UNIVERSITY OF SOUTHERN QUEENSLAND

SOCIAL PRESENCE AND LEARNER SUPPORT: UNDERSTANDING LEARNERS' EXPERIENCES WITH MEDIATED SOCIAL PROCESSES IN TEXT-BASED ONLINE LEARNING ENVIRONMENTS

A dissertation submitted by

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Abstract

This study focuses on the nature, role and function of online social presence in text-based online learning environments and how it relates to learner support. Ultimately, the study seeks to understand the relationships between the nature, role and function of social presence, the social learning processes employed in contemporary online learning environments and the mechanisms which support learning in these environments. This study is guided by the question: *In what ways might social presence enhance the provision of learner support in text-based online learning environments?* Of particular interest in this study is information related to (a) how participants in online courses experience social presence; (b) how learners in online courses perceive and/or experience learner support in online courses and (c) how these experiences affect learner activity in online learning environments.

The research design employs a collective case study approach which focuses on learners in four separate online courses within a single university context to inform understanding of the phenomena in question. Using a combination of interview-like techniques, the study seeks to ground the understanding of social presence, mediated social processes (i.e., interpersonal interaction, collaboration and community development) and learner support in the experiences of online learners.

The results suggest a number of important findings with regard to social presence and learner support. First is an understanding of social presence as a quality of individual actors in the online environments. Social presence exists as a response to the limits of the technology and media in text-based online learning environments. Next, the study identifies social presence an essential component of online learning environments because it facilitates and supports mediated social processes including interpersonal interaction (or transaction), the development of relations between individuals and amongst groups of individuals, the progressive development of productive collaboration and the establishment and growth of community. Finally, the study highlights a revised model for learner support in text-based online learning environments which is informed by the development of learning communities and understanding of mediated social processes.

Certificate of Dissertation

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort except where otherwise acknowledged. I also certify that the work is original and has not been submitted for any other award, except where otherwise acknowledged.

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1   INTRODUCTION

The use of networked computing and communications technologies, particularly in the case of the online delivery of educational programs, has spawned predictions and promises of change in formal education (D. R. Garrison, 1997; Laurillard, 2002; Mason & Kaye, 1990). At times, the debate over both the potential of this mode of delivery to improve teaching and learning and the realisation of that potential has been contentious (e.g., Bork & Britton Jr., 1998; Cravener, 1998). On the one hand is an argument against the dehumanising effects of technology mediated education (e.g., Wetsit, 1999; Wilken, 1998), the digital divide between the technology haves and have nots (e.g., Campbell, 2001; Kennedy & Agron, 1999), and the possibility that machines might usurp skilled professional educators in the name of rationality, efficiency and cost effectiveness. On the other hand is a case which outlines the benefits of expanding access and equity through online delivery (Cox, Carr, & Hall, 2004), the democratisation of education in connected online cohorts (Hodgson, 2002), the transformative potential of online learning experiences (Darby, 2002; Reushle, 2005), and the affordances of the technology to provide venues for dynamic, inclusive teaching and learning approaches which are appropriate for contemporary global societies (Burniske & Monke, 2001; T. W. Miller & King, 2003; Saada, 2000).

Despite this lack of consensus, online learning has continued to develop and grow, not just as a mode of delivery but also as a field of practice. Aided by hard-won experience, emergent research in the area and the increasing ubiquity of computing and communications technologies, online educators have worked to realize the potentials of online delivery through the continual improvement of their practice. The focus on the practicability of online learning has shifted from defence of the viability of online delivery to acknowledgement of the potentials afforded by the technology and continued efforts to identify good practice in the *design* (e.g. Ganesan, Edmonds, & Spector, 2002; Gunawardena, 1998; Jona, 2000; Jonassen, 1999; C. Jones & Asensio, 2002), *development* (Steeples, Jones, & Goodyear, 2002) and *implementation* of online learning (Coomey & Stephenson, 2001; D. R. Garrison & Anderson, 2003; Kimball, 2001; Mayes & de Freitas, 2004). Moreover, as the field has matured, it has become clear that, despite the employment of networked computing technologies in education, the nature of learning has not changed. What

has changed is how education providers and teachers facilitate and support effective learning in these environments (Spector, 2002). These issues of *facilitation* and *support* in online learning are central to this study.

Over the last 30 years, computing technologies have moved from the periphery toward the mainstream of education. Personal computers, computer networks, and portable computing and communications tools are increasingly commonplace in formal education contexts. However, the uptake of technology has outstripped research and development in the application and use of these technologies. This highlights the need for the ongoing development of strategies and tactics for the use of these technologies in the service of teaching and learning as part of a process of continuous improvement of facilitation and support in online learning.

1.1   Impetus for the Study

Recent research in the areas of online learning, e-learning, technology enhanced education and networked learning has focused its attention not on understanding technology, but rather on understanding how technologies have come to be used by teachers and learners in these contexts. The focus is on learning *with* technology, rather than learning *about* it (Caples, 2006). As part of this trend, there has been special attention to the study of interactive social processes in technology mediated environments (Beuchot & Bullen, 2005; Kreijns, Kirschner, Jochems, & Van Buuren, 2004; Levy, 2006; Thorpe & Godwin, 2006). This has included study of social learning theory (J. S. Brown & Duguid, 2000; Fox, 2002; Mayes, 2001), the affordances of the technology for connecting distributed groups of individuals (C. Jones & Steeples, 2002), the development of virtual social structures such as online communities (Barab, Kling, & Gray, 2004a) and the nature of mediated interaction and collaboration as part of learning processes in online learning environments (Collins & Berge, 1996; Coomey & Stephenson, 2001; Curtis & Lawson, 2001; D. R. Garrison, Anderson, & Archer, 2001).

While this study is informed by each of these trends, it is specifically concerned with this last point: a focus on mediated social interaction. Interest in this topic arises from a combination of points in the emerging literature of online (virtual) communities, the application of these community structures in online teaching and learning and the personal experience of the researcher as an online

learner, course designer and online facilitator. The literature indicates a groundswell of interest in virtual communities (Baym, 1998; S. G. Jones, 1998; Preece, 2000; Renninger & Shumar, 2002; Rheingold, 1993; Turkle, 1995) as well as the more recent application of community models in the service of learning (Barab, Kling, & Gray, 2004b; D. R. Garrison, Anderson, & Archer, 2000; Palloff & Pratt, 1999, 2001; Steeples & Jones, 2002). Users' accounts identify a range of benefits of such communities. They are sources of information and venues for idea sharing that provide horizon-broadening experiences for their members. They are sites for critical discourse, discussion and debate which promote richer, nuanced understanding and potentially deeper learning. Membership includes varying degrees of camaraderie, solidarity and belonging.   Virtuality provides freedom from the limits of both the physical world (e.g. distance, isolation, access difficulties) and face-to-face encounter (e.g. judgements based on physical appearance). Networked technologies have created a new world of possibilities for communities in this virtual realm.

Educators have recognized the potentials of these online communities and are now concerned with understanding how to leverage the power of online social spaces for learning.   This power includes: the affordances of the media to connect dispersed cohorts of learners (C. Jones & Steeples, 2002); the use of multilayered communicative spaces as venues for socially situated learning process (Renninger & Shumar, 2002); and the convenience of one-stop learning environments which allow for not only engaging multimedia presentations, but also a rich interactive environment for both synchronous and asynchronous person-to-person interaction. The work of exploring these affordances continues for online course designers, developers, facilitators and, indeed, the online learners themselves.

As a former online learner, current online course designer, online teacher and researcher, my experiences of online learning environments as social spaces and venues for socially situated learning process have also motivated the direction and focus of this study. In particular, these experiences identify an apparent paradox in mediated social processes. Reason suggests that the experience of technology enhanced education such as online learning is inherently dehumanizing. Participants are physically removed from one another. They experience other participants only indirectly, as mediated by the available technologies. Channels of communication are restricted and the richness of face-to-face encounter is stripped away by the

limitations of the mediating technology. In text-based online learning environments, for example, individuals are reduced to series of words and sentences in short, sometimes fractured, messages that constitute interactive exchanges in these environments. Indeed, some online users have described this experience as isolating and impersonal. In contrast to this negative and limiting view of text-only interaction, a significant number of participants in text-based online learning environments, including both learners and educators, cite overwhelmingly positive experiences with online learning. They refer to connection, depth of interactive exchanges and quality of interaction which surpass their previous experiences with other delivery modes, including face-to-face education (Walther, 1992). They cite the quality of their technology mediated relationships as indications of the power of this medium and its ability to connect people (Baym, 1998; Turkle, 1995). This paradox suggests that technology mediated learning can be a rich, rewarding, *humane* experience. The question that follows is: *How is this possible given the apparent limitations of the medium*?

A limited, but growing, body of literature on online learning (see Gunawardena, 1995; Gunawardena & Zittle, 1996; Rourke, Anderson, Garrison, & Archer, 2001; Walther, 1992) suggests that part of the answer lies in understanding online *social presence* and its role in online learning environments, particularly those which employ online learning communities which serve learners' needs for both usability and sociability in the virtual environment (Hung & Chen, 2001, 2002; Preece, 2000). Arising from a study of psycho-social aspects of mediated communication (Short, Williams, & Christie, 1976), social presence in mediated interactions provides a potential analogue to physical presence in face-to-face interactions. In other words, social presence is the mechanism by which participants in mediated environments exhibit a sense of *being there* (i.e., being present) and experience this phenomenon as exhibited by others. As communications technologies have become more sophisticated, their use more widespread and the relative expertise of the users more developed, theoretical constructs of social presence have continued to evolve and change (e.g., Daft & Lengel, 1986; Shin, 2002; Tu & McIsaac, 2002). Despite social presence being identified as a critical element of online learning (Gunawardena & Zittle, 1996), a single shared understanding of this phenomena has not emerged (Biocca, Harms, & Burgoon,

2003). As a result, online social presence remains one key area of contemporary online learning that merits further research.

Another important concept in the facilitation and support of online learning is the concept of *learner support*. Historically associated with distance education, the term learner support is gaining currency in a variety of educational contexts due to the "marketisation" of education and the resulting emphasis on education as a service industry (Tait, 2000). In this competitive, market-driven environment, the quality of learner experiences has taken on special significance. Moreover, given the wealth of high quality content freely available online, the relative quality of online educational programs lies less in the content they draw upon than in how they support and facilitate learning. Therefore learner support has become one of the important indicators of quality in educational programs. However, understanding learner support in contemporary online learning programs is not straightforward. Many of the existing support systems are a legacy of correspondence modes of delivery and systematic institution-wide approaches to supporting learners at a distance. These systems are inadequate for more contemporary technology-enhanced programs. In light of the rapid uptake of technology and the emergence of increasingly connected cohorts of learners in distance and blended learning programs, there is a need to re-imagine learner support for contemporary online learning (Thorpe, 2002).

This study seeks to address the question of the facilitation and support of online learning through an exploration of mediated social process which constitute learning activity in online learning environments. More specifically, this study explores the relationship between social presence and learner support in text-based online learning environments through an examination of learners' experiences in these environments.

1.2 Focus and Aims of the Study

This study focuses on the nature, role and function of online social presence and how it relates to learner support in online learning. The study is particularly concerned with the supportive nature of social presence as suggested by Garrison et al (D. R. Garrison et al., 2000, 2001; Rourke et al., 2001), Gunawardena (Gunawardena, 1995, 1998; Gunawardena & Zittle, 1996) and Tu (Tu, 2001, 2002; Tu & Corry, 2002; Tu & McIsaac, 2002). As part of this focus, this study seeks to

address fundamental questions about online social presence: *What is it? Why does it exist? How does it arise? What does it do?* Ultimately, the study seeks to understand the relationships among the nature, role and function of social presence, the social learning processes employed in contemporary online learning environments and the mechanisms which support learning in these environments. This study is guided by the question: *In what ways might social presence enhance the provision of learner support in text-based online learning environments?* Of particular interest in this study is information related to the key dimensions of the research question. Specifically, these include (a) how learners in online courses experience social presence; (b) how participants in online courses perceive and/or experience learner support in online courses; and (c) how these experiences affect learner activity in online learning environments.

There are four main aims of this study. The first aim is to understand the concept of social presence in the context of online learning environments by developing a holistic understanding of how these environments work, including not only the constituent parts of online learning systems, but also the contexts which host these systems and the interconnected systems of activity which exist there. The second aim is to ground the understanding of online social presence in the experiences of users of these environments, i.e., online learners. The third aim is to inform the design, development and use of online learning environments by understanding the relationship between online social presence and social processes which constitute learning activity in online learning environments. The fourth aim is to improve the provision of online learner support by promoting understanding of the relationship between social presence and learner support in online learning environments and using that understanding to inform learner support in online learning programs.

1.3   Outline of the Method

Given the relative dearth of information about social presence and the lack of shared understanding of the concept (Biocca et al., 2003), this study takes an exploratory approach to the research topic. The research design locates the essential information for this study in the experiences of online learners. It is premised on explicating the experience-based heuristic knowledge of practised online learners

and using that knowledge as the basis of a socially constructed account of the mediated social interaction in online learning environments (see Padilla, 1991).

The approach is qualitative and falls within the constructivist research paradigm which seeks to understand the world from the experiences and accounts of those who live within it. The study employs a collective case study design (Stake, 2003) to explicate and understand the experiences of learners in one online postgraduate program at one regional Australian university. Information was collected using an extended interview-like dialogical process consisting of five phases of information collection: questionnaire, interview, focus group discussion, second interview and final focus group discussion. Together these phases form an ongoing dialogue which allows respondents to (a) revisit and explicate their experiences, (b) reflect upon them and, with the aid of the respondent cohort, (c) identify the understandings which they have acquired as a result of those experiences. The process is iterative, interactive and constructive, resulting in a shared understanding of the phenomena in question.

1.4   Limitations of the Study

As with all research, the methodology of this study has certain limitations. In this study, these relate to (a) the use of case study method and the particular context from which the information is drawn and (b) consideration of how the results of the study are presented, disseminated and, ultimately, utilized by educators. As a case study, the information collected and the meanings ascribed to that information are associated with a particular context, namely the wholly online postgraduate programs at a regional Australian university. The findings relate specifically to a particular type of online learning (in networked online learning communities) in a particular formal educational setting. As such, they may be limited in their applicability across a wide range of contexts. Moreover, this is foundational research. The purpose of this study is the development of fundamental understanding of mediated social processes and the generation of theory related to these processes. Therefore the findings in this study should be taken at face value: as situated conclusions which exist in a milieu of interdependent contextual factors. They are not universal truths. They are neither prescriptions for action nor responses to particular universal or local problems. The strength of the results is in the understanding they have produced and the contribution this understanding makes to

the emergent body of knowledge in online learning. Although the findings may suggest implications for action, these implications are, as yet, not concrete or specific. Rather, they represent one small piece of a very large and complex puzzle. They may be utilized to inform ongoing research into mediated social processes, activity in online learning environments and emergent work with virtual communities but, in order to be used to best effect, they must be integrated with the steadily growing body of research in this field in order that the sum of these small pieces can be developed into cohesive frameworks for understanding online learning.

1.5 Overview of the Dissertation

Chapter one introduces the study. It includes a description of the impetus for the study, the focus and aims of the study, an overview of the methodological approach to the research and a brief discussion of the limitations of this approach. It also includes an overview of the dissertation.

Chapter two includes a synthesis of the literature which informed the design of the study, the collection of information and the analysis. The presentation is structured around three main areas. First is a review of contemporary online learning with reference to the theoretical underpinnings of online learning programs and a presentation of exemplary models of online learning. Second is an overview of research into social presence and its relationship to contemporary online learning. Third is a review of literature on learner support which includes an historical overview as well as emerging evidence on key considerations for learner support in online learning. The chapter concludes by linking key themes from the literature to the overarching research question.

Chapter three describes the approach, methods and techniques employed in the study. This chapter identifies the questions which guided the enquiry and links these to the methodological decisions involved in the research design. In particular, this chapter details the dialogical process which constituted the main methods for gathering information. This discussion includes a description of the analysis of information and issues for consideration in the overall design.

Chapter four details the findings of the study. This chapter begins with a description of the collective case and an overview of the findings therein. This general summary is supported by a detailed description of the findings of each of the four cases which constitute the collective case.

Chapter five is a discussion of the results of the study and conclusions drawn from those results. This discussion is structured around three main themes: (a) online learners' responses to the use of technology and the forces of technological determinism; (b) emergent understandings of the social processes which constitute learning activity in online learning environments; and (c) assertions regarding the provision of learner support in online learning environments. It also includes a presentation of key implications of the findings and identifies areas for further research.

2   LITERATURE REVIEW

2.1   Introduction

This study is generally concerned with the facilitation and support of online learning and more particularly concerned with the concepts of social presence and learner support. The design and implementation of this study were informed by a combination of information from current literature in this area, including: (a) appreciation of the historical and theoretical foundations of online learning; (b) knowledge of pedagogical approaches employed in online learning; and (c) understanding of the nature and function of contemporary online learning environments, including the nature of activity of participants in these environments. These three factors provided a foundation for identifying key issues in the continued development of online learning as a field of practice. This chapter examines selected literature on contemporary online learning, social presence in online environments and learner support for online learners.

2.2   Contemporary Online Learning

While online learning has its roots in distance education, it has characteristics of both face-to-face and distance education. In some ways, online education represents a convergence of face-to-face and distance learning (Mason & Kaye, 1990), allowing distributed groups of learners to gather in a virtual *space* as opposed to a physical *place*. Despite learners being physically distant from one another, computer mediated communications (CMC) technology connects them and affords learners opportunities to interact with and relate to one another, much like face-to-face cohorts (D. R. Garrison, 1997; Laurillard, 2002). Learning at a distance need not be an isolating experience. Indeed, the social connectivity afforded by networked CMC has necessitated a re-conceptualisation of online learning as a legacy of distance education. The exploration of this point continues to inform the ongoing evolution of online learning as a field of practice (D. R. Garrison, 1997; Jonassen & Land, 2000; C. Jones & Steeples, 2002; Kehrwald et al., 2005; Postle et al., 2003; Stephenson, 2001).

2.2.1   Theoretical Foundations of Online Learning

Experience has shown that there are no models of learning exclusive to online environments (see Mayes & de Freitas, 2004; Postle et al., 2003). Rather,

there are "e-flavours" of more general learning theories which are made possible though the application of technology (Mayes & de Freitas, 2004). These e-flavours represent the customisation and enhancement of pedagogical approaches based on the careful alignment of several elements: abstract notions of learning (e.g., philosophies of learning, mission statements, values) are aligned with pedagogical approaches which are aligned with concrete teaching strategies and tactics that exploit technological capabilities to produce the best possible outcomes for learners and other stakeholders (Steeples et al., 2002).

As a relatively new field, online learning has been influenced by recent trends in educational research and pedagogy. In particular, because of the connectivity afforded by networked technologies, online learning environments have been identified as excellent venues for the application of teaching and learning approaches derived from a constructivist epistemology and those which emphasize the social aspects of learning (e.g. D. R. Garrison, 1997; Hewitt, 2004; Jonassen, Davidson, Collins, Campbell, & Bannan Haag, 1995; Reil & Polin, 2004). These influences identify learning as a constructive process which, while personal, is a combination of individual mental process and more widely distributed social activities (Bruner, 1986; Jonassen & Land, 2000; R S Prawat, 1996; R S Prawat & Floden, 1994; von Glasersfeld, 1995). Constructivist epistemology is premised on the idea that knowledge is subjective. It is seen to exist in the minds of individuals (von Glasersfeld, 1995), as shared notions within groups of individuals or distributed between members of the group (R S Prawat & Floden, 1994). Reality and meaning are relative and are personally defined (Land & Hannafin, 2000). They are local phenomena dependent upon the contexts in which they exist (R S Prawat, 1996). Individuals and groups construct knowledge by making meaning of experience (Kolb, 1984). Knowledge is literally a construction (or re-construction) of reality which incorporates and accounts for the subjects' experiences.

As Fox (2002) points out, these approaches foreground *learning* over *education* and focus attention on learners and their efforts to construct knowledge through activity and experience. Learning occurs through activity within a process. It is seen as a result of meaning making as part of discovery, exposure to new ideas and experiences, manipulation of ideas and solving authentic problems (D. R. Garrison, 1993; Jonassen, 1999). It is through activity that learners expand their

contact with the world around them, are exposed to new ideas and learn from the experiences they have. This learning builds upon existing knowledge and experience and adds to it (Kolb, 1984). The result is ongoing development: meaning making from authentic activity in context, the enrichment of existing knowledge structures and continual construction (or re-construction) of knowledge (Entwistle & Smith, 2002; von Glasersfeld, 1995). Because educative activities are centred on the needs of learners, decisions about both abstract pedagogical issues and concrete teaching and learning process are based on identifying and responding to learners' needs.

This view of learning implies certain shifts in learning programs: away from teacher centric toward more learner-centric models (D. R. Garrison, 1993; Jonassen, 2000); away from learning as an individual endeavour toward learning as a social process (Lave & Wenger, 1997; Wenger, 1998); away from in-the-head views of thinking and learning toward distributed intelligence and cognition (Cole & Engeström, 1991; Salomon, 1993); away from competitive learning toward collaborative learning (Curtis & Lawson, 2001; Gunawardena, 1998; Kaye, 1992; Koschmann, 1999; Murphy, 2004; Rimmershaw, 1999); away from emphasis on content toward appreciation of process and context (Barab & Plucker, 2002; A. L. Brown & Campione, 1990; Lave & Wenger, 1997); and away from passive reception of information to active construction of knowledge (Laurillard, 2002). The technologies employed in online learning afford opportunities to create dynamic learning environments in which active learner centred constructivist learning can take place.

The extension of this constructivist view is that learning programs must focus their attention upon learners and learning activity. Constructivist pedagogical approaches are characterised by (a) a learner-centred approach to learning; (b) process orientation, learning as a developmental process; (c) authentic activity as a driving force, learning as an active process; (d) opportunities for articulation and refinement of knowledge; (e) acknowledgement of existing knowledge and experience as a foundation for learning; (f) incorporation of prior knowledge/experience; and (g) appreciation of context and recognition of the situated nature of learning (Jonassen, 1999; Jonassen et al., 1995; Jonassen & Land, 2000; Jonassen, Peck, & Wilson, 1999).

Notably, while constructivism is widely practiced in technology enhanced learning programs, it is not without its drawbacks. Constructivist approaches have been identified as labour intensive and perhaps not favourable for time poor learners and teachers. Moreover, there are questions about their applicability in non-western contexts or with learners who come from non-western cultural backgrounds.

2.2.2 Constructivist Pedagogical Approaches in Online Learning

Constructivist epistemology informs a number of pedagogical approaches which have been successfully implemented in contemporary online learning environments. Of particular interest in this study are two groups of pedagogical approaches: *situativity* which includes both *situated learning* and *situated cognition* (e.g., Barab & Duffy, 2000; Barab & Plucker, 2002; McLellan, 1996; Wilson & Meyers, 2000) and approaches derived from the work of Vygotsky and other Soviet psychologists, including *sociocultural theory* and *activity theory* (see Daniels, 2001). These pedagogical approaches continue to have a profound influence on contemporary online learning and the development of online learning models which appreciate the complexity and power afforded by networked communication technologies in contemporary online learning environments.

2.2.2.1 Situativity

The term *situated* "does not imply that something is concrete or particular or that it is not generalisable….It implies that a given social practice is multiply interconnected with other aspects of ongoing social practices…at many levels of particularity and generality" (Lave, in Wilson & Meyers, 2000, p. 58). This term emphasizes the web of social and activity systems within which authentic activity, including learning, takes shape. It replaces the emphasis on *individual in an environment* with the notion of *individual and environment as interconnected* (Wilson & Meyers, 2000).

Contemporary online learning is influenced by developments in constructivist pedagogy in the area of situativity theory (Barab & Duffy, 2000) and the related ideas of situated cognition (e.g., Wilson & Meyers, 2000) and situated learning (e.g., Lave & Wenger, 1997). Drawing from a number of disciplines, including psychology, sociology and anthropology, these ideas seek to account for the influence of the world on individual behaviour and learning. In other words,

situativity is concerned with how factors such as context, culture, problem characteristics or available tools influence behaviour.

