting writing short answers which don't depend on much reading comprehension had been found easily, such as fill the appropriate propositions in the blank. (Student 1/Online Observation 7)

The use of personal experience appeared to afford a deeper engagement with the concepts, revealing a genuine interest in the topic that was relevant to the students' lives. Also, by encountering their classmates' work online, they were exposed to differing perspectives on the topic and were stimulated to further engage with the concepts through answering questions posed by their peers. By providing multiple opportunities to think about course content, students engaged with the concepts and came to the face-to-face setting prepared for classroom discussions.

5.4.2.2 Divergent understandings of the learning object

While acknowledging that the participants often ascribed similar meanings to the learning object, there were two particular instances of divergence which suggested that the participants held differing understandings about what participation actually entailed. These differing understandings created contradictions within the learning object which shaped the nature of its transformation for the participants. In the first instance, several of the EAL students understood the learning object to be more complex than the teacher envisioned. In the second instance, some students

consistently failed to synthesise concepts across the paper, adopting a compartmentalised approach and focusing only on the week's topic.

In relation to the first instance of divergence, the teacher viewed the DIQ activities as “*small assignments*” due on a weekly basis and acting as tools to require student engagement with course content. In contrast, all the EAL students viewed the DIQs as demanding a significant amount of time and effort. The degree of effort expended can be partially explained in terms of English language ability as the students struggled to read academic texts and articulate their thoughts in English. However, the data suggest that the students also perceived the object as more complex – a task which must be fed with fresh material external to the paper. This stood in contrast to the teacher's beliefs that students should recycle existing material (the paper readings) – reviewing and building on key concepts across the course such as validity and reliability. By adopting this approach, the teacher placed limits around the amount of material the students would have to encounter, thus, in theory, decreasing their reading workload. It was a simpler view of the object requiring the use of local resources and giving the students permission to revisit concepts. The teacher explained:

Actually I don't think there's any problem whatsoever with repetition. But they probably think they have to come up with something new and interesting every week to answer these questions. Not so, if they are showing a good, cause we've got lots of material for them to draw on. They don't need to go outside to get ideas, just flip back through some of the earlier articles um and just, and they don't even need to refer to them specifically. (Teacher 1/Account 4)

She added:

Some students have got it and they're basically questioning each week from the same kind of perspective, what does this actually mean? What are the validity and reliability issues as related to this form of assessment as opposed to other things that we've talked about? That's what I'm looking for. Now they, it's really actually, what I'm looking for is probably far simpler and less complicated than they think. (Teacher 1/Account 4)

Returning to the same material in a cyclical manner was contrasted with a linear view of continuously encountering new material:

For them [the students], it's like a continuous stream of information. That it, just it starts and it just keeps going. It isn't, there's a, there's a block of stuff, and I've told them, there's a block of stuff. We're gonna go through a block of stuff in the beginning and if you don't get it first time, don't worry, cause we keep repeating and recycling and back through it and referring back to, so you will recycle through these ideas over and over again. But they still seem to think that it's like, you know it's like, it's like, information transfer, you know, it's like the transmission model. That its' just all new and it's all starting from square zero again, it isn't, it just isn't ... and I find it astonishing that they don't get it. (Teacher 1/Account 4)

In contrast to the teacher's expectations, Students Two, Three and Four all reported turning to the Internet to acquire additional information to answer the questions posed by peers. The data suggest that this information-seeking behaviour was probably caused by two key factors. First, Student Three simply believed that the DIQs should be fed by fresh material. She was observed posing questions which required her peers to turn to external sources to answer them and she expressed disappointment when her peers did not provide her with new ideas. Thus, she held a differing view of participation as more complex and time-consuming than the teacher intended. Second, the teacher's rule that "*everyone's questions must be answered*" combined with the rule "*answer all the questions from the same student*" led to the forced selection of questions which the students perceived they could not answer without undertaking further research. In their struggle to answer questions which might require them to draw on experiences they had not encountered or refer to topics beyond the scope of the readings, some students were forced to expand their search for resources to answer the questions.

The teacher observed that a positive unintended outcome from this more complex view of participation was that students might read more widely than she had planned. However, this extra reading came at a high price as the task became more labour

intensive – increasing the student workload. As will be suggested later, student perceptions of being overwhelmed with paper commitments contributed towards a profound sense of weariness which seeped into the activity. Initial enthusiasm for the sharing of ideas became subsumed by a survival mode approach to complete the task as quickly as possible. As will be discussed later, the view that participation entailed using external resources may have constrained the teacher's objective for social learning to occur.

The second instance of divergence was characterized by misunderstandings about the evolving object. As the paper progressed, the teacher's conception of the DIQ learning object changed from an activity where students drew on the specific readings for that week (Object 1) to an activity where students considered the week's readings but also synthesised ideas across the paper in order to gain a global understanding of the paper content (Object 2). These expectations were communicated to the students via individual feedback from the teacher. Some students started to reproduce this new version of the learning object (Object 2); for example, Student Two drew on the cross-paper concepts of validity and reliability to make sense of her teaching experiences.

After reading it, I started to think about my own teaching experience. I used to write the test to my students for class-test. Compared with those 'high-stakes' tests, class-tests seem less important. So what I often did was to copy some items from the past test-paper and paste them to the new test-paper without really thinking what I wanted to know from my students. The test was not valid and reliable, which means I was not responsible to my students. Now, when I think of that, I find how important of validity and reliability of a test. (Student 2/Online Observation 2)

Toward the end of the paper, the teacher noted that approximately one third of the class understood that they should be integrating ideas across the course (Object 2). However, a significant number of students continued to produce the earlier encapsulated version of the object (Object 1), even with feedback. When questioned as to why they were continuing to produce Object 1, three of the six students claimed

to be unaware of this requirement – a curious situation as the teacher stated that students were reminded of Object 2 through weekly feedback. Other reasons for the divergence in views can be inferred from the data. Certainly student ability may have played a key role – perhaps some students simply lacked the skills to integrate and synthesise. This raises questions about the entry requirements for postgraduate study and the role of the teacher in developing basic academic skills such as time management, referencing, and the ability to summarise and synthesise. In addition, the rule that the students had to answer everyone’s questions may have forced them to answer questions they did not fully understand – leading to limited and superficial responses. Finally, the perception of being inundated with work may have played a role as, during the latter stages of the course, students developed tunnel vision, limiting their engagement to what actions and operations were deemed to be compulsory.

To summarise, the EAL students and the teacher did relate to the learning object in similar ways even though many of the students had little experience of this type of learning context. The findings suggest that the tight structure of the learning activity and clearly articulated expectations communicated via multiple modes supported the alignment of student and teacher understandings of participation. However, diverging views did emerge leading to internal contradictions in the learning object in relation to what “doing” the activity actually entailed. Some students invested more time and energy in their work by searching for resources outside the paper, and other students failed to synthesise key ideas and concepts. While these contradictions were not a crippling blow to the learning activity – the students still continued to process the course content in focused ways – they did increase student workload and limit a deeper understanding of the field of language assessment and evaluation.

5.4.2.3 The prevalence of instrumentalist objectives

As the paper progressed and the students engaged in the DIQ learning activities on a weekly basis, mixed intentions were articulated which revealed conflicting goals. One goal was based on a genuine interest in co-constructing understanding with peers while the other instrumentalist goal was based on the need to complete essential components of the assignment as quickly as possible to gain credit. In the excerpt below, Student Five reveals her mixed intentions:

This time is the most successful questions for me because I really, for these two questions I really want, want to know, to know the answers...sometimes when I, when I produce some questions ... the questions are not what I really want to ask, I just want to finish the assignment. (Student 5/Account 3)

A primary concern with pleasing the teacher rather than the meaningful exchange of information with others is suggested below.

Researcher: *Do you care about these questions?*
Student 4: *Um, this question, the first one, I think I know the answer, right, so I mean I think, I think, I think I just, you know, want to feel what kind of questions [the teacher] wants to get, so I produce this one. (Student 4/Account 3)*

An inherent risk in awarding marks for participation is that students will become more focused on individual performance and assessment, and less focused on sharing and building understanding with their peers in meaningful ways. Initial interest in cooperating with peers to explore issues in language assessment and evaluation was constrained by the pragmatic need to be expedient; namely, to complete the learning activity as quickly as possible to gain credit. Through their shifting motivations, the students' relationship with the object was transformed.

In addition to a growing preoccupation with individual performance and assessment, the students expressed little connection with their peers. The teacher envisioned that the learning activity might build a sense of “community” as the students began to know each other in greater depth through their online interaction (Teacher 1/Account 2). However, many students expressed feelings of being disconnected from their

peers; for example, Student One said that “*I just simply question and answer that’s all, yeah, it’s not actual connection*” (Interview 2). Interestingly, Student Three suggested that interaction was constrained because the class was not situated within specific communities of practice, united by practical, real-life problems.

Maybe it’s just because of the theory not the practical one, I mean if, I mean like if I studied this course with my, my colleagues, you know, like we involved in the same item writing situation before, that would be like stimulate lots of discussion and we have like particular problems in some areas, but this is like general broad overview and stuff ... we’ve seen some examples of a test, but yeah, just general, not particular involved in like the process. (Student 3/Interview 2)

The findings also suggest that the perceived relentless pace of the paper significantly influenced the way the EAL students related to the learning object and to each other. As the paper progressed, the students began to express feelings of being pressured for time which dampened their enthusiasm to interact with others. The intention to share ideas and experiences was replaced by feelings of exhaustion and indifference towards the DIQs. Driven by the need to simply complete the task within a short period of time, student participation shifted towards a functional orientation to focus on perceived essential aspects of the task and ignore non-essential aspects:

Researcher: *Do you care about the answers?*

Student 2: *Actually not (Laughter)*

Researcher: *Because...?*

Student 2: *No just like, now I’m kind of er exhausted, I simply want to finish and then go. So, um this attitude is not very good but really it’s just to be honest, I don’t really care.* (Student 2/Account 3)

Student Five echoed these sentiments, feeling compelled to produce questions which did not reflect her interest or experience.

Researcher: *So why did you ask the questions?*

Student 5: *Because I must produce two questions ... but these two questions not attract my, not maybe not attract my interest and I never experienced, I’ve never experienced this, this, this process in my teaching, in my teaching career, so I think they are very boring.* (Student 5/Account 1)

There is a sense of compulsion in her words which was also expressed by Student One who stated “*it’s my duty, I have to make a question*” (Student 1/Account 4).

Time constraints continued to be a key factor in determining how students participated. Student Six did not linger in the forum to encounter her peers' experiences and understandings but instead posted her work and immediately left the online space.

We haven't enough time to, to, to look at all the questions, I just very hastily log on to and try to read some questions or one of the questions easy to answer. I know how to answer, I have some questions I have know them, I have the ability to answer. So then after I finish I just get off the line and rush to the dining hall to or to read some other materials. (Student 6/Account 1)

In relation to the answers she received from her peers she added "*in fact, I'm too tired ... we have no energy to care about the answers, I intended to before I, at the beginning of, of this semester, but later I give up*" (Student 6/Account 3). Student One lamented the lack of time to consider course content in deeper ways, saying "... *move on, next topic, next topic, next topic, you can't intensify the topics more ... so if we had some more time we can discuss more*" (Student 1/Interview 1).

It should be mentioned that factors external to the paper may have intensified the pressure on the students. The paper ran concurrently with another paper which employed a similar online DIQ-type task – thus, the students were under pressure to produce DIQs constantly throughout the semester. In an email communication with the researcher, the teacher said that no discussion had occurred between the lecturers about the coordination of learning activities between concurrent papers.

From the teacher's perspective, there was a clear tension between her objective that postgraduate students should engage with a significant amount of literature and the external construct of the twelve week teaching semester imposed by the university. It is the semester artefact which condenses the learning activity into a small period of time, requiring the teacher to move the students through the paper content within twelve teaching weeks. Thus, each week the students were normally expected to produce two DIQ texts from two readings and it is perhaps unsurprising that they

believed they had little time to reflect upon key concepts, linger online to view their peers' understandings, or engage in dialogues with their peers in the online forum. Interestingly, the teacher perceived that the distance block papers that ran over a year could allow students to move through material at a “*more intellectually leisurely pace.*” The teacher was aware that she could reduce the content thereby decreasing the tension within the paper. However, by doing so, she may threaten the validity of the postgraduate paper.

Now I could cut the content in half, you know, not give, you know really water it down, um to be quite honest with you, I feel that it's just skating across the surface in terms of testing theory. I've already kind of more or less cut out the evaluation component, it's so, it's so squashed at the end ... I've really simplified it [the paper]. I feel it's about as simple as I can get away with and sort of honestly feel that I've given them a basic overview of assessment concepts. (Teacher 1/Interview 2)

The findings indicate there was a tension here between the institution's need to manage teaching and learning through the use of the semester artefact which creates a pressurised environment and the students' need to encounter the paper content at a more leisurely pace so that reflection and dialogue could occur.

To conclude, the data suggest that the students' relationship with the learning object was transformed as they engaged in the learning activity during the semester. In the early stages of the paper, social interaction was meaningful as an authentic exchange of information to support individual learning; however, as the paper progressed and the students perceived that they were under considerable time pressures, social interaction became meaningful as a means to meet the teacher's expectations and gain marks. External factors such as other concurrent papers and the constricting effects of the semester artefact may also have played important roles in nurturing a sense of expedience and influencing how the students ascribed meaning to the learning object.

5.4.2.4 Reciprocal relationship of subject and object

A recurring theme in the case study is the connections forged between the DIQ learning activity and the target practices of academia and language teaching. The students encountered academic practices and engaged in activity reminiscent of legitimate peripheral participation (Lave & Wenger, 1991) as they reflected upon the concepts in the literature, engaged in autonomous and independent practice, integrated theory with practice, and synthesised ideas across the course. The teacher encouraged the students to express not only their voice, but also the voices of other academics in the field of language teaching and assessment. She explained “*it’s not just their voice, their voice is important, but it’s academic reflection that’s important which means synthesis of ideas*” (Teacher 1/Interview 1). By engaging in the activity, the students were exposed to academic ways of thinking as they assumed roles of novice academics. Moreover, the learning activity provided a space for the students to reflect upon their teaching and learning experiences and articulate transformations in their practice. For example, Student Four expressed new perspectives on designing tests:

Before I read this article, I just evaluated the quality of tests subjectively and I did not even realise or appreciate how hard test writers had worked to try to produce a more reliable and valid test. This does not mean that I am satisfied with all current tests, but it means now I can evaluate the quality of tests from a more informed and objective position since I have learnt a lot from the article. In particular, next time, if I am asked to write a test, I will follow the stages to try to produce a better one. But I may not follow every stage and which stages I would like to choose generally depends on the type of the tests I am going to produce. (Student 4/Online Observation 2)

Student Five articulated new understandings of social theories of learning:

It [the DIQ activity] can force students, to, to to learn independently but in China, in the class, teacher must explain a lot, students only need to listen and after class they can do what the teacher asked them to do according to the text ... they seldom communicate with, with the students, with each other and they don’t know. Maybe this is a good way for cooperation ... after I come back to China, I going to, I planning to use this way in my class. (Student 5/Interview 1)

However, the learning activity reached out to the target practices of language teaching and academia in deeper ways which implicated issues of personal identity. Students were not just developing key skills and participating in new practices, they were experiencing a shift in their ways of thinking, doing, and being as they moved into postgraduate study and reflected upon the paper content as language teachers. For example, the students were being encouraged to become independent thinkers, able to manage their learning and bring a critical perspective to bear on their studies. Thus, as the students transformed the learning object into an outcome, the data suggest that their sense of identity was being transformed in the process.

5.4.2.5 Summary

This section has examined how the participants related to the learning object as they engaged in its transformation. The data have suggested that there was a strong alignment between teacher and student understandings of what “doing” the learning activity actually entailed. However, at times differing meanings were ascribed which created contradictions in the object and shaped how the participants engaged with its transformation. In addition, a concern with individual performance and assessment nurtured a type of pseudo-communication between the students where the communicative intent to share and build understandings with peers was subsumed by an overwhelming need to be expedient. The data suggest that the semester artefact may have played an important role in placing the students under considerable pressure, dampening their interest in engaging in social interaction with their peers.

5.4.3 Occupying the Role of Knowledge Resource

The data in this category pertain to how participation in the learning activity was organised and managed amongst the EAL students and teacher. One key theme emerging from the data analysis (seen also in previous cases) was the credibility of

the students to act as resources for each other without the active intervention of the teacher. The DIQ activity, specifically the questions and answers component which required social interaction between the students, afforded another opportunity for students to process content in a social context; however, the task was predicated on the expectation that the students would be able to assume the role of setting each other appropriate questions and offering sound answers in the absence of the teacher. The next section considers this issue in relation to two factors: the teacher's perspective and the students' ability to act as credible resources for each other.

5.4.3.1 The teacher's role

In contrast to Case Study One where the teacher lacked an understanding of pedagogy, the teacher in this study drew on a rich history of teaching and learning with computers to inform decisions about her role in the DIQ activity. Drawing from her previous experiences as a graduate student, she expressed a belief that graduates should be self-directed in the management of their learning and, through the learning activity, the students were exposed to the academic culture where independent thought and autonomous practice were valued. Additionally, the teacher was aware that the DIQ activity connected to a weekly face-to-face classroom session where there were opportunities for her to engage with the students. Informed by these beliefs, the teacher did not actively participate in the DIQ learning activity, limiting her role to assessing student work and offering feedback. She believed that the online interaction was a student space – their learning experience – and she feared her participation would “*hijack*” the interaction, transforming it from a student-to-student learning experience into a “mini-lecture.”

I could totally take it over, that's the thing, that's what I don't want to do...I could just totally highjack the whole thing and have it as, you know, “ok you guys said this, well here's what the real answer is.” (Teacher 1/Interview 2)

The teacher intended to develop a student-centric culture where she was not the focus of attention. She stated “*I want them to be talking to each other and interacting and mixing*” (Teacher 1/Account 2). However, in the excerpt below, she expressed some reservations about her role, specifically when students’ questions were not answered. Her comments reveal that perceptions of optimal pedagogy have to be balanced with teaching workloads.

Now sometimes I have thought for the weeks when someone’s questions aren’t answered that I should answer them, I’ve considered that and in fact it’s not that I, I don’t want to do it, I just haven’t done it but I think actually it would be a good practice, but it’s more work for me. (Teacher 1/Account 3)

Thus, drawing from her beliefs about teaching and learning in postgraduate contexts, knowing that she would be meeting the students face-to-face, and guarding her workload, the teacher did not bring her voice to bear in the social interaction between students.

5.4.3.2 The credibility of students as peer resources

The DIQ learning activity was underpinned by the belief that the students could function as resources for each other in the development of understanding around language assessment and evaluation. Initially, the following section will consider several ways in which the students did assume the role of peer resource as they generated models of the DIQ text for each other, stimulated thought by asking interesting and relevant questions, constructed a communal display of understanding, and provided useful answers to questions. After this discussion, attention will be directed towards the ways in which they struggled or failed to assume this co-constructive role.

First, the students functioned as resources for each other by providing models of the DIQ text as their work was displayed in a communal online space for the entire class

to view. This modelling was facilitated by the teacher through the “*questions and comments area*” where she identified examples of well-constructed DIQs and gave reasons for her decisions. She was using the students to scaffold each other’s learning.

I want them as a community to work together um because they all have different strengths and weaknesses, and you know, it’s the old scaffolding thing ... I’m certainly scaffolding them, but they can also certainly scaffold each other. (Teacher 1/Account 2)

In addition, modelling occurred as the students navigated through the website and encountered their peers’ work. Student Five recounted an instance of learning how to create a question by using her peer.

Her question is like this, “according to this idea, this is what, but what do you think of, what do you think of.” I, at that moment, I know how to produce a question. Maybe this, this, this theory is general, it’s general but in a specific situation, how do you, how do you use this theory to deal with a problem ... that’s useful for me to produce a question and how to think about something. Maybe this is just the theory, what about the practice. (Student 5/Account 1)

Second, the students functioned as resources for each other by creating questions which stimulated thought and afforded another opportunity for their peers to engage with the paper content. For example, online observations showed that Student Three was compelled to return to previous readings and consider key themes in order to successfully answer a question. Additionally, many questions asked students to share their teaching and learning experiences and consider them in relation to the theory. Interestingly, Student One notes that even being forced to answer an uninteresting question may support learning.

Sometimes I have to choose some specific question because there’s no option at that time it’s quite forceful, pressed, yeah, to answer some question, but even, even that time ... I can find some value or meaning from that quite horrible task ... because I have to answer to that question and then I read again the articles and then I think about the question and how can I answer that question. That that activity or that time er depends on my, my, my, my, my thinking or my activity, it can be changed to valuable time. (Student 1/Account 2)

There was much data to indicate that, by posing questions, the students gave their peers further opportunities to reflect upon the paper content and relate it to their teaching and learning experiences.

Third, the students became resources for each other by constructing an online communal display of understanding which was focused on the weekly topic and offered a range of experiences and differing perspectives to consider. However, it should be noted that many students did not read everything displayed on the website. Indeed the findings indicate that the students deliberately bounded their exposure to others' work by strategically targeting specific components that would assist them in the writing of their DIQ (for example, quickly skimming the questions to find those they could answer and ignoring other postings). Interestingly, the website interface had properties which in some ways made it complicit in these avoidance strategies. The "*replies*" function allowed the students to see if their peers had received a response before opening up the posting. Thus, they could strategically bypass those students who had received a reply to their questions and target those students with no "*replies*." Additionally, by locating each student's work on a different webpage, in a new discussion thread accessible by an additional click, the website may have contributed to feelings of compartmentalisation. While the website was communal, in other respects it sequestered student work behind additional navigational clicks. Students could subvert the communal nature of the website by easily avoiding their peers' work. The point being made here is that, theoretically speaking, the communal online space did afford the ability to encounter differing perspectives. However, practically speaking, this affordance was not fully realised as the students deliberately bounded their exposure to their peers' work.

The fourth way in which students functioned in the role of peer resource was through providing useful responses to the questions. Many students were genuinely interested

in their peers' answers and found their responses helpful. For example, Student Two noted:

I want to get some other people's opinions. It's really I don't know the answers... so they gave me some ideas about how to do this and yeah, it's helpful. (Student 2/Account 2)

The preceding discussion has indicated four ways in which the students rose to the challenge of functioning as credible resources to build understanding with their peers. In some ways, it is quite remarkable that this occurred as most of the EAL students had to undertake a paradigm shift in their views of teacher and learner roles, particularly the four Chinese students. However, while acknowledging that the students did assume these new roles, the data suggest that this was not always the case. The following discussion presents an alternative perspective, arguing that, at times, students struggled and failed to function as peer resources.

First, some students expressed dissatisfaction with the quality of responses for their questions. For example, Student Three often found her classmates' work lacking.

Hers is so short I think and didn't get to the right point I want to know ... she didn't provide like in-depth opinion or knowledge which I'm looking for, which I was looking for ... she just answer like, just get something from the chapter, and is the thing that I already know, yeah, ... maybe I didn't ask clear enough, I don't know. (Student 3/Account 3)

And later she expresses disappointment that the class may lack the teaching experience to give her the "fancy ideas" that she seeks:

Sometimes yeah some questions and answers were very good, yeah, it stimulates discussion but yeah, I think the problem is ... maybe most of us don't have strong background in teaching or this particular topic, so I don't think we get more knowledge from this discussion. (Student 3/Interview 2)

This sense of disappointment created a sense of disillusionment and eroded the value she placed on her peers' contributions. This led to the posting of a general question she did not care about.

I think last time I care [about my questions], like I put my expectation quite a lot in my question because I really want to know about the computer project or automated system to creating the feedback, but this one, is just general a question, not, not, not something specific that I really want to know. (Student 3/Account 2)

Second, the students had mixed feelings about their own role as active contributors. Certainly, there were instances in the data where the students expressed confidence about sharing their ideas and experiences with the other students. Generally speaking, the students appeared more confident when sharing their own experiences and giving practical advice to peers rather than discussing abstract theoretical concepts. However, some of the students expressed insecurities about their ability to contribute information. Student One perceived that there was a “*correct*” answer to the question and expressed uncertainty about whether he had provided it to his peer. Student Two felt that her lack of experience led to a shallow engagement.

But I know the answer is not very deep because I can't combine the theory with my experience, so I can't go into very deep like [name of Student Four] or like [name of an ENL student], they've got five years experience, just teach English. I think they got maybe their opinion is more deeper than me, is deeper than me. (Student 2/Account 4)

Third, there was the perception that the students were struggling to think at higher levels of cognition, particularly integrating theory and practice or synthesising concepts across the paper. This is noted by Student Four who observed the tendency for students to ask questions which focused on specific examples of practice.

This is why I think maybe our answers are not as useful as I think, because we just take examples, we don't have higher, higher levels, higher thinking, higher thoughts, right, so I think um, yeah I think it's not good. I think people maybe, maybe students like me sometimes we couldn't figure out, we couldn't get higher thoughts, so we just produce questions, like “can you give me an example like this, this, this,” so this is one reason because we couldn't understand very well. (Student 4/Interview 2)

Student Five echoed similar thoughts, observing that students “*just write some information and not deep thinking*” and missing the voice of the teacher (Student 5/Interview 2).

The data suggest that, at times, the students experienced a crisis of confidence in the group's ability to propel itself onto a higher level of cognitive engagement. The concept of a student-only online space was questioned as being adequate for learning. The blended nature of the paper provided other opportunities for the teacher's voice to be heard; however, this did not seem to be appreciated by the students.

Fourth, the students' credibility as knowledge constructors was affected by the production of weak questions. The DIQ activity required that students set each other an assessed task, namely, to create two questions per reading to stimulate online discussion and reflection. The teacher described the form of the questions on the website, requiring that they be "*unambiguous, not multi-part and answerable based on the text (or previous articles we've read)*" (Teacher 1/Online observations 9). While there were many examples of questions which adhered to these requirements, there were other instances of questions which could not be answered from the readings, questions which were multi-part and complex, questions which focused on particular issues or experiences and restricted the number of students who could respond, and questions which dwelt on abstract theory and were difficult to understand. Two examples of these types of questions are given below:

Do you have any experience of accommodation training in speaking tests? Can you share your experience with us? (Student 6/Online Observation 16)

The author contrasts 'deficit competence model' and 'multiple factors model' considering discourse management, comprehensible utterance and etc (refer p. 52-53, 'the focus on accuracy or correctness') How do you evaluate these two briefly according to the validity and reliability? (Student 1/Online Observation 16)

In response to these types of questions, the teacher gave low marks and explicit feedback to the students.

While some students were handicapped by weak questions and expended much time and effort attempting to formulate a response, on occasion, a few students were proactive in asserting control over weak questions. For example, when answering a question, Student Four indicated that the question is “*a little bit logically wrong*” (Student 4/Online Observation 7). In response to a question which asked a student about an experience he had not encountered, Student One took control of the question, admitting he lacked a response and modifying the question so he could answer it. By acting as autonomous and self directed agents, the students met the teacher’s expectations of postgraduate academic practice, namely, that postgraduate students should not be victims of weak questions but should be able to evaluate them and modify them by re-negotiating meaning as necessary. These responses received good marks and positive feedback from the teacher. However, it should be noted that displays of this type of agency occurred sporadically throughout the paper. All too often, students accepted weaker questions and spent significant time and effort attempting to answer them.

Problems stemming from weak questions were amplified by two teacher-created rules. These rules required the students to select questions which had not already been answered and answer all questions from the same student. In practice, this meant that each student had to answer a set of four questions (each student generated two questions for each DIQ and there were normally two DIQs due each week) from one student who had not been chosen by another student. Students could not pick and choose four questions from different students and were therefore “trapped” into answering weak questions or questions they felt unable to answer. This rule was driven by the teacher’s reluctance to expend much time searching the website for student answers – she wanted them in one place for ease of assessment. If the teacher relaxed the rules and allowed students to answer any questions, then the answers would be scattered throughout the posting areas and the teacher might have to spend additional time locating and monitoring posting activity. There is a clear tension here

between the teacher's needs to limit her workload and the students' needs to select any question they wish to answer, and this tension was increased by the website interface. In later discussions, the teacher conceded that it may have been possible to re-design the activity to meet both teaching and learning needs; however, as this was the first time she had used Moodle in formal teaching, she lacked detailed knowledge of how to format the DIQs in this way.

The data suggest that these two rules created by the teacher (stated above) significantly shaped student participation, often constraining meaningful activity. Student Two (Account 1) recounted how she was unsure of a question's meaning and offered a superficial response by copying sentences and then expressing irrelevant points. The rules forced students to engage with questions they would prefer to avoid, increasing their workload and anxiety levels. Students felt locked into answering questions they found uninteresting, did not understand, or felt unqualified to answer. Most significantly, the rules meant that the students were compelled to answer weak questions – they could not be sidestepped. One improvement suggested by a student was to allow the free choice of questions in order to afford more meaningful participation. Instead of spreading the interaction out thinly between all the questions, students could migrate to areas of mutual interest, clustering around stimulating questions and potentially engaging in deeper and richer interaction with each other. However, there are costs – the teacher's workload could increase as she searches for answers and it would be inevitable that some student questions were not answered.

The issue of non-responses bears additional comment as it has emerged in all three case studies. In spite of the teacher's rule that students respond only to those who had not received a response, there were cases of more than one student responding to the same person's questions. This practice resulted in some students not being answered, the worst case being Student Four whose questions were not answered a

total of four times (out of eleven) during the paper. Student Four started to doubt the quality of her questions, blaming herself for creating questions which were unfamiliar or unclear to other students. Students Three and Five expressed disappointment and sadness when their questions were bypassed. Students Four, Five, and Six, motivated by a fear of embarrassment, created “easy” questions to “lure” students to their questions.

I have a strategy, at the beginning for the first time, or first time, nobody answered my questions and at the beginning I didn't know the process and I was sad “oh maybe my questions are not very good” and I thought about this, and later we often talk each other and we find if the questions are easier to answer, then, then all of the people will choose your questions. So later I will produce your questions easier. (Student 5/Focus Group 2)

Thus, the embarrassment of not being responded to altered the communicative intent of the social interaction as some questions were based on the need to receive an answer rather than the need to request information. As observed earlier, it was questionable whether authentic communication, as the teacher planned, was occurring in these instances.

This discussion has considered ways in which social interaction between students supported the cooperative goals of the paper (interaction as a means to support individual learning); however, it has also suggested that the students struggled to assume the role of resource at times. As noted earlier, the DIQ activity was predicated on the expectation that the students would share and build understanding together in the absence of the teacher; however, the data have suggested that this assumption can be problematic.

5.4.3.3 Summary

This section has explored how participation in the learning activity was organized amongst the EAL students and teacher. A key theme emerging from the data analysis

was the credibility of the students to act as resources for each other without the active intervention of the teacher. Often, this expectation was realised as the students occupied this role by providing models, stimulating their peers with questions, and answering questions. However, this was not always the case. The students did experience insecurities in this new role or devalued the contributions of their peers. At times, they struggled to engage in higher levels of thought, produced weak questions which handicapped their peers' ability to engage with the content, and missed the voice of the teacher. Additionally, teacher-imposed rules and affective fears about not receiving responses aggravated the situation.

5.5 The Cross-Case Analysis

Although it is the intent of this chapter to present each case study as an holistic unit, it is imperative that global perspectives be briefly identified so that the foundations can be laid for the following discussion. In all three case studies, key findings emerging from the data analysis have clustered around two activity theory-based concepts of object orientedness and the division of labour. These concepts have been termed *making sense of the learning object* and *occupying the role of knowledge resource*.

5.5.1 Making Sense of the Learning Object

The findings indicate that the participants' relationship with the learning object was both idiographic and complex, imbued with a richness stemming from the historical context which foregrounds all activity. As sociohistorical agents who import a personal portfolio of past experiences and beliefs into activity systems, the participants made the learning object meaningful by building on what had come before rather than reinventing meaning in these new contexts. These past constructions such as teaching and learning experiences, understandings of the target

practice, and pedagogical beliefs about teaching and learning, shaped the nature of participation, particularly in relation to how the learning object was understood and transformed by the students and teachers. The data suggest that the teachers and students related to the object in unique and sometimes conflicting ways by bringing their previous experiences and understandings to make the learning object meaningful.

At times, the manner in which the participants ascribed meaning to the learning object led to the emergence of stresses, conflicts, and internal contradictions within the object. For example, in Case Study Two, the belief that the learning object was a credible pedagogical tool to realise the teacher's learning objectives was contested by both the tutors and students who questioned whether student-to-student interaction could result in increased understanding of business and academic writing. This situation created an internal contradiction in the learning object by fracturing the connection between object and objective which led to an erosion of the value of the task for the tutors and created tensions between the tutors and the teacher. The transformation of the learning object lacked meaning for the tutors and students in the same way that it had meaning for the teacher and this affected how the participants engaged in the activity.

Another common theme spanning all three case studies was the dominance of instrumentalist goals which were embedded within meanings ascribed to the learning object. As the students engaged in the learning activities, their meaning-making processes were shaped by the need to complete the assignment for individual credit as quickly as possible. More often than not, the data indicate that the students viewed social interaction as a means to engage in limited cooperation with peers in order to write and display their own understandings to gain marks from the teacher. This perception was in contrast to the teachers' expectations that students would cooperate

and possibly collaborate with peers to develop individual and group understandings. The students certainly expressed interest in their peers work but this interest tended to focus on engaging with peers briefly to stimulate their own thought so they could undertake their individual posting – a form of limited cooperative behaviour. For example, in Case Study One, all the EAL students produced one lengthy monologue in order to display their understandings of the topic rather than engage in dialogue with others. In Case Study Two, the students often gave and received feedback in a cursory fashion with little expectation that the interaction would help their own or others understanding of academic and business writing. In Case Study Three, initial intentions to share and build understanding with other students were dampened by a number of factors including the perceived relentless progression of the semester, the production of weak questions, and teacher rules limiting student ability to respond to questions of their choosing. Curiously, while student knowledge building was promoted by the teachers, it was not typically valued in assessment criteria. For example, in Case Study One, the production of one monologue displaying individual understanding with only a cursory nod to peers was given high marks. This concern with individual performance appeared to nurture forms of pseudo-communication between the students where the communicative intent to share and build understandings (a stated objective of the learning activity) was subsumed by powerful pragmatic needs.

A final theme that appeared in both Case Studies One and Three was the emergence of a reciprocal relationship between students and learning object – as the object was transformed, so too were the students. As the eLearning activities reached out to the target practices of nursing, language teaching, and academia, students experienced transformations in their thinking and doing which implicated issues of personal identity.

5.5.2 Occupying the Role of Knowledge Resource

The credibility of the students to act as resources for each other in the construction of knowledge within the online environment has emerged as a dominant theme in the findings. It was clear that all three learning activities were enriched and enhanced by requiring social interaction between the students. However, uncertainty around the ability of students to act as effective resources weakened the credibility of the learning activities.

The findings suggest that the students did benefit from social interaction but often these benefits were realised through being exposed to others' work rather than directly interacting with them. For example, in all three case studies, the students used their peers' work as models to determine what engaging in the learning activity actually entailed. The findings clearly demonstrate that, through the online platform, the students were exposed to a range of experiences around paper content, and this stimulated their thought in various ways and enriched their learning experiences. Experiential contributions were valued, particularly in Case Studies One and Three where the students displayed much interest in accounts of real-life practice and viewed their peers as making useful contributions to the group. The students did not actively engage in negotiating meaning with each other through dialogue – the value of social interaction tended to lie in the creation of a public display of understanding that could be viewed by the students.

The findings indicate that the potential for students to occupy the role of knowledge resource was often not fully realised. In many cases, student activity reached a plateau of mediocrity which did not stimulate higher levels of thought or sustain engagement with the topic. Certainly, assessment practices can be implicated here along with the constricting effects of the semester artefact which pressurised student

learning experiences and nurtured a sense of expedience; however, the students' ability to co-construct knowledge without the direct involvement of the teacher is a pertinent issue.

The data suggest that the students experienced difficulties both affectively and cognitively to participate without direct input from the teacher. There are numerous accounts of this in the findings, for example, the students often struggled to achieve deeper levels of cognitive engagement as evidenced by the lack of substantive material in their postings; they failed to generate global perspectives on paper content; and they displayed an inability to offer constructive critique. They doubted their peers' ability to act in the role as resource and expressed insecurities about their own capabilities. Social issues, such as the need to be diplomatic and congenial and the experience of being marginalized by not receiving a response, appeared to constrain student participation, and they often remained in their comfort zones by adopting responder rather than initiator roles. Students created sub-optimal questions which failed to provide their peers with a springboard to propel them into robust forms of participation; they displayed only a cursory interest in their peers as a tool to complete their own work; and they often showed little interest in an ongoing commitment to advance the understanding of the group.

The design of the curriculum was predicated on the assumption that the students would view their peers as having something to contribute that they lacked. In terms of experiential knowledge, the students did appear to value their peers' contributions. However, a strong sense of doubt and uncertainty infused the activities as the students questioned the ability of students to act as knowledge resources, particularly as resources for writing knowledge. Indeed, the case studies were often characterised by a form of pseudo-communication where students "went through the motions" of exchanging information without a real intent to share understandings. It can also be

advanced that the students lacked the cognitive and/or affective ability to engage in forms of interaction that would stimulate higher levels of thought and engagement.

In all three case studies, the voice of the teacher was missed. The three teachers assumed that their participation in the online student space would be inherently detrimental citing concerns that their views may be imposed on the students or that teacher-pleasing behaviour might be encouraged. The notion of teacher participation in the online setting was rejected out-of-hand without considering that teacher input could take a variety of forms, provoking and stimulating the students without imposing teacher perspectives. The teachers advanced the view that the learning activities were spaces for students to share and build understandings but this view assumed that the students would be capable of assuming this new role.

In terms of teaching roles, it is important to remember that these were blended classrooms – combining face-to-face and online interaction. Although the teacher’s voice was absent from the online space, there were face-to-face opportunities for teacher input. This was most evident in Case Study 3 where the DIQs functioned to prepare the students for the following face-to-face class discussions. In contrast, the products of the learning activities in Case Studies One and Two were not followed by face-to-face interaction. In Case Study 1, the discussions concluded the three week cycle and, in Case Study 2, the feedback was not discussed in the face-to-face sessions. Thus, opportunities for teacher input were less (unless a student met with the teacher privately) and arguably the absence of a teaching voice became more problematic.

Overall, the findings suggest that the move to distribute cognition amongst the students was partially successful; however, there was a sense that, without direct

intervention from the teacher, the online student space was a flawed pedagogical tool, limited in its ability to fully engage and extend the students. Certainly, the students did act as resources for each other as they shared experiences in relation to the course content, but the potential for their interactions to lead to a deeper engagement with theoretical content often stalled. Unassisted by the teacher, the students reached a plateau, but struggled to go beyond it

5.6 Chapter Summary

This chapter has presented the findings from the three case studies in this inquiry. After a brief description of each case study, the data have been discussed in relation to two major themes based on activity theory – making sense of the learning object and occupying the role of knowledge resource. The final section has briefly presented the cross-case analysis which has synthesised the findings into global perspectives to the extent that this is possible while still maintaining the integrity of the cases. These cross-case themes lay the foundation for further development in the next two discussion chapters

CHAPTER SIX: DISCUSSION PART ONE

6.0 Introductory Comments

Due to the volume of findings, the discussion is spread over two chapters. The presence of two dominant themes in the findings has made the task of dividing the discussion into two parts a relatively easy process. Therefore, this chapter will consider the findings in relation to how the learning object was perceived and transformed by the participants (making sense of the learning object) while the next chapter will examine the nature of participant roles during the learning activity (occupying the role of knowledge resource). This chapter is divided into five main sections. The first section comments on surprises in the data; the second section considers the non-deterministic nature of meditational means; the third section considers how the participants made sense of the learning object; the fourth section discusses the concept of object construction in relation to curriculum implementation and teacher cognition; and finally, some implications from the findings are identified.

6.1 Surprises in the Data

In the task of identifying cross-case themes, I have focused on what themes exist in the data rather than what themes do not. Sometimes, the lack of particular findings can be as significant (or more so) than the presence of specific findings. In relation to this research, I have been surprised at the lack of data arising from the use of two important artefacts – the English language and the asynchronous online tool. This statement is not meant to give the false impression that these tools were unimportant, but simply to convey the fact that other issues were raised by the participants. In relation to language, the students generally produced comprehensible and appropriate texts and linguistic issues did not feature prominently during interviews. In relation to the asynchronous web-based technology, the data were often quite trivial – relating

to specific aspects of the user interface such as the formatting of web pages or navigational issues.

Several caveats should be articulated however. It cannot be disputed that language and the online tool were key artefacts which mediated the learning experience for these students. In terms of language, the asynchronous mode of communication required that they read and transcribe in English in order to participate. To varying degrees, this literacy requirement was an issue in all three case studies, but was experienced most acutely in Case Study One. In this case, the students paid attention to their peers' work, noting the form and content of the other postings and reproducing certain characteristics in their own work. Moreover, these students drew upon other resources such as electronic dictionaries, translation software, and central learning support services at the institution. However, in Case Studies Two and Three, the mediation of written English as a vehicle for communication appeared to recede into the background. I suspect this was due largely to the fact that the students in these cases were more proficient users of English. Two participants in Case Study Two had lived in New Zealand for several years, and the students in Case Study Three were postgraduates who tended to have higher levels of English proficiency. In terms of the asynchronous tool, it was clearly present in the background quietly affording the creation of an online communal space where the students could post their understandings, view each other's work, and respond to peers. Certainly, there were times when the tool became more visible, particularly when it appeared to constrain activity. For example, in Case Study Two, the website interface which required the teachers to move between multiple web pages to assess the students' work thwarted the ability to check if the feedback accurately represented the text being critiqued. Likewise, in Case Study Three, four of the six students lacked home access to a computer or an internet connection and had to travel to the university to participate. This clearly affected their participation by requiring them to undertake

their work with pen and paper at home and limiting their ability to check online activity at regular intervals from the comfort of their residence.

The absence of dominant themes in the findings relating to the mediation of the English language and the asynchronous tool was surprising. This statement should not be taken to mean that these artefacts were insignificant, but rather they often blended into the background, invisibly affording participation and only becoming more visible when breakdowns occurred. In terms of the online technology, it appears a degree of “normalisation” had occurred “when a technology is invisible, hardly even recognised as a technology, taken for granted in everyday life” (Bax, 2003, p. 23). However, one theme did emerge in the findings – the observation that mediational means do not necessarily determine activity. This issue will be explored in the next section.

6.2 Mediational Means as Non-Deterministic

One area of interest that did emerge from the findings pertained to how functional affordances present in the tool were both awakened and quashed by the agency of the subjects and contextual factors in the educational setting. For example, in Case Studies One and Three, although the asynchronous forum afforded a communal space for students to encounter each other’s understandings, the students’ practice of selectively targeting some postings and bypassing others appeared to subvert this affordance. Influenced by a number of contextual factors such as the pressures of working intensively within a semester time frame, assessment practice, and the objective to complete work for an individual grade rather than build understanding with others, the students adopted a pragmatic approach and used the tool in an expedient manner. Similarly in Case Study One, the asynchronous tool afforded dialogue between students and yet contextual factors such as previous beliefs and

understandings about online discussion, the marking criteria, and the teacher's lack of knowledge about social constructivist pedagogy stifled this affordance. Agency was a powerful factor in shaping how the tool was used.

This finding adds to work which has applied the concept of affordances (Gibson, 1979) to eLearning contexts (Brine & Franken, 2006; Hutchby, 2001; Van Aalst & Hill, 2006), offering more evidence to suggest that tool use is not deterministic. The tool certainly shapes how an individual participates in a learning activity “in terms of the potential and the limitations that are presented to learners” (Brine & Franken, 2006, p. 26); however, the individual and the environment also determine how latent affordance in the tool are awakened (or not) and become manifested through practice. This is consistent with Hutchby's (2001) definition of affordance:

Affordances are functional and relational aspects which frame, while not determining, the possibilities for agentic action in relation to an object. In this way, technologies can be understood as artefacts which may be both shaped by and shaping of the practices humans use in interaction with, around and through them. (Hutchby, 2001, p. 444)

The delineation of functional and relational aspects indicates that the relationship between a technology and an individual is not one-way. Technologies do have particular functional features which “allow certain actions to be readily performed with them, and which therefore push behaviour in certain directions” (Tolmie & Boyle, 2000, p. 120). However, through the agency of the individual, the tool can be used in varied ways – thus, the subject shapes the tool. Mediational means are not deterministic – they represent the potential to shape activity, but human agency can alter this potential through unique or unpredicted ways of use (Wertsch, del Rio, & Alvarez, 1995). For example, the use of software to author web pages in the hands of an expert or a novice yields dramatically differing outcomes. While the expert creatively draws out the many affordances latent in the software tool in order to

design an impressive web page, the novice uses the tool in limited ways to create a basic but rather uninspiring web page.

Connections can be made with ecological perspectives of learning where “the learner is immersed in an environment full of potential meanings [and] these meanings become available gradually as the learner acts and interacts within and with this environment” (Van Lier, 2000, p. 246). Learning is conceptualised as “the relationship between properties of the environment and the active learner” (Van Lier, 2000, p. 257). A relational perspective offers a more authentic understanding of the concept of affordance which reflects the complexity of learning environments. In accord with Day and Lloyd (2007), the findings reinforce the need to adopt more expansive understandings of the concept of affordance to transcend limited views which focus on the inherent properties of the technology. Affordances must be seen “as being products of a whole learning context, of which online technologies are an integral part” (Day & Lloyd, 2007, p. 20). In relation to teaching practice, the findings are consistent with comments made by Steel (2009) who observes that technology has different affordances for different teachers and the perception of affordance plays a key role in determining how technology is used.

The centrality of agency has been a dominant theme which has infused the findings as the teachers and students have engaged in the learning activities under study, particularly in relation to the dynamic interplay between human consciousness as an historically-mediated phenomenon and the learning objects. The next section explores issues of agency as individuals construct or ascribe meaning to the learning objects.

6.3 Making Sense of the Sense-Maker

The title of this section is taken from an article by Kaptelinin (2005, p. 4) in which he examines alternate interpretations of the concept of object in the academic literature. He writes that objects are “powerful sense makers” because they give meaning to an activity system (Kaptelinin, 2005, p. 4). In the context of this discussion, the phrase *making sense of the sense-maker* is being used to refer to the process of making the learning object meaningful or constructing understandings of the object as the participants engage in the learning activity over time.

6.3.1 Dual Dimensions of Object

The findings from this study indicate that object construction within these learning environments was an ongoing and emergent process of meaning-making that took place as the participants engaged in a learning activity multiple times during the semester. The teachers and students can be seen as “immersed in an environment full of potential meanings” (Van Lier, 2000, p. 246) and as they engaged with the learning activities (for example, the nursing discussion or the peer feedback activity), they constructed understandings of participation. This process of making the object meaningful was idiographic, perceptual, and subjective – a unique and personal experience for each participant.

These findings run parallel to work conducted by Miettinen (1998) who has examined object construction within research teams over an extended period of time. He contends that “the object of activity is twofold. First it is something independently existing in the environment, selected to be the object of transformation. Second, it is an image of the object constructed by the subject” (Miettinen, 1998, p. 424). This

concept of the object as a duality with both objective and subjective dimensions has been developed by Engeström (1990) who writes:

The object is both something given and something projected or anticipated. This very duality of the meaning of the term indicates that the concept of object carries in it the processual, temporal, historical nature of all objects. Objects are objects by virtue of being constructed in time by human subjects. This in no way diminishes their reality and materiality. But despite its materiality, an unknown particle or a mineral is not an object for us before we somehow make it our object – by imagining, by hypothesizing, by perceiving or by acting on it. (Engeström, 1990, p. 107 as cited in Miettinen, 1998, p. 424)

Object as image (Miettinen, 1998) is a powerful metaphor, highlighting the perceptual, constructed, and subjective nature of activity as a process of ascribing meaning to the world through participation. Objects of activity not only exist independently of the individual as “processual, temporal, historical” entities (Engeström, 1990, p. 107 as cited in Miettinen, 1998, p. 424), they exist as personal constructs as they are drawn into an individual’s world of understanding.

In the field of second language learning, Coughlan and Duff (1994) have undertaken work in the area of object construction. In their critique of second language acquisition research which uses tasks to elicit specific behaviour from subjects, they question the assumption that these tasks are “controllable and measurable,” and capable of being repeated at different times to generate comparable results (Coughlan & Duff, 1994, p. 174). They argue that this belief is underpinned by the assumption that research tasks are constants; namely, that the same task can be repeated between participants and with the same participant at different times. By examining data from a research task which attempts to elicit linguistic forms from EAL learners, they show the variability of the data which suggests differing interpretations (by both the interviewees and interviewer) of the same task. They conclude by arguing that “while the task or blueprint may be the same, the activity it generates will be unique” (p. 190). These findings highlight dual aspects of the object/task – in one sense, a

task can be planned, described, and reified in various forms as an objective construct; however, in another sense, as the task is enacted or the object is transformed, alternate forms of understanding and practices emerge as the participants make the task meaningful to themselves.

Other scholars have also considered similar issues in the field of language learning (Lea & Street, 1998; Prior, 1998). Prior (1998) has investigated differing conceptions of academic writing tasks held by a teacher and his postgraduate EAL students. Prior (1998) delineates multiple representations of the writing tasks including task as described in the syllabus text, task as oral restatements by the teacher, task as verbally articulated by the students, task as manifested through student production of written texts, and task as represented through teacher feedback. Prior (1998, p. 37) contends that “the real writing task, I argue, is not in any one exposure or any privileged perspective on them, but in their dense textured totality.” In the same vein and from an academic literacies framework which conceptualises literacy as social practice, Lea and Street (1998) have explored how teachers and students understand varied literacy practices across a range of disciplines at tertiary level. Their research has revealed conflicting expectations and interpretations held by academic staff and students regarding undergraduate students’ written assignments. From differing perspectives, these scholars have considered how understandings about learning tasks are constructed by individuals in varied and nuanced ways. They have explored the process of making sense of the sense maker or attributing meaning to learning objects. Their findings reinforce the belief that participation in learning activities has a subjective dimension whereby personal images of the object emerge as students and teachers engage in the learning activity.

6.3.2 Historical Shaping of Object Construction

This discussion builds on the notion of the object as embodying both objective and subjective dimensions by considering what this means within the learning contexts under study. Specifically, the subjective dimension will be examined in relation to how agency is shaped by historical factors.

Earlier research has underscored the importance of historical factors in language learning contexts (Gillette, 1994; Spack, 1997; Thorne, 2003). By investigating the use of ICT in tertiary-level language classes, Thorne (2003, pp. 40-41) has argued that “all artefacts, including Internet communication tools, are imbued with characteristics that illustrate the intersection of histories of use with the contingencies of emergent practice.” He contends that these “cultures of use” (Thorne, 2003, p. 40) create differing expectations about communicative practice (the rules, norms, and conventions which guide behaviour) which in turn affect beliefs about how a tool should be used. Spack (1997) has considered the influence of historical factors on the acquisition of academic literacy as she observed the effect of educational background on the language learning experiences of a Japanese student over a three year period. In a similar vein, Gillette (1994) examined individual differences in language learning achievement in relation to the influence of historical factors such as previous experiences, understandings, and intentions. She observed the interplay between past and present as learning strategies employed by students were shaped by their previous experiences with languages. As a point of similarity, all these scholars consider how agency is shaped by historical “baggage” and how alternative constructions of learning objects are manifested through activity.

The findings from this study build on their work by providing new perspectives from eLearning contexts on the unique interplay of past and present, particularly in relation

to the intersection of previous beliefs and understandings with emergent practice. For example, in Case Studies Two and Three, the teachers' pre-existing beliefs about learning were reflected in the designs of the learning activities. Both teachers articulated pedagogies which drew on social theories of learning, specifically the use of social interaction as a means to support student learning objectives. Likewise, in Case Study One, two versions of the object were generated by the teacher, and yet only one became the dominant representation through the mediation of historical factors such as the teacher's lack of knowledge of eLearning pedagogy, the teacher's negative experiences as an eLearning student, the students' previous experiences as participants in an online discussion, the dominance of the objective of safe practice, and the teacher's beliefs about learner abilities. The findings shed some light on the process of object construction through the eyes of teachers and students as they participated in the learning activity. They are consistent with Lantolf and Pavlenko's (2001, p. 150) view that "agency is never a 'property' of a particular individual; rather, it is a relationship that is constantly co-constructed and renegotiated with those around the individual and with the society at large."

Building on these notions of the object as an historically-mediated construction, the following section will examine what this actually means in practice within the learning contexts under study. It will explore how the presence of alternate interpretations or forms of the learning object co-existing within the same activity system can create contradictions within the learning object, specifically in relation to the interplay between the object and motive.