Online learning draws from two interconnected streams of situativity. The first, situated learning, is influenced by anthropology and the notion of learning as identity development within the context of a community which has an established cultural infrastructure for activity, including language, customs, tools, etc. (Barab & Duffy, 2000; Lave & Wenger, 1997). In this perspective, learning is a process of participating in the practices of a community. Meaning, reality and truth are determined by the culture and norms of the group. Likewise, knowledge is distributed amongst members of the group rather than held entirely by individuals. An example of this type of learning system is the Community of Practice, in which members engaged in a particular practice exchange ideas, observe, discuss and collaborate and learning is based on the understandings which emerge as a result of these interactions (see Wenger, 1998; Wenger, McDermott, & Snyder, 2002). The second, situated cognition, is based on psychological views of learning and cognition (Land & Hannafin, 2000; Wilson & Meyers, 2000). Like other forms of situated learning, situated cognition focuses on the importance of context in defining authentic activity and how individuals learn from engaging in such authentic activity. However, it situates knowing in the minds of individuals and is concerned with (a) the situations individuals find themselves in and (b) how those situations influence behaviour, activity and learning. Examples of this type of pedagogy include anchored instruction (Cognition and Technology Group, 1990) and cognitive apprenticeship (Teles, 1993).

In the context of online learning, situated cognition and situated learning emphasize the importance of rich experiences based on active participation in authentic contexts which afford high degrees of interactivity in online learning systems (see Barab & Plucker, 2002). Furthermore, they highlight the significance of both the learning environment and learner activity in those environments. Situated approaches must carefully consider the design, development and use of the learning environment as a venue for learning activity. Likewise, designers must consider the nature of that activity and its situation in a range of interconnected social, historical, and political contexts which influence participation and learning.

2.2.2.2   Vygotskian sociocultural views of learning

Following from the work of eminent Soviet psychologist Lev Vygotsky and his colleagues, sociocultural theory and activity theory focus on the relationship between human mental functioning and the cultural, historical and social settings in which they are located (Wertsch, 1995).

Sociocultural views emphasize social activity as an essential constituent of learning activity. Vygotsky explicated a contrast between (a) the social situation (the inter-mental level) in which an individual is situated and (b) the psychological activity (intra-mental level) of an individual which takes place in connection with this social world (Hung & Chen, 2001). He argued that social interaction precedes individual development and that higher order mental functions develop as a result of social interaction (Vygotsky, 1978; Wertsch, 1990). Cognitive development results from a dialectical process whereby an individual learns from the experience of solving problems with the aid of another person. Vygotsky suggested that even seemingly individual mental processes have their origins in social activities which employ interaction and dialectic devices.

Vygotsky's notion of the Zone of Proximal Development (ZPD) indicates that learners are able to extend their own knowledge, skills and abilities within a limited range with the aid of more capable co-participants (Chaiklin, 2003; Vygotsky, 1978).   This aid seeks to structure and support learning. As learners become more capable, the ZPD is extended and supportive activities of the more capable peer are re-structured to allow for continued development. While this idea has generally been applied to interactions between adults and children or teachers and students, it is also applicable to the notion of peer interaction (Tudge, 1990). Through social interaction, peers are seen to aid one another to states of more developed understanding.

Also significant is the concept of *mediation* which states that individuals both experience and act upon the world indirectly, with the help of tools which mediate those actions (Kozulin, 2003; Vygotsky, 1978). Vygotsky suggested that the cultural and historical contexts in which learners were situated provided them with a range of cultural artefacts (i.e., tools) through which they experience the world, act upon it and, importantly, influence the behaviour of themselves and others.

Activity theory provides a framework for understanding social activity within a group by explicating the relationships among the individual subject, the community and the object of activity (Engeström, 2000; Engeström, Miettinen, & Punamaki, 1999). It utilizes the concept of mediation to explain how individuals experience the world indirectly, through mediating factors, and how those factors influence knowing and doing (activity). According to activity theory, which expands Vygotsky's foundational work, these mediating factors include rules and governing principles within the community, roles which divide labour amongst the community members and tools as cultural knowledge artefacts which aid in activity (Hung & Chen, 2002; Miettinen, 2001). Of particular interest is the use of language as an essential tool for first controlling behaviour in the inter-mental world and then influencing oneself in the intra-mental world. As Hung and Chen (2001) point out, "through social interaction and communication through mediated tools, there is a form of metacognitive self-regulation of behaviour through reflection in action. Through such a process, internalization and learning occurs" (p. 6).

Vygotskian views of learning have important implications for online learning. They emphasize learning as a social process and the importance of interaction in promoting learning. In particular, they identify supportive roles for co-participants and some opportunity for complementary relationships between peer learners. These views also highlight the role of mediating factors in influencing behaviours. These influences include the use of tools, rules and roles to promote productivity. Together, the emphasis on mediating factors indicates a need for careful attention to supportive structures (i.e., infrastructure) within learning programs which promote learning as a developmental process.

2.2.3 Online Learning Environments: Venues for Learning

Both situativity and Vygotskian approaches highlight the role of the learning environment as a venue for learner activity. Therefore it is important to consider the particulars of the role and function of these environments in supporting learning (Barab & Plucker, 2002).

As highlighted above, through engagement with an active social learning process, learners are involved in numerous interactions, including person-to-person interactions in which involved parties both influence and are influenced by the exchange. In other words, this type of learning involves not only one-way

interactions but also two-way *transactions* in which all parties involved are changed by the experience (J. Garrison, 2001). In this way, learning is a transactional process and is facilitated by the relations between individual actors (Shin, 2002). Individual participants engage in goal-directed interactions with the aim of developing knowledge and skills related to authentic practice. The mutual modification of attitudes, ideas, skills, beliefs and knowledge that results from these exchanges has been described as *interactivist* (Bickhard, 1992), *transactional* (Shin, 2002) and *relational* (Lave & Wenger, 1997) learning. The emphasis is on a process of cognitive interaction and learning is an active, dynamic process (Goodyear, 2002; Hung & Chen, 2001).

While interaction in these environments may take a variety of forms, much of it is structured as dialogue. In their extensive literature review, Coomy and Stephenson (2001) identified dialogue as a key component of best practice in online delivery. Dialogue drives learning by aiding in the conceptualization, construction and application of knowledge (Mayes, 2001). In *conceptualization*, dialogue makes content cognitively accessible by making tacit knowledge explicit and so learners are able to comprehend, manipulate and integrate it into their personal knowledge structures (Mayes, Dineen, McKendree, & Lee, 2002). Learning results as a by-product of comprehension as knowledge is *constructed* in the performance of tasks which draw on domain-specific knowledge. Furthermore, as subjective knowledge structures are externalized, interrogated, explained and re-negotiated, dialogue allows knowledge to be refined. Dialogue also develops context and allows learning to be situated. Context provides a foundation for the construction (Mayes, 2001) and co-construction (Goodyear, 2002) of knowledge. By making participants' assumptions explicit and providing opportunities for confirmation or refutation of these assumptions, dialogue creates an alignment of assumptions and a context for shared understanding. This alignment is critical to the development of learner-centric learning environments (Hase & Ellis, 2001). Through the combination of situatedness (context) and social activity, learners pick up both implicit and explicit knowledge (Hung & Chen, 2001). Learning that results from dialogue may be *vicarious* through observation of dialogue (Mayes et al., 2002), *constructive* through direct participation or *reflective* through self-regulation and reflection in action of the

knower (Hung & Chen, 2001). Finally, when the dialogues are focused on the production of shared products, dialogue provides opportunities for collaboration.

As a result of the activities which take place within them, online learning environments are relational systems driven by the exchanges between individual actors in the environment (Steeples et al., 2002). Steeples et al. (2002) have suggested a general architecture for online learning systems within organizational contexts. This architecture includes a learning environment within an educational setting as a venue for learning activity. Within the model, the learning environment works in conjunction with learning tasks to influence learner activity, which in turn leads to learning outcomes. Online learning environments provide the virtual space (as opposed to the physical *place*) for online learning activities. Consistent with the notion of post-industrial distance education suggested by Garrision (1997), these environments are generally more open and learner-centred than traditional place-based learning environments (Land & Hannafin, 2000). Furthermore, either tacitly or explicitly, these environments reflect a constructivist epistemology and are designed to support learners' efforts to negotiate meaning while engaging in authentic activities. Technology in the environment is used to provide the infrastructure to support experimentation, manipulation and generation of ideas (Jonassen, 1999; Jonassen et al., 1999).

The strength of these environments is their ability to connect people. At the heart of these systems is the notion of a network, which implies both (a) the technological infrastructure identified above and (b) a social infrastructure that supports the interpersonal interactions which constitute the processes of production, experience, power and culture in these environments (Castells, 1996). The connectivity afforded by the systems creates opportunities for various types of human--human interaction, including interaction among all participants: learners, tutors, subject matter experts and support staff.

2.2.4   Community Models for Online Learning

Situativity and Vygotskian socio-cultural views of learning have had a significant influence on pedagogical approaches for online learning. Consistent with constructivist epistemology, both focus on learning as an active, social process which puts the learner at the centre of multiple interconnected activity systems in rich, authentic contexts. At the heart of these systems is the notion that learning is a

social process involving *connections*: between learners, between what is being learned and the learners' needs, and between the context in which learning is situated and the situations in which the learning is applied (Barab, MaKinster, & Scheckler, 2004; C. Jones & Steeples, 2002). Reil and Polin (2004) identify a range of terms which have surfaced to describe the social systems that have emerged in the name of learning, including *learning communities, learning organizations, communities of practice* and *knowledge communities.* In particular, community models have come to the fore as ways of structuring learning activity as a social process in authentic learning situations.

However, as Barab et al (2004) point out, the term *community* is in danger of losing its meaning owing to its ubiquity in political, professional and social contexts. Therefore, it is important to differentiate between uses of the word community with regard to learning contexts and those drawn from other contexts. Barab et al. provide a starting point for such a description with a definition: "*online community is a persistent, sustained network of individuals who shape and develop an overlapping knowledge base, set of beliefs, values, history and experiences focused on common practice and/or mutual enterprise*" (p. 55, emphasis in the original). This network is seen to include a number of characteristic attributes:

1. *Commonality*, including shared histories, knowledge, values, beliefs and purposes. This includes common tools and communicative techniques which constitute common practice. Commonality binds members to one another (Barab & Duffy, 2000; Hung & Chen, 2001; Reil & Polin, 2004).

2. *Situativity,* including a shared context which contains interconnected webs of relationships among individuals, practices, groups and particular events. Situativity implies context in which meanings are made through the identification of relationships between the constituent elements (Barab, MaKinster et al., 2004; Hung & Chen, 2001; Reil & Polin, 2004).

3. *Interdependence,* which is predicated on a variety of particular needs, skills and abilities within the group and creates both need and opportunity for interactions with others (Barab & Duffy, 2000; Barab, Kling et al., 2004b; Hung & Chen, 2001, 2002).

4.   *Infrastructure,* which includes the processes, roles, rules and tools which support and facilitate the processes which define the activity of the group (Hung & Chen, 2001, 2002).

5.   *Methods of reproduction,* which allow the community to endure. These include the recruitment and retention of members, the movement of members from the periphery to central positions in the community and the evolution of community activity over time (Barab, MaKinster et al., 2004; Hung & Chen, 2002; Reil & Polin, 2004; Wenger, 1998).

Reil and Polin (2004) suggest three overlapping types of learning communities. *Practice-based communities* are relatively large groups which use practice in authentic contexts as an opportunity to learn. These are most often associated with the term *communities of practice* (Lave & Wenger, 1997; Wenger, 1998). These communities of practice seek to explicate the learning that takes place through activity and membership in occupational or discipline based fields of practice. Because they are large and concerned with ongoing activity, these groups have the advantage of longevity and are likely to include mechanisms for the reproduction, revitalisation and growth of the community over time. Examples of this type of community are provided by Lave and Wenger (1997) in communities of tailors, quartermasters, midwives and butchers. *Knowledge-based communities* are similar to practice-based communities insofar as they are concerned with learning in authentic contexts. However, these knowledge-based communities are distinctive in that they are focused on the production of knowledge about the practice. Rather than limiting their focus to local contexts, these communities are concerned with the advancement of knowledge in and across an entire field. An example of this type of community is the network of medical practitioners and researchers working to combat viral diseases. *Task-based communities* are those groups which come together for a specified time in order to achieve an outcome. While these groups may not be communities in the sense that they are not enduring and so do not share either (a) a sense of history or (b) mechanisms for growth and reproduction, they are communities insofar as participants experience a strong sense of identification with the group, the task or the organization which supports the group. "Community" in this context is an appropriate label because it denotes a form of learning that is

qualitatively different from simple collaboration (Schrage, 1995).   Task-based communities are of particular interest to this study because they occur frequently in formal education. Examples of this type of community are common in postgraduate studies in which cohorts of learners come together for a single course or suite of courses with the goal of meeting program objectives as a group of interdependent individuals

2.2.5   Two Models: Networked Learning and Communities of Inquiry

In explicating the potential of community models for online learning, it is useful to consider some examples. Networked Learning (Steeples & Jones, 2002) and the Community of Inquiry (D. R. Garrison et al., 2000, 2001) models are presented here. These two approaches distinguish themselves from other models of online learning in that they are both built upon community structures which are oriented toward learning as a social endeavour. Also, both seek to employ technology to best effect in the facilitation of the interactions which constitute community activity.

2.2.5.1   Networked Learning

According to Jones and Steeples (2002), networked learning is "learning in which information and communication technology is used to promote connections: between one learning and other learners; between learners and tutors; between a learning community and its resources" (p. 2). It employs participative, collaborative and situated approaches to learning. As the name implies, this model seeks to exploit the power of networks to facilitate learning as an active social process. The technological infrastructure affords timely and convenient communication between parties, provides access to readings and other content and links physically distant parties to allow for the formation of a distributed group (Steeples & Jones, 2002).

The *network* component of networked learning refers not only to technology, but also to particular social structures (networks) in which relationships are structured by "networked logic" and the accompanying notions of culture, production and experience (Castells, 1996). Networked learners rely on connections with both electronic resources (content) and people (Steeples et al., 2002) because both are necessary for efficient and effective learning (Collins & Berge, 1996). The basic working unit within this system is the networked learning community which

seeks to exploit the synergistic power of wider networks for learning in two ways. First, each learning community relies on its internal network to structure and facilitate the activity of the community. Second, each community functions as a node on wider networks, thereby providing the learning community access to a wealth of information outside the immediate communal group.

The *learning* component of networked learning is informed by socially oriented learning, including both the situativity and socio-cultural approaches identified above (C. Jones & Asensio, 2002). Within the networked learning communities, knowledge is embodied in practice, which is socially reproduced, supervised and modified over time (J. S. Brown & Duguid, 2000). Learning is viewed as a process of developing individual and shared understandings which inform changes in attitudes, beliefs, capabilities, knowledge structures and skills. Learning activity is facilitated by the connectivity provided by the network.

2.2.5.2   *Community of Inquiry*

The Community of Inquiry model suggested by Garrison, Anderson and Archer (2000) is a community-based model which seeks to capitalise on the ease of CMC to create a learning environment focused on deep and meaningful learning. This model is built around three core "presences". First, *cognitive presence* is the extent to which participants within the community are able to make meaning through ongoing interactive exchanges, such as the dialogue identified above. Second, *teaching presence* includes the design and management of learning activities, provision of subject matter expertise and facilitation of the learning process. Third, *social presence* is the ability of learners to project themselves socially and emotionally in a Community of Inquiry. The educational experience lies at the nexus of these three key components (D. R. Garrison & Anderson, 2003; Rourke et al., 2001).

This model is of particular interest because it exemplifies the use of community structures in the service of learning. Community activity is oriented toward meaning making through the development of cognitive presence. However, community activity accommodates a variety of supportive structures. Teaching presence provides content related expertise and facilitative supports for ongoing interaction. Social presence is seen to support discourse and create an appropriate

social environment for productive interaction. Together, these three presences begin to indicate holistic views of learning activity in online communities.

As previously stated, the concept of online social presence, its supportive role in online learning activity and its relationship with learner support are central to this study.

2.3   Social Presence

Social presence is a derivation of the concept of *presence*, which refers to the extent to which mediated interactions seem unmediated (Kumar & Benbasat, 2002; Selverian & Hwang, 2003). In other words, presence creates the illusion of reality in mediated situations.

Lombard and Ditton (1997) identify six related notions of presence: (a) presence *as social richness,* referring to the qualities of a medium to support rich interactive exchange; (b) presence as *realism* in which mediated representations appear authentic and lifelike; (c) presence as transportation in which participants experience feelings of "being there" either for events or in terms of co-existence, i.e., "being there *together*"; (d) presence as *immersion* in which users are both perceptually and psychologically immersed in a mediated experience; (e) presence as *social activity within media* in which users experience mediated interaction with other actors as though they were both real and physically present; and (f) presence as the *medium as social actor* in which users respond to with the medium itself in response to social cues. These concepts of presence have been variously applied to virtual reality environments (Schumie & van der Mast, 1999), filmmaking techniques (Marsh, 2003), web design for commercial purposes (Kumar & Benbasat, 2002), the impact of media choice on interactive processes such as negotiation (Purdy, Nye, & Balakrishnan, 2000), comparison of communications media (Daft, Lengel, & Trevino, 1987; Yoo & Alavi, 2001) and relational aspects of mediated interpersonal interactions (De Bruyn, 2004; Rourke et al., 2001). It is this last category (the relational aspects of mediated interpersonal interactions) that is particularly relevant to online learning and to this study.

2.3.1   Online social presence

Short, Williams and Christie (1976) are widely credited as genitors of the concept of social presence and the first to explore it in depth by comparing mediated

and non-mediated interactions (see Gunawardena & Zittle, 1996; Kumar & Benbasat, 2002; Rourke et al., 2001; Shin, 2002; Yoo & Alavi, 2001). Short et al (1976) defined social presence as "the degree of salience of the other person in a mediated interaction and the consequent salience of the interpersonal interaction" (p. 65). *Salience* in this case refers to the relative significance of the other party in the interaction. Further, it indicates the relative strength of the relation between the parties as characterised by the interaction. This definition has been interpreted in various ways.

Initially, research was focused on social presence as a media attribute. Following from Short et al's (1976) Social Presence Theory and Daft and Lengel's (1986) Media Richness Theory, research concentrated on the capacity of media to convey information necessary for experience to be perceived as real (non-mediated). What followed was the development of a particular strand of social presence theory. Researchers concentrated their studies on the characteristic attributes of various media and their ability to convey a variety of information in communicative exchanges. Media were compared with one another and determined to be more or less 'rich'. It was argued that rich media, such as face-to-face communication, were more appropriate for communicative tasks that involved equivocal or ambiguous messages while less rich (lean) media such as text-only e-mails were suitable only for very straightforward communication (Daft et al., 1987). These results were used as a basis for the selection and use of respective media for particular tasks (e.g. Carlson & Davis, 1998; Daft et al., 1987; D'Ambra, Rice, & O'Connor, 1998). Typical definitions of social presence from this strand refer to media's ability to approximate the characteristics of face-to-face interactions (Hackman & Walker, 1990).

However, as CMC technologies evolved and their use spread beyond information processing and transmission, users began to experience very rich and productive communicative exchanges in so-called 'lean' media (Carlson & Davis, 1998). As a result, researchers began to reconsider the limits of definitions which identify social presence as an attribute of media. Rather than being viewed as related to media richness, social presence came to be viewed as a quality of *relational* systems (Shin, 2002). Definitions of social presence began to reflect this emphasis on relational aspects of communication, including a sense of individuals' abilities to

perceive others through their mediated interactions (Collins & Murphy, 1997) and to focus on the degree of "tangibility and proximity" of others within a communicative situation (McLeod, Baron, & Marti, 1997); and the ability of online participants to project themselves both socially and emotionally in a community (Rourke et al., 2001).

This relational strand of social presence theory is supported by communications theory which suggests that there are two dimensions of communicative messages: the topical content and the relational content (Walther, 1992). The former refers to the topic under discussion while the latter defines the nature of the relationship between the sender and receiver of the message. In face-to-face encounters, this relational information is conveyed by a variety of verbal and non-verbal cues including tone of voice, posture, facial expressions, hand gestures and other body language. By indicating the nature of the relationship between parties, the relational aspects of communication inevitably influence the interpretation of messages and so affect judgements regarding a variety of social-relational states: rapport, interpersonal connection, likeability, etc. (Burgoon & La Poire, 1999). In other words, relational aspects of communicative exchanges affect the meaning of the messages. Messages which contain topical information without relational information are more likely to be misinterpreted. These effects are particularly significant in text-based CMC because of the limits of text-only communication. Owing to a lack of non-verbal cues, textual messages must convey both topical and relational aspects of messages via text (Riva, 2002).

There are a number of notable implications of this distinction between social presence as media richness and social presence as relational information, particularly in the context of online learning. Most important among these is the point that relational aspects of communication are dependent upon the participants involved in the communicative exchange rather than (or in addition to) the medium. The extension of this point is that social presence is quite dynamic. Its roles and functions are related to a variety of factors, including: (a) the contexts in which the communications occur such as the social context of the exchange (Conrad, 2002; Rourke et al., 2001; Yoo & Alavi, 2001) and the type of communicative task (Tu, 2001, 2002); (b) the particular traits of the individuals involved, including skills with the media (Tu & McIsaac, 2002), cultural dispositions for or against particular types

of communication (Gunawardena, 1998; Tu, 2001), confidence in communications or particular skills such as literacy or keyboarding skills (Tu, 2002; Tu & McIsaac, 2002); and (c) the way in which those individuals subjectively interpret social presence cues (Riva, 2002). Furthermore, the point that social presence is participant-dependent implies that social presence can be cultivated amongst a group of users (Gunawardena & Zittle, 1996). Because social presence is conveyed in messages, as opposed to being an inherent quality of the medium, participants can *learn* to convey both topical and relational aspects of communication. Finally, there is the possible implication that understanding the particular roles and functions of social presence in online environments will aid in the identification of conditions in which it might be fostered and promoted as an important element of online communication. Indeed, much of the existing research on social presence theory relates to the various conditions for promoting the development of social presence and interaction.

As a result of experience and increased attention to online communication, the concept of social presence has come to be viewed as much more complex than originally understood. Despite the passage of 30 years since the genesis of social presence theory and more than 10 years since the shift in focus to relational aspects of online communication, the development of a robust theory of social presence is ongoing (Biocca et al., 2003). A number of key questions remain about the nature, role and function of online social presence.

2.4   Learner Support

Learner support is gaining currency in many educational contexts. Increasing attention on lifelong learning has resulted in changed demographics in higher and further education (Ryan, 2001). Constructivist pedagogical approaches and the related learner centredness have refocused the design and implementation of learning programs on the learner experience (Jona, 2000; Mayes, 2004). Furthermore, the *marketisation* of education has changed the dynamics of the institution--student relationship and necessitated a reconsideration of the status of learners as consumers or clients (Tait, 2000). Together, these forces have emphasised the role of learner support in increasing the satisfaction, retention and success of learners. Simply put, learner support adds value for learners. It addresses their needs and empowers them to create learning experiences which are more personally meaningful, more relevant

and more productive. Education has become a service industry and learner support is a key component of that service.

However, the notion of support is not new to education. McLoughlin (2002) points out that teaching has always had a supportive dimension. It is clear that not all learners are willing or able to successfully complete activities that lead to learning. They need support (Laurillard, 2002). This is particularly true in online education, which introduces a number of potentially unfamiliar conditions to formal education, including: (a) the focus on learner centredness and the implied role changes for learners; (b) the physical distance between learners and the resulting reliance on mediated interactions; (c) the use of potentially unfamiliar technologies; and (d) the particular pedagogical approaches which emphasize collaborative process over individual ones and highlight concerns over learning skills and equitable social practice. Therefore learner support in online education merits particular attention.

2.4.1   *The Historical Basis of Learner Support*

Learner support has a historical basis in open and distance learning programs. It arose as a means of supplementing distance learning materials in order to help overcome problems posed by learning at a distance (Tait, 2000). In traditional face-to-face higher education, particularly undergraduate education, most learning is mediated by the teacher (Laurillard, 2002). Furthermore, most of the learner support in face-to-face situations is tacit, and carried out informally in the activities of the teacher. In other words, in face-to-face situations support exists in the person of the teacher (Ryan, 2001). In traditional distance education (i.e., a correspondence model), physical distance removes the learner from direct contact with the teacher and the rest of the learner cohort. This distance precludes much of the interaction that is taken for granted in face-to-face contexts. Distance learning has traditionally been an individual endeavour: an individual learner, physically distant from the education provided, working in isolation. In this situation, tacit learner support mechanisms provided in the person of the teacher are not present. Therefore formal learner support systems are needed to help learners succeed. Learner support operates to mediate between standardised learning materials and the increasingly divergent needs of distance learners (Tait, 2000).

2.4.2 Rationale for Learner Support

The reasons for learner support are moral, theoretical, and practical. First, learner support plays a humanistic role in educational programs, democratising otherwise authoritarian educational systems (Hodgson, 2002). It promotes the personalisation of the educational experience and extends access to educational programs through the mediation of learning materials. As such, learner support provides opportunities for personal growth and development (Simpson, 2002). In terms of educational theory, learner support enables learning by extending learners' ability to manage learning activity and complete learning tasks (McLoughlin, 2002). It is consistent with constructivist pedagogical notions of developmental learner-centred teaching and learning. Given that learning is most effective when learners pursue specific, authentic, personal goals (Jona, 2000), the role of learner support in the personalisation of the learning experience is very significant to learning outcomes. Finally, learner support is a practical response to a variety of institutional needs to attract and retain learners as clients while maintaining learner satisfaction and realising the aims of the learning programs (Simpson, 2002). As the marketisation of education has altered revenue streams, education providers have come to realise the need for responsive customer service (D. R. Garrison, 1997; Ryan, 2001; Tait, 2000).

2.4.3 Definition

Broadly, learner support includes "*all those elements capable of responding to a known learner or group of learners, before, during and after the learning process*" (Thorpe, 2002, p. 108, emphasis in the original). Learner support in this context refers to "meeting the needs that all learners have because they are central to high quality learning" (Thorpe, 2002, p. 107).

2.4.4 Function

Learner support has the role of mediating between individuals (or groups of individuals) and institutions. Further to the point above regarding the humanisation of education, learner support allows educational programs which are designed as 'one size fits all' to be personalised.

Various authors have attempted to characterise learner support in terms of its role and function. Simpson (2002) highlights a classic differentiation between

academic and non-academic supports, focusing on academic learning as the goal of formal education. Tait (2000) suggests a more holistic view of learning with three key functional types of support: cognitive, affective and systemic support. Referencing support in face-to-face education, Ryan (2001) suggests similar forms, including support for individual development, motivation and administration. Thorpe (2002) notes that the widespread use of networked communications technologies has added technical support to this list. Taken together, support can be conceived as four types: academic supports for cognitive learning and individual development; affective supports for non-cognitive functions; administrative or managerial support for aiding learners in negotiating relations with the education provider; and technical support for dealing with mediating technologies.

Thorpe (2002) has identified *response* as the functional essence of learner support; learner support responds to learners' needs. The elements of *identity*, *interaction* and *time* each contribute to the effective responsiveness of learner support. Identity is critical because it allows for the personalization of learner support and identifies the recipient as a person or group who is known to the supporter. Personalization adds meaning to supportive responses, thereby enhancing their value. Time is significant because learner support is a live process and learning is demand driven (J. S. Brown & Duguid, 2000). Support must be provided within meaningful time frames in order to be effective. Interaction in general and interpersonal interaction in particular increase the effectiveness of learner support because they address learners' needs in the terms they chose to express themselves (Thorpe, 2002). Through interactive processes, learners have access to responses to their needs.

2.4.5   Learner Support in Online Learning

The convergence of distance and face-to-face education (Mason & Kaye, 1990), and the development of online and networked delivery systems, have led to a re-conceptualization of learner support and its place in educational programs which employ technology (Thorpe, 2002). As Kimball (2001) points out, rather than trying to 'make up for' particular perceived shortcomings in distance programs, faculty members are successful with those programs when they view them as providing some qualitative advantages. With emphasis on community, connection, and interaction, learner support in online learning has shifted away from a systems-based

industrial model of support to a learner-centred view which is consistent with the constructivist and other socially situated pedagogies that feature prominently in online learning (Ryan, 2001). While a traditional view of learner support places the responsibility for learner support in the hands of teachers and other specialist support staff, contemporary online learning seeks to leverage the power of networked connectivity to overcome the isolation of distance. Online learning provides support in the workings of learning communities and the infrastructure which sustains them. It places greater responsibility for learner support in the hands of participants in the learning community. Thorpe (2002) highlights the fundamentals of support in online learning: "Learner support is essentially about roles, structures and environments: support roles and supportive people, together with support structures and supportive environments" (p. 110). Notably, this notion of supportive people engaging in activity within a supportive infrastructure (i.e., structures, environments) is consistent with the model of networked online learning systems suggested by Steeples, Jones and Goodyear (2002) above. It includes both dynamic socially situated support and more static infrastructural support.

2.4.5.1 *Responsive Learner Support*

Following the notion of response and responsive support suggested above, the most obvious opportunities for learner support in online learning are in the provision of opportunities for interpersonal interaction. The networked communications technology connects members of the learning community and allows for timely, convenient interaction. Online learning systems cater not only to educational activities which promote organized formal learning but also cater to natural (non-educational) learning which occurs informally and incidentally whenever people interact (Fox, 2002). Learning occurs both as a result of direct participation in learning activity and also through legitimate peripheral participation in communities (Lave & Wenger, 1997) in which implicit and explicit knowledge is 'stolen' from the community (J. S. Brown & Duguid, 2000). Therefore online learning provides the capacity for a broader range of learner supports which are potentially much richer than traditional learning approaches. In particular, networked learning communities provide socially situated learner support through the active processes of *dialogue* and *collaboration* which drive learning in social settings.

As mentioned above, much online interaction is structured as dialogue. Dialogue is supportive in several ways. First, it is generally supportive of learning process by aiding sense making, construction of knowledge and application of knowledge. Dialogue allows patterns of thought to be articulated, examined critically and integrated into knowledge structures. Second, in social learning situations, dialogue promotes the development of identity, which is central to learner support. In interpersonal exchanges, participants choose words and make statements which identify them and develop their identities within learning communities (Hodgson, 2002). Members of the learning community associate ideas with particular individuals and utilize relevant contributions from the community. Third, dialogue supports learning by developing learning skills (Goodyear, 2002) and the expert practice of learning (Hung & Chen, 2001) within learning communities. Learners with particular ways of thinking or ways of viewing the world are exposed to new ideas and develop new procedures for making meaning (Goodyear, 2002). Participants develop 'ways of seeing' the world and learn to manage understandings that emerge from different patterns of thought (Hung & Chen, 2001). Finally, in terms of support, this provides opportunities for learners to express themselves and also to receive support in the form of responses from peers, facilitators, specialist support staff and other available parties.

When dialogue takes place with a structure for creating shared products, it creates the possibility for collaboration. As Ryan (2001) points out, collaborative activity addresses one of the most common learner complaints: the loneliness of the distance student. In online learning, it provides motivational learner support by addressing the needs of all human beings to be a part of a group, to socialize and to belong. Collaboration implies involvement in and engagement with an activity. Ideally, this involves a level of absorption into the activities of the learning community which includes concentrated effort, interaction, challenge, feedback and learner control (Coomy & Stephenson, 2001) and which contribute to a sense of commonality and interdependence in the learning community (Hung & Chen, 2001).

In terms of explicit learner support activities, collaborative learning communities allow tutors to participate as co-learners and play mentoring roles in the development of expertise and knowledge-in-practice within the communities (Hung & Chen, 2001). Tutors are able to exploit the richness and diversity of such groups

by acknowledging the legitimacy of the participants' experiences and integrating them into learning activities while helping learners connect their sometimes idiosyncratic interests with more general themes of the courses under study (Mandell & Herman, 1996). Tutors as co-participants are able to play the important role of *more capable peers* in learning communities and they support learning by extending learners' Zones of Proximal Development (Hung & Chen, 2001). While these activities may signal a role change for teaching staff, they preserve the learner-centric nature of networked learning while providing powerful learner support mechanisms.

2.4.5.2 *Infrastructural Supports*

With the convergence of computer and communications technologies over the last 20 years, networked computing now provides high degrees of interactivity, flexibility and customizability in the provision of educational programs and services. The technology allows learner support to be integrated, seamless and user driven in networked learning. In this context, the use of the term *infrastructure* refers not only to the capabilities of the technology to support learning but also the ways it is applied to support the activities of networked learning communities. Hung and Chen (2001) have identified three dimensions of infrastructure which help create and sustain vibrant networked communities and which structure the support activities they provide. These include: rules and processes; accountability mechanisms; and facilitating structures.

Rules and Processes

Any community is organized by its rules and processes for engaging in tasks and activities (Hung & Chen, 2001). These rules structure the practice of the community and help define its culture (J. S. Brown & Duguid, 2000). Ideally, they are established though negotiation and consensus building within the community and the history of their relationships (Hung & Chen, 2001).

In networked learning communities, these rules and processes guide and support the practice of learning by defining the roles of participants and structuring the operation of these communities. The combination of networked communications technologies and networked logic (Castells, 1996) allows individuals to have a distinct voice in networked communities and facilitates the development of rules and processes democratically. In this way, networked learning attempts to approach the

ideal of education which is driven by learner needs and focused on meeting those needs (Hase & Ellis, 2001).

Accountability Mechanisms

Accountability mechanisms help communities regulate themselves and ensure effective practice. Where the practice of networked learning communities is learning, accountability is focused on ensuring that learning is effective. Networked computer technologies create robust accountability mechanisms in network learning communities by allowing all members to monitor tasks performed within the community (Hung & Chen, 2001). Accountability in this context is highly democratic and learner-centred. The implication of this for learner support is that learning communities can become self-regulating and, to a degree, self-supporting with accountability driven by participants (learners) rather than external parties.

Facilitating Structures

Facilitating structures make the operation of communities possible. In networked learning, these structures include the web space within which the community operates and the information architecture of the network (Hung & Chen, 2001). These structures support learning through the mechanisms of *co-ordination, control* and *communication* (Ganesan et al., 2002).

Co-ordination focuses learners' efforts on meaning making and knowledge construction. Networked computer technologies allow learning communities to consistently and comprehensibly represent themselves in an integrated platform which provide a sense of place for the communities and allow participants to focus on activity and practice. The platform also provides opportunities for integrating more automated administrative supports which make platforms more learner-centred. Mechanisms such as digital drop boxes, online grade books and feedback generating bots help make administrative functions more transparent to users and add flexibility and user control to administrative functions. Additionally, the technological infrastructure provides a means to manage the intense interactions and activity that take place within vibrant learning communities (Hung & Chen, 2001). Intelligent agents (bots), advance organizers and electronic tools which organize collaborative activities help learners manage learning programs (Steeples et al., 2002). Other systems such as content managers (or content management systems) allow increasing learner control and customization in the learning environment, which creates meaningful context for learning.

Facilitating structures also provide necessary control in networked learning environments. While it may seem undesirable to create an environment which is *controlled*, control is necessary from cognitive, management and technological points of view (Ganesan et al., 2002) in order to help participants organize, manipulate and make sense of activity in communities. Control in networked learning is significantly different from that in other learning environments because the technology allows control to be handed over to the community itself. This allows the activity of the community to be driven by and focused on meeting learner needs.

The CMC facilities associated with networked learning infrastructure play a central role in learner support in networked learning by making communication flexible, timely and convenient. These attributes afford community members control over communicative exchanges that underpin the socially situated learner supports discussed above. Furthermore, when combined with the notion of control, CMC provides excellent opportunities for learners to negotiate learning objectives and assessments, thereby extending their control of the learning programs and moving programs toward the ideal of learner directed learning (Hase & Ellis, 2001). Also, CMC has improved learner support by extending the reach of learner support services (G. Miller, 1996) and improving access to resources (Levy, 2002).

2.5   Foreshadowing the Research Questions

The preceding sections indicate a number of key points in the consideration of best practice for learning in text-based online learning environments. The first of these points is that learning in contemporary online learning environments is overtly social. The power of these online learning environments is their ability to create the potential for social activity between parties who are physically distant from one another. The technology provides connectivity between distributed learning cohorts. However, because the technology mediates these connections, it also affects the experience of social processes which are carried out within the media which form these environments. As a result, the social aspects of learning in online learning environments are quite different from those in face-to-face settings (Nicol, Minty, & Sinclair, 2003). In order to understand the social processes at work in online learning, it is essential to understand the differences between the operation of these processes in face-to-face settings and in online environments. Central to these

concerns is the notion of online social presence, which functions to eliminate the sense of mediation of online experiences and promote productive activity in mediated environments.

A second key point is the acknowledgement of the theoretical underpinnings of online learning. In these systems, learning is viewed as an active, constructive social process. Effective online learning programs place the learner at the centre of decisions about pedagogical strategies and tactics. They seek to engage learners in learning tasks which structure and support learning as a developmental process. Emphasis is placed on what learners *actually do* as part of the learning process, rather than on prescribed content structures or teacher direction (Steeples et al., 2002). This emphasis on learner experience is important. The move away from transmissive views of education toward learner centred constructive learning processes implies change: change in roles, change in power structures, change in processes related to learner performance and, most importantly, change in learners' experiences of the learning process. It is necessary to understand learners' experiences of these environments and the practice of online learning in order to inform the continued development of the theory--practice relationship which underpins the design, development and use of these environments.

Finally, there is the issue of learner support. Changes in formal education as a result of the emergence of the global marketplace and increasing demand for continuing education as part of lifelong learning have redefined the relationship between education providers and students. High quality education up to and including higher education is no longer considered a privilege; it is increasingly seen as a right. With consumerism and the marketisation of education, learners find themselves enjoying more powerful positions in their relationships with education providers. The combination of more client oriented service by education providers and more learner-centric approaches to teaching and learning by educators has drawn attention to the issue of learner support. Increasingly, the quality of learning programs is measured not by the content of those programs, but by the manner in which they support learning. In particular, given the increasing prevalence of online learning, there are serious questions about the provision of learner support. Given the relative newness of online delivery and the relative unfamiliarity of online

learning approaches identified above, there is a need to better understand what constitutes good supportive practice in online learning.

Taken together, these issues highlight the need for this study into online social presence and its potential relationship with learner support in text-based online learning environments. They emphasise a need to understand mediated social activity as a form of learning activity, to focus on learners' experiences and what learners actually do in online learning environments, and, ultimately, to use this knowledge of mediated social activity to inform decisions about how best to support and facilitate learning in online learning communities in formal education.

3   RESEARCH DESIGN

3.1   Purpose of the Study

This study is concerned with two main concepts: *social presence* and *learner support*. As indicated above, social presence is the characteristic ability of individual participants in mediated interactions to project themselves as real and salient actors in these interactive systems. Learner support is the process by which learners' needs are recognized, responded to and met in learning environments.

While the general purpose of this study is to understand the nature, role and function of social presence, it is more specifically concerned with the relationship between online social presence and learner support in text-based online learning environments. It is anticipated that understanding this relationship will enrich general understanding of the concept of social presence and contribute to the development of a more complete and robust theory of social presence. As outlined by Biocca, Harms and Burgoon (2003), a robust theory of social presence benefits online teaching and learning in a number of ways, including the exploration of learning designs which utilize social processes, understanding the social motivation of users, improving the social properties of telecommunications systems, and informing research into social cognition, interpersonal communication and theories of mind. Specifically, this study seeks to understand the ways in which social presence might enhance the provision of learner support in text-based online learning environments to inform the development and use of those environments and thereby improve the quality of the educational experiences of learners in such environments.

3.2   Research Questions

As stated in Chapter One, the primary question which guided this study is: *In what ways might social presence enhance the provision of learner support in text-based online learning environments?* There are three dimensions of this question which are of particular interest to the study: (a) how learners in online courses experience social presence; (b) how participants in online courses perceive and/or experience learner support in online courses; and (c) how these experiences influence learner activity in online learning environments. The collection of information needed to address these dimensions was guided by the following related questions:

1) **How do participants in text-based online courses experience social presence?**
   a) What specific instances of social presence do participants recognize and/or remember?
   b) In general, do participants experience other participants as real and present in the environment?
   c) In particular, what individual participants are perceived as real and present in the environment? i.e., who is seen as real and present in the environment?
      i) Do participants experience 'degrees of presence' of other participants? i.e., are some participants more 'present' than others?
      ii) Are participants aware of their own social presence?
      iii) Do participants experience the facilitator as real and present?
   d) Do participants value social presence?
   e) Do participants see social presence as supportive? If so, how?
2) **How do learners in online courses experience learner support within a course, particularly in the (a) infrastructure of the course and (b) the human--human interaction within the course?**
   a) Do learners perceive particular courses as more/less supportive than others? How? Why?
      i) What supportive infrastructure exists in particular courses?
         (1) Do participants recognize this as supportive? Do they value it?
      ii) Do participants value human--human interaction?
         (1) Why? (e.g., do they find it supportive?)
         (2) What types?
3) **What do the responses to the questions above suggest about the relationship between social presence and learner support in text-based online courses?**
4) **What are the implications of responses to the above for the role of social presence in text-based online environments?**

These questions foreground the reality of online learning in the experience of online learners and their subjective notions of *being* and *doing* in online learning environments.

3.3   Approach

This study is concerned with the examination of a potential relationship between social presence and learner support in text-based online learning environments. Given the emergent nature of practice in online learning environments (Mayes & de Freitas, 2004), the relative lack of shared understanding of the concept of social presence (Biocca et al., 2003), and the dearth of experience- based evidence drawn from online learners, this study seeks to use the experience-based knowledge of participants to inform theory generation related to the function of social presence. Because the purposes of the study focus on *understanding* rather than *explanation*, the approach to the research in this study is qualitative (Denzin & Lincoln, 2003; Husen, 1997; Shaver & Larkins, 1973).

Denzin and Lincoln emphasize the use of qualitative approaches to make sense of experience:

> Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (1994, p. 2)

Qualitative researchers reject notions of steady-state objective reality, instead focusing on emergent meanings gleaned from a variety of descriptions of the social world. These descriptions account for the perspectives of individual actors; appreciate context and the situated nature of meaning; acknowledge the importance of values and beliefs in interpretation; and strive for richness and holism to inform understanding of the phenomena in question (Denzin & Lincoln, 1994, 2003; Lincoln & Guba, 2003)

3.3.1 Constructivist Paradigm

Denzin and Lincoln (1994) identify research paradigms as the "net that contains the researchers' epistemological, ontological and methodological premises" (p. 13). A paradigm is a "basic set of beliefs that guide action" (Guba & Linclon, 1998, p. 185). As such, paradigms contain sets of assumptions, values and other commitments which inform decisions that researchers make in the conduct of research (Walker & Evers, 1999).

The choice of paradigm involves alignment among the particular worldview of the researchers involved in the inquiry, the nature of the problem or question under study and the type of information needed to respond to that question. This choice is influenced by the researcher and his/her beliefs about the nature of knowledge, truth and reality and the relationships between them (Guba & Linclon, 1998). Epistemology informs ontology, which informs choices of method and technique in research. Furthermore, the choice of paradigm is dependent on the objectives of the research and the kind of knowledge that is being sought as these conditions inform action. Research paradigms determine how problems are framed and approached methodologically (Husen, 1999). This places questions of method and technique as secondary to the choice of paradigm.

In this study, the research paradigm employed is constructivist. According to Schwandt (1998), those who employ this paradigm "share the goal of understanding the complex world of lived experience from the point of view of those who live it" (p. 221). The

epistemological basis is transactional and interpretive (Guba & Linclon, 1998; Schwandt, 2003). In this view, human action is purposeful (intentional) and, through transactions with others, individuals and groups can derive meaning by interpreting action. Actors experience the world both directly and vicariously and they construct or reconstruct understandings of the world to accommodate their experience (R S Prawat, 1996, 1997; von Glasersfeld, 1995). That is to say, interpretation *is* understanding (Schwandt, 2003). This type of research is based on a relativist ontology with an emphasis on context-dependent local realities (Guba & Linclon, 1998). Determinations of truth and rightness are linked to particular conditions or characteristics of the situation in which those determinations are made. These conditions include such things as cultural norms or particular rules and process which structure activity in a given community. Furthermore, such understanding of valid truth is not fixed or universal; rather, it arises from the relationships between actors in a community.

In constructivist research, meaning is constructed through iterative cycles of information gathering and interpretation. Understanding, and therefore knowledge, are products of dialogue and negotiated meaning (Lincoln & Guba, 2003). Particular players in particular situations at particular times construct understanding through complex interactive processes involving history, culture, tradition, language and action (Schwandt, 1998). Constructivist inquirers read these meanings and construct their own interpretation. While these interpretations are personal to the inquirer, the quality of these interpretations is dependent upon factors such as the range of information used as a basis for the interpretation, the inquirers' treatment of that information and the rigour which is applied in the method of gathering and interpreting the information (Schwandt, 1994). Rather than referencing strictly objective criteria, constructivist researchers premise the quality of their work on relative propositions which reference the contexts under study and appreciate the practicalities of 'rightness' in context. These general standards include such ideas as *trustworthiness* and *authenticity* (Guba & Linclon, 1998).

Constructivist research is particularly appropriate for the purposes of theory generation, as is the case in this study. Shaver and Larkins (1973) highlight the role of this type of research in theory generation, identifying the researchers':

> …immersion in the object of study, his [*sic*] deliberate attempts to be sensitive to
> many things, and his [*sic*] open searching for unanticipated relationships between

persons and systems are well suited to the identification of important variables and their antecedents and consequences - the basis of theory generation. (p. 1257)

These sentiments are echoed by Snow (1973), who points out that construction of theory in this way involves:

…continuing interaction between provisional theoretical concepts and data gathering….The mode is eclectic; the researcher builds or borrows what constructs he needs to account for finding, returning frequently…to test implications, and dropping and adding concepts as the data dictate. (p. 87)

Notably, this approach to research is consistent with the philosophical foundations of the activity and environment under study. Contemporary online learning environments are dynamic social spaces and the learning activity that takes place in them is part of a constructive process: it is personal, idiosyncratic, activity driven and experiential. The constructed knowledge is situated, inevitably connected to the social, cultural and historical practices through which it is produced. By taking a constructivist approach to research, the researcher seeks to access the subjective worlds of the participants in order to establish local versions of truth and reality, to explicate the relationships therein and to open him/herself to the unanticipated possibilities. To do so is to acknowledge the validity of an experienced-based reality. The conclusions which follow are both enriched by understanding the social and cultural context and strengthened by grounding in the very real world of experience.

3.3.2   Implications for Research Design

As Schwandt (1994) points out, the distinctive qualities of constructivist research are not apparent in examination of its methods. Like other forms of inquiry, constructivism is concerned with *knowing* and *being* more than method. Constructivist researchers seek to understand phenomena on the same level as those participating the study. With a basis for knowing and being in the relationships between actors and value placed on holistic interpretation, constructivism tends to rely on methods which employ dialectic and hermeneutic processes (Lincoln & Guba, 2003). These processes allow constructivist researchers to access the intersubjective meanings and symbolic activities that constitute social life as well as appreciate the place of the individual part within the context of the whole.

For these reasons, constructivist research is open ended. It does not seek to deal with a predetermined set of variables or prove a fixed set of hypotheses. Instead the study is guided by the intent of the problem or question upon which the study is based and a number of foreshadowed problems which provide a focus for information collection and analysis. Absolute, exclusive prescriptions cannot be made (Shaver & Larkins, 1973).

In this study, the method and technique employed are focused on the development of understanding around the concepts of social presence and learner support and the relationship between these concepts in text-based online learning environments. Through the use of an iterative, dialogical process involving the identification and explication of knowledge associated with the experience of participation in online learning environments as dynamic social spaces, the study targets the intersubjective meanings regarding the nature, roles and functions of social presence and learner support held by participants in the contexts in question. The design of the study is *phenomenological* in the sense that it seeks to access the lived experience of participants and the knowledge which develops from those experiences, *ethnographic* in the sense that it targets knowledge which is a cultural product distributed amongst members of a community and *hermeneutic* in the sense that it seeks to interpret the descriptions of both experience and knowledge held by individual participants and shared notions held by the group and to acknowledge the views and place of the researcher in the interpretive process (see van Mannen, 1997).