6.3.3 Divergence: One Object and Multiple Motives

There has been some discussion in the academic literature about the nature of the relationship between object and motive (Jonassen, 2000; Jonassen & Rohrer-Murphy,

1999; Kaptelinin, 2005; Miettinen, 1998; Nardi, 2005). Miettinen (1998, p. 424) writes that “within the concept of object is a desire to transform it.” Jonassen and Rohrer-Murphy (1999) observe that intentionality is a key factor in shaping how people relate to the object and Jonassen (2000) contends that once subjects begin to engage in the transformation of an object, their intentions become manifested through the nature of their participation (Jonassen, 2000, p. 99). A reading of these scholars suggests that the concept of motive is embedded within and inextricably tied to meanings associated with the object. Motive is a powerful factor in shaping how people make sense of the object. However, Kaptelinin (2005) suggests that the relationship between object and motive is more complex – throwing doubt on the meaning of the term *object* by arguing that the translation of the term from Russian into English by activity theory scholars has been problematic. Such discussions are beyond the scope of this thesis; however, the nature of the findings from this study suggest there is much utility in drawing from the work of Kaptelinin (2005) and Nardi (2005) by treating the object (learning activity) and the motive (the purpose, intent, objective, or the “why” behind the object) as distinct and yet interconnected elements. Therefore, drawing on Nardi’s (2005) conceptualisation of object, it is advanced that there are two dimensions of the object – that which is to be realised (for example, a cure for cancer) and the motive-object of the activity (for example, making the world a better place by finding a cure for cancer).

Nardi’s (2005) study on collaborative work in a pharmaceutical company has been particularly useful in the interpretation of the findings because it challenges a “one-object, one-motive mapping” (2005, p. 40). Nardi (2005) argues that in collaborative activity, one object can be shared by a group, but members of the group can relate to the object through differing motivations. While all participants (for example, managers and scientists) share the common object of identifying two genes for further development within their company, they relate to it in differing ways. The managers may be motivated by a desire to increase profits for the company and the scientists

may be motivated by a desire to advance knowledge in their field. Thus, according to Nardi (2005), a single activity system can tolerate one object and multiple motives.

The idea of multiple motives has also been articulated by Lantolf and Pavlenko (2001, p. 148) who, commenting on Gillette's (1994) study, observe the presence of multiple motivations within a language learning course. These motivations can include the intent to learn French but they can also include the intent to complete the course to satisfy a requirement for the programme of study. Lantolf and Pavlenko (2001) write:

It doesn't matter that in the operational domain they are all engaged in the same overt behaviours, for example, listening and repeating, reading and writing, communicative/task-based group work. Cognitively, they are not all engaged in the same activity. (Lantolf & Pavlenko, 2001, p. 148)

By relating to the activity via differing motives, the students may, on the surface, appear to be sharing similar understandings of the object of activity by displaying the same behaviour; however, on deeper levels, the object is meaningful to them in differing ways. Lantolf and Pavlenko (2001) continue by suggesting that not only are operational and cognitive dimensions of activity disconnected, but also the presence of multiple motives might not be accommodated within a singular activity. In opposition, Nardi (2005, p. 48) argues that "the active interplay between motives knit together the activity system, as against a collection of individuals pursuing individual activities."

It is not the intent of this study to offer any definitive comment on whether an activity system can accommodate multiple motives; however, the findings indicate that multiple motivations were present within these learning activities under study. These

motives had a significant effect upon the nature of participation and also created tensions within the learning object as the participants formed alternate understandings. For example, in Case Study Two, the teacher's belief that student-to-student social interaction in the peer feedback task would lead to greater student understanding of business and academic writing practices was resisted by the tutors and students. Informed by their beliefs that students required individual assistance from the teacher, the tutors perceived that the teacher's configuration of object and motive was not viable. As they engaged in the activity, the tutors subverted the teacher's vision of the object by creating alternate constructions and enacting alternate ways of participation. Likewise, the students also doubted whether their peers could offer useful feedback on their work, challenging the credibility of the object as a means to realise the teacher's learning goals for the class. Trapped within a learning activity which they perceived as ineffective, the students "went through the motions" in a form of acquiescence to the dominant construction of the teacher, and yet they were both cognitively and affectively disengaged from activity. Using an activity theory perspective, the situation can be interpreted as a decoupling of the object and motive as presented by the teacher and the creation of alternate ways of relating to the object and new forms of participation through different objectives, motivations, or agendas.

Similar findings have been reported by Yamagata-Lynch (2003, p. 110) who observes in her own research that "the community component of an activity system may not necessarily support the subject's effort to attain the object." Her comments challenge us to view the community, not as a homogenous group of individuals focused on the same object, but as a diverse group who relate to the object through alternate, and potentially conflicting agendas. This observation is particularly relevant in relation to how social interaction was perceived by the participants in the case studies. Social interaction could be a means to gain a grade, a means to complete the task, a means to cooperate with others to support individual learning, or (more rarely) a means to

collaborate to build group understanding. Often, activity was shaped by a blend of these perceptions; however, it was observed that functional and expedient approaches tended to feature more prominently as the papers progressed. Similar observations have been made by Engeström (1999, p. 65) who, in his healthcare study, observes that “the object of any activity is internally contradictory in medicine, this takes the form of patient as person to be helped and healed *versus* patient as a source of revenue and profit.” By relating to the object through shifting motivations, the participants ascribed alternate meanings to the object and the form of participation changed. As Donato (1994, p. 36) notes “the individual's motive determines which actions will be maximized and selected and how they will be operationalized in a particular setting.” This was particularly apparent in Case Study Three where initial enthusiasm for interacting with peers was dampened and in some cases extinguished by the pragmatic need to complete the work as quickly as possible. Thus, the teacher’s expectation that social interaction would support individual learning through cooperative behaviour was often resisted by the students’ representation of the object as a means to gain marks within the context of their busy lives. The findings indicate that the teacher’s coupling of object and motive can be fractured and replaced with alternate constructions which embody different motivations and manifest alternate forms of participation.

It is interesting that individual characteristics such as attitudes, expectations, beliefs, and motivations that have been acquired during past activity have featured so prominently within an activity theory interpretation which emphasises the role of society in shaping the mind of the individual. The findings shed light on the role of individual cognition within a sociocultural framework. They suggest that while learning is indeed a process of taking part in social activity and becoming a member of a particular community, the internal world of the individual mind shaped by past activity profoundly shapes the nature of participation. As historical agents, students and teachers carry their past within them, drawing on it as a resource to make

meaning based on what has come before. While learning is situated within specific contexts, it is not encapsulated, but forms interconnected networks with other activities in a cultural and historical matrix which blends past and present.

6.3.4 Summary

The preceding sections have discussed how students and teachers made “sense of the sense-maker” (Kaptelinin, 2005, p. 4) as they participated in interactive learning activities supported by asynchronous online technologies. The discussion has explored the notion of a learning object as a personal image that is subjective, emergent, and shaped by contextual factors, and has conceptualised agency as a historically-mediated phenomenon. The concept of the object as both *object* and *object-motive* has been a useful tool in the interpretation of the data, challenging a one-object one-motive mapping and indicating that the community constructs meaning in differing, and sometimes conflicting ways.

In the following section, the discussion shifts to the educational literature, forging connections with work around curriculum implementation and teacher cognition. Drawing upon the previous discussion, new perspectives will be provided and a number of implications will be suggested.

6.4 Shifting the Discussion to Educational Contexts

The previous discussion has undertaken a theoretical discussion in relation to the construction of learning objects within eLearning contexts. In addition, connections can be made with two conceptual areas in the educational literature: curriculum implementation and teacher cognition. Curriculum implementation is concerned with

how the curriculum plan is put into practice, factors which shape this process, and more recently, “how the curriculum has been enacted and experienced by teachers and students” (Synder, Bolin, & Zumwalt, 1992, p. 402). The study of teacher cognition considers the mental states and processes of teachers as they plan and implement the curriculum. Both conceptual areas clearly overlap with the topic of object construction as they examine the ways in which various individual, social, cultural, and historical factors in the local and wider educational context shape teaching practice. It is anticipated that alternate perspectives can be gained by forging connections between these two conceptual fields of teacher cognition and curriculum implementation.

6.4.1 Alternate Perspectives on Curriculum Implementation

In the educational literature, the topic of curriculum implementation has been approached from two key perspectives: a fixed view of curriculum as consisting of various documents (for example, manuals and guides) which reify strategies and objectives for teaching course content and a more emergent view which regards the curriculum as an active process of knowledge construction and negotiation (Snyder, Bolin, & Zumwalt, 1992; Weisz, 1989). In their discussion of curriculum implementation, Snyder et al. (1992) have contended that the meaning of the term *implementation* has been contested and they have delineated three perspectives which have shaped understanding in the field. First, they have identified a fidelity approach, the most extensively documented view, which determines the extent to which the implementation of a curriculum corresponds with planned use. Second, a mutual adaptation perspective has been delineated which examines how the planned curriculum is adapted by the teacher as it is implemented. Third, they have identified a curriculum enactment perspective which considers “how the curriculum is shaped through the evolving constructs of teachers and students” (Synder et al., 1992, p. 404). Both the fidelity and mutual adaptation models are concerned with factors

which afford or constrain the process of implementation. However, while the former perspective conceptualises the process as the installation of a plan within the classroom and focuses upon measuring the degree to which the plan is manifested in practice, the latter approach views implementation as complex, problematic, and inherently social (Synder et al., 1992).

Marsh and Willis (2003) employ a two-way distinction between planned and enacted curricula. Using the metaphor of a play, they describe the planned curriculum as the text of a play while the enacted curriculum is the actual production of the play. The production or enactment of the play can never be a carbon copy of the text but rather each performance will be unique and subject to various interpretations as the actors and audience ascribe personal meanings to the experience. This view of curriculum has been reinforced by Weisz (1989) who, in her study of two primary school classrooms, found that planned curriculum documents (lesson plans and school documents) represented only “skeletons” of what actually occurred in the classroom and did not convey the richness of the classroom experience.

The findings from this study extend understanding of curriculum design by relocating the discussion to eLearning contexts in higher education and specifically to learning contexts which use interactive activities mediated by asynchronous technologies. This focus on tertiary-level education marks a departure from earlier work which has often been preoccupied with primary and secondary schooling and considers the curriculum as an external document created by school boards and institutions. The case studies in this inquiry differ in that the curriculum as such is created and implemented by the teacher and not imposed by an external institution or governing body. Thus, the teacher both authors and enacts the curriculum. Moreover, by examining curriculum implementation at the level of the learning activity and through

the eyes of teacher and student over time, the findings provide a detailed and in-depth view of curriculum implementation from alternative perspectives.

Additionally, by using activity theory as an interpretative lens, these findings highlight the mediated nature of curriculum enactment. The planned curriculum is redefined as a teacher-created construct shaped by contextual factors and reified in various documents such as course outlines, website instructions, and assessment criteria. This construct embodies not only the teacher's expectations about what participation should entail but also her predictions that, by transforming the object or engaging in the activity, specific learning objectives will be realised for the students. It includes not only the plan of action but also the rationale or the "why" which stands behind the plan. In contrast, the enacted curriculum is redefined as the actual "doing" or transformation of the learning object as the plan is put into action. Like the planned curriculum, the enactment of the curriculum is perceived as a mediated act – shaped by various contextual factors.

Before continuing, a note should be made about the use of terminology. The term *implementation* has been commonly used in the field (Synder et al., 1992); however, the term *enactment* will be used in the following discussion because it is associated with how the curriculum is experienced by the participants. The concept of curriculum enactment as negotiated, co-constructed, and emergent seems more aligned with the nature of the findings presented here.

6.4.1.1 The planned curriculum as a historically-mediated artefact

This study examines how the construction of the planned curriculum was shaped by historical factors including the teachers' beliefs about learning, knowledge (or lack of knowledge) of social constructivist pedagogy, and previous experiences in eLearning.

For example, in Case Studies Two and Three, both lead teachers underpinned their design of the learning activities using social theories of learning and articulated learning objectives which linked student participation to specific learning goals. In contrast, the findings from Case Study One suggest a degree of uncertainty about the planned curriculum. The teacher appeared to be confused about the nature of the planned curriculum – oscillating between the object as a negotiated interaction between students or as a singular display of individual understanding with minimal interaction between students. Through the historical dimension, the findings indicate that this confusion may have originated from a combination of factors including a lack of critique when the teacher inherited the activity, a lack of understanding around social constructivist pedagogy, a belief that online discussions can degenerate into triviality based on past eLearning experiences, and a need to ensure that safe practice was articulated by students during the nursing programme. While the teacher appeared to espouse a social constructivist pedagogy which views knowledge as an emergent and socially distributed phenomenon built through an often messy process of negotiation and renegotiation, ultimately, the teacher's actual objective was for the students to display their understandings of the topic in a structured, formal, and cautious manner.

In particular, the conflict between the maxim of safe practice and the dialogic and emergent nature of a discussion brings to mind the work of Hodas (1993) who contends that technology is never value-free and that ruptures can occur when values embedded within the technology conflict with the values in the educational setting. In this case study, the discussion tool had features which afforded dialogue – for example, it could support sustained text-based interaction between students, the posting of spontaneous messages, and the ability to split interactions into specific threads – and yet by potentially encouraging the exchange of ideas, these affordances threatened the values of thoughtful, cautious practice embedded in the nursing curriculum. The outcome of this tension between the tool and the values in the

nursing curriculum was that dialogue did not occur; rather, long individual postings which had been crafted and polished were uploaded to the discussion forum. The dominant values in the curriculum constrained the affordances latent in the technology. The computing technology was used, not to transform, but to reinforce existing educational practices (Garrison & Akyol, 2009; Howard, 2004; Salinas, 2008). These findings are interesting because they indicate that historical values in the educational context conveyed by the teacher can extinguish the potential of technology to leverage social interaction.

6.4.1.2 Curriculum enactment as an emergent process

By focusing on the subjective and dynamic interpretations which shaped the nature of participation as the teachers and students engaged in the learning activities, the findings indicate that the process of curriculum implementation can be complex and emergent, more akin to a curriculum enactment perspective where curriculum knowledge is a “personal construct which must answer to both personal and external standards” and represents the “educational experiences jointly created by student and teacher” (Snyder et al., 1992, p. 418). From an activity theory perspective, Jonassen and Rohrer-Murphy (1999) write:

Before intentions are manifest in actions in the real world, they are planned. Humans orient their activity and plan their activities. Their intentions and plans are not rigid or accurate descriptions of the intended action, but rather are always incomplete and tentative. (Jonassen & Rohrer-Murphy, 1999, p. 65)

This quote exposes the fragility and malleability of plans which orient, yet do not necessarily determine participation in the world. Similarly, the findings indicate that the planned curriculum as a teacher-created construct designed to realise specific learning objectives is a tentative phenomenon. As the curriculum is enacted, the influence of social, cultural, and historical factors can lead to the emergence of alternate interpretations of the curriculum which in turn leads to tensions as differing

understandings and practices are manifested through participation, and divergences appear between what is planned and what is actually enacted.

Case Study Two displayed the most variation between the planned and enacted curricula, revealing that team teaching can be problematic when the lead teacher as designer of the planned curriculum is perceived as disconnected from the enactment of the plan. The tutors who were actually responsible for the enactment of the plan (the peer feedback task) viewed her pedagogy as an ineffective tool for realising student writing outcomes. Drawing from their own beliefs about the teaching and learning of writing, the tutors resisted the teacher's construction of the object by enacting new plans and altering their participation in differing ways. However, by following alternate practices, the activities of both tutors led to inconsistencies in teaching practice across the course.

Furthermore, the findings from the same case study also reveal interconnections between identity and enactment, in other words, what you do implicates who you are. Considering herself to be a competent and conscientious teacher, Tutor Two experienced a degree of angst when faced with enacting a pedagogy that she found non-credible. Participation and identity were closely intertwined – what she did reflected on her identity as a teacher and person. In response, Tutor Two rejected the pedagogy and enacted alternate teaching practices. This situation is reminiscent of the work of Wenger (1998) in relation to participation and non-participation who writes:

We not only produce our identities through the practices we engage in, but we also define ourselves through the practices we do not engage in. Our identities are constituted not only by what we are but also by what we are not. To the extent that we can come in contact with other ways of being, what we are not can even become a large part of how we define ourselves. (Wenger, 1998, p. 164)

These findings also echo the work of Smagorinsky, Lakly, and Johnson (2002, p. 201) who use the terms *acquiescence* (submission to the curriculum), *accommodation* (an effort to reconcile personal beliefs with the curriculum), and *resistance* (opposing the curriculum either overtly or covertly). In Case Study Two, finding the teacher's curriculum plan (the peer feedback task) lacking, both tutors resisted it by enacting the plan in differing ways. Citing her limited role in the paper, Tutor One displayed forms of acquiescence by following the teacher's plan. However, she covertly resisted it by employing distancing strategies such as failing to discuss the activity in the face-to-face meetings with students and contributing to a sense of disconnection between the students' online and classroom work. In contrast, Tutor Two enacted her own form of the curriculum with her students, overtly resisting the teacher's plans. This is very similar to experiences reported by Smagorinsky et al. (2002, p. 210) who note "she [the teacher] did not like the person who was teaching her classes, feeling distant from the teacher she had become and fearful of the teacher she might become." The findings have implications for the use of team teaching in eLearning contexts, showing that this practice can be problematic, particularly when the dominant pedagogy is seen to threaten other teachers' sense of identity.

Case Study Three exhibited perhaps the closest connection between the planned and enacted curricula. Through the use of various tools such as course outlines, website instructions, assessment practices, and regular explicit feedback, student participation was tightly scripted by the teacher. Certainly, in the first six weeks, the students met or exceeded the teacher's expectations and revealed a close alignment between the planned and enacted curricula as they engaged with the DIQ assignments. This alignment was not just on an operational level, the students were also cognitively and affectively engaged – valuing their peers' contributions and wanting to exchange information with them during the question and answer interactions. However, during the final six weeks, divergences between the planned and enacted curricula became evident as some of the students consistently failed to reach higher levels of thought

(for example, synthesising ideas across the paper) and displayed a lack of interest in interacting with their peers. Feelings of pressure caused by the weekly demands to submit DIQ assignments combined with commitments from other concurrent papers and the constricting effects of the semester artefact appeared to induce a sense of numbness and exhaustion which affected their participation. Towards the end of the paper, most of the students displayed a form of pseudo-communication – exhibiting the expected behaviour which would earn them a mark, yet not engaging cognitively or affectively in their work. For example, they posed questions they thought the teacher would like but were not interested in the responses they received.

The findings indicate that curriculum enactment was an emergent process of making meaning or constructing understanding as the participants engaged in the learning activities during the paper. Variations between the planned and enacted curricula were most evident when other teachers and students did not “buy into” the learning activity; in other words, they found it lacked meaning as a useful pedagogical tool to help learning. Resistance to the learning object was strongest when it threatened a sense of identity. Alignment between the planned and enacted curricula was most evident when students found the activity useful for their learning, valued their peers’ work, were rewarded for their work (in other words, gained marks), were provided with models of participation, and were given clear instructions and explicit feedback. However, this alignment could be threatened if skill deficits in the students were left unaddressed or students felt pressured by workload commitments.

6.4.1.3 *The phenomenon of pseudo-enactment*

The concept of pseudo-enactment was present in all three case studies and suggests that the relationship between what is planned and what is enacted is infused with richness and complexity. At the operational level, there may appear to be alignment between the plan and enactment; in other words, because the students may ostensibly

be doing what the teacher intends, it can be concluded that the planned curriculum is being enacted. However, on cognitive and/or affective levels, the students may be disengaged from the process, simply “going through the motions” with scant interest in the proceedings and feeling little commitment to their peers. On an operational level there appears to be alignment, but on a cognitive level, there is divergence (Lantolf & Pavlenko, 2001). The phenomenon of pseudo-enactment is not new and may feed upon the unequal power relations between teachers and students which exist within classrooms. As Jackson (1983) astutely observed:

Copying an answer on a test, feigning interest during a discussion, giving a false answer to a teacher’s query, and disguising forbidden activities are all of a piece. Each represents an effort to avoid censure or to win unwarranted praise ... learning how to make it in school involves, in part, learning how to falsify our behavior. (Jackson, 1983, p. 50)

The implication here is that the falsification of behaviour may be an inherent component of education; indeed, it may be a successful learning strategy to adopt. Similar sentiments are echoed by the teacher in Case Study One who observes that students “play the game” adding that “they are doing what they think is the right thing to do not what they believe.”

The presence of false and genuine participation is consistent with the notion of enactment as a complex and multi-layered process. Examined using an activity theory perspective, this situation may be attributed to the pursuit of differing agendas by the teacher and students. The teachers’ expectations that students would use the online space to extend the walls of the physical classroom and cooperate with their peers to enhance individual understanding were frequently unmet. Additionally, collaborative learning outcomes which were focused on creating a sense of community and building the collective understanding of the online group were often unrealised. Using Leont’ev’s (1981) three levels of operation, action, and activity, alignment can be seen at the lower levels of operation and action, yet at the higher

level of activity, the students' motives differed from the teachers'. It can be surmised that the participants related to the learning object through alternate motives and this meant that the enactment of the curriculum was meaningful to the students and teachers in differing ways, shaping the nature of their participation.

The findings emphasise the richness of enactment as not only defined by external behaviour but by an internal and deeper level of commitment. Enactment is not just about student behaviour (operations and actions); it is also concerned with asking others to "buy into" the teacher's vision or construction of the learning activity as a valued and effective tool for realising learning objectives. It is a process of distributing the teacher's understanding of the learning object amongst the community at operational, cognitive, and affective levels of participation. Arguably, Case Study One displayed the most authentic student behaviour through an alignment of operational, cognitive, and affective dimensions. The learning activity reached out to the target practice in deeper and more profound ways which implicated issues of personal identity. Students were not just expected to acquire the necessary skills of basic nursing practice; they were expected to show a shift in their ways of thinking, doing, and being as they moved from student nurse towards a practising nurse. By engaging in the learning activity and making the course content meaningful through the lens of their own experiences, it was anticipated that the students would begin to internalise key nursing concepts and ideas and be transformed in the process. To a large degree, this objective was realised. Through their participation in the e-tivity discussion postings, and more specifically drawing on their experiences of nursing as a tool to make meaning, the students expressed new ways of thinking and doing which were aligned with common practices in nursing. At times, participation became more than simply writing a text – it became an expression of identity transformation and an articulation of an ontological shift in the student's ways of being which must occur if she is to move from lay person to nurse.

The findings have shed light on dimensions of learning which lie beneath surface appearances. At first glance, students and tutors were ostensibly participating in the learning activity and enacting it as expected; however, they were often cognitively and affectively disengaged from the process. In the next section, the discussion will move to considering the field of teacher cognition in relation to the findings.

6.4.2 Alternate Perspectives on Teacher Cognition

The findings from this study intersect with work on teacher cognition, offering alternate perspectives on the field. Studies have examined the way in which the beliefs of university teachers affect teaching practice and learning outcomes (Hativa & Goodyear, 2002; Kane, Sandretto, & Heath, 2002). In relation to eLearning, the interplay between teacher beliefs and technology-mediated practice has been explored (Bain, McNaught, Lueckenhausen, & Mills, 1998; Mahdizadeh, Biemans, & Mulder, 2008; Steel, 2009). Reporting on research examining the relationship between three university teachers' beliefs about teaching and learning and their beliefs about learning management systems, Steel (2009) shows the interplay between teacher beliefs and their online learning designs by considering how teachers' pedagogical knowledge and curriculum objectives influence their teaching practice and use of web technologies. Steel's (2009) work adds to the field of teacher cognition within ICT-mediated learning contexts; however, she concedes that the teachers in the study had received teaching awards and were not particularly representative of the general academic population. Moreover, little attention is directed towards how teachers' pedagogical beliefs and practices were constrained by the technology. This study builds on and extends Steel's (2009) work by exploring the beliefs of teachers who do not necessarily have a strong interest in ICT and examines their beliefs in relation to a specific learning activity which repeats during the semester. This in-depth analysis of authentic practice shows the complex interplay between the teachers' pedagogical beliefs, expected learning outcomes, the ICT, and other community members. The

findings contribute to understanding by showing how a variety of factors can create inconsistencies between what teachers think and what they actually do in the classroom.

There is a large research literature on teacher cognition within the field of language learning (Borg, 2003). Borg (2003, p. 81) defines teacher cognition as “what teachers think, know, and believe and the relationships of these mental constructs to what teachers do in the language teaching classroom.” In his review, Borg (2003) delineates three themes in the language learning literature: cognition and previous language learning experience, cognition and teacher education, and cognition and classroom practice. Borg (2003, p. 98) considers a significant body of research which has explored the topic of teacher cognition, observing that “none of the research reviewed here attempts to explore relationships between cognitions, practices, and learning outcomes.”

By closely examining the design and implementation of eLearning activities, this study has responded to Borg’s (2003) comments. Using activity theory as an interpretative tool, the study conceptualises teacher agency as a historically-mediated phenomenon and considers how it affects curriculum design. By directing attention towards historical factors, the findings illustrate how they shape the way teachers ascribe meaning to learning tasks or objects and the way this is manifested through teaching practice. The study has elicited personal histories from the teachers, revealing how past beliefs and experiences such as a lack of familiarity with social constructivist-based pedagogy, specific expectations about postgraduate study, previous experiences as an online student, beliefs about students’ dispositions and abilities, and beliefs about teaching and learning influence curriculum design and the nature of participation.

By adopting a more expansive conception of teacher participation which encompasses contextual factors, the study provides a critique of approaches which tend to focus on aspects of individual participation such as teacher beliefs and behaviours. Borg (2003, p. 98) makes a similar observation, noting that in some studies “little reference is made to the contextual factors which may have facilitated or hindered the kinds of decisions teachers were able to make.” The findings suggest that these encapsulated views of teaching practice which consider the teacher in isolation and ignore social aspects of learning are inadequate to understand what teachers believe, think, feel and do, and instead attention should be directed towards how teacher thought and behaviour is shaped by social, historical, and cultural factors in the educational context. Learning is inherently social and teachers are located within a community of students and possibly co-teachers, each having their own personal portfolio of beliefs, experiences, and expectations which affect classroom activity. These historical factors shape the way participants (teachers, tutors, and students) ascribe meaning to the learning object and influenced how they engage with it. Teaching practice is socially negotiated with the community and any attempt to extricate teacher cognition from its socially-situated context may be problematic.

A socio-cultural-historical approach can reveal how factors which exist on higher phenomenal levels can affect local activity. These factors permeate the walls of the classroom to affect teacher beliefs and practice, and include institutional eLearning support, the under-resourcing of large undergraduate courses, and the values within the target practice. One of the most interesting examples of the mediation of factors external to the classroom has arisen in Case Study One where teacher cognition was profoundly affected by the nursing maxim of safe practice, specifically in relation to epistemological understandings of what types of knowledge were valued in the nursing course. By employing an activity theory lens, the findings extend teacher cognition beyond the immediate context to encompass factors within other phenomenal levels.