The focus is on participant (learner) experience and experienced-based knowledge which inform participant activity. The process seeks to appreciate the holism of this knowledge as situated social practice and examine the meanings which underpin such practice. Notably, individual accounts of such knowledge are not likely to be sufficient to promote a holistic understanding of the knowledge in question as it is both socially situated and distributed amongst members within a social setting. Therefore re-constructed accounts of this knowledge must be based on a collection of individual respondents' accounts and confirmed as representative of a shared understanding of members within the group (Imershein, 1976).

3.4 Method and Technique

3.4.1 Type of Information

The research questions that guide this study are focused on experience and the knowledge that develops as a result of that experience. Padilla (1991) refers to this as *heuristic knowledge*. This knowledge is context-dependent, existing in a milieu of socially, historically and culturally situated practices. Often it is distributed, held not by individual participants but rather existing as shared practices, rules, norms or processes within community structures (Imershein, 1976; Salomon, 1993). Moreover, it is frequently tacit knowledge, neither immediately apparent to nor definable by the knower (Hung, 1999). It is accessed through description, reflection, example and repeated articulation in various forms, including normative judgement (Schon, 1987).

The study seeks to access, explicate, examine and interpret the heuristic knowledge of participants in the online environment (Padilla, 1991). This type of knowledge is highly experiential and, in this instance, is based on the lived experience of online learning in one Australian university's wholly online postgraduate courses in education and the experienced local reality of that environment. Specifically, this study is concerned with: (a) how learners in online courses experience social presence and how that experience affects their social practice in online learning environments; (b) how participants in online courses perceive and/or experience learner support in online courses; and (c) potential links between social presence as a constituent of social activity in online learning environments and learner support in these environments. In this study, this knowledge includes the context-specific social and cultural knowledge that arises from participating in a community-based social/relational system such as an online learning environment.

3.4.2 Sketch of the Research Design

The research design for this study is a collective case study, where multiple cases within a single context have been studied with respect to particular issues identified in the research questions. The purpose of these multiple cases is to inform general conclusions about those issues through understanding respective cases or instances of the issues (Stake, 2003). In this study, the central issue or phenomenon of interest is the nature, role and function of social presence as it relates to learner support. The individual cases are wholly

online postgraduate courses offered by the Faculty of Education. Respondents in each case were asked about their general experiences with online learning in this particular university's system and in particular about the courses under study. Questions targeted participants' experience and activity within the online courses and the heuristic knowledge which underpinned that activity. The information collected was used to inform conclusions about the online programs as a collective case.

The study used an ongoing dialogical process to access respondents' experience and heuristic knowledge. Figure 3.1 provides an overview of this design.

Information Sought	Sources of Information	Technique Used	Data Collected	Analysis
Baseline information about respondents	Four cohorts of volunteer respondents, each cohort drawn from one of four wholly online postgraduate courses	Questionnaire	Hard, soft	Thematic, in process, post process
Participant knowledge of and experiences with social presence		Questionnaire Interviews Focus group discussions	Soft	Thematic, in process, post process
Participant experiences with learner support		Questionnaire Interviews Focus group discussions	Soft	Thematic, in process, post process
Understanding the relationship between social presence and learner support		Questionnaire Interviews Focus group discussions	Soft	Thematic, post process
Understanding the role and function of social presence		Questionnaire Interviews Focus group discussions	Soft	Thematic, post process

Figure 3.1 Overview of the research design

3.4.3   Dimensions of the Study

The overall study includes four cases, where each case is a single instance of an online course. In all, three distinct courses were included, with one course being included twice as different instances in consecutive academic terms. The three individual courses

define the 'breadth' of the study, providing a sample of the wholly online postgraduate programs in one faculty at one university. Meanwhile the inclusion of a repeated study of one course provides insight into the relative variability of a particular case in subsequent offerings, thereby providing opportunities for contrast and comparison between similar cases, an opportunity for replicating findings and the potential to identify exceptional cases which can be further explored to enrich the understandings that are developed (Keeves & Sowden, 1997). These dimensions are intended to provide sufficient information to develop understanding of and generate theory related to the relationship in question. In particular, this combination of cases (three distinct courses, one course repeated as separate offerings) provides opportunity for triangulation of results in the development of collective interpretations of the phenomena in question. The number of cases provides multiple points of data triangulation.

3.4.4   Selection of Data Sources

Of interest in this study were courses which fit the model of contemporary (networked) online learning. These are characterized by constructivist pedagogy, a learner-centric process orientation, high levels of interaction between participants as part of the course design, extensive use of CMC tools and a significant portion of the course content that is dynamic or emergent over the term of study (see Steeples & Jones, 2002). It was anticipated that courses which have these characteristics provide learners with experiences which are relevant to this study, namely: text-based interpersonal interaction, high levels of involvement in learning processes and social connectivity. In addition to the course characteristics identified above, the selection of cases was limited by the availability of courses during the data collection phase and the willingness of course leaders to permit respondents in the study to be drawn from their course cohorts. Notably, the selection of courses which rely on active, social approaches to learning may also limit the extent to which the findings can be generalised to other context or other types of courses. This study draws from a particular type of online course which has particular views of learning and operationalises those views in a particular institutional context. Given that there are a variety of other models for online or blended delivery, the findings of this study may need to be considered critically before they are applied to other contexts. Moreover, there is scope to extend this study in other contexts, with other types of online courses or with courses from

other domain areas. In this study, the need to establish notions of social presence and learner support grounded in participant (learner) experience was seen to outweigh the need to broaden the scope of the study in order to better generalise from the findings.

All respondents in the study were volunteers who replied to a general invitation to participate from within their respective course environments. Participants with a more extensive experiential base in online learning were preferred for this study. Those with experience over several terms of study in several different courses were considered ideal because of the richness of their personal experience and the wealth of their accumulated knowledge with the phenomena in question. By contrast, it was anticipated that relative novices in online learning would not have sufficient experience to acquire much of the heuristic knowledge being sought in this study.

For each case, between three and six learners were recruited as respondents. Given the distributed nature of the knowledge in question, this number was sufficiently high to provide breadth in the experiential base that was under study and so provide a number of viewpoints to inform more general conclusions about the phenomena in question. The inclusion of a minimum of three participants provided another opportunity for triangulation in the data (Keeves & Sowden, 1997). Furthermore, this number of participants allowed for a degree of interpersonal interaction between participants, including the researcher. It was anticipated that this interaction would be an important part of the constructive process in the research and would result in richer, more integrated constructs of the issues in question. Finally, this number of participants was sufficiently low that the volume of information generated was manageable within the anticipated timeline for the study. While this was partially a practical consideration for the conduct of information collection in a given timeframe, the focus in this study was on quality of information collected, not quantity. By targeting and selecting more experienced online learners as respondents, the study sought to premise quality upon richer, more well developed accounts of the phenomena in question rather than simply a greater number of data sources.

3.4.5 Treatment of Cases

Throughout the data collection process, effort was made to maintain the integrity of each case. The researcher worked toward the development of a rich, integrated and holistic interpretation which would account for the nature of the case and the various contexts in

which it is situated (e.g., historical, pedagogical, domain area/theoretical) (Stake, 2003). However, comparison of cases was inevitable. Consistent with the constructivist approach to research (see Guba & Lincoln, 1994; Schwandt, 1994), information collection and interpretation were an iterative process and ongoing analysis of each case informed data collection in subsequent cases. The information from each case was used in four interwoven processes of analysis and interpretation, each of which informed the next. First, the information from each case was analysed in process to inform the next phase of the dialogical process. Second, each case was analysed at the conclusion of the dialogical process to form a tentative summary of the results for that case. Third, consistent with constructivist approaches, the summative results from each case were used to help inform the analysis of the successive cases. While effort was made to maintain the integrity of each case, the analytical terms in later cases were informed by the results of earlier cases. Fourth, after the conclusion of the data collection process, all four cases were further compared to identify areas of commonality and difference and to inform responses to the research questions.

3.4.6   *Information Collection*

Respondents' heuristic knowledge was accessed through a five part dialogical process which employed a combination of techniques including a questionnaire, two semi-structured one-to-one interviews and two focus group discussions to structure five phases of an ongoing dialogue about the issues in question. The entire process functioned as an extended interview in which participants were given opportunities to describe, reflect upon and discuss their experiences in online learning. This process is detailed in Figure 3.2 below.

Cycle	Phase	Technique	Information sought	Method of collection	Level of Structure
1	1	Questionnaire	Baseline information about participants, General information about participant experiences with the phenomena in question Identification of key issues for exploration in the ongoing process	e-mail	Highly structured
	2	Interview	Confirmation of issues identified in the questionnaire Examples of personal experience with the phenomena in question Assignment of meaning to personal experiences Confirmation of emergent meanings and understanding of personal experiences	Synchronous (real time) chat	Semi-structured
	3	Focus group discussion	Identification of points of commonality and difference in individual perspectives Elicitation of further information, including revision or amendment of current understandings Examination of meanings assigned to personal experiences Preliminary shared understanding of issues in question Confirmation of emergent understandings Triangulation of emergent understanding through multiple points of confirmation	Asynchronous (time independent) discussion forums	Unstructured
2	4	Interview	Examples of personal experience with the phenomena in question Focused commentary on personal (individual) experience with these issues Identification of points of difference with preliminary shared understandings	Synchronous (real time) chat	Semi-structured
	5	Focus group discussion	Exploration and possible resolution of points of difference in the preliminary understandings Elicitation of further information, including revision or amendment of current understandings Development of shared understandings and conclusions about the issues in question Triangulation of emergent understanding through multiple points of confirmation Confirmation of emergent understandings and shared conclusions	Asynchronous (time independent) discussion forums	Highly structured

Figure 3.2 Overview of the dialogical process

This process focused on reconstructing shared understandings of the phenomena in question through the exploration of participants' experiences of online learning. As Padilla points out, "…through a structured dialogue, participants are able to exchange views and information about a particular social setting" (1991, p. 86) and "unfold" their experiences through the iterative nature of dialogical exchange. The process was essentially an ongoing conversation in which individual participants' experiences were accessed (Clandinin & Connelly, 1998) both as individual perspectives and as portions of a distributed, shared understanding of the phenomena. The focus was not only on *what participants did,* but also on *how they made sense of that activity* within the given context and ultimately *how that sense making aided participants to structure their activity and make informed decisions about ongoing activity in that context* (Altheida & Johnson, 1998; Fontana & Frey, 2003).

In this study, the dialogical process consisted of essentially two cycles of activity, both of which included a personal interview and a focus group discussion. Within each cycle of information collection, these two techniques allowed the researcher to access the knowledge and experience of participants individually (interview) and within a group setting (group discussion), thereby creating opportunities to target particular individual perspectives and also to reference these against collective (shared) positions on these issues. This combination of techniques provided opportunities for confirmation of emergent understandings through triangulation with multiple points of view and also respondent validation (Fontana & Frey, 2003). Consistent with Padilla's (1991) notion of iterative reflection and the unfolding of heuristic knowledge, the intent of including two cycles of activity was to provide explicit iteration in the process and create opportunities for narrowing of focus through the refinement of ideas as the process moved forward.

In order to preserve the authenticity of respondent information and promote the development of accurate re-constructions of the experiences of participants, the dialogical collection and interpretation process involved extensive checking and rechecking in which the researcher returned to the information frequently to construct meaning progressively as more information was collected through dialogue and more meaning was drawn from the unfolding of participant experiences (Padilla, 1991). The process included extensive respondent validation in which the researcher's interpretations were reflected back to participants both individually and

in group settings to establish confirmation or otherwise inform the continued development of the interpretations (Keeves & Sowden, 1997; Sharpe, 1988, 1997).

3.4.6.1   *Phase One: The Questionnaire*

The first phase of the dialogical process employed a standard questionnaire. The development of the questionnaire was informed by the research questions for the study and the particulars of the university's online learning context. Question items were based on general issues drawn from current literature on social presence, learner support and online learning. Questions targeted two types of information: (a) specific characteristics of participants to provide baseline information about respondents; and (b) general information about respondents' experiences with the phenomena in question.

In this process, the questionnaire was a form of structured interview, with a fixed set of questions asked of all respondents (Fontana & Frey, 2003). The questionnaire was distributed and collected electronically via e-mail. Questionnaire items included both fixed response and open-ended questions. After the return of each completed questionnaire, responses were analysed first to collect and collate baseline information in order to create a context for the responses of each individual respondent and second to identify areas for further exploration of key issues. Key issues were highlighted and typed as: either (a) key themes in the collected responses; or (b) potentially anomalous responses which did not fit with expected or emergent patterns of response. Both of these types of issues were used to identify areas for further exploration in the next phase of the process.

3.4.6.2   *Phase Two: The First Interview*

The second stage of the dialogical process consisted of a series of semi-structured individual interviews. In the interviews, participants were asked a series of questions to identify and explicate or *unfold* their tacit knowledge and elaborate the emergent understanding of the issues in question (Padilla, 1991). Questions were drawn from a combination of respondent-specific issues identified from the questionnaire and questions on a range of issues of interest to the study. These interviews were semi-structured in the sense that they included a combination of prepared questions and other questions which arose within the interview process as points for clarification or further exploration of emergent issues. Throughout the

interview process, the researcher sought to confirm emergent understandings through a process of respondent validation.

All interviews were conducted as private (one-to-one) synchronous online chats and all information was recorded electronically as an archived log of the chat. This approach provided several advantages in the information collection process. Synchronicity provided an opportunity for the researcher to establish and cultivate a personal social presence and to develop rapport with the respondents. It also provided an opportunity to capture respondents' immediate reactions to questions in real time. This was seen as an important source of authenticity in responses. The private (one-to-one) nature of the interview promoted a sense of safety amongst the respondents and the foundations for trust in the researcher--respondent relationship. It also allowed the researcher to broach potentially difficult issues within the confines of a safer one-to-one situation or to explore potentially anomalous individual responses without the pressure of group conformity.

Interpretations of information collected were subjected to respondent validation both within the interview and after its conclusion in the next phase of the dialogical process. Within the interview, key issues were reflected back to the participant for confirmation. At their request, participants were given access to their respective interview transcripts for the purposes of confirmation and validation. The archived transcripts were subjected to thematic analysis, with a particular focus on refining understanding of the emergent issues. Analysis of transcripts occurred in multiple phases: first, immediately following the interview as preparation for the next phase of the dialogical process; second, at the conclusion of information collection for each phase to inform general conclusions about the case and data collection in further cases; and finally, at the conclusion of information collection for all four cases.

3.4.6.3   *Phase Three: The First Focus Group Discussion*
The third phase of the dialogical process was a focus group discussion in which the ongoing conversation of the dialogical process was widened from a conversation between the researcher and participant to include multiple participants. This widening allowed the researcher to access not only individual perspectives, but also distributed knowledge. It also allowed for the confirmation of emergent

understanding through the development of shared notions of the phenomena in question.

In this phase, participants responded to a series of questions drawn from the results of the preceding phases of the process. Questions posed included those that were carefully targeted to elicit information about particular issues of interest and also questions which were much more open-ended, allowing participants to reflect, respond freely and interact with other participants in order to negotiate meanings. This combination was intended to maintain the exploratory nature of the research whilst generally narrowing the focus of the inquiry to target particular information and structure the discussions. Participants had opportunities to explicate their personal experiences and reference them against the experiences of others in the group. This process also provided opportunities to explore and potentially reconcile disparate responses from the questionnaires and interviews. The process allowed the group to confirm or refute emerging issues from the earlier phases and work toward developing shared understandings of the phenomena in question.

The purpose of this phase was to begin to identify points of commonality and difference regarding the phenomena in question by drawing out and examining experiential examples and reflecting on their meaning. Unlike the interviews, which were synchronous, the focus group discussions were asynchronous, continuing over a number of days. This provided respondents with the time and opportunity to reflect on their experiences as well as to consider both the issues in question and the responses of others. This reflective process aided in the explication of participants' heuristic knowledge as the group worked toward shared understanding through an iterative process of interrogation and articulation of ideas emerging from personal experience. The asynchronous nature of these discussions also allowed the researcher to play an active role in targeting particular information. The researcher was afforded time to add questions, to respond to emergent ideas and to confirm formative conclusions regarding the issues in question.

The discussion facility automatically generated a textual record of the proceedings. This textual record was analysed both during this phase of the overall process and after the conclusion of this phase according to the emergent themes from this and previous phases. Emergent understandings were reflected back to the discussion participants for confirmation or otherwise. Final tentative conclusions were used to inform the next phase of the process.

3.4.6.4   Phase Four: The Second Interview.

The fourth phase of the overall process marked the beginning of the second loop of dialogical activity. This phase consisted of a second round of individual interviews. These interviews were conducted to refine emergent understandings from the preceding phases, examine personal experiences of individual respondents and tighten the focus of the preliminary conclusions from the first dialogical loop.

Like the interviews in phase two, these interviews were conducted as synchronous online chats. Questions were informed by general themes emerging in the dialogical process and by potentially anomalous personal responses from each participant. This second one-to-one interview allowed the researcher to re-visit apparently anomalous responses from earlier phases and either to highlight the nature of the anomaly or to reconcile the previous responses with emergent conclusions. Moreover, these interviews provided a venue for individuals to privately raise points of concern or disagreement with shared conclusions from the group discussions. Again, respondent validation was used to confirm both emergent general conclusions and immediate points arising in the interviews.

After the second interviews, the totality of information was re-analysed to form more conclusive understandings of the issues.

3.4.6.5   Phase Five: The Final Focus Group Discussion.

The fifth and final phase of the dialogical process was a focus group discussion. The purposes of this phase were: (a) to explore any late emerging issues; and (b) to validate conclusions for the entire process. The ultimate aim of this phase was the establishment of conclusions which reflected the shared understanding of the group on the issues in question.

As in phase 3 of the process, discussions were conducted asynchronously and respondents were able to reflect upon the entire dialogical process in order to make determinations on the confirmation of the conclusions. A significant portion of the activity in this phase was dedicated to the confirmation (or otherwise) of tentative conclusions posited by the searchers and the establishment of shared understandings of the key results of the dialogical process. In some instances this confirmation process involved extensive dialogue within the group to establish consensus on the issues in question. This process provided an essential source of respondent validation.

3.5   Data Analysis

Sowden and Keeves (1988) identify a general framework for the analysis of qualitative data which includes the following steps: (1) data reduction; (2) display and examination; and (3) conclusion drawing and verifying. This process was used as a guide for the analysis of the information collected in this study. It was applied to the ongoing analysis in the dialogical process for each case, at the conclusion of information collection for each case and then at the end of all information collection for the study.

In all analysis for this study, the general analytical technique was thematic analysis. In this context a theme is a unit of meaning which emerges regularly in the analysis of information (van Mannen, 1997). Themes represent categories of knowledge, meaning or experience and are essential to understanding qualitative data (DeSantis & Ugarriza, 2000). Thematic analysis, then, is the search for and identification of common threads that extend throughout a set of data. However, as van Mannen (1997) points out, this sort of analysis is highly nuanced: "Making something of a text…is more accurately a process of insightful invention, discovery or disclosure—grasping and formulating a thematic understanding is not a rule-bound process but a free act of 'seeing' meaning" (p.79). This process is exemplified in the description of the in process analysis below.

3.5.1   In Process Analysis

Consistent with the framework identified by Keeves and Sowden (1997), for each step in the dialogical process, analysis involved a reduction of data through coding according to theme, re-organization and representation of the data and the development of tentative conclusions which were verified through respondent validation.

Data reduction and coding were an iterative processes involving constant checking and rechecking of the data against the themes and vice versa to accommodate the emergence of the relationships within the data and preserve the richness of participants' knowledge and experience. These iterations included multiple analyses of the data set at each phase of the dialogical process and visitation of data from previous phases as the process progressed. Thematic coding of the data was followed by a reorganization and representation of data with respect to each theme. Meaning was extracted from each intermediate representation of the data and

this meaning was used to draw preliminary, intermediate and final conclusions as the dialogical process progressed. This extraction of meaning included a number of techniques, including:

1. *Noting patterns*, as in the case of recurrent use of language or descriptions of confirmation of shared experiences. This technique involved the identification of obvious patterns of response to fixed questions and less apparent (more nuanced) issues revealed in the unfolding of participant experiences through reflection and articulation.

2. *Splitting or combining themes*, as in the case of identifying divergent meanings from participant experience or reconciling apparently anomalous emergent issues or the development. The development of themes was an ongoing process, in terms of both accommodating emergent issues and the accumulation of information throughout the process or across multiple cases in the study.

3. *Noting relations*, as in the case of consequential relations in the development of rich, highly integrated knowledge arising from (more) extensive experience with the issues in question. These relations were evident in both: (a) the interactions between participants to identify points of similarity and difference with personal experience and the resulting knowledge; and (b) the unfolding of participant experience to explicate the relationships between experience and activity.

4. *Building a logical chain of evidence* as in the explication of the relations above and the development of a logical progression identifying the development of such heuristic knowledge (Keeves & Sowden, 1997; Sowden & Keeves, 1988).

The meanings which resulted from these techniques were enriched and confirmed by the use of the following techniques (see Keeves & Sowden, 1997):

1. *Checking for representativeness.* Representativeness in this context is the extent to which emergent understandings are shared amongst the group or are seen to represent a consensus position. This technique involved confirming emergent understanding with the group to establish that the reconstructed version of reality was consistent with shared understandings of these phenomena.

2. *Triangulation.* As a method of confirmation which references a particular point against two other points, two main forms of triangulation were included in this study, including methodological triangulation involving the use of multiple techniques for accessing and gathering information (e.g., individual interviews, focus group discussions) and data triangulation involving replication of the investigation with multiple sources of data as in the multiple cases (each with multiple respondents) included in this collective case study.

3. *Getting feedback from respondents.* This technique was used more than any other to confirm emergent understanding throughout the process by confronting participants with tentative conclusions, explanations and synthesis of information, then asking them to confirm (or otherwise) these products. This technique proved useful not only for gathering support for emergent products but also for gathering further information to inform richer, more well developed understandings of the issues.

4. *Making contrasts and comparisons.* The use of multiple cases and multiple respondents within each case provided numerous points for contrast and comparison of emergent information, themes and conclusions.

5. *Examining outlier cases*. Rather than strive for uniformity of information and conclusions, the outlier cases, as potentially anomalous examples, were explored to reveal new information, identify relationships between concepts and generally enrich understanding of the phenomena in question.

6. *Replications of findings.* The use of multiple cases (as in the inclusion of four individual courses) was seen as an important opportunity to confirm emergent findings and lend support to tentative conclusions.

7. *Checking rival explanations.* Not unlike the use of outlier cases, the exploration of rival explanations was used to develop fuller understandings of the issues in question. This technique was also used to promote consensus or resolve seemingly incompatible information.

Ultimately, the meanings drawn from the in process analysis were used to form conclusions which were then reflected back to participants for validation, rejection or refinement.

3.5.2   Post Process Analysis

At the conclusion of each dialogical process and again at the conclusion of all information collection, the validated conclusions of each case were reviewed and subjected to the processes of reduction, examination and conclusion drawing. Like the in-process analyses, this summative analysis was an iterative process, employing a variety of techniques for the extraction and confirmation of meanings which were used to construct final conclusions through the development of a logical progression of ideas grounded in the experiences of participants across all four cases. The final analysis was a constructive process, using the combination of successive phases of information gathering and the combination of conclusions from each successive case to construct conclusions which represent a richer, more developed whole view of these issues.

3.5.3   Ensuring Quality

Keeves (1988) emphasizes the role of rigour in ensuring the quality of humanistic research:

> Unless research workers who adopt this perspective report in detail on the methodology which they employ in order to observe accurately, to describe consistently and to develop a valid interpretation of the events observed and described, then reviewers of their research have no basis on which to assess the quality of the research (pp. 501-502).

Of particular interest are the notions of *methodological rigour* and *interpretive rigour* to ensure the quality of research in this study.

3.5.3.1   Methodological Rigour

Qualitative research which lacks methodological rigour can be labelled vague or unreliable. Methodological rigour includes explicit alignment between the inquiry process and the intended outcomes. In this study, this rigour is achieved through the alignment of four main methodological considerations: the philosophical foundations of the researcher (epistemology, ontology, and axiology), the philosophical bases of the context under study (constructivist pedagogy, community learning models), the intended outcomes of the study (theory generation) and the techniques and procedures used to collect and interpret the information.

This study is focused on the experience-based heuristic knowledge of participants related to social presence, learner support and the (potential) relationship between them. This heuristic knowledge arises through a constructive process in which individuals and groups make sense of their experiences to identify meaning and develop knowledge as a result of those experiences. Heuristic knowledge can be linked to constructivist/interpretivist epistemologies which emphasize individual and collaborative interpretation of experience in the construction of knowledge. It can also be linked to a relativistic ontology in which reality is a local construct, dependent upon the immediate and wider contexts in which the individual (or group) is situated. Therefore it is essential that the research method and technique are aligned with these epistemological and ontological premises in order to establish methodological rigour.

It is particularly appropriate then that this study employs a constructivist approach to research. The dialogical process identified above is a constructive one, relying on iterative cycles of dialogue and reflection to identify, explicate and interpret experience to make meaning and to progressively construct shared notions of the knowledge which underpins activity in the context in question.

3.5.3.2   Interpretive Rigour.

In the collection and treatment of information, researchers must employ methods which allow for the application of practical or persuasive reasoning which is justified by reference to the information itself and the context from which it is drawn rather than a fixed set of objective rules and procedures. Schwandt (1994) refers to this as a *normative* approach to method and highlights the role of judgment based on the application of general criteria in context (e.g., coherence, comprehensiveness, utility, etc.) rather than universal, fixed criteria. *Authenticity*, with the underpinning criteria of fairness, educative authenticity and tactical authenticity, has emerged as a basis for establishing interpretive validity in constructivist research (see Guba & Lincoln, 1989; Lincoln, 1995; Lincoln & Guba, 2003).

In this study, interpretive rigour is provided though an emphasis on authenticity. Authenticity is achieved through a combination of fairness in consideration of multiple points of view, the unique abilities of the researcher to interpret the information and a continual process of respondent validation. Lincoln

and Guba (2003) refer to *fairness* as the consideration of multiple perspectives with a degree of balance. This involves not only the inclusion of multiple voices but also action on the part of the researcher to seek out and represent all voices. This process was enhanced in this study through the provision of opportunities to explore both individual perspectives in interviews and more widely shared notions in group discussions. The research design included multiple opportunities to (a) seek out individual perspective away from situations in which outlier cases are naturally 'normed' by group processes and (b) contrast individual perspectives with (shared) group perspectives for the purposes of explicating the nature of the differences between particular outlier cases and normal positions. This combination of characteristics allowed the researcher to identify and account for all respondent voices in the information collection and analysis.

The interpretive rigour was enhanced through the unique position of the researcher as co-participant. Drawing from his experience as both a learner and a teacher in the context in question, the researcher was uniquely placed to appreciate the holism of the learner experience within this context and to employ an empathetic view to get at the nature of and motives for learner activity. These characteristics allowed him insights into: (a) the nature of activity in the online contexts under study (b) the learners' (as respondents) perspectives in this study; and (c) an overarching sense of the institutional context in question. Together these perspectives allowed him to interpret the emergent meanings in the data, synthesize these and reflect them back to respondents for confirmation.

Finally, respondent validation was used to ensure the quality of the analysis and findings. Respondent validation is one of the most common techniques for ensuring interpretive rigour (Ball, 1988). This refers to the practice of "confronting participants with emerging theoretical explanations of their actions and inviting them to respond to its status with respect to reality, and them using these responses to refine that explanation" (Sharpe, 1988, p. 510). In this study, respondent validation was used extensively within the dialogical process as both individual validation in one-to-one interviews and more collective validation of shared understandings in focus group discussions. This respondent validation provided formative feedback to the researcher in the ongoing research process and added strength to the emergent conclusions both within and at the conclusion of each dialogical process.

3.6   Issues for Consideration From the Research

As in any research design, there are a number of conditions in this study which can potentially impact upon the outcomes of the study. While some of these can be viewed as advantageous or disadvantageous, most of these conditions are both benefits and limitations, albeit in different ways.

3.6.1   The Subjective/Objective Problem

Findings in research studies are often premised on notions of *objectivity* or consistency with a widely acknowledged reality. Set in opposition to this widely held notion of reality is the *subjective*. However, the meaning of these terms in not straightforward. As Popham (1975) points out:

> Subjectivity can have two meanings. In a pejorative sense subjectivity reflects a haphazard and indefensible idiosyncratic personal stance. In another sense, subjectivity reflects an opinion based on personal experience….[We] cannot cavalierly dismiss all subjective measures because sometimes the very phenomena we have the most difficulty measuring objectively will be those worth measuring. The dilemma is clear: Is it better to measure something trivial well, or to measure something significant less well? (p. 97)

In discussing research on human experience, van Mannen (1997) supports the notion of subjectivity as a positive:

> "Subjectivity" means that one needs to be as perceptive, insightful and discerning as one can be in order to show or disclose the object in its full richness and in its greatest depth. Subjectivity means that we are strong in our orientation to the object of study in a unique and personal way—while avoiding the danger of becoming arbitrary, self-indulgent or of getting captivated and carried away by our unreflected preconceptions. (p. 20)

In this study, the acknowledged reality is subjective, or, more accurately, inter-subjective, as a shared construction by the groups of respondents which participated in this study. It is based on shared notions of rightness and truth that arise from similar (or shared) experiences with online learning. As such, the reality in question in this study, in terms of both the examination of individual perspectives and the shared construction of a result, is not firmly placed in either objective or subjective worlds. This knowledge lies at the interface of those worlds (Popper,

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1979). It occupies a middle ground (Imershein, 1976) in which individual subjective worlds are externalised, then co-mingled with one another and with more widely held notions of objective reality. The knowledge that results from this process is highly practical (Dewey, 1991) and is distributed amongst members of the group (J. Garrison, 2001)

The central point here is that researchers and readers of research need not be constrained by the subjective/objective duality, which is potentially false (J. Garrison, 2001). Rather, it is more important to focus on the practical nature of *knowing* in this context and the relative nature of these conclusions as *points of view*. The strength of these points of view is based on the extent to which they are consistent with (or represent) a functional advantage for the knower.

3.6.2   The Place of the Researcher

In constructivist research, the role of the researcher is important in terms of acknowledging his/her place in an active, participatory process and also identifying what he/she brings to the research as interpreter and builder of the constructed reality.

In this study, the researcher might be described as *researching with* study participants rather than *researching on* them. The dialogical process employed clearly indicates high levels of interaction between participants: between the researcher and individual respondents, between the researcher and the group of respondents and amongst the group of respondents. The role of the researcher is one of relatively equal partnership with the respondents in the dialogical process through which the experiences of the respondents are accessed.

This level of involvement by the researcher has both advantages and disadvantages. As an advantage, the researcher enjoys close contact with the respondents and is able to generate rapport and even positive relationships with the respondents. The resulting closeness may permit the researcher greater access to the experiences and insights of respondents. It may also provide a richer, more fully developed understanding of the respondents' perspectives and so inform more accurate re-constructions of the local realities under study. As a disadvantage, the high level of interaction and participation in the research process puts the researcher at risk of undue influence on the respondents or may cause the researcher to lose perspective on the issues under study. To militate against these disadvantages,

researchers must be mindful of their role in the research process and be vigilant in their attention to accurate representation of participant responses. Attention to both methodological and interpretive rigour is helpful in this regard.

As the sole participant common to all respondent groups in this study, the researcher had a critical role in constructing this reality in a way that was representative of all of the cases under study. In this study, the researcher was uniquely placed to engage in interpretive analysis and construction (or re-construction) of the experienced reality of study participants. As a graduate of the program under study and a member of the teaching staff in the programs, the researcher's personal experiences were, in some ways, experiences *shared* with the study participants. Moreover, these experiences afforded the researcher insights into the experiences of participants and aided in interpreting the information provided by respondents. However, it is clear that the researcher's experiences and insights also extended beyond those of the participants with regard to the cases under study. More specifically, the combination of relatively recent experience as an online learner in the program, experience as a teacher in the programs and a comprehensive understanding of the current state of the art of online teaching and learning provided him with a critical ability to target, gather and interpret the experiences of the respondents. This is a distinct advantage for the researcher in this study.

3.6.3   *The Experience of Participating in the Research*

Participation in a highly interactive research process such as this inevitably involves learning for the participants. When participants are involved in identifying and examining their experiences and the related knowledge, it is likely, even expected, that the very knowledge structures under study will be affected by the experience of participating in the research process. Indeed, the educative component of this research process is considered an advantage of this research design in terms of providing benefit to the participants. In this study, a number of respondents commented on the value of participating in the research process as a learning exercise and at least two respondents were explicit about the transformative nature of this experience. These outcomes emphasize the researcher's responsibility to account for the changes and acknowledge the potential effect of the research process upon the results and conclusions of the research. The challenge for the researcher in this situation is to construct a shared reality of the phenomena in question while

maintaining the integrity of the knowledge structures from which this reality is drawn.

There are several notable caveats for researchers in this situation. First, respondents may influence one another and confuse their own personal experience and knowledge. As they access and unfold their personal experiences in the dialogical process, respondents are likely to become aware of their own knowledge for the first time. Additionally, they may be encountering certain concepts for the first time. In this situation, they may be susceptible to the influence of other participants. While interaction and negotiation are a desirable part of the unfolding of heuristic knowledge, the researcher must be aware of the potential effects of this process on the results and continually monitor each respondent's input to the process to account for the authentic voice of each individual participant.

Second, the researcher may influence the respondents and so affect their responses. This may happen owing to the way questions are phrased or issues are presented or it may happen as the researcher strives to restate, synthesize and narrow the focus of the ongoing dialogical process. The researcher must be mindful of his/her influence on the process and be vigilant in letting participants express themselves authentically as well as in preserving each respondent's authentic contributions.

Finally, in a research process that is also a learning process, the researcher must be conscious of explicit *teaching* activity that takes place and the effect that such teaching has on participant responses. As a supporter of the constructivist process, the researcher must not contaminate the information provided by participants by indicating expectations and so influencing participants to respond with expected (or favourable) information. The researcher must be mindful of a supportive role in which the focus is squarely on the knowledge and experience that participants bring to the information collection process.

In this case, it is believed that the advantages of this approach offset any potential problems with this approach with regard to participant experiences within the research process.

3.6.4   The Learning Management System

During the course of the data collection process for this study, the host institution in question made a transition from one learning management system to

another. The decision was made quite suddenly and was not anticipated in the design of this research. Because this transition occurred during the data collection process, part of the data (one case) was collected in the old platform and the rest of the data were collected in the new platform. This transition is significant to this study insofar as it affected the online learning experience for respondents. In particular, in the academic term immediately following the transition, there was a degree of discontent amongst the online learners about the new learning management system. This discontent manifested itself in a variety of ways, including as a topic of discussion in the online courses themselves. Respondents in the term immediately following the transition cited these discussions and the transition itself as a possible distraction from the courses themselves. Given the focus of the study (learner experience) and the comments of respondents immediately following the transition, it is safe to conclude that the experience of this transition had some effect on the experience of the respondents. However, this effect was not fully explored in the data collection process and it is unclear what influence this event has had on the results of the study.

3.6.5 Disparity Amongst the Cases

While it was anticipated that the four cases under study would be relatively similar in terms of participant demographics and the research process employed in the study, actual experience highlighted some notable differences among the cases.

First, the number of participants in each case was somewhat variable. Two of the four cases attracted more volunteers than needed and the respondent group included the maximum number of participants that could be accommodated. In one of the other cases, the number of participants fell in the ideal range. However, in the other case, only three volunteers emerged and near the end of the data collection process one of these participants removed himself from the study. The difference in participant numbers for each case produced a clear disparity between cases in terms of both the quality and the quantity of data collected.

Second, there is some question as to whether the domain-specific content of the course influenced the research results. In one of the four cases, the content of the course in question explicitly addressed the concept of social presence, its definition and its role in online learning. Notably, the participant group from this case was extremely active and was seen to excel with participation in the dialogical process.

Compared with the other cases, the participant group from this course went farther with the research questions and achieved a level of depth in their analysis and conclusion drawing that was not seen in other groups. By contrast, only one of the four cases did not specifically refer to the particulars of online education as part of its core content. In this case, both the quantity and the quality of responses were generally lower than in the other groups. It is unclear if these disparities were due to participants' skill levels, relative levels of experience of various respondents, interest in the object of this study or other factors. As noted above, this study focuses on a particular type of online course in a particular context. Therefore, the ability to generalise from the findings may be limited. Further to that point, additional study is needed to clarify the impact of researching these phenomena in other domain areas.

4   CHAPTER 4: RESULTS

In Chapter 3, the general approach, method and technique for the collection and analysis of information in this study were described. In this chapter, the particular application of that design is explicated along with the results of the information collection and the analysis of that information. The presentation begins with an overview of the collective case and findings which form a response to the research questions. These findings are supported by the presentation of results from each of the four individual cases which comprise the collective case. These individual case presentations are structured around the dialogical process for each of the four cases and they are supported by the inclusion of a sample of representative data for each case.

4.1   The Collective Case

This study is a collective case study involving four individual cases, each of which is a single instance of an online postgraduate course in education. The four courses which comprise the collective case are described in Figure 4.1 below. These include OTea1, Eval2, EdEn3 and EdEn4. These individual cases were chosen because they share a number of common characteristics which are of interest to this study. They are all offered wholly online and all contain a combination of static and dynamic (participant generated) content. Each of these courses employs CMC tools as the primary communicative channel for course participants. The communication within these courses is almost exclusively textual. All four courses employ constructivist pedagogies which take a process oriented, learner-centric approach to learning. In short, these courses fit the model of contemporary networked online learning communities (Steeples & Jones, 2002) and they provide learners with experiences which are of interest to this study. The context for the study is online learning in online learning communities as part of formal education.

Collection of data occurred over three academic terms during one year, including data collection during the summer term. In the first term of collection, only one course was studied. Then, in the second term, two courses were studied concurrently. Finally, in the third term, one course was studied as a second case based on one of the previously studied courses. All data were collected during a single 10 month period.

Case	Course	Description
1	OTea1	A course exploring the theory of online teaching. The course assumes prior knowledge in areas such as learning theory, instructional design and familiarity with online learning environments. The content of the course is balanced between static content (e.g., readings, course notes) and dynamic content generated by participants, including explicit collaborative work on assignment tasks. The course aims to link participants' emerging expertise with online teaching and learning to the particular needs and opportunities for online teaching in their individual professional contexts. Notably, the course content explicitly deals with the concept of social presence.
2	Eval2	An introduction to educational evaluation. The course provides a general overview of evaluation. It aims to equip learners with the basic skills needed to carry out educational evaluation in their local contexts. The content of the course is relatively static, with some opportunities for interaction via CMC tools, but less opportunity for task-driven collaboration. Interpersonal interaction is explicitly structured in the CMC tools, but is not linked to assessed products. Notably, the content of this course is the only one of the four within this study which is not specific to online or technology enhanced learning.
3	EdEn3	A course on the design, development and implementation of web-based environments for education. The course aims to cultivate design and development skills tailored to the creation of education environments. It assumes prior knowledge of both basic web design and educational theory. The content of the course includes both static and dynamic content. There is explicit, task-driven collaboration in the completion of project work.
4	EdEn4	EdEn4 is the second instance of EdEn being studied. This course was studied twice within the collective case in order to provide points of comparison involving learners from the same course in different version of the course and lend insights into the variability of the learner experience from one version of the course to the next. Notably, the teaching staff for each of the two versions under study was different with a team teaching approach in Case 3 and an individual teacher in Case 4.

Figure 4.1 Overview of the collective case

4.2   Findings Summary

As a collective case, the four individual cases provide a wealth of information about respondents' experiences with online social presence, the workings of the social-relational systems within online learning environments, the dynamics of interpersonal interaction and the provision of learner support in these environments. What emerged was the beginning of a holistic view of activity in online learning environments. This view includes social presence, interpersonal interaction and collaboration as key components of successful online learning (Gunawardena & Zittle, 1996) and begins to indicate the relationships among them.

The findings are presented below with reference to the two main foci of the research, participant experiences of social presence and of learner support, and the questions which guided the research. Within each of these respective areas, the findings summary is structured with respect to the research questions.

4.2.1 Participants Experiences of Social Presence

Whilst all respondents in the study indicated that they were aware of the concept of social presence, early phases of the dialogical process in each case showed that shared understandings of this concept did not exist within the respondent cohorts. As a result, a number of individual definitions were suggested in each cohort and these were synthesized and confirmed in the focus group discussions. Two key aspects of social presence emerged:

1. that there is an 'other' party who conveys a social presence in the online environment; and,

2. that this 'other' exists and is identifiable as a real person i.e., as a human being, with all the characteristics thereof, including personality, emotion, personal history and context, amongst others.

These two points highlight a view of social presence as a quality of individuals and their habitation and use of online spaces rather than an attribute of the media employed in online learning. The definition of social presence which has emerged from the data is: *Social presence is an individual's ability to demonstrate her state of being in a virtual environment and so signal her availability for interpersonal transactions.* The implications of this definition are detailed below.

4.2.1.1 What specific instances of social presence do participants recognize and/or remember?

All respondents were able to cite instances of recognizing the social presence of others, including identifying personal characteristics of others, personality traits and professional details. However, the intensity of these remembrances varied. The most memorable instances of social presence were associated with extreme relational qualities. These included negative experiences with rude, pushy or 'vanishing' partners in which the relations between parties were not positive or productive. They also included positive experiences of productive collaboration, synergy and supportive interpersonal interaction which stemmed from strong positive relations between the involved parties. Briefly, findings suggest that respondents' experiences

of others' social presence vary according to the qualities of the relation between them. Extreme qualities, either positive or negative, were the most memorable.

4.2.1.2 *Do participants experience other participants as real and present in the environment?*

4.2.1.3 *Also, who is seen as real and present in the environment?*

The findings clearly affirm the notion that online participants experience other participants as both *real* and *present*. However, the findings suggest that these two conditions are very different in online learning environments.

Regarding the notion of others as real, respondents in this study unanimously viewed their peers as real. Notably, this finding was considered a foregone conclusion by many of the respondents. As experienced users of online environments, respondents indicated that they made assumptions about other online participants and generally attributed human qualities to them. This was seen as a consequence of an empathetic relation in which the respondents recognized similarity with other participants and attributed characteristics of 'sameness' to other participants. A portion of this sameness is the notion *being real*; i.e., if I am real and you are like me, then you must be real as well. This finding reinforces the split between views of social presence as a quality of media and social presence as a characteristic of individuals' existence and habitation of online spaces. Respondents in this study clearly view social presence as a quality of individuals and associate it with relations between themselves and others as real people and salient social actors.

As for being present, findings on this issue were more directly associated with individuals' abilities to establish and maintain a personal social presence. The findings indicate that being present is not an either/or proposition; rather, online participants are seen as present in degrees. Presence is seen to be demonstrated by visible activity: posting messages, responding to others, participating in the activities of the group, etc. Other participants are seen to be present to the extent that they demonstrate their presence. Social presence is seen to be conveyed as a combination of the cues that individuals send as part of the messages they post in the online environment and the way those cues are interpreted by others.

Information collected in this study suggests that social presence develops in a two-part process. First, participants establish that they are present in the online environment by making themselves known to others. Often, this happens in the form

of personal introductions which include instances of self-description, personal disclosure and indications of personality, but this may occur with any sort of initial interaction between an individual and other individual actors. Whatever forms this establishment of social presence takes, it involves explicit (visible) participation in the course community. Second, participants demonstrate ongoing presence by indicating both their ongoing attendance in the environment and their availability for interactions and interpersonal relations at any given time. An individual's social presence is seen as a cumulative result of their demonstrations of presence but it is also affected by the strength of relations between individuals and the history of the relationship. Respondents indicated that a sense of history can help maintain a relationship over time, but that the quality of relationships was also heavily influenced by recent events. There was a strong sense of retaining currency in the dynamic state of relationships between participants. Notably, this two-part process applies not only to learner participants, but also to all participants in the online learning environment: tutors, support staff, subject matter experts and invited guests. Moreover, individuals are seen to display presence relatively. An individual may be seen to be more or less present than any other. This finding is explicated in the next subsection.

4.2.1.4   Do participants experience degrees of presence of other participants?
        Responses clearly indicated that *online learners experience one another in degrees*. That is, each participant in the online learning environment has a social presence which makes her or him seem more or less present than other participants. According to respondents, the degree to which an individual is able to convey a sense of presence depends on three key factors: the *ability* to convey a sense of presence through the use of social presence cues; the *opportunity* to interact with other parties; and the *motivation* to engage not only in interpersonal interactions but more particularly in the relational aspects of such interactions. If these conditions do not exist, then the establishment and development of social presence are unlikely, if not impossible. Conversely, the degree to which these conditions do exist enhances an individual's ability to convey a sense of presence.

        Regarding ability, the data indicate that novice online learners do not come to online learning environments equipped to interact. Respondents suggested that the abilities both to convey a sense of presence and to read the social presence cues of

others are learned skills, developed over time with increasing amounts of experience with online interaction via CMC. An important extension of this point is that these skills must be cultivated in online learners. Respondents noted their own learning in this regard. While they did not note any explicit teaching of these skills, there was evidence of implicit teaching through norming of behaviour within the group and role modelling by experienced online participants, including the facilitator.

The notion of opportunity is related to opportunities to interact and highlights the role of both (a) structuring in activity within online learning environments which brings learners into contact with one another and (b) the relative willingness and availability of the involved parties. Unless participants in the online environment have access to one another and are also willing and able to interact, they are unlikely to be present to one another.

With regard to motivation, social presence is enhanced by a sense of relation between individuals. The cues which constitute the demonstration of social presence provide information upon which social actors make decisions about ongoing interaction. They provide information which contributes to a sense of relation between parties and makes individuals more or less likely to participate in ongoing interactions. In positive relations, participants are motivated to continue to interact. Positive social presence facilitates ongoing interaction and creates further opportunities for the development of social presence. In this way, social presence and interpersonal interaction are complementary. This point is evident below in the consideration of participants' valuing of social presence.

4.2.1.5   *Are participants aware of their own social presence?*

Respondents indicated that they were aware that other course participants developed perceptions of them based on their textual messages in the environment. However, they did not have clear understandings of how others perceived them. This was attributed to a lack of explicit feedback from others about how they were perceived. Some participants indicated that they received tacit feedback about their social presence and were encouraged by signs such as others' responses to them and indications of a particular sense of connection between themselves and other participants, but that overall participants' notions of their own presence were not well developed.

Participants' establishment and development of social presence were seen to be guided by some general rules for behaviour, commonly known as *netiquette*, and also by examples provided by other individuals who were seen to display particularly positive or negative social presence. Respondents suggested a repertoire of strategies and techniques to convey a sense of presence, including responding to others in a timely fashion, communicating with a warm, friendly tone, displaying humour and conveying a sense of openness to others' ideas.

4.2.1.6 Do participants experience the facilitator as real and present?

Responses for this issue varied amongst the four respondent cohorts. Whilst all facilitators were viewed as *real*, the extent to which they were *present* varied. Some facilitators were seen as quite active, visible and quite obviously present. Others were seen as present to a lesser degree; while still others were seen as relatively 'absent' from or invisible in the online environment. Notably, despite the variety of experiences of facilitator presence, all respondent groups valued facilitator presence and had high expectations of facilitator activity. In many ways, the online facilitator was seen as the leader of the cohort of online learners. The facilitator was seen to have important roles in both modelling online behaviour through the cultivation of an apparent social presence and creating accountability for learner behaviours through the enforcement of norms of good online behaviour. To restate: regardless of how the facilitator was viewed in the particular courses from which these respondents were drawn, all respondents indicated high expectations for active, responsive, visibly present online facilitators.

4.2.1.7 Do participants value social presence? Do participants see social presence as supportive? If so, how?

Respondents in all cases were nearly unanimous in valuing social presence. This value was associated with a related valuing of interpersonal (human--human) interaction. There were both explicit and tacit indications that social presence was valued for its role in facilitating the interactions themselves as well as the positive outcomes of these interactions.

This valuing of social presence and interaction is linked to a valuing of relational aspects of communication in creating a richer experience for participants. The relational experiences of commonality, connection, empathy and respect were seen to contribute to the creation of safe environments in which participants

experienced a diminished sense of being at risk. These conditions were seen to support learning as a dynamic, interactive process in which interpersonal transactions play an important role in meaning making, the development of personal and shared understandings and, ultimately, learning.