The concept of contradiction (Engeström, 2001) has proven to be particularly useful to examine teacher cognition in these eLearning contexts. As the participants (teachers, tutors, and students) related to the learning object through differing motives, their varied understandings created internal contradictions within the object. Thus, the enactment of teacher beliefs can be thwarted by other community members. For example, in Case Study Three, divergent student and teacher understandings of the learning object led to internal contradictions in the object as to what “doing” the activity actually entailed, and alternate forms of participation emerged as the students fed their postings with material external to the paper and failed to synthesise key concepts. Also, the findings from Case Study Two suggest that the teacher’s learning objectives may not be shared by the community and may even be resisted by that community. Informed by their beliefs that students learn about writing best when they receive individual teacher assistance, the use of student-to-student interaction to support learning was not viewed as a credible tool by both students and tutors; thus, the teacher’s coupling of object to motive was fractured. This led to varied teaching practices and forms of pseudo-enactment from the students.

Finally, by examining the use of team teaching in educational contexts where the plan and enactment of the curriculum was distributed amongst a number of teachers, Case Study Two offers a glimpse into situations where teacher cognition is distributed between several individuals. The case provides insights into the relationship which existed between the teachers and the differing ways they related to the learning object through their personal histories. As designer of the online activity, the lead teacher identified learning objectives and planned a learning task capable (in her view) of realising these goals, yet she delegated the implementation of the activity to others. In this context, teacher cognition was spread between several individuals as the teacher designed the peer feedback activity and the tutors enacted it with the students. However, this situation encouraged a sense of disconnection between thinking and doing, and the perception that the teacher’s planning was disconnected from actual

practice reinforced the tutors' belief that the learning object would not realise learning objectives. The learning object lost credibility as a pedagogical tool and the tutors related to the learning object in differing ways by altering their teaching practices. Additionally, it is interesting to observe how teaching practice implicates issues of identity through the experiences of the two tutors – while one tutor was able to distance her participation from her sense of identity, the other tutor experienced a degree of angst enacting a pedagogy which she found lacking. In this situation, teacher cognition was marked by dissent and conflict as teaching practice was distributed amongst individuals who did not share and often actively resisted the lead teacher's beliefs.

To summarise, by using activity theory as an interpretative tool, the study brings a socio-cultural perspective into the field of teacher cognition. By adopting an expansive view of teacher participation, the study rejects approaches that may focus on individual teacher beliefs and practices, arguing that these perspectives are limited and simplistic. The findings from this study indicate that teacher cognition – or what teachers think, feel, believe, and do – is influenced by a myriad of local and broader factors such as the affordances and constraints of tool artefacts, the division of labour amongst the immediate community, the belief and expectations of other community members such as co-teachers or students, institutional support of eLearning, institutional artefacts such as the teaching semester, and the resourcing of large undergraduate papers. This expansive view recognises the socially-situated nature of learning by considering student and tutor perspectives, and the differing ways these individuals relate to the learning object. Moreover, by seeking the student perspective, this study has indicated that observable student activity may mask alternate agendas and differing perceptions of the learning activities. Although the teacher may believe that learning outcomes are being realised through the curriculum, in actuality, these outcomes are being realised only in an operational manner which lacks cognitive and affective engagement. Through an activity theory-based

perspective, the findings inject a richer and more complex view of teacher thought and practice into the field of teacher cognition, arguing that more expansive approaches should be used which encompass social, cultural, and historical dimensions of teacher participation.

6.4.3 Pedagogical Implications of the Findings

Previously, the fields of curriculum enactment and teacher cognition have been conceptualised as culturally-mediated and socially-situated constructs. However, the discussion has adopted a rather theoretical slant which may hinder the practical application of the findings. In the interests of offering pedagogical insights which can have direct application to teaching and learning practice, this section will draw upon the previous discussions and consider what factors loosened or tightened the connection between the planned and enacted curricula. Conventionally, the implications are placed in the conclusion chapter; however it is felt that they flow naturally from the preceding discussion and it is more meaningful to locate them here in this chapter than at a distance in the conclusion.

6.4.3.1 Adding value to the learning activity

Assessment practice has been identified as a key factor in student participation (Oliver & Shaw, 2003; Rimmershaw, 1999; Williams, 2002); however, the findings indicate that some teachers did not appear to appreciate this connection. At times, there seemed to be a disconnection between learning objectives and teaching practice around assessment. For example, in Case Study One, students were asked to discuss an issue and yet they were told that only their first posting would be marked – there was no incentive for students to engage further with peers. Moreover, when they produced long monologues displaying their own understandings, they received high marks. Similarly, in Case Study Two, students produced feedback postings for their

peers that offered little in the way of useful substantive comment, and yet they were rewarded with full marks. Preoccupied with individual performance and assessment, students in both cases studies tended to become expedient – valuing and reproducing behaviour that was rewarded with a grade and avoiding behaviour that was unrewarded. In contrast, the teacher in Case Study Three tightly linked her planned curriculum with assessment practice, thus encouraging the students to enact the plan. Students were given explicit instructions about the nature of participation and valued aspects of the task were identified and assigned marks. In addition, if students lost marks, then the deficit would be communicated in the weekly written feedback. The findings indicate that students are strongly motivated by marks and will value those aspects of the task which are rewarded through assessment practice. The more characteristics of the planned curriculum that are explicitly identified and rewarded, the higher the likelihood that the enactment of the curriculum by the students will be more closely aligned with the plan.

Interestingly, even though student activity was tightly scripted by the teacher in Case Study Three, the students still found ways of avoiding full participation (as defined by the teacher). For example, some students would read only one or two DIQs instead of looking at all their classmates' perspectives by perusing the postings. However, aware that this practice could occur, the teacher displayed a degree of ingenuity by creating two subsequent learning activities (a face-to-face discussion and summarisation report) which required the students to re-engage in a deeper and more expansive way with the postings at a later date. By making the learning activity a resource to be appropriated by a subsequent learning activity, the teacher required the students to re-visit their peers' postings and expand their level of participation. Conversely, in Case Study One, after the online discussion had completed, the students left the forum never to return. There was a sense that the product of the activity was encapsulated with little application for further use within the paper.

A dominant theme in the findings is that the nature of participation is profoundly shaped by the value students ascribe to the learning activity. By offering marks, a teacher adds value to the activity and offers a tangible benefit for participation. In addition, a teacher can enhance the value of a learning activity by making the outcome or product into a resource for a future learning activity. A learning activity which is perceived to be valuable may stimulate a deeper level of engagement, a greater investment of time and commitment, and closer alignment between planned and enacted curricula.

6.4.3.2 The influence of formative feedback and procedural knowledge

The findings suggest that constructing the object or making sense of the learning activity was an ongoing process throughout the papers in the case studies. The students formed understandings of what participation entailed which converged or diverged from the teacher's expectations, and through feedback and continued participation, they modified these understandings. The close alignment between the planned and enacted curricula in Case Study Three may be attributed to the degree of formative feedback and procedural knowledge which was communicated from teacher to student during the enactment of the activity. The students' emerging constructions of the object were shaped by explicit instructions, descriptions of the task, models of student work, and both face-to-face and ongoing feedback, and this helped them to understand the teacher's expectations. Although Case Studies One and Two offered descriptions and instructions, there was a distinct lack of direct formative comment from the teacher during participation. It could be inferred that ongoing comment from the teacher was instrumental in communicating the planned curriculum to the students and ensuring close alignment with the enactment of the plan.

In addition, feedback to students could also encompass affective dimensions by including encouraging comments. This may have been particularly useful in Case Study Two where the students experienced a degree of insecurity in their role as critics of their peers' work. They expressed fears that by offering critique they would be misunderstood; they might be wrong; or they might be perceived negatively by their peers. One can speculate that the role of critic required a major shift in the students' learning practices and identities, and the use of empathetic and encouraging comments during enactment of the feedback activity may have helped the students transition more effectively into this new role.

Of note, the findings indicate that divergence between the planned and enacted curricula was observed in Case Study Three, particularly in relation to sourcing fresh content for the DIQ postings and also in a failure to provide global perspectives of the literature. Possibly, direct teacher engagement in the DIQ interactions through the posting of substantive comments, the answering of questions, or the posing of strategic questions could have afforded greater alignment between the planned and enacted curricula. Also, direct discussion of these issues in face-to-face meetings each week may have been useful. However, this would have increased the teacher's workload and absorbed valuable class time. Additionally, some students appeared to lack the skills of summarising and critique which were essential for full participation in the DIQs, and it may have been useful for the teacher to offer a "crash course" in these skill areas. Once again, an obvious constraint would be that less time may have been available for course content and other students who possessed these skills may have been bored. This touches upon a wider issue of students' preparedness for postgraduate study which is beyond the scope of the current discussion. The point here is simply to draw attention to the fact that some students lacked key academic skills and thus were unable to fully enact the curriculum according to the teacher's plan.

6.4.3.3 Reducing false behaviour

All three case studies exhibited a falsification of behaviour (Jackson, 1983) which included feigning interest in peers' work, posing questions they were not interested in, focusing on their own performance rather than building knowledge with others, and avoiding exposure to others' work. As already observed, this type of behaviour was most pronounced in Case Study Two where the learning object lacked credibility and the students "went through the motions" with little interest in their peers' understandings. The issue of authenticity in relation to valuing each other as resources will be addressed later in this chapter. The suggestion being made here is that learning activities which ask students to use their personal experiences to make course content more meaningful may stimulate a deeper sense of engagement within the student whereby key concepts are internalised and transformations in ways of thinking, doing, and being are articulated. The findings indicate that there was a greater sense of authenticity in Case Studies One and Three, particularly in relation to the sharing of experiences gained in nursing and language education. Students interpreted content through the lens of their own experiences and shared this with others. Through this experiential dimension, content acquires meaning in a more personalised way which can transform the student. Participation then becomes a process of inhabiting new ways of thinking, doing, and being on a more authentic level – a process of transforming the self rather than completing a task to achieve instrumental goals.

Thus, a key implication from this research is that teachers should design eLearning activities which forge links between paper content and student experience and should provide students with opportunities to reflect upon the meaning of these relationships. Case Study One presented an ideal situation with students undertaking clinical rotations in the community and then bringing those experiences back into the online activities to fuel their participation. This dove-tailing of classroom and target practice may not be possible within other learning contexts; however, it could be artificially

simulated through the use of case study scenarios. Additionally, teachers should be sensitive to areas of student expertise. Expecting undergraduate students (many of whom are under twenty years old) to bring academic writing experience to a peer feedback writing activity may be unrealistic. As a key aspect of design, teachers should consider what students bring to the classroom and harness this expertise through learning activities which allow students to make meaning on their own terms.

6.4.3.4 *Community investment*

The findings suggest that it is essential community members (students and co-teachers) share the curriculum designer's representation of the learning object. It is crucial that others "buy into" the vision of the planned curriculum, believing that the plan will lead to stated learning objectives. If the learning object is perceived to be credible, then it may be more likely that participants will invest their time through deeper levels of commitment and engagement. In addition, credibility can be strongly influenced by preconceptions about teaching and learning which are imported into the learning activity. Possible ways to increase community investment may include discussing the rationale for a learning task with others and explicitly linking the object with motives and planned objectives, initiating a dialogue with other teachers about the efficacy of the curriculum, initiating a dialogue with other community members (both students and teachers) about their preconceptions relating to teaching and learning which they bring to the learning activity, adopting a critical perspective whereby actual outcomes of learning activity are compared with expected outcomes and modifications made to pedagogy where required, and ensuring that the person who plans the curriculum is also directly involved in its enactment.

The need to ensure that the designer of the curriculum plan is connected with its implementation cannot be underestimated. The disconnection of the planned and enacted curricula was only evident in Case Study Two; however, it dramatically

affected the nature of curriculum enactment by nurturing the emergence of multiple motives and alternate forms of enactment in this context. The lead teacher as designer of the curriculum delegated most of the actual enactment of the curriculum to her tutors and was perceived to be distanced from learning activity. Intensifying this disconnection, the lead teacher articulated feelings of being desensitized to the peer feedback activity after so many years of being involved with it. She felt that she had lost her critical perspective which had been present earlier when the activity was new. It was clear that doubts about the curriculum plan were an eroding force which undermined the credibility of the learning activity, constrained the community's investment in the task, nurtured the emergence of alternate practices, and significantly disrupted the enactment of the planned curriculum.

6.4.3.5 The demands of repetitive learning activities

The findings show that these types of eLearning activities which repeat a number of times during a paper make multiple and ongoing demands on the students' time. These demands may be particularly acute using asynchronous modes of communication whereby students have to read and transcribe to participate, and even more acute in situations where EAL students are required to use formal academic conventions in their writing. For example, in Case Study One, the teacher was both surprised and shocked to learn that the word count for the paper had been greatly exceeded through student participation in five online activities. In addition, the students in this course felt so drained after completing their formal discussion postings that they had little interest in posting other texts. This suggests that teachers should ensure they have a clear picture of exactly what is entailed in the implementation of the curriculum for the students. The use of a three week cycle in Case Study One – one week to find and read articles, one week to post a text to the teacher on a topic, and one week to continue their ideas socially in the discussion forum – did distribute the workload over time. Theoretically, this arrangement did give the students more time to encounter the course content; however, practically

speaking, the students still adopted expedient behaviours. An implication is that allowing students more time to interact will not necessarily lead to deeper and more meaningful engagement.

6.4.3.6 External Factors

The findings provide a holistic view of student experience revealing that the learning activities under study were only one small part of the students' lives. In addition to the learning activity, the students balanced part-time work, family, and other programme commitments. The students often expressed a sense of anxiety as they juggled the varied demands from their studies and private lives, and the frequent requirement to submit work (often on a weekly basis) contributed to a sense of urgency. For example, in Case Study One, Student Five was taking five concurrent nursing papers, undertaking her clinical rotation in the community, and working part-time as a cleaner in a motel. Not surprisingly, she was often studying through the night. Similarly, in Case Study Three, a number of students were taking a concurrent paper which ran a similar type of weekly DIQ activity and they had to produce two sets of DIQs for each paper on a weekly basis. Dual demands from both papers significantly affected student participation by fuelling their pragmatic need to complete the learning activity as quickly as possible in order to move on to the next assignment. The students developed a number of strategies such as displaying a cursory interest in their peers' work, reading only one or two postings, and waiting for others to identify topics of discussion. The perceived relentless demands of these external factors encouraged students to take the path of least resistance.

To a degree, the feeling of being pressured can be traced back to the semester artefact which compresses learning into pre-defined "chunks" of time. Within this period, the students and teachers were expected to move through a significant amount of content and complete various activities. This situation did not seem particularly conducive to

the processes of sharing and building knowledge with others which is often an ongoing process of negotiation. The students perceived that there was simply no time to engage in any prolonged interaction – they had to move onwards by addressing other course requirements. While the planned curriculum anticipated that social interaction would be meaningful to the students, this expectation was often constrained by external demands on the students' time.

External factors clearly influenced the implementation of the curriculum; however, finding a solution to this issue is elusive. Students are typically busy as they juggle many commitments simultaneously, and in some ways this nurtures qualities of resilience and perseverance in the face of adversity. In addition, lack of time management skills can be an issue. However, two suggestions can be made which may align the planned and enacted curricula to a greater degree. First, anecdotally, the teacher in Case Study Three observed that students taking the paper over the entire year rather than the semester appeared to be less pressured. Perhaps more papers should be offered this way or more radically perhaps the use of the semester artefact should be challenged. Second, more co-ordination between papers within a programme may be beneficial as the teachers could understand the varied demands on students and plan workloads accordingly. These suggestions clearly have implications for departmental and institutional practice.

Further implications which interconnect with and extend the preceding discussion will also emerge in the following chapter which discusses the use of social constructivist-based pedagogies.

6.4.3.7 Summary

These findings bring alternate perspectives to the fields of curriculum implementation and teacher cognition in tertiary education. By employing activity theory as an interpretative lens, curriculum implementation has been conceptualised as an emergent, complex, and multi-layered phenomenon more akin to a curriculum enactment perspective (Synder et al., 1992) where the curriculum is shaped by the emerging constructs of teachers and students. The findings further enrich understanding of curriculum enactment by exploring the intersection of past histories with emergent practice and the existence of personal images of the learning activity indicates that alternate understandings can thwart the enactment of the planned curriculum. Indeed, the planned curriculum is exposed as a tentative and malleable construct which is shaped by the meanings students and teachers ascribe to it. In terms of teacher cognition, this study has conceptualised teacher agency as a socially-situated and historically-mediated phenomenon, providing a more expansive view of teacher participation within eLearning contexts. Through an activity theory-based perspective, the findings inject a richer and more complex view of teacher thought and practice into the field of teacher cognition. Finally, implications which suggest ways to tighten the connections between planned and enacted curricula have been discussed in order to generate practical guidelines for teaching and institutional practice

6.5 Chapter Summary

Chapter Six has considered conceptual and pedagogical issues around object-orientedness or how the participants make sense of the learning object. After a theoretical discussion of object construction, the chapter has provided alternate perspectives on curriculum implementation and teacher cognition. Additionally, a number of pedagogical implications have been discussed. The next chapter will

continue the discussion by providing a critique of the use of social constructivist-based pedagogies in these eLearning contexts.

CHAPTER SEVEN: DISCUSSION PART TWO

7.0 Introductory Comments

Continuing the previous discussion, this chapter will consider the findings in relation to the notion of *occupying the role of knowledge resource*; in other words, how the work involved in the learning activity was organised, managed, and divided amongst the participants. More specifically, the findings suggest that contradictions emerged within the mediated relationship between the community, the division of labour, and the learning object. Conflict coalesced around the credibility of the students to assume the role of resource in the absence of the teacher and the prevalence of limited forms of cooperation between students. These problematic areas weakened the credibility of all three learning activities to varying degrees and challenged the assumption that social interaction between the students would be an effective tool in realising learning outcomes.

The following discussion will draw on the concept of the zone of proximal development (ZPD) (Vygotsky, 1978) in order to explicate the notion of capability in the relationships between the participants. The discussion will consider factors which affected the formation and development of a capability differential, the role of reading as a form of social interaction, the presence of a weakened or absent capability differential, and the role of the teacher. After this, a briefer discussion will consider how social interaction was meaningful to the participants as a form of limited cooperative activity with expedient objectives and will provide some broader perspectives about tensions between institutional and curriculum activity. Finally pedagogical implications will be drawn from the findings.

7.1 The Zone of Proximal Development

Originating from the work of Vygotsky, the ZPD 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, italics in original). Conventional interpretations of the ZPD in the literature have seized on this notion of an “interaction on a task between a more competent person and a less competent person, such that the less competent person becomes independently proficient at what was initially a jointly accomplished task” (Chaiklin, 2003, p. 41). Lewis (1997) offers a useful description of the ZPD:

One may consider that the knowledge of an individual has a central core which is ‘owned’ by the individual who is able to use that knowledge in the autonomous performance of tasks. Surrounding that core is a region (the zone of proximal development – zoped) in which the individual has some knowledge, but needs help in performing tasks which depend upon that knowledge. In a community, some parts of each person’s core knowledge overlap that of others and, most importantly, one person’s ‘zoped’ overlaps with the core knowledge of others. (Lewis, 1997, p. 211)

Of note is that a number of interpretations have moved away from viewing the ZPD as being concerned with properties of the individual, preferring to focus on the socially constructed and distributed nature of the ZPD as people relate to each other (Moll & Whitmore, 1993; Nassaji & Cummings, 2000). For example, Moll and Whitmore (1993, p. 21) define the ZPD as “collective, interrelated zones of proximal development as part of a transactive teaching system.”

In neo-Vygotskian discussions, scholars have contended that the concept can be applied to adult learning contexts (Bonk & Kim, 1998b; Lantolf, 2005; Tharp & Gallimore, 1988). However, readings of Chaiklin (2003) and Wertsch (1985) remind us that the ZPD was constructed by Vygotsky in relation to child development.

According to Chaiklin (2003, p. 57), the ZPD is underpinned by beliefs about child development, in particular the centrality of “maturing psychological functions ... that are relevant for the general intellectual development to the next age period.” Thus, the ZPD is one idea embedded within and drawing meaning from a broader Vygotskian conceptual framework. This observation reminds us to be cautious when extricating the ZPD from its theoretical context and applying it to other learning settings, particularly adult learning.

As Wells (1999) observes, Vygotsky’s untimely death left a number of unanswered questions and a degree of uncertainty about the ZPD which has left it open to various interpretations and modifications. It remains a useful interpretative tool because it draws attention to the inter-psychological dimension or social origins of learning. A key aspect of the ZPD is that it is dependent on the “right support” being present (Bonk & Kim, 1998b, p. 70). In my interpretation of the ZPD, this support is predicated upon three key conditions: a blend of less and more capable individuals must be present in the learning community; this capability differential must be perceived by those in the community; and communicative modes must facilitate interaction between the less capable and more capable so that they are able to interact together. It is essential that an awareness of capability exists in the community; in other words, the community perceives that more capable or more expert individuals are present and they have something to offer that the less capable members lack. If this perceived capability differential is not present, then social interaction may devolve into a form of pseudo-communication whereby people interact with little interest in exchanging information in an authentic manner.

Acknowledging that the application of the ZPD to adult learning may be problematic, in the following discussion, the concept of a capability differential will be extracted from the ZPD in order to inform understanding. However, the discussion may

contribute to understandings of the ZPD in adult learning by posing a number of intriguing questions; for example, what did the ZPD mean in these eLearning contexts; how was the tension between the less and more capable manifested; who assumed the roles of less and more capable and were these roles/identities recognised as such; and what factors afforded or constrained the process of establishing an effective ZPD? This discussion offers a response to Nassaji and Cumming (2000, p. 96) who have argued that “the notion of the ZPD remains something of a mysterious, idealized entity, often claimed to be in place by those promoting their particular approaches to instruction, but seldom systematically accounted for or critically evaluated.”

7.1.1 The presence of an inter-personal capability differential

In all three case studies, the findings suggest that the learning activities were enriched by requiring social interaction between the students. Through exposure to their peers' work, the students encountered a range of experiences and perspectives on the paper content and also gained information about the nature of participation (for example, the linguistic form and content of postings). The online space was crucial in creating a place where the student group could display their work for each other and cooperate together to realise individual learning goals. Admittedly, the limited nature of the interaction did not appear to afford sustained negotiation between students as all the learning activities were essentially a two-step process of displaying one's work and then responding to another's work; however, the ability to view peers' work and interact in a limited manner led to perceived learning opportunities by the students and appeared to extend their competence. Similar findings have been reported by Locke and Daly (2006) in their study of EAL (English as an Additional Language) and ENL (English as a Native Language) students' perceptions of participation in asynchronous discussions. In all three case studies, the communal display of understanding not only stimulated the students' thought but also provided models of

expected practice, thereby defining the nature of participation. For example, in Case Study Three, the teacher actively encouraged the students to learn from each other's work by indicating to the group which students had performed well that week. The website afforded a virtual space where students' understandings and experiences could be displayed for the group, and encountered and re-encountered by the students. In Case Study One, the students clearly valued their peers' work to the extent that they would delay their engagement, adopting a responder role and allowing others to upload their postings to the website first. This practice gave them some comfort as they avoided the responsibility of determining the form and content of the discussion, and yet this practice also encouraged a more dependent relationship with their peers.

The findings suggest that some student content was more valued than others and this was particularly apparent in relation to the sharing of experiential material in Case Studies One and Three. In both settings, the students were interested in reading about each other's nursing and teaching experiences in relation to the topic of the week. In particular, some of the postings in Case Study One conveyed poignant and intense recollections of nursing experiences (such as being present at a patient's death) which were both engaging and emotionally moving. Likewise, in Case Study Three, the students respected their peers' language teaching experiences and were genuinely interested in their contributions. However, this relationship was not one-way and students demonstrated confidence in their own abilities to be resources. At times, they were keen to express their own opinions drawing from personal experience. Clearly, learning was meaningful to the students as they related to experiences which had relevance for them. Through the experiential dimension or the dovetailing of professional and student life, students were positioned as valued resources, capable of contributing new material and perspectives to the groups' understanding. These findings echo the work of Dewey (1916) as cited in Garrison and Archer (2000, p. 11)

by indicating that “meaningful and educationally worthwhile knowledge is a process of continuous and collaborative reconstruction of experience.”

Students were also viewed as credible resources in Case Study Three where they had to pose questions to the group and then answer a peer’s questions each week. Although they did become somewhat apathetic towards the end of the course, early in the paper they displayed interest in receiving responses to their questions, indicating that the students seemed to value their peers’ input. Even in Case Study Two where the students often devalued their peers’ contributions, they reflected upon the merits of the peer feedback they received. Weak feedback, even though rejected by the students, would still be considered, and this provided the students with another opportunity to process the paper content.

This last observation is of interest, suggesting that even interaction with less-than-optimal work can support learning. Although not a dominant theme in the findings, some students commented that viewing less capable postings sensitised them to the nature of participation. In Case Study One, a student critiqued the excessive use of examples in the postings of some of her peers which she perceived were tangential to the task at hand. In Case Study Two, a student complained that her peer had given her vague and excessively positive feedback without any constructive input. In Case Study Three, students commented on the practice of posing complex abstract questions which were difficult to answer. This is reminiscent of the work of Donato (1994, p. 45) who describes “negative evidence” or the notion that “correct knowledge is subsequently secured from incomplete and incorrect knowledge.” In these instances, interactions with less-capable peers appeared to support a degree of learning.

The findings shed some light on how a capability differential – or the perception that more and less capable individuals were present – was manifested through an experiential dimension. In Case Studies One and Three, it appeared that the personal histories of the students (their differing ages, life experiences, and levels of professional experience) enhanced the sense that capability was present in the student community. Often, the students did view each other as having valued information to communicate, perhaps knowledge they lacked about the paper content or the linguistic form and content of their postings. Moreover, they shared their own experiences, readings, and thoughts with the group. Thus, through the medium of experiential content, the students positioned themselves and their peers as resources.

7.1.1.1 An expanded view of inter-personal semiotic mediation

It can be argued that the educational literature has privileged dialogic social interaction mediated by speech in discussions of the ZPD (Donato, 1994; Moll & Whitmore, 1993; Tharp & Gallimore, 1988). Wells (1999, p. 319) observes that “learning and teaching in the zpd is clearly dependent on social interaction and, in educational settings, this most typically involves face-to-face interaction mediated by speech.” Additionally, in the eLearning literature, sustained interaction between students and teachers (for example, online discussions) has been the focus of many studies (Anderson, Rourke, Garrison, & Archer, 2001; Hammond, 2005; Pena-Shaff & Nicholls, 2004; Shea, Swan, Li, & Pickett, 2005). This interest in dialogue – both online and face-to-face – is hardly surprising considering that it is consistent with social constructivist learning theory which views dialogue as a key tool for thinking as people elaborate, clarify, describe, and defend their ideas (Jonassen, Davison, Collins, Campbell, & Bannan Haag, 1995).