Many participants made strong statements about the need for interaction in the learning process and identified the potential for interaction as one of the key benefits of online learning. Suggested reasons for the value of human--human interaction included:

1. *Overcoming distance/isolation/loneliness.* Respondents noted that distance education can be an isolating and lonely experience. Interaction with fellow learners and teaching staff was seen to help overcome feelings of isolation and loneliness and to promote feelings of belonging, inclusion and connection to others. This notion of overcoming loneliness was linked to motivation and other forms of affective learner support.

2. *Opportunities for getting to know others*. The notion of 'getting to know' other participants was seen as an important part of collaborative endeavour and learning in community settings. Without interaction there is no opportunity to get to know one's peers. This notion of getting to know others was seen as the basis for a number of other beneficial outcomes including: (a) the development of trust, rapport and respect; (b) the creation of context which aids in meaning making; (c) aiding content selection within the dynamic content of a course; (d) the development of a safe environment in which feelings of risk are diminished and there is opportunity for deeper interaction in critical discourse; (e) the identification of commonality; (f) the development of group cohesion; and (g) the development of connection between individuals.

3. *Feelings of being valued*. Possibly related to notions of community and collaborative work identified above, participants noted feeling valued when their contributions were recognized and responded to. This was predicated upon two-way interaction in which feedback was provided to participants on their contributions to the community. While this sense of being valued provided an affective benefit, it also had the result of promoting more interaction between participants.

4. *Motivation.* Related to the notion of overcoming isolation and promoting feelings of belonging and connection, interaction was seen to have a direct motivational effect in all four respondent groups, particularly where participants in the interactions displayed positive social presence. In this way, interaction and social presence are mutually reinforcing: positive social presence stimulates further interaction, which stimulates a greater sense of presence.

5. *Opportunities for feedback.* Interaction was seen to provide essential opportunities for feedback in the learning process. This feedback included the ability to monitor one's own progress against that of others within the learning process. Such feedback was considered an important form of academic support.

6. *Exposure to different ideas/enrichment of the learning experience.* Interaction with others was seen as essential for exposure to multiple points of view and working on interpretation (meaning making) of those views. This was seen to enrich the learning experience and result in 'deeper', richer or more developed learning.

Based on responses in the study, it would seem that social presence and interaction are closely related and are highly valued by online learners. This point is explicated in Chapter 5.

Notably, there was a seeming disconnect between respondents stated preferences regarding learning activity and their values regarding interpersonal interaction. As shown below in the discussion of individual cases below, 14 of 20 respondents indicated that they preferred individual learning activities to collaborative ones. Despite this, the vast majority of respondents commented favourably on social aspects of learning activity including interpersonal interaction, the development of relations and, to a lesser extent, collaboration. The reason for this is unclear and this point is indicative of one area for further study.

4.2.2   *Participant Experiences of Learner Support*

Respondents in this study were able to identify a number of supportive aspects of their online courses. These aspects were generally consistent with the two types of support identified in Chapter 2, including relatively static *supportive infrastructure* (e.g., course materials, clear and intuitive interfaces, role expectations)

and more dynamic *responsive supports* which are provided in-person. These notions of supportive infrastructure and responsive in-person support are used to structure findings related to learner support in this study.

4.2.2.1 *What supportive infrastructure exists in particular courses?*

Hung and Chen (2001) identify the issue of supportive infrastructure as one of the key features of vibrant and sustaining communities. Such infrastructure allows participants to be clear about the processes they are engaged in and facilitates the operation of the community. Hung and Chen further highlight the fact that infrastructure has a particular significance for online communities in both (a) the need to manage and regulate the activity of diverse and distant groups; and (b) the opportunity to re-imagine activity freed from the constraints of place-based, face-to-face modes of work. To reiterate, they identify three aspects of supportive infrastructure: *rules and processes*, which structure activity in online communities by identifying clear roles for participants and rules which govern activity; *facilitating structures,* which allow the community to carry out its work and manage the workflow; and *accountability mechanisms,* which allow processes to be monitored. This framework was adopted to aid in the analysis of participant responses with regard to supportive infrastructure.

Respondents indicated a number of supportive mechanisms which could be traced to considerations of *infrastructure* within respective courses. Instances of supportive infrastructure contribute to the general feeling of support in a course and lend insight into the workings of both explicit and tacit support mechanisms. Most notable were rules and processes and facilitating structures. Accountability mechanisms were less evident in the data. This may be due to the dynamics of accountability in educational environments and role expectation of the teacher as an authority figure.

Rules and Processes.

Course Design/Instructional Design The overall design of the course, from the abstract of approaches to learning and pedagogies employed to the concrete of learning tasks and facilitator activity, was seen as an important component of supportive infrastructure. Respondents noted the importance of constructivist underpinnings of course designs and the related values of learner-centred ness and active/interactive constructive learning processes. The identification of processes

which promote and facilitate interaction was seen as an important part of course design. In particular, respondents also noted the importance of alignment between constructivist pedagogical foundations and the intended outcomes, learning tasks and assessment scheme. This was viewed as a supportive mechanism to reinforce the values of learner activity and expectation of interpersonal interaction as a key aspect of learner activity. Some participants noted that this congruence could be extended further to include the assessment of collaborative activity such as assessed participation or the submission of collaborative work. This was a potential source of motivation for interactive learning and consistent with the implied values of design. Moreover, responses suggest that poorly designed courses create greater needs for learner support rather than being a source of support.

However, in contrast to the value of supportive structure, some participants noted the value and supportive nature of flexibility which catered to individual needs. This is consistent with the findings of Hase and Ellis (2001) regarding the need to balance flexibility and structure was highlighted as a key consideration in course design.

Participant Roles – Roles for both learners and facilitators were identified as essential infrastructure in online courses. In particular, comments focused on role expectations, the establishment of shared understandings of roles and the implied activity for both learners and facilitators. Given that collaborative activity is a departure from the norm in many formal education contexts, the identification of collaborative roles was seen as essential to support interaction and collaborative activity.

Important participant roles identified include: challenging the viewpoints of peer learners sharing ideas and providing alternative views contributing to discussions early and often, maintaining a positive social atmosphere/tone, making personal introductions and personal disclosure, providing confirmation not only of ideas, but also of rates of progress and approaches to tasks. This list implies a high degree of interaction and commitment to reading of and response to the dynamic content of the course. Examples of this commitment include being the first to post messages, recognizing the contributions of other participants, recognizing group achievements and being explicit about commitment to collaborative work and accountability to the group.

The facilitator was seen to play an extremely important role in creating and maintaining the infrastructure of the course as well as providing support. Respondents in all groups indicated particularly high expectations for responsive support from facilitators. Some of the facilitator roles identified included: creating an inviting social climate, prompting learner responses, responding to emergent issues in the course, structuring discussion topics, creating spaces for work groups, maintaining flexibility with timelines, aiding in the selection of content and responding to emergent issues. The notion of 'responsiveness' was seen to include timely responses to student queries and feedback on progress in the course. In courses which were seen as less supportive, there was a clear indication of a need to re-assess facilitator roles and the implications for facilitator activity.

These findings highlight the need for clear and explicit roles in online learning environments owing to differences between group process in face-to-face and mediated environments.

Orientation Activities - Respondents noted that meaningful orientation activities which not only contributed to learning but also initiated a sense of 'group' or community within the course were supportive. Some participants went further to suggest that these activities need to be followed up to promote the ongoing development of cohort and community within courses as these characteristics were supportive. These findings suggest the importance of orientation activities which: (a) explicate group norms of behaviour; (b) provide opportunities to begin interactive relational processes early in a course; and (c) promote an understanding of group roles, rules and process. However, these points were not explored in detail. Given the points above regarding the need for novice online learners to learn skills necessary to cultivate online social presence, interact with one another effectively and collaborate, orientation activities represent an important area for further consideration and study in creating supportive infrastructure.

Rules which support interaction - A number of respondents in one case noted the negative tone of discussions early in the course as learners struggled to adjust to the new online environment. For some, the negativity was very off-putting and seemed to undermine efforts to establish the course community or create an inviting course environment. Some suggested that clearer rules for participation would help address this issue, including the establishment of norms for behaviour. Other suggestions included the need for accountability mechanism to support these rules.

Facilitating Structures

Group and Community Structure – Structuring was seen as an important supportive function. Participants commented on numerous aspects of the organization and structure of the courses, identifying some as very supportive and suggesting changes in others. The structures identified included issues from the number of discussion areas to suggestions about content selection to the creation of workgroups within the course.

In particular, the size of the course cohort was discussed. Some groups were deemed too large for the development of meaningful relationships or community and the use of smaller work groups was identified as supportive structuring technique. Although no ideal group sizes were suggested, some participants commented very favourably on their experiences in the small group of 10-15 members while others had mixed comments about very small groups of 3-4 members: some liked the intimacy of small groups; others felt that this technique segmented the whole class into too many subgroups.

Of interest was the basis for group creation. In one course, the whole group was divided based on professional contexts into school teachers, tertiary educators and corporate trainers. This basis was seen as providing an important source of commonality for participants which helped them identify shared attitudes, beliefs and experience as a basis for relationship building. The grouping also helped them establish commonality of purpose in their learning activities and focus their efforts on shared objectives. Small groups were seen as a means of promoting the development of community within the course, albeit in 'groups within the group'. However, respondents also noted some need for progression in the creation and use of groups. It was suggested that groups should be periodically re-formed in order to expose different individuals to one another and thereby introduce new ideas and fresh perspectives to group activities.

The notion of community was seen as an important source of support. As part of the development of small communities within the larger course cohort, participants identified: (a) an enhanced sense of the identity of group members with whom they were interacting and a related greater sense of accountability to those individuals; and (b) a greater commitment to group activities and the shared goals that emerged. Critical discourse within these community structures was identified as a very important aspect of learning in text-based online environments. Some

participants were vocal in their identification of the supportive nature of these workgroups and identified it as a highlight of their postgraduate program. Others indicated that the experience had (positively) changed their views of social support and collaborative activity. In particular, this was seen to influence the roles of participants and imply a set of rules for activity which include timely response/contribution and maintenance of a positive social climate through the use of netiquette.

Content - Respondents identified an important supportive role in the selection, management and use of course content, including the participant generated dynamic content. The content structure is important because learners take meaning from such structure (Laurillard, 2002). In some courses, the quantity of content was seen to be excessive, even burdensome. As a result, participants highlighted the need for informed content selection in order to focus their efforts on the most important tasks and information. The selection of content was aided by advice from peer learners and the facilitator.

Flexibility – As indicated above, participants noted the need to balance structure and flexibility. In particular, participants in courses running over the shortened summer term commented that a lack of flexibility in the shortened term undermined the general notion of a course as 'supportive'. Conversely, participants in other terms commented favourably on the flexibility afforded in those courses. This suggests some need for attention to the alignment of course processes with institutional timelines and the need for supportive flexibility.

4.2.2.2 Do learners perceive particular courses as more/less supportive than others? How? Why?

Referencing their experiences in other courses, respondents commented on the relative levels of support in various courses. The most frequently mentioned indicators of the quality of support were the activities of the facilitator to structure and support learner activity and the instructional design of the course. Courses with visible, active facilitators were preferred to ones with less visible facilitators. Expectations of active supportive facilitation were high in all respondent cohorts. Also, course designs which provided clear processes with adequate supports were preferred. Aspects of design which were considered supportive included alignment

among objectives, processes, tasks and assessment and flexibility which accommodated learners' needs.

4.2.2.3 *Do participants recognize infrastructure as supportive? Value it?*

Although they did not refer explicitly to the term "infrastructure", respondents clearly recognized supportive structure within online courses. As indicated above, they cited instructional design, task design, assessment structures, clear and explicit course processes, orientation activities, group and community structures, explicit participant roles and 'rules of engagement' as supportive insofar as they met learners' needs within the courses. Responses indicated a high value on clear, coherent processes within courses which were supported by responsive facilitation.

4.2.2.4 *How do learners in online courses experience learner support in the human--human interaction within the course?*

Respondents indicated experiencing support in interactions with both facilitators and peer learners:

Facilitator activity. Further to the points above about roles, facilitator activity was seen as an essential form of learner support. Respondents indicated high expectations of timely, responsive support from course facilitators. They viewed responsive support as perhaps the single most important function of online teaching staff. Most often, a lack of support was associated with a lack of timely response from the facilitator and the negative impact this had on both interaction and the facilitator's presence. Expectations of supportive facilitator activities included: (a) responding to questions; (b) providing feedback on ideas in discussions; (c) providing encouragement; (d) facilitating connections between learners: and (e) moderating discussions, including enforcing norms of behaviour.

Underpinning responses about facilitator activity was the expectation that online teaching staff have a traditional role as authority figures in the online learning environments. While respondents conceded that teaching staff may defer their roles as subject matter experts to other parties, they indicated expectations of being led by an active teacher figure. Despite working within pedagogical approaches which espouse learner centredness, respondents indicated a strong preference for a highly visible, active teacher who assumes authority for managing and facilitating the learning process. Furthermore, respondents explicitly refused to accept the notion

that they or their peers could take responsibility for such activities. Respondents suggested that as clients, learner support was what they were paying for in formal education. They were unwilling to assume leadership and management of the processes which constituted the services in question.

Peer support. Findings regarding the role of peer support were mixed. Throughout ongoing discussions about social presence, interaction and learner support, respondents indicated a valuing of peer support provided through interpersonal interaction. This interaction was seen to be an important source of affective support. Interpersonal interactions provided motivation for continued interaction and reminded learners that they 'were not alone' in their studies. Respondents also noted that they frequently benchmarked their progress against that of their peers when discussing particular aspects of the study program. This was seen as an important form of feedback. Finally, respondents referred to successful collaborative activities in which they experienced a wide variety of supports that included: (a) other affective benefits such as a sense of accomplishment and satisfaction with the learning experience; and (b) academic benefits from working interdependently in a diverse group.

By contrast, relatively few participants indicated high expectations with regard to peer support or high levels of commitment to collaborative processes. Following from the points in the previous section regarding support from the facilitator, a majority of respondents indicated that they expected support from the teaching staff, but had little expectation of support from peer learners. Furthermore, comments suggested that, despite being engaged with a learner-centric process and realizing the benefits of successful collaborative activity, they had limited expectation of peer support and little commitment to collaborative processes. However, participants also noted that their views on collaboration were changing as they gained experience. This may be an area for further investigation.

4.2.2.5   *Do participants find interaction supportive?*

Respondents clearly affirmed the supportive nature of interpersonal interaction. As indicated above, interaction and the related notions of social presence and the development of relations between individuals were highly valued. This value was associated with a combination of academic, affective and

administrative supports derived from interaction with others in the online environment.

4.2.3   Findings Summary

Taken together, the findings above indicate not only the role and function of social presence and its relationship to learner support but also provide insights into the operation of contemporary online learning environments as experienced by online learners.

Six key points emerge. First is the notion of social presence as a quality of people, not media. This point is significant because it emphasizes people over technology (or media) and provides a platform for the study of social presence as a quality of human activity. The immediate implications are that, as a characteristic of individual participants, social presence can be cultivated and the cultivation of social presence can be learned. This highlights the second key point: the establishment and ongoing development of social presence. The identification and explication of progressive development of social presence informs the design, development and implementation of learning programs which utilize mediated environments. Given the role and function of social presence indicated above, the development of social presence can enhance learner experiences of online learning.   Third is the link between social presence and the development of interpersonal relations in mediated environments. Relations are at the core of contemporary views of learning. Understanding the cultivation and development of relations in mediated environments informs the development of processes such as collaboration and community development which draw upon these relations. Fourth is the relationship between social presence and interpersonal interaction. Interpersonal interaction is widely acknowledged in the literature as an important component of online learning (e.g. Beuchot & Bullen, 2005; Burgoon, 2000; Ge & Tok, 2003; Gunawardena & Zittle, 1996; Jung, Choi, Lim, & Leem, 2002; McIsaac, Blocher, Mahes, & Vrasidas, 1999; Swan, 2002). Furthermore, it is acknowledged in this study as highly valued by online learners. The findings here indicate a complementary relationship between interaction and social presence and indeed an important role for interaction in the development of relations. Appreciation of these relationships is critical to the understanding of social processes in mediated environments and the improvement of the practices of online teaching and learning. Fifth is learners' experience with

learner support in online learning environments. As with all educational environments, learner support is important. However, given the differences experienced by learners in mediated environments, it is necessary to understand the development and ongoing provision of learner support in these environments. The findings suggest important roles for both static supportive infrastructure and more dynamic responsive learner supports. Sixth, and finally, is the relationship between social presence and learner support in online learning environments. Given the points above regarding static and dynamic supports, social presence enhances the provision of learner support both directly, in the case of dynamic support, and indirectly, in the operation of supportive infrastructure. The implications of these six points are far-reaching and are addressed in Chapter 5.

4.3   Case 1: OTea1

As the first case, OTea1 was somewhat distinctive amongst these four cases. Relative to the other cases in the collective case, OTea1 was more exploratory in the approach to the research questions and emergent issues. Questions and initial issues were drawn from current literature in order to provide preliminary structure to the process. Additionally, the process was structured to accommodate emergent data and to allow those data to guide the ongoing enquiry. With the benefit of the findings from this case, later cases were more closely focused on the key issues which emerged from participant experiences.

OTea1 is presented here with reference to particular details from the dialogical process and instruments used to collect information. In later cases, this detail is omitted for the sake of brevity and the focus is on the results of the process.

4.3.1   Questionnaire

The questionnaire sought to collect three types of information relevant to this study: (a) baseline information about respondents; (b) general information about respondents' experiences with the issues identified in the questionnaire (i.e., social presence, interpersonal relations, and learner support); and (c) the identification of emergent issues for further exploration in the ongoing dialogical process. See Appendix A for a copy of the questionnaire.

The baseline information targeted by the questionnaire included:

1. information about the respondents' levels of experience with online learning based on both (a) the number of online courses they had completed (Item 1) and (b) whether or not they had taught online (Item 3);

2. respondents' self determined levels of activity indicated as frequency of activity in their online courses (Item 4);

3. their expertise with CMC (Item 7);

4. their comfort with CMC (Item 8); and

5. their preferences for either individual or collaborative work of various types (Item 9).

The baseline information for Case 1: OTea1 is summarized in Figure 4.2.

These results indicate that the respondent cohort for this case was relatively experienced, with 5 of 6 participants having participated in three or more online courses and 4 of 6 having been involved with some form of online teaching. Moreover, the group was comprised of online learners who participated at least regularly (5 of 6), characterized themselves as at least capable with CMC (5 of 6) and were generally comfortable working in this medium (6 of 6). Given that the aims of the study were related to accessing the heuristic knowledge of participants in text-based online learning environments, the combination of experience and self-reported ability with CMC made this respondent cohort nearly ideal for this study.

Notably, most respondents (5 of 6) indicated a preference for individual activity. They ranked at least 2 (of a possible 3) individual learning activities in their top three preferred activities. Despite commenting favourably on social aspects of learning and the supportive nature of interpersonal interaction and other social processes, individually, respondents claimed to prefer individual work. This pattern is present in 3 of the 4 cases and in the findings of the collective case as a whole. It indicates one possible area for further research.

Number of respondents	Experience with online education		Frequency of activity		Expertise with CMC		Comfort with CMC		Preferences for learning activity
	Courses Taken	Teaching activity							
6	5+ 3	Yes=4	Always	3	Expert	0	Always	4	Individual
	3-4 2		Regular	2	Very capable	3	Usually	2	activity=5
	1-2 1	No= 2	Occasional	0	Capable	2	Sometimes	0	Collaborative
	0 0		Rare, never	1	Novice	1	Rarely, never	0	activity=1

Figure 4.2 Baseline data for OTea1

Regarding the respondents' more particular experiences with online learning, questionnaire items focused on the two main areas of interest to this study: social presence and learner support. Given the background to social presence identified in Chapter 2 and the research questions identified in Chapter 3, this study was concerned with the extent to which participants in online environments were able to identify other students in the online environment, the extent to which participants could and did differentiate between other participants and how they used that information as part of the social-relational system in online learning environments. As such, the questionnaire targeted general information about participants' experiences with social phenomena within the course such as a sense of community (Item 10), a sense of knowing other members of the group (Item 12, 13) a sense of being known to others (Item 14) and the importance of social presence in online learning environments (Item 16), as well as how those experience affected their behaviour within the course, if at all (Item 14b). The questionnaire also targeted more specific information about respondents' ability to identify details of peer learners such as personal details, professional details and personality traits (Item 11, 12).

Results from the questionnaire with regard to respondents' experiences with social presence and social-relational activity in the online course indicated that, despite the questionnaire being administered in the early phases of the course (week 4 of 16), the social-relational system within the course was operating and social-relational activity was evident to the respondents. All respondents (6 of 6) were able to identify some sense of relationship with their peers in the course and most (5 of 6) described some sense of knowing their peer learners. Moreover, respondents indicated that they were able to remember details about a number of other participants in the course with all respondents (6 of 6) being able to recall personal details of at least one other member of the course, and most (5 of 6) being able to recall either professional details of at least one other member and personality traits of at least one other member of the course. All respondents (6 of 6) were able to describe another member of the course cohort with regard to personal, professional or other individual characteristics. These responses indicate that respondents recognize and remember particular indications of social presence and that these cues take a variety of forms such as personality traits (e.g., disposition, sense of humour), professional details (particular role, area of specialty) and personal details (locality,

family situation). Further, they indicate that the respondents generally viewed other participants in the course as human beings and, more importantly, as real and salient social actors insofar as they were able both to recognize and remember personal characteristics and to attribute characteristics such as personality.

Notably, all respondents (6 of 6) indicated that they did not recognize all participants in the environment equally well. While this may be due to a variety of factors, responses indicated that different individuals display different degrees of social presence in online environments and so are likely to be recognized as more or less present than other individuals.

There were indications that, as readers and interpreters of social presence, the respondents' recognition of different participants was affected by three main factors: *ability*, *opportunity* and *motivation*. In terms of ability, there were suggestions that the ability to recognize and interpret social presence cues developed over time and that more experienced online learners had more skill in this area. The implied other side of this point is that novice online learners do not come to the environment with the skills necessary either to read or to cultivate social presence and that this has effects on their ability to interact. Opportunity is related to the opportunity to interact with other participants. Respondents noted that in large groups, they were not likely to interact regularly with more than a few other participants and that this affected their ability to get to know other participants outside that small group. In other words, relations among individuals are partly dependent upon their opportunities to come in contact with one another and engage in meaningful interactions. Regarding motivation, respondents indicated that the likelihood of recognizing and remembering others in the online environment was related to both (a) their personal interest in the other parties and the information they provide and (b) their need to interact. In particular, a sense of relation and interpersonal relationships were seen to be related to interest and need. Personal interest was seen to be related to the notions of *commonality*, *connection* and a *sense of history* and the exchanges were seen to influence the degree to which relationships emerged and developed over time. Commonality was seen as a quality of sharedness between individuals, i.e., something in common. Respondents indicated that they were more likely to remember individuals who seemed like themselves and potentially more likely to interact with them in the future. Connection was presented by respondents as a relational link between individuals. It was suggested that this is a basis for the

development of sustained interpersonal relations.   A sense of history was also posited as the basis for the formation (or reformation) of relationships between individuals within a course cohort. Participants commented on recognizing "familiar names" from previous courses and noting the particular presence of individuals they had encountered previously. These concepts of commonality, connection and sense of history provided a basis for further exploration of social presence, interpersonal relations and related concepts as the dialogical process progressed. The need to interact was provided by learning tasks which required interaction.

With regard to recognizing the social presence of individuals, respondents indicated a strong sense of presence from the facilitator. In this case, the facilitator was seen to be "heavily involved" with the course and communicating with a "supportive, positive tone". It was recognized that the facilitator was not only "professional, committed and enthusiastic" but also a person who was "sympathetic" and "willing to have a laugh". Responses indicated that this high degree of social presence was valued by participants.

By contrast, respondents indicated that they were much less sure of their own social presence. While all of the respondents (6 of 6) indicated that they thought about their social presence and were aware that they were being perceived by others in particular ways, they were not sure what those perceptions might have been. This seeming paradox was identified as an area for further exploration in the ongoing process.