The dominance of sustained person-to-person forms of social interaction clearly has implications for this study as, on the surface, it is difficult to label the learning

activities as dialogic. In all the learning activities under study, students interacted in limited exchanges which did not support the sustained negotiation of meaning (although sustained interactions were not prohibited). Even Case Study One, labelled a *discussion*, functioned more as a display of individual understanding as the students posted one long monologue whereby they acknowledged peers' ideas and then launched into an articulation of their own perspective on the topic at hand. Certainly, dialogue was not prohibited and the students had opportunities to seek more prolonged interaction if they desired, but this behaviour was not rewarded through marks. Similarly, both Case Studies Two and Three required a two-step form of interaction whereby students were asked to post a text and then respond to another's text. A prolonged engagement or sustained interaction in the online setting was not required. It should be noted that these were blended learning contexts which provided opportunities to engage in face-to-face discussions; thus, the need to discuss in an online space was perhaps less pressing than in fully-online contexts.

However, the coupling of dialogue and the ZPD raises some interesting questions to consider in relation to the study. Did a capability differential emerge from limited non-sustained text-based social interaction, and if so, in what form did it manifest itself? The following discussion will explore these issues and will suggest that a less visible form of social interaction emerged through the practice of reading and reflecting upon student online postings. This form of social interaction was not characterised by an active negotiation of meaning between students, and yet it appeared to advance student competence and support learning. Through this discussion, it will be suggested that greater recognition should be given to this form of inter-personal semiotic mediation, particularly in eLearning contexts which are asynchronous and text-based.

The findings have indicated that there was non-visible activity occurring “behind the scenes” as students navigated their way through the online space, making decisions about which texts to read in detail, which to skim read and which to ignore, and reflecting upon the form and content of the postings. The asynchronous nature of communication provided the ability to view and re-view the work of others as students were freed from the “tyranny of time” (Locke & Daly, 2006, p. 43). Cognitively, the ability to view and reflect on a range of experiences exposed the students to differing perspectives on the paper content. As they navigated around the website, observing who had posted, to whom they had responded, when they had posted, and the content of what they had posted, the students reflected on the paper content as they re-encountered it in differing forms. Affectively, as a means to establish the nature of participation (what topics should be discussed and what linguistic form should the posting adopt), the ability to view others’ work first before they posted their texts afforded the students a degree of security, comfort, and control. This was felt most acutely in Case Study One where issues of safe practice and being “on the right track” were of great importance to the students, the teacher, and the nursing programme. The fact that all the learners were EAL students with lower levels of English competence than the other two case studies may have led to a degree of uncertainty about how to express themselves in English, thus the ability to observe native English speaking students was clearly useful to them.

The practice of reading without posting has been referred to (rather negatively) as *lurking* in the field of eLearning. Dennen (2008, p. 1624) defines lurking behaviour as to “observe a setting but not contribute in any noticeable way.” In her research, Dennen (2008, p. 1624) found significant levels of “pedagogical lurking” in two online classes where students read postings and reflected on the ideas presented. These students viewed their online experiences in a positive light, perceiving that both writing and reading supported their learning. In contrast to Dennen’s (2008) findings that pedagogical advantages to lurking activity may exist, Nagel, Blignaut,

and Cronje (2009) have raised concerns that lurking behaviour may benefit the individual, but may erode a sense of learning community in online contexts.

Studies which examine lurking activity or the behaviour of “ROPs (Read Only Participants)” (Williams, 2004, p. 1) direct attention towards the non-visible aspects of student participation. The assumption that online learners participate only by writing has been challenged by scholars who argue that participation is a complex and multifaceted phenomenon which includes both visible and non-visible aspects (Beaudoin, 2002; Bozik & Tracey, 2002; Dennen, 2008; Hrastinski, 2008; Lee, Chen, & Jiang, 2006). They have challenged the negative connotations surrounding the concept of lurking and the inclination to consider the posting of text as a singular sign of participation. In their study of an electronic bulletin board, Bozik and Tracey (2002, p. 223) advise:

Do not assume that only those posting frequently are learning. In our experience, many students were frequent readers and less frequent posters ... some of the best comments came from students who read often, then replied with insight gained from hearing the others out before responding. (Bozik & Tracey, 2002, p. 223)

Indeed, this type of reading behaviour may be an example of legitimate peripheral participation (Lave & Wenger, 1991) whereby fledgling participants observe and learn cultural norms in new online spaces (Schrage, 2002).

As observed above, there is evidence in the literature to suggest that observing online activity without posting text may have pedagogic value for the individual, although it is conceded that this form of non-visible activity may constrain collective objectives (Nagel et al., 2009). In the findings, the asynchronous online space afforded the ability to encounter and re-encounter varied perspectives, reflect upon their meaning, and formulate a response. It can be argued that through the processes of reading and

thinking about the understandings of others, the students interacted indirectly with their peers through text, advancing their competence by gaining a deeper and richer understanding of paper content and the nature of participation. Interestingly, it seemed that understanding could be advanced with exposure to both more-capable and less-capable instances of student work. For example in Case Study Two, by critiquing weak feedback and identifying its perceived shortcomings, student consciousness was raised about the desired features of the text under study. The findings suggest that advancing competence could be a bi-directional process in which expert informed novice and novice informed expert.

During these reading experiences, processes were observed which were familiar to those discussed in the Involvement Load Hypothesis (Hulstijn & Laufer, 2001) within cognitive conceptualisations of vocabulary acquisition in language learning. In operationalising the concepts of deep processing and elaborating, Hulstijn and Laufer (2001, p. 543, italics in original) have developed “a motivational-cognitive construct of *involvement*, consisting of three basic components: *need*, *search*, and *evaluation*.” *Need* refers to both intrinsic and extrinsic motivation which emerges from some unmet need; *search* is the process of finding the meaning of a word or searching for a word to express a concept; and *evaluation* refers to the process of comparing words with other words or meanings to assess suitability for use in a particular context. In this study’s findings, students appeared to undertake similar processes as they constructed meaning through their reading experiences. Motivated by needs based on intrinsic factors (for example, the desire to learn with others) and/or extrinsic factors (for example, the desire to receive a grade) to engage in the learning activity, the students searched their peers’ online texts for work that was meaningful to them in some way. As they surveyed online texts, making decisions about which to skim read, which to bypass, and which to read closely, they evaluated the texts, seeking those which were perceived to be comprehensible, relevant, and stimulating in some way. As noted previously, students were often attracted to texts which focused on

experiential rather than abstract theoretical content and they often sought texts which afforded a sense of connectivity, for example, texts that articulated similar understandings or experiences which resonated in their own lives. Through the processes of searching and evaluating, they interpreted texts, related them to their understandings and past experiences, and generally made these texts meaningful within their own lives.

In the learning activities under study, social interaction was not manifested as a direct, visible, and dialogic negotiation of meaning between two people (as might be observed in a face-to-face discussion), but instead it was manifested as an internal process which occurred between and within the minds of the students mediated by online texts. Connections can be forged with the field of literary theory, specifically in relation to Reader Response Theory (RRT). RRT is generally concerned with “an array of approaches to literary and cultural texts that focus on the role of the reader in the creation of meaning” (Castle, 2007, p. 174). In opposition to formalist theories which advance “a passive mode of reading that involves the discovery of the text’s internal dynamics and structural unities,” RRT is only concerned with matters of form in relation to how readers interpret or ascribe meaning to texts (Castle, 2007, p. 174). As a key figure in RRT, Rosenblatt (1995) writes:

In the past, reading has too often been thought of as an interaction, the printed page impressing its meaning on the reader’s mind or the reader extracting the meaning embedded in the text. Actually, reading is a constructive, selective process over time in a particular context. The relation between reader and signs on the page proceeds in a to-and-fro spiral, in which each is continually being affected by what the other has contributed. (Rosenblatt, 1995, p. 26)

It is not my intent to delve deeply into the field of RRT as it is a complex area of literary theory which encompasses a range of views in the study of literary and cultural texts (Castle, 2007; Davis & Womack, 2002). Instead, it is my intent to forge a connection with a central theme in RRT that is concerned with the relationship

between reader and text and how the reader experiences a text and makes it meaningful. This theme has great utility in relation to the findings because it directs attention to the ways in which students encountered and ascribed meaning to their peers' online texts as they participated in the learning activities. These readers are conceptualised as active agents engaged in a subjective, emergent, and constructive process of meaning-making as they encountered their peers' postings. As the students engaged in these reading experiences within the web pages of the learning activities, they encountered varied perspectives and instances of more-capable and less-capable work. Through this process, they advanced their competence by enriching their understanding of paper content through the perspectives of others and/or acquiring a fuller picture of the nature of participation (the form and content of the postings). As active reading agents, they often made strategic decisions about which texts should be read and which could be bypassed. In Case Study One, early postings were valued as identifying key themes for development, and latter postings were shunned as the students simply did not return to the discussion forum after they had completed the mandatory one posting. This finding is consistent with the notion that "the reader approaches the text with a certain purpose, certain expectations or hypotheses that guide his choices from the residue of past experience" (Rosenblatt, 1995, p. 26).

Thus, in these asynchronous text-based activities, a capability differential appeared to emerge through the inter-psychological relationships mediated by the reading experiences of the students. These findings are reminiscent of Bakhtin's (1984 as cited in Trimbur, 1987) work concerning "the language of inner speech" where "we receive words through others' voices, and once internalized these voices continue to echo in the word" (Trimbur, 1987, p. 219). Social interaction in these contexts was characterised by internal, non-visible dialogues between students and online texts. As the students searched the texts, evaluated and reflected upon the quality of the postings, formulated their response, and received responses from other students, they

made these texts meaningful within their own lives in relation to their understandings and experiences. Their reading experiences became a site for meaning-making as they interacted with the voice of the other through the medium of online text. The setting afforded a form of capability whereby students, as active agents, engaged with both less capable and more capable instances of participation in a “to-and-fro spiral” (Rosenblatt, 1995, p. 26).

Similar thoughts have been articulated by Wells (1999) who argues that:

To focus exclusively on face-to-face interaction mediated by speech is seriously to limit our understanding of the range of modes of semiotic mediation that play a role in both interpersonal and intrapersonal thinking and problem solving broadening the range of modes of semiotic mediation considered also leads to the recognition that there are other sources from which learners can receive assistance in the zpd, in addition to deliberate instruction or the assistance of others who are physically present in the situation. (Wells, 1999, pp. 319-320)

Citing Vygotsky (1981), Wells contends that forms of semiotic mediation are not confined to speech, but can include algebraic symbols, works of art, maps, diagrams, and writing. These artefacts, particularly writing, are relevant to this study, drawing attention to a “powerful means of self-instruction, as the reader appropriates the thoughts of others and makes them his or her own” (Wells, 1999, p. 320). Texts are not only useful when read in order to understand meaning conveyed by the author, they are valuable when used as a “thinking device” (Lotman, 1988, p. 36) to stimulate thought. Within the asynchronous settings under study, students used the words of others in the form of online postings to ignite their thought as they actively constructed meaning. Through the experience of reading as a social act, the negotiation of meaning occurred in a less direct and less visible way than active exchanges between individuals, and it manifested itself on an internal plane as a dialogue between the perceptual and cognitive processes of one student and the understandings of other students conveyed by online texts.

This discussion has suggested that the reading experiences of students were an important form of inter-personal semiotic mediation. It provides a description of the way in which the processes of individual cognition operate within the sociocultural context. In addition, the discussion has offered evidence to support the use of expanded conceptions of participation in eLearning research which include not only the text uploaded to the webpage but the reading that occurs. This position is consistent with the work of others (see for example, Beaudoin, 2002; Bozik & Tracy, 2002; Dennen, 2008; Hrastinski, 2008; Lee, Chen & Jiang, 2006; Mazzolini & Madison, 2007; Williams, 2004) who have argued that online participation extends beyond the quantity and quality of writing displayed by students.

Up to this point, the discussion has considered the ways in which a capability differential emerged in these online learning settings. However, the study produced mixed findings, indicating that this was not always the case. In the next section, the discussion will pursue an alternate perspective by considering how the emergence of a capability differential was constrained in the learning activities.

7.1.2 A weakened inter-personal capability differential

This thesis maintains that the existence of a capability differential is dependent on the presence of more and less capable individuals in the community. In addition, individuals must perceive the presence of a capability differential; in other words, they perceive that some members of the community are more capable or have something to contribute that is lacked by others. In contrast to the findings presented above which have suggested that a fairly robust capability differential was present in these interactive eLearning activities, there is also evidence to the contrary which indicates that the students struggled both affectively and cognitively to support each other's learning without direct input from the teacher. Generally speaking across the

three case studies, students experienced difficulties achieving deeper levels of cognitive engagement (identified as eLearning outcomes by teachers). At times, they struggled to form global perspectives through the synthesis of ideas; they remained in their comfort zones by adopting responder rather than initiator roles; and they created weak questions for their peers to answer. They often displayed only a cursory interest in their peers' work and demonstrated little commitment to advancing the understanding of the group, instead preferring to focus on individual goals. Social issues, such as the need to be diplomatic and congenial, the fear of being "wrong" in the company of others, and the experience of being marginalised by not receiving responses, appeared to constrain participation. There were a number of times when the students doubted their peers' ability to act in the role as resource, perceiving that their work was of little value, and expressed insecurities about their own abilities. In all three case studies, the voice of the teacher, the perceived more-capable-other, was missed in the online space. Finally, there was an overwhelming sense of pragmatism as the students adopted a functional orientation to complete the task as quickly as possible. Fledgling feelings of cooperation and collaboration were subsumed by the need to be expedient, and there was a muted or absent sense of sharing and building understanding with others in the online setting.

The issue of congeniality is worthy of further comment. In their study of five students (three EAL and two ENL students), Locke and Daly (2006, p. 47) illustrate a positive aspect of Chinese politeness practices which acted as a "lubricant" for the discussion and provided a congenial atmosphere to manage challenges and acts of disagreement. Certainly, in these case studies, politeness appeared to contribute to a friendly and welcoming atmosphere which helped to forge connections with others and soften occasional disagreement. But, particularly in Case Studies One and Two (the undergraduate papers), little disagreement was observed as students quickly aligned themselves with their peers. It seemed that these social interactions were too agreeable and the use of polite comments served to intensify an almost suffocating air

of congeniality. These mixed findings suggest that the presence of congeniality can be useful when it is used to pave the way for critique, but in the absence of substantive critique, too much politeness can foster a culture of convergence at the expense of divergence.

Insights into this perceived lack of capability within the online learning activities under study can be gained by considering the nature of the concept of community. Roth and Lee (2006) argue that natural learning communities such as villages or societies consist of a heterogeneous blend of people pursuing the same collective object, representing a wide range of expertise and relating to each other in varying ways. They give an example of a community composed of school students working alongside and with various communities of practice such as scientists and environmentalists as they focus on assessing the state of a local river (the object of activity). Using Roth and Lee's (2006) conception of natural communities, it can be argued that the presence of diversity which encompasses a range of expertise is a key factor in affording the emergence of a functional capability differential as it supplies a range of ability in the community.

To a degree, diversity was evident in Case Studies One and Three through the experiential dimension. In Case Study One, the student cohort encompassed a range of ages and experiences and there was the perception of expertise in terms of writing ability and life and nursing experience. Similarly, in Case Study Three, the students perceived that their classmates brought language teaching expertise to the DIQ activity. Through contributions of applied knowledge, there was a perception of expertise in the absence of the teacher. Interestingly, in Case Study Three, a student observed that perhaps the cohort was too diverse. As the teachers originated from language teaching communities of practice in different countries, she sensed that the students lacked a degree of commonality in terms of shared experiences and

educational systems. Her comment suggests the need for balance – the community must be diverse enough to supply a range of expertise and yet similar enough to allow common interests and mutual goals to emerge. In contrast, Case Study Two with its focus on writing outcomes represented the learning context with the least amount of perceived expertise and a barely perceptible capability differential. Students consistently viewed their peers as barely capable or simply incapable of offering constructive feedback on their writing and they expressed insecurity in their own abilities. Drawing from Roth and Lee's (2006) concept of a naturally occurring community, the group of students can be viewed as a fairly homogenous group who lacked or were perceived to lack diverse levels of ability to sustain a capability differential.

Although experiential input did support the perception of capability within these learning contexts, in other ways the learning activities often lacked a sense that more capable individuals were present who could assume the role of resource to advance student competence. Often, the students were observed struggling to provide support to their peers as evidenced by an inability to provide a critical evaluation of their peer's work (Case Study Two), a lack of confidence to initiate ideas or disagree with others in substantive ways (Case Study One), or the inability to move the discussion onto higher planes of thought such as synthesising local perspectives with global ones (Case Study Three). The teacher's voice as the perceived more-capable other was missed by the students. The implication here is that a diversity of capability – a tension between the less capable and more capable – may be an essential component of social interaction, and that the teacher as the voice of expertise can provide this diversity to an extent. Roth and Lee (2006) might argue that the teacher's voice is essential to provide desperately needed diversity in the classroom which occurs naturally in authentic communities.

A different perspective on the absence of a capability differential can be gained by considering the type of knowledge being constructed. In Case Study One, a key objective of the task was the creation of a posting which integrated academic reading with clinical experiences gained in hospitals and clinics. In a sense, each student was an expert in their clinical context, bringing unique experiences to inform the discussion. As the course progressed and the students gained more clinical experiences, their voices appeared to become stronger as they shared their expertise with the group. In addition, each student chose a different article so they were also acting as resources by describing these articles to the group. Similarly, in Case Study Three, the students were encouraged to integrate the paper content and academic readings with their language teaching and/or learning experiences. In contrast to Case Studies One and Three, Case Study Two had specific learning objectives centred on knowledge of academic and business texts. Although it can be assumed that the students had been exposed to various forms of writing in the past and could potentially bring a degree of expertise to the activity, many of the students were not seen as credible resources for this type of specific content knowledge. It could be argued that the focus on academic writing as a learning objective required specific knowledge of text construction including an understanding of cohesion, coherence, grammar, and referencing, and this specificity interfered with the ability of the students to assume the role of resource.

The findings indicate that the three eLearning contexts under study struggled at times to establish conditions under which a capability differential could develop in the online space. These findings may have implications for the nature of a ZPD in adult learning contexts. This discussion has highlighted two areas of concern - the perceived lack of diversity in the online community which failed to provide a capability differential and the nature of the knowledge to be constructed. Drawing on the work of Roth and Lee (2006), the findings highlight the artificial nature of the classroom community which lacks the depth, breadth, and overall diversity of

authentic communities. This poses a challenge for students to assume the role of resource in a knowledge domain where they may lack (or perceive they lack) competence.

7.1.2.2 The teacher as the voice of expertise

Across the three case study sites, there were two points of similarity regarding the teacher's role in the learning activities: the teacher was not an active participant in the online space and the students (and indeed some tutors) felt this left a void of expertise. In relation to the first point, the teachers believed that their participation in the student space would be inherently detrimental, citing concerns that their views might be imposed on the students or their presence might incite teacher-pleasing behaviour. They characterised their role as opportunity creators through the design of the learning activity rather than ongoing facilitators. In relation to the second point and in opposition to the teachers' views, many students and some tutors felt that a student-only online space was inadequate and lamented the absence of the teacher as a resource and perceived expert.

It is useful to revisit the findings in relation to teaching roles in the learning activities. In Case Study One, the teacher did not engage with the online discussion until after it had completed, adding a final concluding comment. Part of her contribution would provide a general assessment of the discussion and part would give her perspective on the topic and offer an additional reading resource for the students to consider. However, during the last two discussions (there were four in total) she made no comment at all except to assign individual grades to the students. In Case Study Two, the peer feedback activity was designed to be a student-only space where the students presented their work to peers and received feedback from one peer each week. The teacher believed that the students would be "disempowered" by the tutors' interventions; thus, the tutors' role was to ensure the students had attempted the task

in an appropriate manner and assign a grade but give no written comment. Although the teacher's decision appeared to be based on pedagogical reasons, it cannot be ignored that the size of the class and teacher-student ratio (260 students, four tutors, and one lecturer) was large. Student feedback may have been the only credible option here. Finally, in Case Study Three, the teacher feared she might "hijack" the interaction; therefore, she did not actively participate in the DIQs by answering questions or facilitating the online student interaction. She did concede that she could engage online with the students (for example, by answering questions), but this activity would add to her workload. It should be noted that as the DIQs were directly linked to face-to-face interactions in the weekly classroom, the teacher had further opportunities to engage with the students.

As previously discussed, the findings have suggested that the move to distribute cognition amongst the students led to the partial realisation of learning objectives which centred on supporting conditions for the co-construction of knowledge. However, there was a sense that, without direct intervention from the teacher, the online student space was a flawed pedagogical tool, limited in its ability to fully engage and extend the students. Certainly, the students did act as resources for each other as they shared experiences in relation to the course content, but the potential for their interactions to lead to a deeper engagement with conceptual understandings often stalled. There is a wealth of evidence to support this stance which has already been discussed in previous sections.

Workload concerns were one of the main reasons the teachers chose not to directly engage with the students and facilitate the learning activities. This was particularly evident in Case Study Two which had five teachers/tutors for approximately 260 first year students. These workload concerns highlight tensions between paper and institutional activity about the resourcing of large classes. In addition, the teachers'

assumption that their input during the activity would be inherently detrimental to the social interaction does not take into account that the teacher could facilitate student interaction in varied ways to mitigate concerns that their input might constrain the students – teacher involvement was simply dismissed. This situation raises issues of teacher preparedness for online teaching, specifically in relation to the design and implementation of learning activities based on social theories of learning. This issue will be revisited in the pedagogical implications.

Within these case studies, there was uncertainty about the role of the teacher. The students wanted the teacher to be located within the online group as an active participant, and yet the teachers stood outside the process of co-construction of knowledge, believing that their presence might adversely affect the student interaction in some way (for example, stifle student discussion or impose teacher viewpoints on student understandings). This dilemma touches upon conceptual issues of the role of expertise in social epistemologies and the ways such expertise should be manifested. Roth and Lee (2006) would probably argue that, as the voice of expertise, the teacher brings much needed diversity into the classroom. Another perspective is supplied by the concept of cognitive apprenticeship which views learning as “the development of expert practice through situated learning and the acquisition of cognitive and metacognitive skills” (Collins, Brown, & Newman, 1989, p. 460). By becoming engaged in authentic problem solving activity with more and less experienced members of the community, students learn to solve immediate problems, and they are assisted by others onto higher and more complex levels of thought. In this process, the teacher’s presence is crucial to model expert practice, coach learners as they participate, scaffold learning, and make explicit their tacit knowledge. By supporting student attempts to participate, the teachers eventually empower the students to become independent actors (Collins, Brown, & Newman, 1989). Similarly, within the concept of legitimate peripheral participation, the notion of apprenticeship is defined as having “broad access to arenas of mature practice”

(Lave & Wenger, 1991, p. 110). By observing and then gradually working alongside more mature members of the community, apprentices enter into the ways of thinking, doing, and being of the community, eventually moving from the periphery to more mature and central forms of practice. In the three theoretical positions advanced above, a robust rationale can be advanced for the active participation of the teacher in these online spaces. As the voice of expertise, the teacher is not an optional participant whose presence may contaminate social interaction. Certainly, a student-centred approach must respect the understandings and experiences students bring to the online space, allowing that they too can provide a measure of expertise; however, it is the teacher, as the embodiment of mature practice, who can build capacity in the capability differential and propel the students onto higher levels of competence.

7.1.3 Summary

Drawing from the concept of the ZPD, the preceding discussion has provided a critique of how social constructivist-based pedagogies were enacted in the three online learning contexts. These activities under study were predicated on the belief that social interaction between the students would support the sharing and building of understanding; however, the findings have suggested that this belief is simplistic and masks the complexity of designing and implementing learning activities based on social theories of learning.

A primary focus has been upon determining the nature of capability within these eLearning contexts. The findings suggest that exposure to their peers' work provided the students with models of participation (both form and content of the postings) and that the online platform offered a space where students could encounter a variety of perspectives and experiences around the paper content. It was evident that experiential knowledge was particularly valued by students as they read about their

peers' experiences in nursing and teaching situations. A capability differential – a tension between less capable and more capable individuals – appeared to be present as the students often considered their peers as having valued information to communicate, perhaps knowledge they lacked about the paper content, the linguistic form and content of their postings, or real-life experiences. In addition, the dominance of dialogic modes of communication mediated by speech in discussions of the ZPD has been challenged by the presence of non-visible reading activity as a form of semiotic mediation. Students gained both cognitive and affective benefits from observing their peers' work without actually posting texts. Moreover, processes similar to those of need-search-evaluate (Hulstijn & Laufer, 2001) appeared to stimulate a form of dialogue between the student and the online texts. As active reading agents, the students made these texts meaningful within their own lives in relation to their understandings and experiences. However, there was a wealth of data which indicates that students struggled to assume the role of resource for each other and it is questionable whether a capability differential was present at times. The findings have portrayed the online group of students as a pseudo-community, lacking the diversity or collective orientation of naturally occurring communities (Roth & Lee, 2006). Additionally, an epistemological perspective has considered that the nature of knowledge objectives may affect the formation of a capability differential. Finally, in regard to teaching practice, cognitive apprenticeships (Brown, Collins, & Duguid, 1989) and legitimate peripheral participation (Lave & Wenger, 1991) have been considered. It is advanced that these concepts offer a theoretical rationale to support teacher participation in interactive online activities.

7.2 The Prevalence of Limited Forms of Cooperation

The findings suggest that social interaction was meaningful to the participants in a number of ways. It could be a means to gain a grade, a means to complete the task, a means to cooperate with others to support individual learning, or (rarely) a means to

collaborate to build group understanding. Certainly, at times the students expressed an interest in their peers, particularly in relation to experiential knowledge of nursing and language teaching. They were acutely aware that they had to engage with their peers in order to complete their work, but social interaction was primarily meaningful to them as a way to achieve the individual goals of gaining marks and supporting their own understanding. Self-interest was a powerful motivating factor in all three case studies. Students were provided with an online space to engage in social interaction, and yet (due to various reasons previously discussed such as time constraints and assessment practice) they bounded their activity and expressed feelings of disconnection and disinterest in the group. A sense of artificiality permeated interactions between students – social interaction was often brief, transitory, and focused on mandatory aspects of the task.