Respondents were also asked about their general experiences with learner support (Items 17-20), their preferences for learner support (Item 17b), their personal characterization of the support within each course with respect to five key areas: technology support, course design, facilitation, peer interaction and the social infrastructure of the course (Item 17a) and their experiences in the provision of peer supports as a form of social support within the course (Item 20a). Responses indicated a relatively high level of support experienced in OTea1 with all (6 of 6) respondents indicating that the course was not only supportive in general but also "supportive" or "very supportive" in each of these five dimensions of learner support. The course facilitator and peer learners were seen as the preferred source of support, indicating a preference for responsive *in person* support structures to more static supports such as design or infrastructure. This preference provided *entrée* to a potential link between interpersonal relations and the provision of online learner

support. Indeed, half of the respondents (3 of 6) were able to cite examples of when they had provided support to peers in their online studies. This was seen as an area for further exploration in the ongoing collection of information.

The in-process analysis of the questionnaires yielded a number of potential issues for exploration in the next phase of the dialogical process. Briefly, these included:

1.   Exploring issues related to both recognition of other individual participants and differentiating among them as social actors, including issues such as (a) commonality, (b) interpersonal connection and (c) sense of history in relationships

2.   Defining social presence, establishing a shared notion of this concept

3.   Exploring the role and function of social presence in text-based online learning environments, including potential relationships between social presence and (a) interaction, (b) the development of community, (c) the promotion of critical discourse and (d) the provision of in-person learner support

4.   Identifying instances of social presence in peers, the facilitator and self

5.   Identifying supportive structures such as participant roles and rules of operation in the environment.

These issues were used to frame questions for the next phase, one-to-one interviews.

4.3.2   Interview 1

The individual one-to-one interviews provided opportunities for further exploration and explication of points made by individual respondents in the questionnaire phase. Questions were drawn from a combination of particular responses made by each individual and the general issues identified in the previous phase of the process. In answering the questions posed in the interview, respondents drew upon a combination of general experience with online study and the particular experience of the course in question. Respondents were asked to support general assertions with reference to particular experiences whenever possible.

The results of the in process analysis of the interview transcripts indicate several main themes for exploration in the focus group discussion. Generally, these can be grouped under three headings: (a) the nature of social presence; (b) the role and function of social presence within the social-relational environments within

online learning environments; and (c) learner support in online learning environments.

The nature of social presence.

Social presence was portrayed as a combination of the messages individual social actors send and the way those messages are interpreted. The nature of the cultivation of a personal social presence through the sending (transmission) of social presence cues and the reading (receiving, interpreting) of those cues was unclear.

A typical response is included below. *Please note: all respondent contributions have been edited for readability, including the correction of typographical errors which may obscure meaning and some formatting changes to improve the overall presentation. However, they have not been edited for writing style, expression or mechanics in order to preserve the respondents' individual voices. Pseudonyms have been used in all cases to protect the identity of respondents.*

Interviewer:	*Social presence…you think it's important?*
Marco:	*This is a new term for me. So I'm not sure if I interpret it right…I think it has a few meanings and I don't know which one is the "standard" one.*
Interviewer:	*(What does it mean to you?)*
[…]	
Marco:	*Does it mean – I think people think I exist? People recognize my name? People look to me as a peer/learned peer? I recognise people? I look up to someone with social presence? I still haven't decided.*
[…]	
Marco:	*Or maybe it's just that thing about thinking people are real.*
Interviewer:	*In the questionnaire, you mention having a voice and being heard.*
Marco:	*Nice one! […]Yes, maybe that is it. You feel there is listening going on. I like that one.*

This exchange indicated that while respondents were aware of social presence, their understandings of this concept were not fixed. As they gained experience with this phenomenon and reflected upon those experiences, they became aware of the complexity of the concept.

It was suggested that online learners learned about social presence through interaction with others and roles models within the group. Both the facilitator and other experienced peers were seen as important role models for social presence.

> *Interviewer:*   *What does [the facilitator] do to convey a sense of presence?*
> *Marco:*   *Her messages, almost daily, her feedback on what she has learnt from our submissions, the chat forums she organized. She is almost as present as an f2f teacher!*
> *Interviewer:*   *That response would indicated that presence is generated "by volume"…is that correct? More input, more presence?*
> *Marco:*   *Not quite the "volume" but rather the "thread of communication" that is there every day. It's like she's accompanying us all the time.*
> *Interviewer:*   *Do you get a sense of her as a person?*
> *Marco:*   *Exactly. It's like there is a real person behind the course, even without a face it's OK.*

While respondents indicated that they were aware that they were seen to have a particular social presence by other members of the course cohort, they did not have a clear idea of what their presence might be. Therefore role models were seen as particularly important influences on the development of positive social presence.

Regarding both the sending and the reading of these cues, while some respondents indicated that this was a deliberate, conscious activity, others indicated that they did this unconsciously. There were indications that the reading of social presence is a learned skill that develops over time. These issues were identified as areas for confirmation and further exploration in the ongoing dialogical process.

The role and function of social presence.

The role and function of social presence were discussed generally in the interviews with the aim of accessing both respondents' beliefs about the role and function of social presence and also their experiences in the online environment which support those beliefs. Illustrative excerpts from respondents' interviews are included below.

Social presence was discussed as a means for 'getting to know' others in the online environment.

> *Interviewer:*   *You mention gleaning information about your fellow participants by "reading between the lines of their postings"…tell me about that*
> *Andy:*   *Well, I suppose just as you can read a "hidden agenda" type of thing when people talk…I suppose it's possible to infer what people might be really saying by the way they phrase things…*
> *Interviewer:*   *What sort of information is between the lines?*
> *Andy:*   *I suppose you can tell a lot about the type of person someone is…whether they write very directly or use a lot of flowery adjectives in the writing…Also I think you can tell things about them by the use of SMS talk.*

The notion of getting to know other parties was seen to provide important benefits such as the creation of context for the communicative exchanges.

> Interviewer: Is social presence important and why/not?
> Don: I think it is...because the more you know the person you are communicating with...the better you can adapt what you're saying to match their experiences...you can use examples you know they will understand...if you know they appreciate your humour you can use it to good effect...if you know something about their family or their interests...you can use it to make links and establish rapport...all of these things help to open up the lines of communication for more serious stuff

Further, knowing others was seen as an important precondition of trust in the critical dialogues that constitute many of the interactions between participants.

> Interviewer: I'm missing the connection between social presence and being direct/frank...can you elaborate?
> Tina: I think people are extremely polite to peers who have all achieved in their field, until they know them better...not that polite is bad, but frank is better. You cannot be frank if you do not trust or are not trusted...You cannot trust without knowing the person.
> Interviewer: And knowing the person?
> Tina: Being sure they are sympathetic, concerned, have some common goals...a real person
> Interviewer: So social presence is important?
> Tina: Absolutely.

Social presence was also seen as important for establishing a sense of commonality between parties.

> Interviewer: Let's explore that sense of "relating"...In your questionnaire, the peer you described...you seemed to have a sense of relating to her...what was that based on?
> [...]
> Andy: She seems to be thinking the same things as me...and yes, I know, it turned out she works in a similar field as me. And seems to have similar experiences to me
> Interviewer: How do you know that?
> Andy: Personal comments in the forums, I think.
> [...]
> Andy: Her replies to my post were similar to thoughts I had...Yes, I know...Things that she said were very similar to someone I know at work
> [...]
> Andy: Being able to "put a face" to the online person I suppose gives her a personality (...)

[…]

Andy: And yes, I do feel a sense of commonality with her because of ours similar positions.

Several main themes emerged in the interviews including identifying *commonality* as a basis for interpersonal connection and relation, using social presence to create *context* which aids in meaning making and supports the provision of situated responses, the identification of traits in others as a basis for *interdependence*, the notion of *group cohesion* and the role of social presence in promoting ongoing interpersonal interaction. Each of these was viewed as an area for further exploration in the ongoing dialogical process.

Learner support in online learning environments.

A number of respondents commented on the links between social-relational activity and support in online learning environments. Respondents indicated that they generally valued human--human interaction and found it supportive of their efforts as learners both for social support and more task oriented academic support.

Supportive interactions were highly valued.

Interviewer: You indicate that you value supportive facilitation and peer interaction…why?

Don: I think it enriches the learning experience…discussions need a balance of freedom and structure…that can come from both the other students and from the facilitator…the good facilitator knows when to step in and when to let the discussion flow…keeping a discussion on track requires both proactive and reactive…

[…]

Interviewer: Can you give an example of how you've provided peer support?

Don: One example that comes to mind is in the discussion group recently it was evident from another student's response…that she wasn't feeling very confident about her ability to contribute something worthwhile to the group…I replied to her saying that I valued her contributions and gave examples of ways in which she could contribute to my knowledge of the topic.

Interviewer: How did she respond?

Don: She seemed to be reassured by this…at least that is what she said in her reply. I hope it was true

[…]

Interviewer: Do you think that your comments made a difference because they came from you?

Don: I think it often helps when these things come from fellow learners…They often feel you are sharing common experiences [and] are likely to be more empathetic than, for

> *example, a facilitator, who they perceive (rightly or wrongly)*
> *is wearing a different hat.*

Also there was an emergent sense that peer learners had an important role to play in the support process.

> *Interviewer:* *How important are peers in the process?*
> *Tina:* *Until this course, I would have probably said "just for social support"…But we have tackled some interesting issues in our forum – e.g., the place of "content", critical literacy, futures in schools etc., and the perspectives offered have made a difference to the way I think. So, very important!*
> *Interviewer:* *…but not just for social support?*
> *Tina:* *No, for learning as well.*

Interdependence in collaborative situations was seen as potentially supportive.

> *Interviewer:* *What is your role as a member of the group in terms of supporting others?*
> *Margaret:* *I have probably been more active in past courses than I am in the current one, but have felt a sense of responsibility for others – sharing resources, posting comments to react to and support others, making sure that others are comfortable*
> *Interviewer:* *Why?*
> *Margaret:* *Because it's a round world, I guess, and I believe that what goes around comes around*
> *Interviewer:* *Do other people do that for you?*
> *Margaret:* *We all succeed more I think when we support and react to each other, otherwise we are in a vacuum, and back to those books and regurgitating assignments. […] Yes, I'm sure others do that for me too…*

Interpersonal interaction was valued by respondents for its role as a source of support. Issues for further exploration included the links between social presence and interpersonal interaction as a form of support.

As a result of the in process analysis, a number of issues were identified for discussion in the following phase. These included:

1. *The role and function of social presence.* This theme was organized around the general question "Why is social presence important?" and included the following central issues from the interviews: (a) establishing a connection with other members of the group through the identification of shared experiences, goals, attitudes, etc - i.e., establishing 'commonality'; (b) creating a 'safe' environment and building trust or rapport between participants; (c) Helping identify the attitudes, skills and abilities of others and so inform a choice to interact (or not) with them - i.e., creating

'interdependence'; (d) showing that others in the group are 'in attendance' – there is someone out there 'listening' and your messages can be tailored to that audience; and (e) creating context to help you ascribe meaning to other participants work e.g., if you know where someone is 'coming from' you can understand his or her comments better.

2.   *The skill of conveying a sense of personal presence.* Does this skill develop over time? If so, how? Also included here is the notion that social presence is an individual concept and that different individuals have different degrees of presence in an online environment.

3.   *The nature of social presence.* Social presence is portrayed as a combination of the messages individual social actors send and the way those messages are interpreted. Also of interest is the nature of both sending (transmitting) and reading (receiving, interpreting) social presence. Is this a conscious or unconscious activity?

4.   *The importance of peer support in online learning environments and the potential links among social presence, interaction and in-person forms of support.*

5.   *The role of the facilitator in managing the social-relational system with a course (with particular reference to the concept of community) and as a provider of learner support.*

6.   *The extent to which OTea1 is a supportive course*, with reference to particular examples of supportive (or otherwise) structures.

4.3.3   Focus Group 1

Activity in the first set of focus group discussions was structured around the issues identified above. Each of these was presented in an asynchronous discussion space and respondents were asked both to respond to the question/proposition as posed and also to comment on other respondents' input with the purpose of either confirming or refining the emergent ideas.

Respondents commented further on the role of social presence cues in aiding with the development of context for communications and the related benefit in terms of meaning making.

> *Tina:*   *I also think you can have a perception of face-value and "looking beneath the face value" of comments, and therefore extracting the real meaning of comments. Sometimes when I*

post a comment that somehow doesn't come to grips with the real message I am delivering, someone else looks past clumsy language and picks out the guts of what I am saying. This shows understanding, not just of the words, but of the person who "said" them. This is comforting.

They also commented on notions of getting to know others in the environment and the benefits thereof.

Don: *I guess the "getting to know people" process has tended to fall into two main categories:*
1. The explicit statements, e.g., in the introductions forum where people explicitly tell you things about themselves. From this I tend to store away information like people who work in similar environments to myself or who have similar interests. Now and then when I can't quite picture another person in the discussion, I have a peek back at these introductions.
2. The information that can be teased out of what people say and how they say it. This can be attitudes, opinions, feelings, etc, etc. Of course you have to be careful that you don't be too simplistic in inferences drawn here. There is a danger of over-stereotyping people. This danger can be alleviated by more interaction with the person to test your first impressions of them, and to tease out what they really meant by earlier statements made. No difference from f2f, I suppose; the more you interact with someone the better you get to know them. It's just the medium for interaction that is different.

Don: *My experience on OTea has led me to believe that social presence is very important when interacting with other learners in online learning. I say this because:*
1. I have become much more confident in "talking" to other learners as I have come to know them better.
2. As my confidence in communicating with the others has increased, the value of my learning has increased because I have been more prepared to say what I think, to pose questions and to challenge opinions that I don't agree with. This all comes from feeling that I am in an environment where I can trust the others to treat my comments with respect and not to get upset if I don't agree with their views. Knowing people better helps develop this trust.
3. Although I try to spread my communications across the group, I tend to communicate with some people more than others because I have come to know them better. It's like being at a party. You start off with good intentions to mingle but usually end up talking most to your friends.
4. Communication has become easier with other learners I know a little about. I can make assumptions about their

background knowledge and experiences without having to spell everything out in detail. For example, I have come to know people who have a similar teaching background or have similar interests and this provides common ground for discussions.
5. Some learners who have had little presence in the discussions have been very hard to get to know and therefore difficult to strike up a meaningful conversation with.

Reinforcing the information collected in the interviews in phase two, the notion of *commonality* was prevalent.

Andy: *By working in a small group of "school teachers", I felt that, right from the beginning, I was clearly identifiable as belonging to a particular educational sector.*

I have felt much more comfortable sharing experiences and comments about my job than I would have if I felt that others reading them were university people- tutors, lecturers, etc. I know very little about that sector so I suppose I hold them in a certain amount of awe.

As a result of feeling more comfortable in this smaller "schoolies" group, I think my "personal social presence" or online persona has become more obvious or "out there". This is probably through being more willing to make personal comments, jokes or asides.

Respondents also commented on the notion that the ability both to read social presence cues and to convey a sense of presence was a learned skill. This was seen to include awareness of one's own presence.

Don: *I am sometimes (but not always) aware of my own social presence. I think the awareness relies very much on the mirror that is provided by other group members through their responses and communications with me. I think I can only guess at my own presence without this feedback from others. This doesn't mean that without feedback I don't have any presence but that I have less chance of realistically gauging that presence.*

When somebody responds in some way that shows they have reacted positively to something I have said online then it acts as reinforcement and I tend to continue to say similar things or at least to be more confident in contributing to discussions.

Marco: *Tina, I wonder about your comment: "If we subscribe to the theories underlying online learning, then we have to subscribe to the idea that collaboration is important". Do you think you*

> *were aware of this during your first course? I certainly wasn't. I agree that it is important but I also like the freedom to come and go as I please to the forums and still pass my course.*

[Subsequent posting]

Don: *Just to confirm with you [Marco] there, I certainly was not aware of the importance that the literature placed on online collaboration during first semester. I think my online presence demonstrated this.*

[Subsequent posting]

Andy: *This is definitely the case. My own online presence in this subject must be much more obvious than in the subjects I did last semester. [...]*
(a) This has definitely resulted in a stronger sense of community in the "schoolies" group - at least in my mind, if not in other people's.
(b) The differing degrees of presence of different participants has not affected my own collaboration. The exception to this would be if there were so many people not contributing as to affect the quantity of posts. If there were dramatically fewer posts, then there would be fewer comments to comment on.

Different individual were seen to display differing degrees of presence.

Don: *I certainly agree that different participants exhibit different degrees of social presence. However, this is not restricted to online environments, is it? It is also true in f2f situations. Physical presence doesn't necessarily equate to social presence, although in the f2f case it could be argued that it is easier to employ strategies to develop the social presence of each student.*

An example: in [OTea1] to my perception there is a range of degrees of social presence exhibited by other learners. The whole course group has been divided into 3 discussion groups. The people in the other two groups besides my own have little social presence to me; just a little picked up from general introductions and the occasional message in the general forum. Within my own group, the social presence is certainly stronger than for people outside the group, but there is still quite a range. For me there are about 3 other people who have a very strong social presence, 3 or 4 with a moderate presence and a couple with little presence at all.

All this results in little sense of community across the whole course group but quite a strong one within the smaller group (although obviously I can only judge this on my own group).

In this course, peer support, in its various forms, was seen as important to some:

Tina: *For me, peer support is essential. Not only the cute personal comments, although they are nice, but also the intellectual support of my statements, definitions and positions. It addresses my need for feedback, and allows me to re-think my position on many things. Of course, an intellectual "feeel-good" feeling leads to other nice thoughts about one's collaborators!*

Marco: *Rather than peer support I'd like a bit more peer challenge. Like [Tina] mentioned in this forum and another posting, I like to have a good serious discussion too. While the niceties are essential in getting things going, it often doesn't go much further than that*

[Subsequent posting]

Interviewer: *In terms of support...the operational definition I use is "Support meets my needs"...Do you have a "need" to be challenged? What are the prerequisites for creating an environment where participants are comfortable with challenging and being challenged by others? That is, what is "needed" for this to happen?*

[Subsequent posting]

Marco: *I think I do have a need to be challenged. That is why I am here. I want to be stretched, to be made to think. Otherwise I wouldn't be doing this masters.*

Don: *I think peer support is very important in the online environment. There is probably more need for explicit support than in a f2f situation where there are more opportunities for support to occur almost incidentally because of the physical presence of the people in the group. In an online environment it is easier for people to feel isolated and peer support can be very useful to ease this problem. Simple things like getting confirmation from peers that you are on the right track with an assignment or that your interpretation of a reading can be extremely powerful ways of overcoming feelings of isolation. Feedback that indicates that other people are having similar problems to yourself can also be very reassuring. It can keep you going during those low times when you ask yourself why you are sitting at the computer plugging away when you could be out in the garden (it's a beautiful day as I look out my study window) or reading a good book.*

Margaret: *I would think of myself in any situation as a "social" kind of person. Friends are very important to me and their opinions and interactions with me greatly affect my life. It is not surprising, then, that I believe that peer support provided through person--person interaction is important to the group.*

If a group is supportive and reactive, then I think that it encourages further interaction by participants, and my past experience indicates that this interaction can produce good learning opportunities. Looking at the discussion boards for an earlier topic of "Flexible Learning" this semester, I feel that the better comments were from people who responded to someone else, rather than those who were posting a new comment not related to others. Somehow the process of reflecting on the views of others and deciding if you agree or not, and to argue why or why not, is a valuable and memorable learning experience. We all look to see if anyone else has responded to what we have posted, because what we post has been important to us as a contributor and a part of the group.

In particular, affective supports were seen as related to peer support.

Don: *Affective support is very important to many learners, although the degree varies from one person to another. For example, I have often been described by others (even my best friends) as an introvert in the sense that I tend to get my ideas from within. However, that doesn't stop me benefiting from affective support from others but perhaps my need for such support is not as great as learners who might be described as more extroverted. I certainly enjoy belonging to a group, especially one that has similar interests to my own, and the group experience I have shared with other teachers in [OTea] has been particularly rewarding.*

The collected responses from Focus Group 1 were synthesized into a summary by the Interviewer for confirmation by the respondents. The summary included the following key points from the discussion:

1. *Social presence exists.* This point was accepted with little reservation. Respondents indicated that they had experienced social presence and were aware of it in online environments.

2. *Social presence is valued by participants in text-based online environments.* Respondents indicated that they valued social presence for its role in humanising the experience of online study and helping them overcome feelings of isolation in the online medium. Social presence was seen to have a number of beneficial effects (see below).

3. *Social presence may be important (or beneficial) because: (a) it helps establish rapport between participants in an online environment; (b) it helps create a sense of community; (c) it help promote a sense of intimacy*

(closeness) and immediacy between participants; (d) it helps promote further interaction; (e) it contributes to the development of trust and the creation of a 'safe' environment; and (f) it helps create a context against which participant comments can be situated and meaning can be made.

4. *Different participants exhibit different degrees of social presence.* Respondents suggested that online social presence may be analogous to face-to-face notions of presence in that different individuals with different personalities and other characteristics present themselves differently and are perceived differently (as individuals) within the group.

5. *Social presence arises from interaction; without interaction, there is no 'presence'.* After some consideration and debate, respondents tentatively indicated that this was possibly a 'chicken and egg' proposition, but that while interaction can take place without presence, the opposite case was not possible and interaction must precede the development of social presence.

6. *Because it promotes trust, intimacy and feelings of community, there may be a link between social presence and learner support* as there are indications that social presence contributes to conditions which help meet learners needs--especially affective needs-- but also needs for interaction (leading to meaning making), creation of context (also leading to meaning making), *opportunities for challenge (i.e., critical discourse).*

7. *Peer support is valued by most online participants.* Respondents indicated that peer support and other forms of social support were important to their study. Some indicated that this form of support was not essential, i.e., it was 'nice rather than necessary' but the presence of peer support was considered added value in online courses.

These points were confirmed by the respondents as an accurate summary of the consensus position.

4.3.4 Interview 2

The purpose of the second interview was to explore further individual respondents' experiences with the phenomena in question and to follow up emergent issues from the previous phases in a more private one-to-one setting. Questions for this phase of the dialogical process were drawn from the findings of the previous phase and the identification of issues for further consideration or explication. In

particular, the second interview provided an opportunity to explore potentially anomalous individual perspectives which had emerged in earlier phases. In this phase, these general issues addressed in the interviews included:

1. Identifying personal definitions of social presence.
2. Exploring the role of social presence in promoting the development of community within an online course.
3. Examining the role of social presence in promoting interpersonal interaction.
4. Exploring the concept of infrastructure within the course and its role: (a) in supporting the social-relational system within the course; and (b) as a source of learner support.

Regarding personal definitions of social presence, the respondents identified a number of characteristics of a common definition of social presence, including: the identification of a known 'other' party in a relation and their status as a 'real' person; the combination of cues as sent (transmitted) by one individual as a portrayal of themselves and the reading (interpretation) of those cues.

Social presence was viewed by respondents as an important component of online learning activity for its role in promoting a number of beneficial social-relational activities. These include the genesis and ongoing development of relationships between individuals and the related development of social-relational constructs such as trust, respect, rapport and notions of 'safety' in the online environment. Social presence was also seen as a means for individuals to demonstrate that they were genuine participants and members of the group as well as real people with the characteristics of human beings. These characteristics include attributes such as personality. Following these points, social presence was seen to promote interpersonal interaction and support critical discourse. Through the creation of a safe environment and the demonstration of trust, respect, rapport, etc, individuals were seen to be more likely to interact with others within the group.

Regarding learner support, respondents discussed both static support in the form of supportive course infrastructure and more dynamic in-person support. The group noted several instances of supportive infrastructure within the course. These included aspects of the course design such as explicit collaborative work and the associated expectations of collaborative roles for participants. They also included the use of smaller, more interactive workgroups, which were seen as an opportunity

to concentrate on both learning activity and social aspects of the course activity. Finally, respondents noted the course leader's (facilitator's) role in promoting activity within the course through the creation of a positive, supportive atmosphere and active, supportive facilitation.

The in-process analysis of responses from this phase identified the following key issues for consideration in the final focus group:

1. The nature of social presence as a combination of the messages individual social actors send and the way those messages are interpreted.

2. The nature of both sending (transmitting) and reading (receiving, interpreting) social presence as both a conscious and an unconscious activity.

3. The development of sending and reading social presence as an emergent skill, developed over time with the benefit of experience in online environments.

4. The role and function of social presence with regard to social-relational mechanisms identified above (e.g., trust, rapport, respect, etc.).