Before proceeding further, it is helpful to draw on Lewis' (1997) distinction between cooperation and collaboration – terms which, he argues, are often used interchangeably. He writes:

Cooperation depends on a supportive community of actors who agree to help one another in activities aimed at attaining the goals of each person involved. Collaboration, on the other hand, depends upon the establishment of a common meaning and language in the task which leads to the community setting a common goal. (Lewis, 1997, p. 212)

Lewis (1997) notes that these definitions are somewhat simplistic as collaborative activity may result in a division of labour whereby members of the group pursue personal cooperative goals, but the intent is for these personal goals to eventually contribute towards the common goal. Using these definitions to examine teacher statements of learning objectives, the learning activities under study used social interaction mainly to support individual learning (cooperative objectives). In addition, there are hints in the findings which suggest some of the teachers hoped the students would share and build understanding in order to advance group learning

(collaborative objectives). However, the findings have indicated that an awareness of other students' needs – an important aspect of cooperative and collaborative activity – was often missing from social interaction. Seen from an activity theory perspective, the students appeared to be preoccupied with their own needs and lacked an investment in the local community which was engaged with the learning activity.

7.2.1 Tensions between institutional and curriculum activity

As observed above, in the eyes of the teachers and students in these case studies, social interaction was primarily meaningful as a tool to support individual (cooperative) rather than collective (collaborative) objectives. However, student preoccupation with individual issues (individual learning, performance, and assessment) tended to nurture a functional and self-focused approach to participation which diminished an awareness of the needs of other students. Interesting perspectives on this situation can be obtained by exploring inter-activity relationships (relationships between two or more activity systems) (Engeström, 2001) rather than focusing primarily on intra-activity issues. Similarly, Somekh (2007, p. 8) observes that much research has considered issues at one phenomenal level such as classroom or institutional domains, and that redirecting attention to the “inter-relationships between local phenomena and the wider socio-cultural context” may have great utility.

Using an inter-activity perspective (Engeström, 2001), tensions can be seen between learning activities based on social epistemologies which are embedded within institutional systems focused on individual performance. This conflict exists at an inter-activity level – as a credentialing body, the institutional activity system values individual performance while the local learning activity draws upon pedagogy which values social interaction between students to share and build both individual and

group understanding. As Resnick (1987, p. 13) observed in her seminal address over twenty years ago, “although group activities of various kinds occur in school, students ultimately are judged on what they can do by themselves.” Values in the broader institutional context may be inconsistent with the values in the learning activity and consequently may undermine the goals of local activity. This inter-activity perspective reminds us that learning activities are socially-situated and culturally-mediated and that values in the wider context can have profound effects at the local level.

The institutional focus on individual performance touches on deeper issues about the role of tertiary education in society. Fullan (1999, p. 1) might frame this issue in terms of the “moral purpose of educational reform,” in other words, what is “education’s contribution to societal development and democracy?” Is it enough to produce graduates with sound content knowledge, specific cognitive abilities, and technical skills or is there an imperative to nurture social competencies in students? The need for credentialing bodies such as universities to assess and recognise individual performance and achievement is not disputed; however, this focus can lend a decidedly individualistic and arguably selfish perspective to tertiary study which can permeate down to the paper and learning activity level. While there is an awareness of the relationship between tertiary institutions and society (New Zealand Universities Academic Audit Unit, 2009), more dialogue may be needed to explore how social epistemologies can shape the relationships between institutional and societal activity.

Internationally, these issues intersect with ongoing discussions about tertiary-level study and graduate attributes, particularly in European settings where attention has been directed towards providing a degree of consistency in European higher education contexts through the Bologna Accord (Council of Europe, n.d.). Recent

discussion (Bologna Working Group, 2007) has centred on aligning national qualification frameworks with an overarching set of qualification frameworks from the European Higher Education Area (EHEA) and an important aspect of this undertaking has concerned consistency around qualification descriptors. These qualification descriptors are general statements of the achievement of learners who successfully complete a qualification (Bologna Working Group, 2005). Within New Zealand, similar work has been conducted in relation to identifying level descriptions for study from certificates through to doctorates (<http://www.kiwiquals.govt.nz/about/levels/leveldescriptors.html>).

The topic of graduate attributes – or what content knowledge, skills, and dispositions graduating students should have – is central to this discussion. Land and Gordon (2008, pp. 40-41) have identified a number of undergraduate attributes in Scottish higher education including critical understanding, independence, disciplinary currency, learner responsibility, creativity, problem formulation, problem analysis and resolution, evaluation, and critical values. In addition, attributes identified at Masters Level include the ability to critically evaluate, to reconcile complex issues, to form sound judgments, to cope with incomplete data, and to demonstrate originality in the application of knowledge. Of interest is the dominance of individual skills and knowledge in these lists of attributes. From a workplace perspective, the Council for Industry and Higher Education in the United Kingdom (Archer & Davison, 2008) has reported on the results of the International Employment Barometer (IEB) which surveyed 233 employers. Archer and Davison (2008) note:

The IEB survey confirms that most employers view social skills and personality type as more important than their degree qualifications ... ‘soft’ skills including communication skills and team working are the most important capabilities sought among new graduates, with over 85% of employers regarding these as important. (Archer & Davison, 2008, p. 7)

It is unwise to draw any firm conclusions from comparing these two perspectives in isolation; however, it is interesting to note that the social skills of communication and teamwork are emphasised in the IEB survey, but are lacking from the tertiary perspective. There is a sense of disconnection between the two views in relation to the value and importance placed on social skills and collaborative activity. These perceived inconsistencies serve to highlight the need for robust and ongoing dialogue about the role of tertiary education in the workplace and society, the types of graduate attributes that should be developed, and the influence of individualistic bias embedded within institutional structures which may exert influence over local praxis and diminish an awareness of others in learning activities.

7.2.2 Summary

The preceding discussion has considered the prevalence of limited forms of cooperation which appeared to be shaped by a student preoccupation with individual performance and assessment. Using an inter-activity perspective (Engeström, 2001), the relationship between the wider institutional activity system and local learning activity has been considered. Questions have been raised about the role tertiary institutions play in society, the nature of graduate attributes to be developed, and the power of self-focused agendas to shape activity.

This concludes the second major theoretical discussion in this discussion chapter. The following section adopts a more practical perspective by considering pedagogical implications arising from the enactment of social constructivist pedagogy in these learning activities.

7.3 Pedagogical Implications of the Findings

The preceding discussion has indicated that the enactment of social constructivist-based pedagogies in the three case studies was problematic. It has been observed that the learning activities could, at times, be a site for sharing and building understanding between students without a teaching presence; however, there was a strong sense that the potential to stimulate higher levels of thought and to generate more authentic levels of engagement amongst the members of the student community was often limited. In this section, attention will now be directed towards two key issues which have implications for curriculum designs based on social epistemologies – creating conditions to support a capability differential (and potentially a functioning ZPD) and counteracting the prevalence of limited forms of cooperation amongst the students. Once again, it is felt that these implications follow naturally from the preceding discussion and reside more appropriately here than in the conclusion.

7.3.1 Creating Conditions for a Capability Differential

The findings suggest that creating conditions to support a capability differential in eLearning contexts is a complex undertaking. Learning activities which use social interaction are dependent upon the students perceiving that there are individuals within the community who can contribute something they lack to the activity. This should be a key consideration in design. Therefore, the following discussion will consider the concept of a capability differential in relation to the nature of knowledge to be constructed, building a capability differential into social relationships, the role of reading, and the role of the teacher.

7.3.1.1 The nature of knowledge construction

The findings have indicated that the type of knowledge to be shared and constructed by students can play a role in supporting conditions for a capability differential to emerge. Teachers should carefully consider the type of knowledge to be constructed, and in particular they should be sensitive to ways in which they can harness students' prior knowledge and experiences – their domains of expertise – in order to facilitate the perception that students have something of value to contribute. Clearly, experiential knowledge was valued by the students in this study and the implication here is that learning activities must be designed so that students can bring their previous experiences as a contribution to the meaning-making process. Additionally, by asking students to locate and discuss resources (such as journal articles, websites, or books) that are unknown to the group, the curriculum design enhances the perception of expertise. Through these contributions of applied knowledge and other relevant resources, students are credibly positioned as resources in the community and a capability differential can emerge.

Conversely, caution should be taken with knowledge objectives which are abstract, theoretical, technical, and/or difficult for the students to relate to and make meaningful within their own life experiences. As observed in Case Study Two, the students struggled to perceive their peers or themselves as credible resources for knowledge about writing. It is not my intent to argue that students cannot build understanding around abstract, theoretical, and/or technical material, simply to suggest that teachers must recognise student insecurities and the fragility of feelings of expertise and capability. For example, students could be given multiple opportunities to engage with content through individual reading, private interaction with the teacher, and/or interactive opportunities in small groups of students so that they could “test run” their understandings, receive feedback, and build their confidence before moving into larger peer groups.

7.3.1.2 Building a capability differential into social relationships

Using the concept of social capital (Coleman, 1990), defined as “the potential to access resources through social relations” (Frank, Zhao, & Borman, 2004, p. 151), curriculum designers must understand how to build this potential into the social relations between students through the mediation of pedagogy. Designing to support a capability differential between participants may be one way to build forms of social capital. In this respect, connections can be forged with the field of computer supported collaborative learning (Miyake, 2007) and communicative approaches to language learning (Doughty & Pica, 1986) where information-gap or jigsaw activities are used to artificially stimulate a capability differential. These learning activities “require the exchange of information among all participants, each of whom possesses some piece of information not known to, but needed by, all other participants to solve the problem” (Doughty & Pica, 1986, p. 307). For example, a reading passage can be divided into sections and students are asked to read one section only. After this, groups of students who have read different sections come together to share their part of the text so that the whole reading can be understood. This approach which places students in the role of resource or “domain expert” (Miyake, 2007, p. 260) transforms them into experts as they possess information that their peers lack. It may help to create a less-capable more-capable tension in the class. Communication between students is more authentic as they are genuinely exchanging information to build understanding.

The importance of perception cannot be underestimated because a capability differential is ineffective if students do not perceive it exists. As Lewis (1997, p. 211) notes “this collective potential can only be realised if each member of the community is aware of the knowledge of others and can capitalise on that by offering and receiving help from others.” A pedagogical implication here is that teachers should provide opportunities for students to gain deeper and richer views of each other as credible resources. Rovai (2007) in his synthesis of the literature on

facilitating online discussions recommends the use of social and emotional discussions which provide students with an informal space to deepen their relationships with peers and nurture a sense of community. However, these findings indicate that informal interaction serves another goal in addition to fostering community and rapport. Pre-activity socialisation can provide students with a platform to display their expertise and, by sharing historical information about their work and study experiences, the students can establish the perception that their peers are real, salient, and capable.

7.3.1.3 The role of reading

In online learning contexts, this discussion has suggested that greater recognition should be given to the reading experiences of students as a form of semiotic mediation in social relationships. Social interaction was often meaningful in these asynchronous text-based activities through inter-psychological relationships mediated by the reading experiences of the students. In terms of pedagogical implications, the findings suggest that teachers should take account of non-visible reading activity as a crucial tool in learning. A quieter student who posts less text may be enjoying a rich learning experience which may be invisible to the teacher who is focused on the production of written texts as a sign of participation. Social interaction can be mediated through semiotic forms other than face-to-face interaction through speech, and consequently, a capability differential can be manifested in alternate ways. This should be a key consideration in the design and implementation of interactive eLearning activities, specifically those dependent on text-based modes of communication.

7.3.1.4 The role of the teacher

Although it is conceded that the students were capable of sharing and building understanding to varying degrees, there is a strong sense that this co-constructive

potential was not fully realised in these eLearning contexts. For various reasons previously discussed, the students often seemed to plateau at a basic level of competence, and yet were unable or unwilling to engage in higher level thinking and cooperative activity. Significantly, it appeared that a student-only community lacked or was perceived to lack a robust capability differential. An implication from this research is that the use of student-only groups for social interaction to support learning can be problematic and teachers should carefully consider the nature of their participation. Of course, this is a generalisation and decisions around teacher engagement are driven by pedagogical considerations which are unique to each learning context. With this caveat in mind, it is suggested that the teacher as the source of much needed diversity in the artificial classroom community (Roth & Lee, 2006) can increase the capability capacity in the community by participating directly in the learning activity. This can be a complex undertaking as the need to facilitate social interaction and higher levels of thought is balanced with the need to give the students space to develop their own understandings. As Hennessy, Deaney, and Ruthven (2005) observe:

As pupils' roles become more autonomous, teachers feel that they should encourage and *support pupils in acting and thinking independently*. Rather than devolving the responsibility for learning either to the computer or to pupils, this means *strategically balancing freedom of choice, pupil responsibility and self-regulated learning with structured activity, focused enquiry and proactive teacher guidance* through the ZPD ... the pedagogical role is not diminished through using technology but that its nature changes in significant ways. (Hennessy, et al., 2005, p. 286, italics in original)

The challenge of transforming teaching practice in order to successfully enact social theories of learning should not be underestimated. Teaching roles are diverse and complex. In his review of sixty two case study papers examining asynchronous online discussions in higher education, Hammond (2005) contends:

Instructors should draw on past experience but appreciate the unique features of the online environment; show teaching presence but encourage critique and divergence; fade as appropriate; have an administrative role (e.g., notify students

of assessment arrangements); have a pastoral role (e.g., identify and support nonparticipants); be aware of their pedagogic role (e.g., respond where appropriate); suggest activities and roles to generate debate; and take responsibility for monitoring the nature and scope of discussion and group processes. (Hammond, 2005, para. 37)

It is not the intent of this discussion to offer comprehensive guidelines about teaching practice in eLearning settings as this has been provided elsewhere (Clegg & Heap, 2006; Hennessy et al., 2005; Salmon, 2003; Stephenson, 2001). Indeed, Salmon (2003) devotes an entire book to the topic of e-moderating, offering a five stage model of access and motivation, online socialization, information exchange, knowledge construction, and development. Similarly, work relating to assisted performance (Tharp & Gallimore, 1988) and cognitive apprenticeship (Brown, Collins, & Duguid, 1989) offers guidance on social interaction in learning contexts. The intent here is simply to suggest that the teacher's role can be a complex blend of content knowledge, teaching skills, and dispositional factors that does not diminish in eLearning settings, but is transformed.

Recognising that the move to social theories of learning is a complex undertaking requiring the transformation of teaching practice, it is rather ironic that teachers may feel unprepared and unsupported in this endeavour. This has been observed by Clegg and Heap (2006, p. 1) in relation to online asynchronous discussions who note "staff members who must facilitate these discussions usually have no training, no role models, no benchmarks, and no quality standards." These comments resonate with the study. For example, in Case Study One, the lead teacher was a trained nurse who had undertaken a course in adult learning; however, she seemed to lack pedagogical knowledge. She was unable to articulate a social theory of learning even though she was using an online discussion as a pedagogical tool; she expressed uncertainty about how to assess online discussions; she articulated a sense of helplessness about how to participate without negatively affecting student-to-student interaction; and she

appeared to lack the pedagogical background to counteract student non-participation and critique learning activities. In terms of institutional support, while the teacher in Case Study Two displayed an understanding of social constructivist pedagogy, she lamented the lack of professional development opportunities and the lack of a community of online teachers at her institution, observing that she felt as though she was operating in a vacuum. One can speculate that the sense of stagnation and lack of critique and reflection which infused the peer review learning activity were caused, at least partially, by this lack of support. To be fair, there were other issues in the background including teacher workload issues, the management of large class sizes, and the blended nature of the learning activities which provided additional face-to-face opportunities for teacher-student interaction; nonetheless, the findings suggest that the teachers were unprepared in these eLearning contexts.

Broader issues pertaining to the nature of institutional support for teaching in eLearning contexts are clearly indicated by the findings. This finding is consistent with Steel (2009) who writes:

In order to negotiate these technology environments and create effective learning designs, teachers require opportunities to resolve tensions across their own belief systems. This means that teachers need opportunities to articulate their pedagogical beliefs and beliefs about technologies and to negotiate their choices around the use of technologies in their teaching. (Steel, 2009, p. 417)

There is a need to recognise, at the institutional level, that online teaching does not simply mean a transferral of pre-existing teaching skills to new settings; it is a complex undertaking which entails the transformation of teaching practice and this entails professional development. In addition, other institutional factors such as the inability to change the course outline once a paper has begun without receiving permission from the entire class (an anecdotal comment by the teacher in Case Study Three) or rapid staff turnover which may nurture a sense of disengagement as teachers move from paper to paper can constrain teaching practice. It is perhaps not

surprising that teachers may articulate feelings of being under-valued and under-supported in these contexts, and these feelings can corrode a sense of investment in, and commitment to, eLearning activities.

7.4 Chapter Summary

This chapter has discussed the findings in relation to the way the learning activity was managed and organised amongst the participants, and in particular how the students occupied the role of knowledge resource. It has provided a critique of social theories of learning as manifested in the three case study sites, suggesting that the design and implementation of interactive learning activities in asynchronous online contexts can be problematic. Using the concept of a capability differential, the findings have suggested that a tension between less capable and more capable individuals appeared to be present as the students often viewed their peers as having valuable information to communicate, perhaps knowledge they lacked about the paper content, the linguistic form and content of their postings, or real-life experiences. In addition, the findings have challenged the dominance of dialogic modes of communication mediated by speech in discussions of the ZPD, suggesting that more attention should be directed towards the reading experiences of the students as powerful forms of semiotic mediation within these eLearning contexts. In contrast, this chapter has also examined the inability of students to assume the role of resource and the fragility of a capability differential. This chapter has also discussed the presence of weak and limited forms of cooperation which were shaped by a focus on individual concerns. This finding has been viewed using an inter-activity perspective to consider how broader institutional activity may affect local learning. The chapter has concluded with a number of pedagogical implications emerging from this inquiry. In the following chapter, this thesis will conclude by summarising key findings, identifying the limitations of this study, and providing some directions for future research.

CHAPTER EIGHT: CONCLUSION

8.0 Introduction

Historians of science and technology will tell you that any powerful new technology, when first introduced, will be radically misunderstood. Our first instinct is to use it to address an old set of problems or questions. Only over time do we come to understand that the new technology actually reorganizes the world, generating both new questions and new ways of answering them. (Howard, 2004, p. 278)

It should be remembered that it took 50 years after the first book produced by the Gutenberg press before someone hit on the idea of numbering pages. It was over 200 years later before the University of Paris allowed students access to its library ... we should not be surprised then that the Web has not revolutionized education. (Bates, 2001, p. 42)

Returning full circle to the introductory chapter of this thesis, these quotes place the use of ICT within its historical context by reminding us that the potential of technology to transform educational settings can be a painfully slow process. The integration of technology – papyrus scrolls, chalkboards, radio, television, or virtual classrooms – is not necessarily a straightforward or immediate process. On the one hand, there are signs that higher education has been and is being transformed by ICT (Jones & Cross, 2009) and a routine trip to my university library confirms this view. Students now sit in front of computers undertaking a multitude of tasks such as searching online databases for journal articles, writing assignments using word processing programmes, and participating in online discussions. Students sit at tables discussing projects with classmates, moving seamlessly between their laptops, mobile phones, pens, and paper. At times, it seems that a state of “normalization” (Bax, 2003, p. 23) does indeed exist where computers are used:

... as an integral part of every lesson, like a pen or a book. Teachers and students will use them without fear or inhibition, and equally without an exaggerated respect for what they can do. They will not be the centre of any lesson, but they will play a part in almost all. They will be completely integrated into all other

aspects of classroom life, alongside coursebooks, teachers and notepads. They will go almost unnoticed. (Bax, 2003, p. 23)

In contrast, these accounts of the successful integration of ICT are often countered with instances of its failure to transform education such as the patchy uptake of ICT across institutions and the repackaging of conventional pedagogies. Clearly, the integration of ICT into education has met with mixed success but Bates (2001) reminds us that technologies such as the Internet have emerged relatively recently and, placed within the historical context of educational technology, this state of affairs is perhaps not surprising. In the sub-domain of eLearning activities which use social interaction as a tool to support learning, the finding from this study reflect this uncertainty, suggesting that the enactment of social epistemologies in virtual spaces can offer new opportunities for learning and yet fail to fully leverage the potential of ICT to support collective learning objectives.

This inquiry has been underpinned by the belief that more expansive research approaches to eLearning are required which can accommodate its complexity and reveal the socially-situated and culturally-mediated nature of ICT use in education. The intent of this study has been to represent the complexity of eLearning environments by providing an in-depth and critical representation of this multi-faceted social phenomenon through the eyes of EAL students and their teachers as they engage in interactive learning activities mediated by ICT. To realise the objectives of this study, an exploratory research question, a qualitative methodology, and an inductive approach in the data collection and analysis phases were used to allow the nature of participation to emerge through the experiences of teachers and students. The combination of ethnographic and phenomenological techniques provided research tools which elicited the lived experiences of the participants with a focus on describing the culture of the learning activity from the perspective of an insider. In addition, by highlighting mediated activity rather than individual actions

or mental states, activity theory (Engeström, 1987; Vygotsky, 1978) has provided an expansive conception of participation which encompasses the mediating role of social, cultural, and historical factors in the local and broader context. An activity theory perspective recognises the inherent complexity of eLearning settings by acknowledging the value-laden nature of ICT (Hodas, 1993), supporting a critical stance which reveals affording and constraining factors in the surrounding context, and providing opportunities to explicate multiple perspectives.

This final chapter is divided into five sections. A summary of key findings will be provided before a number of implications are discussed. Next, some limitations of the study and directions for future research will be identified. The thesis will conclude with some final comments.

8.1 Summary of Key Findings

This study builds on previous work in the field of social epistemologies in eLearning contexts but makes its own unique contribution from an activity perspective by “facilitating engagement in multiple perspectives, capturing kaleidoscopic views and finding new ways of interpreting what is seen” (Cook, 2009, p. 280). This study contributes to understanding by forging new connections between ideas, offering alternative perspectives, and identifying areas for further investigation. The findings have been diverse and wide-ranging, encompassing numerous issues in theoretical and methodological domains.

8.1.1 Theoretical Findings

The findings have clustered around two key themes which concern how the participants made sense of the learning activity and how they perceived and related to each other as they worked together. The fact that much of the data coalesced around these two themes is surprising, particularly as it was expected that the use of two crucial tools – ICT and written academic English – would feature prominently in the findings. While it is unwise to draw generalisations from this finding as it is only based on data from three case studies, it does caution against a techno-centric focus in eLearning settings. Similar thoughts have been expressed by Murphy, Walker, and Webb (2001):

Despite the focus on technology, most of the issues with which the case reporters wrestled were concerned with people, their actions, interactions, collaboration (or lack of same) and achievements, as they strive to improve their teaching and their students' learning. While the introduction or insertion of technology in teaching and learning in higher education means significant change, this change in itself can mask the fact that less has changed than we might be tempted to think. (Murphy et al., 2001, p. 171)

The mediation of ICT is certainly important, but so too are core issues around how students and teachers understand learning activities and how their relationships with each other can build or erode the capacity to co-construct understanding.

Of note, in relation to the mediation of the ICT, one of the more interesting findings showed how latent affordances in the tool can be awakened or stifled by the surrounding context. Undeniably, ICT shaped the nature of participation but the agency of the subject and curriculum values embedded in the educational context were shown to constrain the potential of technology to leverage social theories of learning. This finding contributes to the discussion around the concept of affordances, providing empirical evidence against deterministic conceptions of tool use and reminding us that although technology may have the potential to shape

activity, human agency and the perception of affordance can affect this potential through unique or unpredicted ways of use. Transcending techno-centric views of affordance which limit vision to the inherent properties of a tool and fail to understand its relationship with the surrounding context should be a key consideration in discussions of eLearning.

The study has illuminated how students and teachers made sense of the learning object in these eLearning settings by exploring the intersection of previous beliefs and understandings with emergent practice. Drawing upon activity theory, the learning object has been conceptualised as a personal image that is subjective, emergent, and shaped by numerous historical factors. Through the historical dimension, the study has examined aspects of individual cognition – past beliefs and experiences which are imported into and shape activity – within a sociocultural framework. By unpacking the concepts of object and motive and exploring the relationships between them, the study has contributed to understanding in the field of eLearning, and education more generally. It provides a glimpse into the mixed motivations which exist within learning activities, indicating that the community constructs meaning in differing and sometimes conflicting ways. In particular, it highlights the difficulties in enacting aspects of the curriculum when the classroom community has doubts about the credibility of the learning object as an effective tool to realise stated learning outcomes.

Building on these discussions, new connections have been forged with the fields of curriculum implementation and teacher cognition. The findings have further enriched understanding of the curriculum by shedding light on how the enacted curriculum can diverge from the planned curriculum. They illuminate activity which lies beneath surface appearances, indicating that the enactment of the curriculum is a multi-layered and multi-faceted phenomenon which encompasses activity at operational,

cognitive, and affective levels of engagement. The thesis contributes to discussions of teacher cognition in eLearning settings by showing the complex interplay between teachers' pedagogical beliefs, expected learning outcomes, the ICT, and the perceptions, beliefs, and agendas of other community members. More specifically, the study sheds light on teacher cognition in eLearning contexts where the enactment of the curriculum is distributed across several teachers by revealing the nature of the relationships between them, the alternate ways they relate to the learning object, and the ways in which participation implicates identity.

This study has suggested that the use of social epistemologies in eLearning contexts is both complex and problematic. Mixed findings have indicated that while the students appeared capable of sharing and building understanding, there was a strong sense that this co-constructive potential was not fully realised. Specifically, much conflict coalesced around social issues such as the credibility of community members to act as resources and the pervasiveness of individual agendas which constrained cooperative activity. This study has spotlighted social relations within asynchronous web-based interactive learning activities, suggesting that the community must perceive these relationships are valued resources and worthy of their investment. Supporting this perception of value must be a key consideration in the design of interactive learning activities. In addition, by drawing from the concept of the ZPD, the thesis has considered how a capability differential can be manifested, emphasising the role of reading as a form of semiotic mediation which is not visible to the teacher. The findings challenge research approaches which only consider forms of visible participation such as the posting of texts, suggesting that they may provide a limited view of participation. In contrast, the study has also considered how the formation of a ZPD may have been thwarted in these learning activities through a lack or perceived lack of capability in the local community.

8.1.2 Methodological Findings

This inquiry adds to the growing body of work which has used activity theory in educational research, particularly in relation to learning mediated by ICT. This study has found activity theory to be a useful research tool which is well positioned to meet the need for more expansive conceptions of participation in eLearning. It has provided a participatory unit of analysis which helps to explicate differing perspectives and acknowledges the socially-situated and culturally-mediated nature of learning. This perspective has proved invaluable as a tool to make sense of complex educational settings. In addition, by highlighting mediated activity, the relational dimension of technology has revealed the interplay between the technology and its surrounding context. Moreover, by deconstructing mediated activity into operations and actions, useful understandings have been obtained into the phenomenon of pseudo-participation. Finally, the use of activity theory has proven to be a powerful tool to support researcher reflexivity by raising awareness of how various factors (for example, relations with participants and researcher beliefs) shape research activity.

In contrast, the study has also found that using activity theory as a conceptual tool is not without difficulties. Expanding the participatory unit of analysis provides a rich representation of student and teacher experience, but it significantly complexifies the interpretation of data. The interweaving of various factors within fluid and evolving activity systems can be difficult to articulate and the volume and complexity of data can be overwhelming, complicating efforts to make sense of the learning contexts. Additionally, this study has found that the concept of contradiction should be approached with caution. Certainly it is valuable by highlighting tensions within systems and how they affect activity, but a focus on contradiction can skew interpretation towards “what went wrong” in the learning activity, sidelining interpretations which consider how learning was supported. Similar findings have been reported by Issroff and Scanlon (2002). This study has found that it is important

to balance the search for contradictions with an understanding of how forms of activity are both afforded and constrained.

8.2 The Implications of this Study

A number of pedagogical implications have already been discussed in Chapters Six and Seven. Briefly, these implications revolve around supporting the emerging understandings of students, enhancing authentic student engagement, encouraging community investment in the learning activity, and creating conditions for social relations to emerge that are valued by the community. Implications pertaining to institutional practice have also been identified such as the need to consider the pressurising effects of the semester artefact, the need for professional development opportunities for teachers using ICT, and a need to ensure that ongoing discussions continue to examine the relationship between the institution and society.

This inquiry has found that the use of activity theory has implications for methodology, endorsing ethnographical and phenomenological techniques. By describing a local culture from an insider perspective, an ethnographical approach reminds the researcher of the hidden reservoir of beliefs, assumptions, and expectations – the historical dimension – which precedes activity. Activity theory has provided a flexible framework to obtain differing understandings of the local culture through the eyes of the teacher, tutor, student, and other key informants at multiple times during the paper. This inquiry has also found synergies with phenomenological techniques which centre on the lived experiences of people as they participate in the world, allowing them to define the meaning of participation in their own words. However, the study has also found that employing evocative accounts can be a challenging undertaking for both researcher and research participant. Moreover, the failure of VoIP as a tool to conduct accounts is an important finding,

revealing the challenges of using ICT for research when confronted with the current state of broadband in New Zealand during 2007. While ICT promises much for the researcher, realizing this potential can be problematic.

Responding to calls for more expansive conceptions of online participation (Hrastinski, 2008, 2009), this study has demonstrated the utility of research methods which expand the field of vision to consider forms of participation which may be hidden from the community. The study has shown that participation can be a complex and multifaceted phenomenon which includes both visible and non-visible aspects or as Vonderwell and Zachariah (2005, p. 214) write “participation is more than the total number of student postings in a discussion forum.” More specifically, the study has demonstrated the importance of reading as a form of semiotic mediation and has suggested ways in which reading without posting behaviour may support learning processes amongst EAL students. An implication for future research in the field of eLearning is that methods which capture differing modes of participation can provide a more authentic representation of teaching and learning practice and reveal that online participation is “a complex process comprising doing, communicating, thinking, feeling and belonging, which occurs both online and offline” (Hrastinski, 2008, p. 1761). In the same vein and echoing Somekh (2007), the study also demonstrates the need for research to consider educational phenomena at the activity, paper, programme, and institutional level.

8.3 Limitations of this Inquiry

Some limitations of this study have arisen in relation to the sampling strategies employed. First, due to difficulties locating teachers who were using ICT and were supportive of the research, selection criteria had to be reviewed and modified. All the case studies use only one form of ICT – asynchronous online technologies within a

learning management system. This uniformity was not intended; it was simply all that was available. More diversity would have offered increased opportunities to consider eLearning from a number of perspectives. Second, the participants were self-selected and their perspectives may not be representative of typical students and teachers in tertiary education. This was particularly evident in Case Studies One and Three where many of the student participants were female Chinese students. Additionally, difficulties encountered during the recruitment of undergraduate students in Case Studies One and Two meant that only four students from each paper volunteered to participate. This number of students was at the edge of acceptability and at least six would have been preferred. Based on these sampling issues, the findings may be skewed towards students who are Chinese and/or female. However, it is important to remember that obtaining a representative sample was not a goal of this study. The goal has been to gain an in-depth and intensive description and analysis of a social phenomenon and allow the reader to decide if the findings are applicable to other contexts.

Responding to the “call for action” (Lincoln & Guba, 2000, p. 174), this study could have been more effectively framed as action research. The combination of both description and action is a powerful mix which both extends understanding and transforms educational settings. Forming an ongoing relationship with a teacher and working with her to improve the learning activity would have been both rewarding and arguably more consistent with the basic underpinnings of activity theory. This issue has been discussed in Chapter Four and will not be re-examined here except to say that, in retrospect, the dual objectives of description and transformation may have been a potent blend to pursue.

Finally, ensuring the credibility of the findings has been a constant concern in this study. While I have taken many steps to bolster the credibility of this study such as

employing a peer reviewer to check the data and my interpretations, presenting at conferences, and consulting with my supervisors on a regular basis, nonetheless much of the interpretation has been a solo effort. By viewing much of the data through the eyes of only one person, this thesis is inherently skewed towards one perspective. This is a limitation of this study, and indeed all qualitative studies, where the interpretative process is undertaken primarily by one individual.

8.4 Directions for Further Research

There are a number of directions for further research. While the case studies differ in terms of academic level, discipline, and learning activity design, all employed asynchronous web-based technology within blended learning contexts and explored the experiences of EAL students. Certainly, further research could build on this study providing more perspectives on the use of ICT for social interaction. For example, studies could consider the experiences of ENL students or the use of different forms of ICT to support interaction. Surprisingly, the use of key tools (the asynchronous web-based tool and the English language) was not a key theme in the findings of this study and further research may reinforce this finding or present alternate views.

A critical perspective could be brought to bear on educational contexts which use ICT to support social interaction. This critical approach could consider the relationship between institutional beliefs and practices and how they affect the design and implementation of learning activities. While not discussed at length, this study has reflected on the influence of institutional activity upon local activity at the paper level. A consideration of how views of learning held by institutions affect local practice could be useful for extending understanding of social epistemologies. Building on the work of Land and Gordon (2008), research could expose the beliefs and values about teaching and learning underpinning institutional practice. From a

local perspective, a critical approach might explore the imposition of social constructivist pedagogy – the dominant pedagogy – by the teacher. This study has revealed tensions between teachers, students, and tutors as the credibility of interactive learning activities is questioned. The emergence of forms of acquiescence and resistance and the relationship between identity and participation have only been briefly considered and are worthy of further analysis.

Finally, three further avenues for research are indicated. First, whilst the concept of a capability differential has been explored within these eLearning settings, much more work is required to understand how to design learning activities which support and sustain capability differentials. Building capacity for cooperation and collaboration is a key issue and bringing the concept of social capital to bear in virtual settings may offer insights (Daniel, Schwier, & McCalla, 2003). The fields of language learning and computer supported collaborative learning may have much to offer in this regard. Second, more research into the online reading experiences of students may add to understanding of how social interaction is manifested in asynchronous learning environments. Finally, the study indicates that more research is needed to explore the interplay between the past and present in eLearning contexts; thereby, bringing a cognitive perspective into a sociocultural framework. Research could examine teacher beliefs and the design of eLearning activities, particularly in relation to the interplay between learning objectives, teacher perception of affordances within the ICT, and teaching practice. In terms of student experiences, further research might examine the phenomenon of pseudo-enactment, extending understanding of how participants make the learning object meaningful and how this affects curriculum implementation in eLearning settings.

8.5 Final Comments

Cook (1998, p. 102) observes the messy nature of the research process as teachers and researchers sort through “mess, bumbling, jumble, untidy, free flowing, thoughts without set outcomes” in order to construct meaning in educational settings. Whilst her comments are directed towards action research, they resonate within this study because they draw attention to the messiness of human activity and the need to embrace, even “celebrate” (Cook, 2009, p. 289) the mess rather than tidy it away. In accord with these sentiments, the main thrust behind this study has been to argue for the use of research approaches and theoretical frameworks which can represent the complexity or messiness of authentic eLearning practice within tertiary-level educational contexts. Through this approach, the field of vision has been expanded to encompass social, cultural, and historical factors and capture a kaleidoscope of multiple perspectives. A key strength of this study has been its attempt to engage with complexity and yet balance this with a degree of structure and organisation in order to make the findings meaningful. More holistic perspectives are crucial if we are to truly understand the use of ICT within higher education and leverage its transformative potential to improve the experiences of teachers and learners.

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APPENDICES

APPENDIX A: RESEARCH PROJECT PARTICIPANT CONSENT FORM

Title of Research: Community formation in virtual learning environments: The mediation of rule artefacts in higher education practices

Researcher: Nicky Westberry, *General & Applied Linguistics, University of Waikato*

Research Description (as taken from information sheet): I am doing a doctoral research project so I can learn more about the experiences of English as an Additional Language (EAL/ESL) students and their teachers who are using computers in New Zealand classes. By doing this study, I hope to understand how students and teachers participate in online tasks. The results from this research may help teachers to make online courses which help EAL students to learn more effectively.

The three main goals of the project are:

- To find out how learners participate in online interactive tasks.
- To understand how their activity is supported by beliefs, values and expectations about online learning.
- To understand how teachers engage in online tasks in terms of assessment and course design

Participant consent: I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered.

I understand that:

- My participation in the project is entirely voluntary.
- I am free to withdraw myself and any information traceable to me at any time up until December 31st 2007 without giving any reason.
- I can refuse to answer any particular question.
- Any data I supply to the project will be stored securely and accessed only by the researcher.
- All data collected will be coded to ensure that participants remain anonymous and confidentiality is maintained at all times.

I agree to take part in the project named "Community formation in virtual learning environments: The mediation of rule artefacts in higher education" under the conditions in the information sheet.

Signature of participant: _____ Date: _____

Print Name: _____

Researcher: _____ Date: _____

APPENDIX B: EAL STUDENT INFORMATION SHEET

Community Formation in Virtual Learning Environments:

The Mediation of Rule Artefacts in Higher Education

Dear Potential Research Participant,

I am doing a doctoral research project so I can learn more about the experiences of EAL students (students whose first language is not English) and their teachers who are participating in online tasks in New Zealand tertiary classes. The results from this research will be included in a PhD thesis and may be presented to academic conferences or printed in academic journals. The research may help teachers to make online courses which help EAL students to learn more effectively.

The three main goals of the project are:

- To find out how learners take part in online interactive tasks.
- To understand how their activity is supported by beliefs, values and expectations about online learning.
- To understand how teachers engage in online tasks in terms of assessment and course design

As part of the project, I would like to find interested international or permanent resident students (whose first language is not English) who would be willing to take part in this research. If you agree to participate, I will interview you several times during the semester where we will talk about your experiences working on the [eLearning activity]. Some of the interviews may use Skype or MSN Live Messenger, free computer programmes which can be downloaded onto your computer from the internet. If you don't want to use Skype/MSN or if you don't have broadband, we can meet face to face. Some of the interviews will only take about 15 minutes, others may take around 30 minutes. Also, with your permission, I would like to look at your work that you post on the online site and the feedback you receive from the teacher and other students. Finally, I would like to observe activities in the lectures and tutorials. Your participation in the research will take about three hours over the entire semester.

After collecting the information, I will remove all identification from it, code it, and no one other than me will know the source of the data. You will be anonymous and the data will be reported so that no individuals can be identified. Also, your participation in this project is completely voluntary and you can leave at any time up until 31st December 2007 without giving any reason. If you withdraw from the study, your information will be destroyed. Your participation or non-participation will have no effect upon your grades for the class.

Please note that this research study has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences at the University of Waikato and by the WINTEC Ethics Committee. If you have any complaints about the nature of this research, you can contact the FASS Research Ethics Committee directly at the University of Waikato, Private Bag 3105, Hamilton, New Zealand, or email the Committee's Secretary, Charlotte Church (charl@waikato.ac.nz).

If you would like to participate in the study, **please read and sign the yellow consent form** with this information sheet. Please give the form to [your teacher] or myself this week and I will arrange a time to have the first interview. If you have any questions about the research, please do not hesitate to contact me by email for further information.

Thank you very much for your interest and support,

Nicky Westberry, Department of General & Applied Linguistics, University of Waikato,
[Skype name: nicky103, MSN Live Messenger name: nickywestberry@hotmail.com,
cellphone: 027 384 2805]

APPENDIX C: ENL STUDENT INFORMATION SHEET

Community Formation in Virtual Learning Environments:

The Mediation of Rule Artefacts in Higher Education

Dear Potential Research Participant,

I am doing a doctoral research project so I can learn more about the experiences of EAL students (students whose first language is not English) and their teachers who are participating in online tasks in New Zealand tertiary classes. The results from this research will be included in a PhD thesis and may be presented to academic conferences or printed in academic journals. The research may help teachers to make online courses which help EAL students to learn more effectively.

The three main goals of the project are:

- To find out how learners take part in online interactive tasks.
- To understand how their activity is supported by beliefs, values and expectations about online learning.
- To understand how teachers engage in online tasks in terms of assessment and course design

Even though the research is mainly focused on EAL students, it is important that I view your entire group interacting in class and online. This means that I would like to view your postings online, observe your group in the lectures and tutorials, and possibly meet with you for an interview towards the end of the course. The information I collect from you is vital in order to give a fuller picture of the online experiences of EAL students.

Any data that I collect from you will have all identification removed from it. I will personally code it and no one other than me will know the source of the data. You will be anonymous and the data will be reported so that no individuals can be identified. Your participation in this project is completely voluntary and you can leave at any time up until 31st December 2007 without giving any reason. If you withdraw from the study, your information will be destroyed. Your participation or non-participation will have no effect upon your grades for the class.

Please note that this research study has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences at the University of Waikato and by the WINTEC Ethics Committee. If you have any complaints about the nature of this research, you can contact the FASS

Research Ethics Committee directly at the University of Waikato, Private Bag 3105, Hamilton, New Zealand, or email the Committee's Secretary, Charlotte Church (charl@waikato.ac.nz).

If you would like to participate in the study, **please read and sign the attached yellow consent form** with this information sheet. Please give the form to [your teacher] or myself this week. If you have any questions about the research, please do not hesitate to contact me by email for further information.

Thank you very much for your interest and support.

Nicky Westberry, Department of General & Applied Linguistics, University of Waikato

[Skype name: nicky103, MSN Live Messenger name: nickywestberry@hotmail.com, Cellphone: 027 384 2805]

APPENDIX D: TEACHER PARTICIPANT INFORMATION SHEET

Community Formation in Virtual Learning Environments:

The Mediation of Rule Artefacts in Higher Education

Dear Potential Research Participant,

I am doing a doctoral research project so I can learn more about the experiences of EAL students (students whose first language is not English) and their teachers who are participating in online tasks in New Zealand tertiary classes. The results from this research will be included in a PhD thesis and may be presented to academic conferences or printed in academic journals. The research may advance knowledge of language learning within mainstream classes and assist teachers in creating online tasks which help EAL students to learn more effectively.

The three main goals of the project are:

- To find out how learners take part in online interactive tasks.
- To understand how their activity is supported by beliefs, values and expectations about online learning.
- To understand how teachers engage in online tasks in terms of interaction, assessment and course design.

As part of the project, I would like to follow your experiences as the teacher in [name of paper], specifically in relation to the online task. If you agree to participate, I will interview you several times during the semester where we will talk about your experiences working on the online task. Some of the interviews may use Skype or MSN Live Messenger, free computer programmes which can be downloaded onto your computer from the internet. If you don't want to use Skype/MSN or if you don't have broadband, we can use the telephone or meet face to face. Some of the interviews will only take about 15 minutes, others may take around 45 minutes. Also, I would like to look at your online feedback to the students and observe activities in the lectures and tutorials. Finally, with your permission, I would like to approach a group of students in [name of paper] to solicit student participants for this research. I estimate your participation in the research will take about four hours over the entire semester.

After collecting any information from you during the interviews or observations, I will remove all identification from it, code it, and no one other than me will know the source of the data. You will be anonymous and the data will be reported so that no individuals can be identified. Also, your participation in this project is completely voluntary and you can leave at any time up until 31st December 2007 without giving any reason. If you withdraw from the study, your information will be destroyed. Please note that this research study has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences at the University of Waikato. If you have any complaints about the nature of this research, you can contact the FASS

Research Ethics Committee directly at the University of Waikato, Private Bag 3105, Hamilton, New Zealand, or email the Committee's Secretary, Charlotte Church (charl@waikato.ac.nz).

If you would like to participate in the study, **please read and sign the attached yellow consent form** with this information sheet and give it to me. If you have any questions about the research, please do not hesitate to contact me by email for further information.

Thank you very much for your interest and support.

Nicky Westberry

Department of *General & Applied Linguistics*, University of Waikato

[Skype name: nicky103, MSN Live Messenger name: nickywestberry@hotmail.com,
Cellphone: 027 384 2805 Email: ncw6@waikato.ac.nz]

APPENDIX E: EXAMPLES OF STUDENT ACCOUNT PROMPTS

Encouraging a state of evocation

Think back to when you were writing the discussion posting – try to relive that time again.

Where were you - describe where you were, what time

How were you feeling?

Talk about what you were doing..

More specific questions

When you say that you looked at other people's postings – what did you do exactly?

How did you decide who to respond to, who to reject, and why?

How did their postings influence (affect) you? Did you agree, disagree with them?

What information were you searching for when you read their postings (ideas, grammar, structure etc)

Timing - when did you decide to post your message, why did you post it at that time?

How did you feel about the other people's posting – do you value them, in what ways?

The first people posting are native speakers – how does that affect you?

You mentioned your clinical experience – talk about that?

Talk about the way you wrote it – words you used, sentence structure, referencing, formatting such as emoticons, social comments. Compare to how you wrote your discussion last week – what is different, what is the same?

How much effort did you put in? Any rewriting? Polishing or more raw?

Honesty in your posting? Did you mean what you said?

How did you know what to do? Did you use any other things to help you?

Linear discussion – did you want to post more than once?

Did you check the site – when and how often? Have you gone back?

Did you get a response (or not) – how does that make you feel?

APPENDIX F: EXAMPLES OF TEACHER ACCOUNT PROMPTS

Think back to when you were working on the peer feedback activity, put yourself back in that time, you talk most of the time, stare off into space, take your time. [Have computer screen up to jog memory if needed]

Start with describing where you were, what time of day, how you were feeling?

- Talk to me about what you did – give me lots of detail.
- What were you expecting, what were your initial impressions, were your expectations met?
- Talk about your thoughts and feelings as you viewed the student work.
- Procedures – What did you do, start from top and work down (random or systematic)?
- Strategies with the marking?
- Other comments – you said...what do you mean by that? Can you tell me more about?

APPENDIX G: EXAMPLES OF PROMPTS USED FOR TEACHERS AND STUDENTS

Teacher Accounts Prompts
1. Explanation – I'm interested in understanding your experiences as the teacher this week– exploring what it is like being the teacher for this course. Would like to obtain a stream of consciousness, your thoughts, feelings, try to put yourself back in time to when you were working on the [learning activity], think of that particular experience, not general experiences.
2. Specific grandtour questions – think back to a particular time recently when you worked on the [learning activity], I want you to go right into the experience, think back to that time – (need to focus on one occasion, avoid generalization, avoid memory mixing). Think of a day you worked on the assignment, a particular day, what time of day was it? Where were you, weather hot or cold? Tell me about your feelings before you started the task? What were you thinking, feeling, seeing, hearing or whatever, what did you do first, then second, tell me a story about exactly what you did.
3. Restate/minitour questions – you said you explained the task – can you describe what you did? So you've verbally explained how they should use the computer, can you describe in more detail what you did or said?" When, where, how often, how interact, who with, how feel, how see themselves? How did you know that? What were you thinking /feeling when...occurred? When you say you did ..., what did you do? Tell me more about..? Can you give me an example of..? In what ways did you...?
4. Restatement – Let's go back to my earlier question, you've explained the task and answered questions - can you tell me what you did? Can you tell me more about how you were feeling?
5. Structural question – Can you think of any other things you have done?

Student Account Prompts

Evocation of felt experience as close as possible to the student's engagement in the learning task. Focusing on a particular experience, the student's thoughts, feelings, and behaviours as she/he engaged with the online task. Participant to self report and select relevant information. Researcher to prompt for more detail using descriptive prompts per Spradley. Avoiding generalizations – keeping attention on that particular time)

1 Explanation – I'm interested in understanding your experiences as a student. What it is like for you to be a student in the course? Want to understand the experience through your eyes, you to talk most of the time, I might interrupt you and ask for more details, is that OK?

2. Grandtour - What are the first things that come to mind when I mention the task? How do you feel about the task?

3. Specific grandtour question – Think back to a particular time recently when you worked on the [learning activity]. I want you to go right into the experience, think back to that time – (need to focus on one occasion, avoid generalization, avoid memory mixing). Think of a day you worked on the assignment, a particular day, what time of day was it? Where were you, weather hot or cold? Tell me about your feelings before you started the task? What were you thinking, feeling, seeing, hearing or whatever, what did you do first, then second, tell me a story about exactly what you did?

4. Minitour question – you said you “read through other people's work” – can you describe what you did? When, where, how often, how interact, who with, how did you feel? How did you know that...? What were you thinking /feeling when...? When you say you did ...what did you do? Tell me more about..? Can you give me an example of...? In what ways did you...?

5. Structural question –Can you think of anything else you did that time when you worked on the task?

APPENDIX H: EXAMPLES OF INTERVIEW QUESTIONS

- Why do you think the teacher wants you to do this [name of activity]?
- What do you think of the feedback you got from the teacher?
- What do you think the teacher's role is here in the group?
- Some people got 2/3 others got 3/3 – what do you think the difference is?
- You had to wait for other students to do their postings. How did you feel about that?
- How did you know when it was time to post?
- What did you think when you first saw the postings?
- Did you have any ideas that were different from the group that you didn't use?
- Was it helpful to you to see the other postings first? In what ways?
- Did you pay attention to how they write – the expressions they use etc?
- Some of the students talked about very personal experiences. What do you think about that?
- Did anyone respond to your posting? How do you feel about that?
- You responded to ... why did you decide to reply to them?
- You started your posting in respectful ways. How important is being polite to you? What about being critical – how would you say it?
- The discussion seemed to go in a straight line, what do you think about that? Did you think about starting another discussion topic?
- Did you subscribe to the forum so you were notified if someone posted? How often did you check the discussion after you had posted?
- The teacher said that only one posting is required and that the first posting is the one that will be marked. How did that information affect how you did your posting? Did you want to do another posting? Why didn't you?
- How do you feel about the other peoples' postings now? Have you saved or printed other peoples' postings? Will you use them again or read them again? Are they valuable to you? After you had posted, have you gone back?
- How did your writing style compare to the summary? Was it different, in what ways? Is grammar and vocabulary, sentence structure as important?
- Typing ability- how well do you type (touch type, finger type)? Do you use spell check/grammar check in Word?
- Formatting tools – emoticons, colour, different fonts, insert picture, insert URL – you didn't use any here. What were the reasons for this?

APPENDIX I: EXAMPLES OF TEACHER INTERVIEW QUESTIONS

- What is the purpose of this learning activity
- What is the underlying pedagogy?
- How does this online setting shape this task – advantages and disadvantages using the ICT?
- Does the learning activity have any further use in the course?
- Were your expectations about student work met or not [prompts: formality of writing, use of referencing, linear nature of discussion, only one posting per student, personal nature of some student reflections]?
- EAL students were not the first to post? Do you pay attention to this? How do you think that affected the nature of their interactions?
- Students are only required to do one posting. How does that shape how they interact with each other?
- There are many formatting tools in Moodle – colour, font, insert pictures, insert URL, emoticons – are these appropriate to use for this task?
- What is your role in the discussion?
- When do you decide to give feedback? Have you thought about interacting during the discussions, earlier on, guiding students? Have you returned to them?
- Talk about the mechanics of giving feedback. What view do you have – alphabetical, chronological? Do you look at when they posted or what number they were?
- Time it takes to give feedback? How having many small pieces of assessment affects the way you give feedback.
- Note that you put your feedback at the bottom of the post and students have to scroll down – how do you feel about that? Any need to offer in-text feedback – can you do it?
- Any other comments about how the learning activity is going – what's working well, what might you do differently next time?

APPENDIX J: EXAMPLES OF ETHNOGRAPHIC QUESTIONS

Descriptive Questions	Example
Start friendly and explain the direction of the discussion	Interested in understanding your experience as a student. What it is like working on the assignment, what you do to help you complete it?
Grand tour question (ask for generalization, a pattern of events)	What sorts of things have you been doing to complete the assignment? “Can you tell me what it’s like – doing the assignment?”
Specific grand tour question	Focuses on the most recent day, the most recent events – ‘Think of a day you worked on the assignment this week, typical day, what do you do first, then second, go right through the day’
Mini-tour question (a descriptive question that asks the informant to describe a smaller unit or event - Restate their answer and start using their words asap)	You said you read through other peoples’ work – can you describe what you do when you do this?
Example question	Can you give me an example of ...
Restating	Ok, lets go back to my earlier question, you’ve read through others’ notes and started to write – can you tell me what that would involve?
Verification question	You’ve talked about a few things you have done this week such as..... Are these things you have done to work on your task this week?
Structural question	Can you think of any other things you have done? Have you spoken to anyone else, read anything, gone online?
Explanation	I’m interested in why you read other peoples’ work? I’m interested in your feelings about this task?
Contrast question	What is the difference between...?
Hypothetical question	Imagine... If I was your friend, what questions would you ask me...?
Strategies for ethnographic questioning	Examples
Make repeated explanations	I want to understand things from your point of view.
Restate using their words	So when you do ..., what do you do?
Don’t ask for me (why, what does that mean), ask for use	What are some other ways you can talk about ...? Tell me more about...?
Expanding the length of the question usually expands the length of the response	I’m not an international student, so I don’t understand what things are like for you.. ?
Express ignorance	It’s difficult for me to imagine being Chinese and coming to NZ to study?
Repeat the question	Think of a day this week when you worked on the assignment...

APPENDIX K: DATA ANALYSIS GROUPING GUIDELINES

Intra-Activity Mediation

Data categorised here will represent the core unit of analysis of the study - the activity system which is focused on the learning object under study (for example, e-tivity discussion, peer feedback task, or DIQ activity). The elements of the activity system and their mediating relationships are included: subject as socio-historical agent, subject-tool-object, subject-rules-community, and community-division of labour-object.

Subject as Socio-Historical Agent

This broad category recognises the participants as socio-historical agents, that is, they build on what has come before, not reinventing meaning but negotiating it within new settings. Past experiences, beliefs, and expectations are carried by the participant as their personal portfolio of beliefs into the learning activity. These beliefs shape the nature of participation, particularly in relation to how the learning object is perceived by and acted upon by the students and teachers. Data grouped under this category refer to how the learning object is described and understood by the participants, particularly how objectives, intentions, beliefs, values, and past experiences shape how the participants ascribe meaning to the activity.

Two examples of data are given below showing the teachers drawing on past experiences and beliefs to make sense of the learning activity. In the excerpt below, the teacher describes her past eLearning experiences which reinforce a wariness of online discussion as an effective pedagogical tool.

You just did the minimum to actually pass the course. You had to put your two responses in yourself, well I think it was the day that um, the chap who worked in the Boeing factory was just about crying into his computer because it had been one of his planes that had hit the towers...so I sent a nice sympathetic thing to her, that to him, that counted as one of my responses (laughter). So really from an educational point of view it was a bit hopeless (Teacher One/Interview One)

In the excerpt below, the teacher articulates a pedagogy drawing upon constructivist approaches in which the student is active in their learning.

They're in a university, part of their university learning is this working together, learning to, I mean for me, I suppose I'm coming from the idea that learning is valuable when you think about what you're doing and why you're doing it and how you're doing it, so the peer feedback is really to get them to think about what was required in the task and how to do it (Case Study Two/Teacher One/Interview One)

Subject-Tool-Object

This large and diverse group includes physical tools (for example, computers, pencils, and dictionaries), mental tools (for example, language, learning strategies, and mental models) and virtual tools (for example, a website interface and copy/paste functionality) which are employed by the subject (the teacher, the EAL student, or the group of EAL students) to work on the learning activity (object).

Data example of a virtual tool:

I wanted to choose [name of student]’s but I couldn’t understand one point. I emailed her to ask for clarification, then I give up because I had to finish the answers very soon, right. I was afraid that she couldn’t email me back in time so I give up and then choose [another student]’s (Case Study Three/Student Four/Interview Two)

Data example of a physical tool:

I: Are you going to go to the library to use a computer?

P: Ah yeah...I go to sometimes I go to the library, sometimes go to just building J, basement there are many labs there so just two places because I haven’t brought, I haven’t brought my laptop computer here so just use (Case study one/Student four/Interview one)

In addition, language is a key tool which shapes participation. The example below suggests that the student may disclose more information if she communicates through writing.

I’m the kind of people, maybe face to face, I won’t tell too much, like I don’t want to say “I love you mother” face to face to my mother, but maybe I can write something like that in letter (Case Study One/Student Two/Interview Two).

Subject-Rules-Community

Data grouped here refer to the implicit and explicit rules of engagement that guide the participants as they interact with each other during the collaborative learning activity. These rules offer information about “the correct procedures and acceptable interactions to take with other community members” (Yamagata-Lynch, 2003, p. 102).

In order to exemplify this category, the following quote shows a student’s reluctance to claim her peers’ questions in advance and preventing others from answering them.

I’d like to open to all other colleagues the questions. If I book some question it means “don’t touch”, yeah so I don’t want that (Case Study Three/Student One/Account Four)

In another quote the student expresses a rule that criticising a fellow student may jeopardise his relationship with them. Moreover, he suggests that a consequence of his rule, the peer feedback task will not be done honestly.

I mean how in this situation [having to give peer feedback] ... it's unfair by the us as the students if I am supposed to criticize your work, so how we can be students thereafter,r so we can't do it by our heart really (Case Study Two/Student One/Interview One)

Community-Division of labour-Object

Data will be grouped within this category if they relate to how the “doing” of the learning task is organized, shared, or distributed amongst the community who are engaged in the online learning task. The community is conceptualised as the teacher(s) and students focused upon or engaged in the learning activity. It is mainly concerned with the core group of EAL students and teacher, however, when appropriate, additional perspectives (for example, ENL students and learning technologists) have been gained to enhance understanding.

The following quote shows Student Two adopting the role of responder rather than initiator in the discussion as she waits for other students to post. In addition, it suggests that she values her peers' work and perceives them as knowledge resources during the activity.

Researcher: Did you ever think about you being the first one to start the discussion?

Student two: Oh, no I don't think about that (laughter) because you know I feel I don't know how to write this posting, so I think it better way to wait until someone post on Moodle so I can read and get some idea from that from their posting. (Case Study One/Student Two/Account Two).

Another example of data to be categorised here shows a student perceiving that his peers are not credible knowledge resources for him.

Researcher: I notice that you said you didn't look at anybody else's peer rev, er, critical writing, any reasons why?

Student three: Er not really but I guess kind of subconsciously I think that reading theirs is not of any use to me, something like that.

Researcher: Can you give me a bit more? “Not any use?”

Student three: Cause from what I know of some of my classmates' writing, like given from some examples of their previous writing from Web Crossing like what I've had to edit, it's not that, it's not that good (Case Study Two/Student Three/Account Four)

Inter-Activity Mediation

Data grouped within this category pertains to elements which lie outside the core learning activity system and yet exert an influence upon it. This category examines connections between different activity systems such as the relationship between learning activities in the same paper, teaching and learning commitments associated with other concurrent papers, the

influence of wider institutional activity systems such as the quality of eLearning support and the credentialing focus of the institution, and connections with the target community of practice. This inter-activity perspective recognises that “activities are not isolated units but are more like nodes in crossing hierarchies and networks, they are influenced by other activities and other changes in their environment” (Kuuti, 1996, p. 34).

Connections with Other Learning Activities or Events in the Paper

Data grouped within this category illustrate a “nested system of activity” (Yamagata-Lynch, 2003, p. 113) where an outcome in a preceding learning activity (activity system) influences or is appropriated as a resource in another activity system.

The example below shows how a DIQ question (Case Study Three) has been appropriated as a resource to stimulate interaction in the face to face discussions.

Student four has moved to centre stage and she puts up a question [from the DIQs posted online earlier in the week] on the Powerpoint slide. It reads “what factors can affect attitude of learners towards portfolios.” [Male non EAL member of class] repeats the question and Student Two responds. Student Four adds misperception and cultural background to the suggestions. [Female non EAL member of class] adds workload, time and Student Two says purpose, and lacking guidance. Their answers are fairly short but relevant. [Male non EAL member of class] says Student Two has made a very important point and links it back into the reading by saying that clarity helps reliability. (Case Study Three/Classroom Observation Seven)

The example below shows how understanding created during a preceding learning activity (the response to reading) has been appropriated as a resource to help the student to engage in the following discussion.

From last week article we summarized the main points and we can use the main points in this one from last week and put it in this posting because they are connected. Last week um points of view also support this week’s discussion (Case Study One/Student Three/Account Two)

Connections with the Wider Programme of Study

Data grouped within this category pertain to relationships between the learning activities and the wider programme of study. For example, the teacher may have other teaching commitments and the students may be enrolled in a variety of concurrent papers. The example below suggests that the teacher has lowered her expectations for the interactivity of the e-activity discussion because she perceives the students have multiple commitments.

You’ve got to be pragmatic about this. This paper is assessed throughout the 15 weeks. Ok, they are not interacting with each other as well as the educational theorists would want. But they have a job to do, they have very busy life as students and they will adopt student behaviour which is “do what you have to do to get through and still have a laugh” and I’ve got

some sympathy with that idea even though I'm the one who's pushing them at this end. (Case Study One/Teacher One/Interview Three)

Connections with the Target Practice

This section examines relationships between the learning activity and the target community of practice. This category may also include data which suggests transformations in identity as the students articulate their understandings about the target practice and changing perceptions of themselves, and hypothesize about their activity as nurses in future-oriented not-yet-realised activity systems.

The following example shows how the teacher is using the learning activity to develop the students' skills in academic reflection. The learning activity functions to imitate academic practice and create an ability or resource (the ability to reflect in an academic manner) which could be used by the students in future academic practice.

It's not just "I think this or I think that or I was out in the classroom and what I say is this or that." No, if they were to say "in the article, these key points were mentioned, these are similar key points to what Hughes said and to the what um er Clapham and Wall said and in my own experience this is precisely what I've been encountering." That would be an A statement, ok. But just "oh, you know, I really liked this article" it's not just their voice, their voice is important, but it's academic reflection that's important which means synthesis of ideas for, (Case Study Three/Teacher One/Interview One)

Another example shows how student understanding about the target practice of nursing and her future activity has been changed through the e-tivity discussion. The term "documentation" refers to keeping a written record of the patient's care.

I think before I started writing this posting, I would never think documentation will have an impact on decision making, but after we have the task to do, I just um, more um pay more attention on documentation when I was on clinical, and then I realized that um, it is an important um factor which will impact decision making and then how it impacts, yeah (Case Study One/Student Five/Account Five).

In the following quote, Student Five articulates a changing sense of identity from the frivolity of a young woman to a nurse making serious decisions for her patient.

It's different you make a decision as a girl as a classmate from like as a nurse, nursing student...as a person I only take responsibility for myself but as a nurse you might need to take responsibility to your patient, to your client, to your colleague, to your hospital, to your things you have here (points to heart)...not only for yourself, you can like I can choose am I going to have lunch or not...it's a huge thing (Case Study One/Student Five/Interview One)

Another example shows a student reflecting upon her past experiences during the DIQ activity. This perspective is both forward and backward looking. It reflects on the past, but it also reveals a transformation in understanding which may affect future practice.

After reading it, I started to think about my own teaching experience. I used to write the test to my students for class-test. Compared with those 'high-stakes' tests, class-tests seem less important. So what I often did was to copy some items from the past test-paper and paste them to the new test-paper without really thinking what I wanted to know from my students. The test was not valid and reliable, which means I was not responsible to my students. (Case Study Three/Student Two/Online Observation Two)

Connections with institutional Support for eLearning

Data grouped within this category relate to how institutional support for eLearning affects the teacher's participation in the learning activity. Thus, data pertaining to eLearning communities and assistance provided by learning technologists may be included.

For example, the following quote from a learning technologist suggests that eLearning support was inadequate at the institution, lacking practical help for teaching staff.

They had like the committee and some people who were doing some technical stuff for the university, but nobody really doing the teaching and learning assistance help, you know, that we were doing, as learning designers. There was no one who was doing that sort of help and that's what they needed, the staff needed help to "I wanna put this stuff on line what do I do, how do I do" and there was no one to do that. They weren't calling on us to do that. It was pretty sad really...so we generally just got pushed aside more and more (Case Study Three/Tool Expert Three/Interview One)

Connections with the Institution

This category examines relationships between the learning activity and institutional practice, particularly in relation to the credentialing role of the institution. This focus on individual achievement filters through into the learning activity and is manifested as a preoccupation with completing the task to earn a mark.

At the beginning I'm interested in who answered my questions, but now I don't care about it, I just care about, I just care about the marks and maybe two months, two months later, I'm tired and all of the people, I think all the students are tired, they just pay much attention to the scores, and because now we are used to doing this assignment (Case Study Three/Student Five/Interview Two)

The excerpt below indicates that the student's main intention in transforming the object is to gain marks. Underpinning this belief is the student's recognition that he is engaged within a credentialing process; in other words, he is a student pursuing a qualification in a credentialing institution.

After all, the main purpose of working in the class forum was to get marks (Case Study Two/Student One/ Reflective Journal Week Thirteen)

APPENDIX L: CASE STUDY ONE DETAILS OF STUDENT PARTICIPANTS

Student Participants	Age and Gender	Country of Origin and Residency Status	Languages Used and IELTS scores (if applicable)	Qualification	Experience with Computers	Experience with eLearning
Student 2	25, female	China, resident in New Zealand (N.Z.) for 2.5 years.	Fluent in Mandarin and English, IELTS: 5.0.	Bachelor of Nursing	Extensive use of computers in personal life: synchronous chat, email, online shopping, nursing research, VoIP. Has access to computer and Internet	Online discussion using Moodle, researching information for assignments, printing out lecture notes, communicating with teacher.
Student 3	26, female	China, resident in N.Z. for 2.5 years.	Fluent in Mandarin and English, IELTS: 5.5.	Bachelor of Nursing	Extensive use of computers in personal life: instant messaging, VoIP with webcam, email. Has access to computer and Internet	Online discussion using Moodle, accessing and printing lecture notes and articles, searching for information, online quizzes.
Student 4	22, female	China, resident in N.Z. for 1 year.	Fluent in Mandarin and English, IELTS: 6.5	Bachelor of Nursing	Extensive use of computers in personal life email, instant messaging. Has access to computer and Internet	Familiar with eLearning – accessing paper content online, printing lecture notes.
Student 5	22, female	China, resident in N.Z. for 3 years	Fluent in Mandarin, English, Cantonese, and Taiwanese. IELTS: 6.0	Bachelor of Nursing	Extensive use of computers: instant messaging, webcam, surfing the Internet, email. Has access to computer and Internet	Uses translation software, online databases, electronic submission of assignments

APPENDIX M: CASE STUDY TWO DETAILS OF STUDENT PARTICIPANTS

Student Participants	Age and Gender	Country of Origin and Residency Status	Languages Used and IELTS scores (if applicable)	Qualification	Experience with Computers	Experience with eLearning
Student 1/Group A	40, male	Sri Lanka, 3 years resident in New Zealand (N.Z.)	Tamil and Sinhalese, IELTS: 6.0.	Bachelor of Electronic Commerce	Knowledge of computer programming, extensive use of computers in his professional and personal lives. Has access to computer and Internet	Encountered eLearning previously at a Polytechnic but has not interacted online
Student 3/Group A	18, male	Taiwan, several years in English speaking countries as a child	Fluent in Mandarin and English, IELTS: 8.5.	Communications Degree	Extensive use of personal laptop in his personal life to communicate with friends and family. Has access to computer and Internet	Minimal experience of eLearning
Student 1/Group B	19, female	Malaysia, resident in N.Z. for 4 years	Fluent in Mandarin, Malay, and English	Chartered Accountancy	Frequent use of computers to communicate with others, but has to negotiate access to the family computer. Has a dial-up connection	Used computers to conduct research and undertake online quizzes, but has no experience interacting with other students online.
Student 2/Group B	17, female	Taiwan, resident in N.Z. since she was 11	Fluent in Mandarin and English	Bachelor of Management Studies.	Extensive use of her laptop to listen to music and socialize with friends. Has access to computer and Internet	Minimal experience of eLearning

APPENDIX N: CASE STUDY THREE DETAILS OF STUDENT PARTICIPANTS

Student Participants	Age and Gender	Country of Origin and Residency Status	Languages Used and IELTS scores (if applicable)	Qualification	Experience with Computers	Experience with eLearning
Student 1	40, male	Korean, permanent resident of New Zealand (N.Z.)	Korean, English, IELTS: 7.0	Postgraduate Diploma in Second Language Teaching (PGDip SLT)	Extensive use in his former occupation as an engineer and also in his personal life. Has a laptop and broadband.	Very familiar with the Moodle tool, previously encountered a similar DIQ activity.
Student 2	28, female	China, permanent resident of N.Z for 2 years.	Chinese, IELTS: 6.5	Masters Degree in Applied Linguistics	Occasional use of the Internet (email and instant messaging). Has a laptop and broadband.	None
Student 3	26, female	Thailand, resident in N.Z. for 4 months	Thai, English, IELTS: 6.5	PGDip SLT	Daily use of the Internet for communication and exploration. Has computer but lacks Internet access at her residence.	None
Student 4	28, female	China, resident in N.Z. for 3 weeks	Mandarin, English, IELTS: 6.0	PGDip SLT	Uses computers for word processing, searching the Internet or email. Lacks her own computer.	None
Student 5	29, female	China, resident in N.Z. for 3 weeks	Mandarin and English, IELTS: 6.0	PGDip SLT	Frequent use of computers for communication and word processing, Lacks her own computer.	None
Student 6	29, female	China, resident in N.Z. for 3 weeks	Mandarin and English, IELTS: 5.5	PGDip SLT	Uses computers mainly for email and word processing. Lacks her own computer.	None

APPENDIX O: PEDAGOGICAL GUIDELINES FOR ONLINE INTERACTIVE LEARNING ACTIVITIES

1. Students must perceive that the other students have something they lack. Building a sense of capability in the student group is essential. This must be a key issue in design. Consider what knowledge the students are constructing – how can you make them experts to each other in terms of knowledge, skills, or experience? The experiential dimension can be a pathway to meaningful interaction – try to harness students’ previous knowledge and experiences. Alternatively, create an artificial sense of capability through information gap-type activities.
2. Getting the students (and potentially other teachers when team teaching) to “buy into” the learning activity requires that you clearly articulate a rationale (how the activity will realise learning outcomes). If students do not appreciate the pedagogical value of an activity, they may engage in pseudo-participation – going through the motions without a deeper cognitive and affective engagement.
3. Students often take the path of least resistance in their participation. Having specific expectations about what you want them to do is useful to combat expedience.
 - Add structure by requiring them to take up particular roles (for example, a rotating moderator role)
 - Reward them by clearly linking the desired behaviour to assessment practice
 - Link the learning activity to other activities in the paper by making it a resource and thereby increasing its value (for example, use the online discussions as a resource for a project or to prepare for face-to-face discussions).
4. Student understanding of the learning activity emerges as they participate. Teachers need to provide clear instructions in multiple ways, provide timely and explicit feedback, and offer models of participation in order to support the alignment of the planned curriculum with the enacted curriculum.
5. Balance the need to cover content in the 12 week teaching period with the need for students to have time to think. A frantic pace may constrain thought and put the students into “survival mode” where they adopt expedient behaviours.
6. While clear structure is important to communicate expectations around social interaction online, try to let student interaction be meaning-driven rather than rule-driven. Let them respond to who they want as this can nurture clusters of activity around specific topics. The drawback here is that some students will not be responded to as their work will not stimulate interest.
7. Qualifying point 6, students who do not receive a response may feel marginalised from the group. This may be particularly acute with EAL (English as an Additional Language) students. Strategies (for example, rotating roles) must be considered to bring these students into the dialogue.

8. Lurking is participation! Students who read their peers' postings and check out activity without actually posting a message are participating through being exposed to a range of experiences around the topic, viewing models of participation (what to write about, how to write etc), and reflecting upon the ideas expressed by others. Do not discount this form of participation – posting is not everything.
9. Do not encapsulate your online learning activity, in other words, ensure that it relates clearly to the rest of the paper, it links into other activities, and can be used as a resource for learning. By making it a resource, students may invest more time and effort in it.
10. Treat the student holistically – yours is not their only paper! Consider the demands of other papers running concurrently and talk to your teaching colleagues about staggering assignment due dates.
11. Students need to feel a teaching presence in the online setting even within blended papers. They want to know the teacher is present and have a sense that you are participating in the activity. Don't just go in at the conclusion of the activity and post a summative comment. Don't post at the end of the day when you've completed your other work – as though your participation is an afterthought. Initially, you may have to work quite hard to offer formative comments and model the desired behaviour, but later you may be able to ease back and hand the reins over to the students. You don't have to read everything or be the centre of attention, but still retain a presence.
12. Adding to the last point, teaching online demands time which can often get squeezed out by other priorities. It must be clearly factored into workloads and given the importance that it deserves – not the last thing you do at the end of the day. Block out time during the day to teach online, pop in from time to time during the day if you can.
13. Teaching online is not the same as teaching face to face. Teachers need support moving into online settings to undertake interactive tasks. There is a danger that teachers can become overwhelmed with the workload and feel they have to respond to students 24/7 – they need strategies to avoid this situation.
14. The values of the institution penetrate learning activities to shape the nature of participation. Collective goals of co-constructing knowledge and collaboration are difficult to establish within the university context where individual assessment and performance is valued so highly. This issue is not easily solved but requires re-visiting the types of attributes we wish our graduates to have and developing relationships with the community.
15. Students may lack key skills – time management, referencing and cognitive skills such as summarising and synthesising – which affect their participation. What is your role here? Can you afford to ignore it?
16. Text-based online interaction (like online discussions) has many benefits, particular for EAL students (time to understand, time to reflect, time to formulate a response). But it does place a heavy reading/writing load on the students and the teacher (even more so for EAL students). Be cognisant of this. Also consider the level of formality you are expecting. High levels

demand much effort and may dampen the desire to post messages more often and more spontaneously.

17. Requiring students to share and build understanding and become resources for each other may be a paradigm shift for some of them and can induce an acute sense of vulnerability. Students, especially undergraduates are fearful – they fear offending people, they fear being ridiculed for their ideas, they fear being wrong in a public space. Pay attention to both their cognitive and affective needs - provide rationales, address primitive conceptions of critique with the students, let them express their fears and emphasise with them, help them to establish rapport with each other, and model desired practices. Be kind to your students!

[Please note: These guidelines have emerged from the study of three interactive activities within blended papers at tertiary-level. All three learning activities required students to interact with each other to share and build understanding, and they were repeated at regular intervals throughout each paper during the semester. For example, one activity required students to post their writing online (such as the introduction to an essay) and then the students were asked to provide feedback on a peer's writing. This peer feedback activity occurred weekly for seven weeks during the semester. Research participants were teachers, tutors, EAL (English as an Additional Language) students and other key informants. Please consider this context when attempting to transfer these guidelines – some may be applicable to your context, others may not].

APPENDIX P: GLOSSARY OF TERMS

Asynchronous Online Learning Activities

These types of learning activities are supported by web-based systems which allow messages to be created, stored, retrieved, and responded to over time. Therefore, communication does not occur in real-time like speaking or engaging in instant messaging. Because messages are usually stored on servers connected to the World Wide Web, participants can access them using a variety of devices (for example, a computer at an internet café or a mobile phone) at various times and in various places. Thus, students could be engaging at different periods of time in differing locations around the world, and communication is delayed as it occurs over a period of time. Varied levels of access for participants can determine the audience of the messages; for example, an online discussion may have a class-wide audience while an email may only be shared between teacher and student. Asynchronous technology can afford a variety of interactive learning tasks such as highly structured activities where learners are expected to engage intensively with others and loosely organized discussions where students are not compelled to participate (Hammond, 2005). Because asynchronous messages are usually text-based, they require reading and transcribing skills. Examples of asynchronous activities are email discussions and posting messages to blogs or wikis on websites.

Bandwidth

The term *bandwidth* refers to the amount of data that can be sent through a network or modem connection and this affects the amount and speed with which data can be transmitted. The larger the bandwidth, the more information that can be sent in a given amount of time, and this is usually measured in bits-per-second or "bps."

Blended Learning

The meaning of the term *blended learning* has been contested (Jones, 2006). Conventionally, it has referred to the connections between traditional face-to-face classroom teaching and eLearning, however more recently the term has begun to encompass "a more diverse combining of a variety of approaches" (Jones, 2006, p. 185). Graham (2006, p. 13) provides three categories of blending learning: enabling blends which focus on creating flexibility and providing access to learning opportunities, enhancing blends which change the pedagogy in limited ways (for example, providing additional resources for students), and transforming blends which radically change the existing pedagogy (for example, moving from transmission to constructivist pedagogies). While, technically speaking, blended learning can encompass a variety of ICTs, text-based asynchronous technologies have been commonly used (Garrison & Kanuka, 2004).

Broadband

This type of Internet connection refers to high-speed data transmission in which a single cable can carry a large amount of data. Cable modems (which use the same connection as cable television) and DSL modems (which use a phone line) are the most common types of broadband connections. These connections can offer speeds that are over 100 times faster than dial-up.

Dial-up

This type of Internet connection uses a modem which connects the computer to standard phone lines. It is significantly slower than broadband connections and users cannot receive incoming calls by phone.

eLearning

The term *eLearning* is broadly defined as “learning facilitated and supported through the use of information and communications technology (ICT)” (Joint Information Systems Committee [JISC], 2009, para. 1). It is evident from this definition that the phenomenon of eLearning is very broad and includes not only Internet-based technologies, but also a range of non-online digital tools such as word processing software, multimedia CD-ROMs, DVDs, and ‘stand alone’ software where all aspects of teaching and learning are contained within an application and no internet access is required. Additionally, the term can span not only computers, but a multitude of mobile tools used in learning including mobile phones, mp3 players, and personal digital assistants. However, there has been an increasing tendency to associate the term *eLearning* primarily with teaching and learning mediated by the Internet and World Wide Web (Garrison & Anderson, 2003; Holmes & Gardner, 2006).

English as an Additional Language (EAL)

This term refers to individuals who use English as an Additional Language, in other words, their first language is not English. It is felt this term is preferable to other terms such as ESL (English as a Second Language) or NESB (Non English Speaking Background) as it does not make assumptions about student linguistic ability and does not indicate that a deficit exists.

English as a Native Language (ENL)

This term indicates those students who use English as their first or native language. The term has been taken from Yildiz and Bichelmeyer (2003).

Information and Communications Technology (ICT)

The term *ICT* is defined as:

Forms of technology that are used to transmit, store, create, display, share or exchange information by electronic means. This broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing, e-mail and blogs. (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2009, para. 2)

IELTS

The International English Language Testing System (IELTS) is an international test of English language proficiency. There are two versions of the IELTS test - the Academic Version and the General Training Version: The Academic Version is intended for those individuals who wish to study at university in an English-speaking country. IELTS is scored on a nine-band scale and each band corresponds to a specified competence in English. Bands 1-4 indicate limited ability; bands 5-6 indicate a basic level of competence in English; and bands 7-9 indicate good to expert levels of ability.

Learning Management System

Learning management systems (LMS) are online technologies which support the delivery of web-based learning for both on-campus and distance students. The terms VLE (virtual learning environment) and CMS (course management system) are also used. A LMS can support a range of learning contexts and pedagogies from the display of content in conventional face-to-face classrooms to the use of online discussions in fully online papers. Learning management systems help teachers to organise and distribute course content, facilitate communication and collaboration, support assessment processes, and perform class management duties (Papastergiou, 2006). An example of a proprietary LMS is Blackboard (<http://www.blackboard.com>) and an open source alternative is Moodle (<http://moodle.org>).

Online learning

Online learning is defined as learning supported by Internet-based technologies and it can be manifested in a variety of ways including using the Internet for research, accessing lecture notes from a paper website, electronically submitting student assignments, and engaging in social interaction with other students. Online learning can refer to any number of web-based applications which support the display of content and social interaction, and can include technologies such as synchronous conferencing, instant messaging, asynchronous online discussions, digital libraries, and e-lectures. In addition, online learning can encompass web-based applications and services such as blogs, wikis, social networking websites, multimedia sharing services, content syndication, podcasting, and content tagging services (Anderson, 2007).

Open source software

Open source software is available, usually without charge, for people to download from the Internet, and use and modify in accordance with the terms of the general public license (<http://www.gnu.org/licenses/gpl.html>). This means that the source code of the software is available for modification so users can adapt the code to respond to their specific settings as long as they allow their changes to be publically available for others. Examples of open source software are Moodle (<http://moodle.org>), GoogleEarth (<http://earth.google.com>), and GIMP (<http://www.gimp.org>).