4.3.5   Focus Group 2

The final phase of the dialogical process allowed for the investigation of late emerging issues in the whole respondent cohort and final confirmation of findings with an eye toward the establishment of consensus positions on these issues.

Regarding the nature of social presence, respondents confirmed that they saw social presence as a combination of: (a) messages sent by one party; and (b) how those messages were received and interpreted by another party. Respondents highlighted the differences between one-way and two-way communication and the point that individuals may be seen to convey their social presence, but unless the 'receivers' of these cues provide feedback to the senders, there is little opportunity for the senders to understand their own presence and how they are perceived by the group. Responses indicated that both the sending and receiving (reading, interpreting) of social presence cues were conscious as well as unconscious, but respondents were unsure as to how or why. There were tentative indications that the cultivation and interpretation of social presence may be a learned skill which changes over time.

On the role and function of social presence, respondents were asked to comment on the following propositions regarding social-relational activity in online learning environments:

1. *Commonality.* Social presence helps individuals identify characteristics which are common to the parties involved in the relation. This commonality is the basis of interpersonal connection between the parties.

2. *Context and meaning.* Social presence helps participants identify traits of others that can be used to create context. Messages from the other party can then be situated in that context so richer, more well developed (higher quality) meaning can be made from the exchange.

3. *Context and response.* Social presence helps readers identify a set of personal circumstances of the other which can be used to create a context against which to situate communications with that other. Responses to the other can be situated in that context.

4. *Interdependence.* Social presence helps participants identify particular skills and abilities of other attributes of an individual. As a result, participants are able to make informed decisions about whom to interact with based on the notion of finding a more capable partner or peer (see also Vygosky's (1978) Zone of Proximal Development) in order to extend their own abilities and learn from that person. This is the basis of interdependence.

5. *Group cohesion.* Social presence helps identify individual traits allow for the identification of points of commonality. This commonality includes commonality of purpose in which another individual is perceived to have similar goals or objectives. This is an important component of group activity as it focuses the efforts of all individuals on a single objective and helps promote the development of a cohesive group.

6. *Promoting interaction.* Commonality (as a basis for connection) also leads to a feeling of 'closeness' between individuals. This is the basis for developing rapport between individuals. It may also be the basis for the development of trust. Rapport and trust lead to feelings of 'safety' and a willingness to put oneself at risk. This leads to an increased likelihood of interaction.

During this process, one further proposition regarding the role and function of social presence was identified:

7. *Respect.* Identification of particular individual traits, skills and abilities fosters the development of respect for individual participants. Respect helps rapport develop between individuals, particularly when that respect is mutual. Respect also supports interdependence.

Respondents confirmed the role of social presence in identifying points of commonality and suggested that this was beneficial, though the exact relationships among social presence, commonality and interpersonal connection was not clear. Social presence was seen to support the development of context which aided meaning making. Moreover, the use of this context to situate responses was seen as a useful way of both relating to others and communicating across differing positions. This was viewed as particularly beneficial not only for understanding one's personal perspectives but also for comparing those perspectives with differing positions held by others. Respondents also confirmed the role of social presence in helping them identify other parties with particular skills or abilities and the notion that this process was related to interdependence between parties in a learning environment. Social presence was seen to promote group cohesion for a variety of reasons, including the aforementioned interdependence and the identification of commonality of purpose. Other social-relational mechanisms such as trust, respect and rapport were also cited and respondents indicated that social presence supported the development of these mechanisms, though the relationships between the concepts was not clear. The relationships between these concepts and their operation were seen as an area for further investigation in the ongoing study.

4.3.6   *Post Process Analysis and Summary*

The case OTea1 was further analysed at the conclusion of the dialogical process and again at the conclusion of the entire information collection for this study. As a result, the following conclusions were drawn about social presence, social-relational activity and learner support in this particular case:

4.3.6.1   Social presence and social-relational activity.

Overall, social presence was seen to include several related notions, including: (a) that individual participants have a voice and that others were listening; (b) the degree to which an individual projects an online 'personality'; (c) the degree to which participants in an online interaction are perceived as real people; and (d) the ability of a student to project him/herself to the rest of the class, as well as the ability to perceive the personality of other students. Social presence was seen to be conveyed through a combination of cues that individuals send in their communications and the way those cues are interpreted by readers of the messages.

All respondents in this case valued social presence. However, the intensity of that value ranged from seeing it as 'essential' to 'nice, but not necessary'. Social presence was linked to the notion of 'getting to know' other participants, which was seen to have a number of beneficial outcomes such as the promotion of interpersonal interaction, the creation of context which aids in making meaning, the identification of personal traits of others which promotes interdependence amongst participants in the environment and the promotion of group cohesion with the development of interpersonal relations.

Responses indicated a close relationship between social presence and interpersonal interaction. Such interaction was highly valued in the group and was seen as a point of origin for social presence. It was suggested that there is progression from an initial interaction to the establishment of social presence and then the ongoing development of social presence over time with further interaction. Parallel to the development of social presence is the development of a sense of relation between parties. This includes identifying points of commonality as a basis for the relation and a sense of connection between individuals that indicates strengthening relations between them. As the process continues, parties develop a sense of history in the relation as the interactions are continued and relations develop and strengthen or wither and recede. In deepening relations, participants experience relational constructs such as trust, respect and mutuality, which lead to rapport. These mechanisms were, in turn, seen to promote interpersonal interaction.

This process was seen to be related to three main conditions: (a) the *ability* to read social presence cues and make sense of them; (b) the *opportunity* to interact with other parties with sufficient quality and quantity of interactions to support ongoing relations; and (c) some *motivation* (either intrinsic, as in personal interest, or extrinsic, as in task-related needs) for ongoing interaction and relationship. These particular themes emerged repeatedly in the data. Barriers to the development of social presence, high quality interaction and the development of relations are related to an absence of at least one of these conditions.

In terms of the importance of relational aspects of interaction, participants indicated that they tended to interact more with those that they had some relationship with and that the quality of those interactions was enhanced by positive mutual social relations. Finally, there were also suggested links between interpersonal interaction and in-person support from both course facilitators and peer learners.

This highlights the potential link between social presence and learner support in the establishment of positive social relations which facilitate productive interpersonal interactions that constitute in-person learner support.

Respondents agreed that different participants exhibit different degrees of presence and that this was a natural consequence of participants' ability both to read and to convey social presence cues as well as their unequal opportunities to interact with different other parties. While they indicated that they were aware that others perceive them in particular ways in online interactions, the respondents indicated little sense of understanding those perceptions. This was attributed to a lack of explicit feedback on their personal presence. Role models, including the course facilitator and other, more experienced peers, were seen as important guides in the process of developing the skills related to cultivating a positive social presence.

4.3.6.2   Learner support.

Generally, participants found OTea1 very supportive, and most indicated that it was more supportive than other courses they had taken. This was seen to be due to a combination of two main factors: the efforts of the facilitator; and the extent to which the course is structured around collaborative work in small groups.

Regarding the facilitator, there was a clear expectation of active, supportive leadership from the course teaching staff and the facilitator in OTea1 seemed to be meeting or exceeding expectations. She was viewed as very active, highly visible and responsive to student needs. Her efforts to structure the learning process were valued, as was the infrastructure of community that was present in the course environment and course design. Participants provided numerous examples of supportive behaviour of the facilitator.

Regarding the development of community and collaborative workgroups, responses were generally positive, but mixed. Three of the research participants were in the same collaborative work group within the course and enjoyed overwhelmingly positive experiences. The other three participants had mixed experiences, but recognized the value of the approach, if not the experienced benefit, of 'learning communities'. For at least one participant, the mediocre experience of collaborative work was offset by the facilitator's willingness to provide opportunities for flexibility.

Respondents commented specifically on the supportive infrastructure of the course. There were a number of positive examples of infrastructure which had supportive benefits:

Course Design/Instructional Design. The overall design of the course, including the instructional design and the pedagogical approaches employed was seen as an important infrastructural consideration. Participants noted the constructivist underpinnings of this course and implied values of learner-centredness and active/interactive constructive learning processes. They also noted that there was congruence between those constructivist foundations and the intended outcomes, learning tasks and assessment scheme. This was seen as an important supportive mechanism to re-inforce the values of learner activity and the expectation of interpersonal interaction as a key aspect of learner activity. Some participants noted that this congruence could be extended to include assessment of collaborative activity such as assessed participation or submission of collaborative work. This was seen to be a potential source of motivation for interactive learning and consistent with the implied values of the course. However, other participants noted the value and supportive nature of flexibility which catered to individual needs.

Structuring: Groups. Structuring was seen as an important supportive function. Participants commented on numerous aspects of the organization and structure of the course, identifying some as very supportive and suggesting changes in others. The structures identified included issues from the number of discussion areas to suggestions about content selection to the creation of workgroups within the course. In particular, the *size of the course cohort* (30+) was noted as 'too large' for the development of meaningful relationships or community and the *use of smaller work groups* was identified as a supportive structuring technique. Although no ideal group sizes were suggested, the course utilized groups of 10-15 members and some participants commented very favourably on their experiences in the small group. Of particular interest was the *basis for group creation*. In this course, the whole group was divided based on professional context into schools teachers, tertiary educators and corporate trainers. This basis was seen as providing an important source of *commonality* for participants which helped them identify shared attitudes, beliefs and experience as a basis for relationship building. The grouping also helped them establish commonality of purpose in their learning activities and focus their efforts on shared objectives. Small groups were seen as a means of promoting the

development of community within the course. Overall, this notion of *community* was seen as an important source of support. As part of the development of small communities within the larger course cohort, participants identified (a) an enhanced sense of the identify of group members with whom they were interacting and a related greater sense of accountability to those individuals; and (b) a greater commitment to group activities and the shared goals that emerged. Some participants were very explicit in their identification of the supportive nature of these workgroups and identified it as a highlight of their postgraduate program. Others indicated that the experience had (positively) changed their views on social support and collaborative activity.

Roles. Roles for both learners and facilitators were identified as important infrastructure. Important *participant roles* included: challenging the viewpoints of peer learners, sharing ideas and providing alternative views and providing confirmation of not only ideas but also rates of progress and approaches to tasks. This list implies a high degree of interaction and commitment to the reading of and response to the dynamic content of the course. Examples of this commitment include being the first to post messages, recognizing the contributions of other participants, recognizing group achievements and being explicit about commitment to collaborative work and accountability to the group.

The facilitator was seen to play an extremely important role in creating and maintaining the infrastructure of the course as well as providing support. Some of the *facilitator roles* identified included: structuring discussion topics, creating spaces for work groups, maintaining flexibility with timelines, aiding in the selection of content and responding to emergent issues. The notion of 'responsiveness' was seen to include timely responses to student queries and feedback on progress in the course.

Content. The content of this course was seen to be quite 'heavy' and in some cases, burdensome. As a result, participants highlighted the need for informed content selection in order to focus their efforts on the most important tasks and information. The selection of content was aided by advice from peer learners and the facilitator.

4.3.7   Case 1 OTea Conclusion.

Taken together, these responses about social presence, interpersonal interaction and learner support in OTea1 begin to illustrate the interconnection and holism of online learning environments as dynamic social spaces. These environments use the technical infrastructure of networked computing and communications technologies to create an infrastructure of social networks. Within this social-relational system, course participants, including learners, facilitators, support staff and other stakeholders, engage in purposeful interactions which constitute learning activity. As part of this process, interpersonal interactions provide a variety of supports to the learning activity. These supports include responsive, dynamic in-person supports that exist within a more static supportive infrastructure which facilitates these interpersonal interactions/transactions.

In the wider study, the tentative findings from OTea1 identified here were used to focus and structure the ongoing information collection in the study.

4.4   Case 2: Eval2

The case Eval2 was studied in the term subsequent to the study of OTea1 and was studied concurrently with the case EdEn3. The timing of these cases provided anopportunity to build upon understandings which emerged in OTea1 and focus the ongoing study more closely on relevant issues whilst allowing for the possibility of emergent issues. Notably, this case included the lowest number of participants and the lowest quantity of information collected of the four cases.

4.4.1   Questionnaire

The respondent cohort from Eval2 consisted of three individuals. The baseline data from the questionnaire are collated in Table 4.3 below.

Number of respondents	Experience with online education		Frequency of activity		Expertise with CMC		Comfort with CMC		Preferences for learning activity
	Courses Taken	Teaching activity							
3	5+	3	Yes=1	Always	0	Expert	1	Always	2	Individual activity=1
	3-4	0		Regular	3	Very capable	1	Usually	1	
	1-2	0	No= 2	Occasional	0	Capable	1	Sometimes	0	Collaborative activity=2
	0	0		Rare, never	0	Novice	0	Rarely, never	0	

Figure 4.3 Baseline data for Eval2

As these figures indicate, the respondent cohort for this case was particularly small, just within the lower limit of the desirable range for this study. Despite this, the respondent cohort was considered very experienced, with all (3 of 3) having completed 5 or more online courses and one of the group having experience as an online teacher. All respondents (3 of 3) considered themselves regular participants at least capable with CMC and usually or always comfortable communicating in this medium.

Responses indicated some lack of evidence of social presence or other social-relational activity within the course. Two of the three respondents indicated no sense of knowing others in the course. Only two of the three respondents were able to identify a professional or personality detail of a peer learner and comments indicated that there was very little sense of a cohort in the course. The reasons given for this are exemplified in the comments of one respondent:

> *Julie:*   *Some participants have posted very "minimalist" messages on the Discussion Boards, and many participants have not directly addressed what anyone else has written. In this CMC medium, you can only get to know people to the extent that they are willing to communicate openly in online discussions. I think it is also quite early in the semester so perhaps more dialogue will occur as the semester progresses.*

This comment highlights the finding from the previous case with regard to interaction and social presence: there must be a combination of ability, opportunity and motivation to interact. In this case it would seem that at least opportunity and perhaps interest (as it related to motivation) in relational aspects of communication were missing.

These findings stand in sharp contrast to the previous case, OTea1, in which participants at a similar stage of the course indicated an active social-relational system at work. Nevertheless, all respondents (3 of 3) indicated that they considered the course supportive and rated the course as either "supportive" or "very supportive" along four of the five dimensions of support identified in the questionnaire.

In the end, the responses from the questionnaire identified a number of areas for further investigation, including:

1.   Defining social presence and exploring respondents' experience with social presence

2.   Exploring the lack of social-relational activity in early stages of the course

3.   Exploring the seeming discontinuity between respondents' preferences and their experience in the early stages of the course

4.   Learner support in Eval2, including support from the facilitator, peer support and supportive aspects of the course infrastructure.

4.4.2   Interview 1

As in the previous case (and in all cases), the purpose of the first interview was to confirm findings from the questionnaire and explore respondents" personal experiences with the key issues identified in those results. However, the first interviews in Eval2 presented some particular difficulties as the respondents were unable to access the chat tool intended to be used for the interviews due to technical problems with the online learning platform. As a result, those two respondents' interviews were conducted semi-synchronously via e-mail, with the interviewer and respondent reading messages and responding immediately (though not in real time) and the third interview was conducted in a third party chat tool.   While less convenient than the in-platform synchronous chat tools, this format was not seen to have an adverse effect on the quality of the interview data.

Following from the key issues identified above, results of the interviews confirmed that interaction among participants in Eval2 was limited and that, despite all three respondents' identification of social presence as an important element of social-relational activity within the course, there was little evidence of it in Eval2. Consequently, the respondents indicated little sense of knowing other participants in the course and little, if any, evidence of other social-relational mechanisms such as trust, rapport or interpersonal connection. All three respondents indicated some preference for certain types of collaborative work and acknowledged the benefits of interpersonal interaction in online learning. They made reference to other online courses they had done and indicated some sense that their experience in Eval2 was somewhat incomplete. When asked about the cause of this feeling in the course, respondents cited insufficient time to develop relationships, some lack of skill on the part of the facilitator and the nature of the course itself as a primarily individual endeavour as reasons for the lack of interaction. These responses suggest little opportunity to interact with others, limited skill in engaging in these interactions independently and little need to do so.

Nonetheless, respondents were able to suggest personal definitions of social presence. These included the notion of recognizing an 'other' party in relations and the fact that such a party is known as a real and significant (potential) partner in interactions.

While the information related to respondents' experiences with social presence and social-relational activity in Eval2 was limited due to a limited amount of such activity, respondents' comments referred to their experiences in other courses and suggested support for the assertions of the critical nature of social presence in online learning environments and the complementary relationship between social presence and interpersonal interaction.

Given the relative lack of input on the issues of interest in this phase of the dialogical process, issues for the focused group discussions were drawn not only from this respondent cohort but also from the results of the previous case (OTea1) and the case (EdEn3) which was running concurrently. These general issues included:

1. Exploring respondents' preference for interaction in online learning.

2. Examining the nature of social presence in online learning environments smf exploring the seeming lack of presence in Eval2.

3. Identifying the role and function of social presence in online learning with respect to the development of community within a course, collaborative activity, peer support and efforts to make meaning from course content.

4. Determining the levels of learner support present in Eval2 and in particular the value of peer support in the course.

5. Examining the role of the facilitator in Eval2, particularly with regard to both creating community within the course and supporting learners.

4.4.3   Focus Group 1

With regard to interaction, all group members indicated that interaction is a valuable part of online learning. Suggested benefits include: getting to know fellow learners, developing deeper understanding as a result of being exposed to a variety of ideas, enjoyment (i.e., 'having more fun') as a result of interaction; establishing a sense of commonality; especially commonality of purpose and the flow-on effect of development of community. Comments also indicated a high value on flexibility in

online interaction (especially with regard to time, i.e., asynchronous communication).

> *Julie:*   *I agree with you totally about how online study can diminish isolation, Liz. You will have noticed how eager I am to discuss ideas by now, and asynchronous online communication tools are perfect in an age when everyone is so busy that it's difficult to find time in the ordinary hours of a day to interact with people.*
>
> *I studied via traditional distance education methods for many years, and got used to the isolation and thought it was fine. After my experiences in OTea [a previous course], however, I realised how very enriching dialogue with one's peers can be - and it was also a solace to actually "know" people who also couldn't afford to take time out to "have a life" because they, like me, were stuck at home working on assignments.*

With regard to defining social presence and identifying its value, definitions referred to getting a sense of others as real people, imagining the characteristics of others and getting a feeling for them. In general, this involved overcoming a lack of visual cues in order to get a sense of the 'others' involved in online interactions. These comments from one respondent were typical of the discussions:

> *Liz:*   *Social presence is the development of a feeling about your fellow learners. You begin to develop a picture in your mind of what they might look like...You begin to discuss more openly on topics and do not feel awkward in asking questions or letting others find out you may not understand a concept or term.*

It was also suggested that social presence relates to the ability to engage with the learning and/or learning community as it helps develop relationships with others in the course. Respondents noted that it takes time to develop relationships and that these do not happen automatically as a result of cultivating social presence. However, this was not explored in depth, and this issue was identified for further exploration in the ongoing research.

Responses indicated that online participants use a variety of tactics to convey social presence, including word choice, use of emoticons, honesty, making comments which are personally revealing and avoiding inflammatory remarks. Social presence was seen to be both *projected* and *perceived*. Participants commented that awareness of their personal social presence did affect their behaviour. There was also some indication that participants were not aware of how others perceived them or why. These seemed to be related to a lack of feedback,

possibly following from a lack of interaction in the course. This confirmed findings from the previous case.

It was suggested that in online environments, as in face-to-face situations, differing degrees of presence are a natural condition and individuals' presence varies with time. Participants acknowledged conscious (and possibly unconscious) decisions in past online studies to become 'lurkers' and not interact within an online group. This was seen to confirm findings in the previous cases related to participants' interest and/or need to interact. There was suggestion that high degrees of presence and stimulating discussion topics were able to influence learners into patterns of participation and daily discussion activity.

Comments confirmed a relative lack of social presence within Eval2 and a suggestion that this was possibly due to a convergence of factors: (a) semester 3 is a particularly busy time of year and this interfered with participants' time for interaction in their study; (b) the course design didn't facilitate the development of social presence in the early stages; and (c) the number and timing of assessment tasks kept learners engaged in 'on task' activity rather than social interaction and community building; i.e., given that assessment tasks were individual tasks there was no need to interact. However, at least one participant also acknowledged some personal responsibility for the situation, indicating awareness of conscious decisions not to post social or off topic messages which might address the lack of social presence in the course. Taken together, these points further illustrate the need for a combination of opportunities to interact (including time), the ability to do so and motivation for both interaction in general and relational aspects of these interactions.

It was noted that there was little development of community in the course at the time of this discussion and this was linked to a relative dearth of interaction, a relatively low degree of social presence and little sense of relationship between course participants. This resulted in s anxiety about future collaborative tasks.

> *Julie:*   *Is this lack of community development going to be a problem? Speaking only for myself, it is already a huge problem. One of the assessments requires that we critically analyse a peer's report, and publicly post the critique. I have been working on wording this report in a way that cannot possibly be misinterpreted as an attack while simultaneously trying to meet the assessment criteria for the assignment - this is very tricky. The person whose report I'm critiquing is a total stranger (no relationships have been established), and I am worried that they will think I picked their report to critique as*

> *an attack - as a learner group, we have not had the*
> *opportunity to develop the trust that is ideally required for*
> *such an assessment.*

However, it was also noted that social support was present when specific questions had been posted (i.e., when help had been specifically requested). Participants valued peer support and indicated that it was present in all online courses that had been encountered. There was a suggestion that this value underscored the importance of trust and community.

Comments on the facilitation in Eval2 were generally confined to the role of the facilitator in stimulating interaction and community development. It was suggested that facilitators played the role of initiators, motivators, energisers and guides in ongoing course discussions. However, there was very little specific comment about the facilitator in Eval2 or facilitators in other courses. Examples were not evident. The degree to which the course was considered supportive seemed closely related to the activities of the facilitator, which, in this case, was satisfactory to the participants. However, there was a suggestion that in interactive courses support is available not only from course leaders (lecturers, online facilitators) but also from peer learners.

Issues identified for further exploration in the ongoing dialogical process were related to the role and function of social presence with regard to:

1.   'getting to know' other participants and

2.   promoting interaction

3.   the development of online community

4.   the provision of peer support.

4.4.4   Interview 2

Second interviews focused on exploring issues arising from individual perspectives in earlier phases of the process. However, at this stage, one of the participants removed himself from the respondent cohort for personal reasons. With only two remaining participants participating in one-off interviews, the amount of information generated in this phase was limited.

In particular, respondents indicated that near the midway point of Eval2 a sense of community had begun to develop in isolated small groups within the course, although there was little sense of this in the whole group. Respondents reiterated

that the lack of whole course community was due to a combination of the demands of studying during that particular time of year near holidays, the heterogeneity of the course cohort and the nature of the course. However, they also noted that by focusing on particular tasks in smaller groups which required interaction between individuals, some sense of 'groupness' had emerged. This was attributed to individuals' willingness to participate, the shared purpose afforded by course tasks and the explicit collaborative structuring provided by the design and facilitation of the activity. These observations highlight the importance of the infrastructure within the course and the complementary relationship between the static and dynamic elements of the course content.

More generally, respondents explored their experiences with social presence, social-relational activity online and the development of online communities. They highlighted a progression from simple, sometimes superficial, interaction to deeper interaction which led to interpersonal connection and on to a growing sense of relationship between individuals in online learning environments. Social presence was seen as an important factor in this progression as it contributed to feelings of safety and the development of trust as well as some sense of rapport between individuals which led to 'opening up' and a willingness to make oneself available. In this way, social presence was seen to promote interpersonal interaction and so help promote sustained dialogue necessary for the development of relationships and the (eventual) development of community. This confirmed findings in other cases regarding the complementary nature of social presence and interpersonal interaction.

Issues identified for exploration in the final focus group included:
1.   Confirmation of the emergent definition of social presence
2.   Exploration of the nature of social presence and its development
3.   Establishing the importance of social presence and its role regarding the development of trust and rapport, the creation of context, the promotion of interpersonal interaction and the ongoing development of community within a course.

4.4.5   Focus Group 2

Respondents confirmed the emergent definition of social presence with reference to their own experiences. Elements of this definition included notions of being aware of others in online environments and developing a sense of them as

people: what they look like, their personalities and other personal characteristics. Respondents suggested that the ability both to convey presence and to read social presence cues developed over time.

> *Liz:* *I have completed 7 subjects online for my Masters....I have been involved in DB [discussion board] discussions with each unit....as I gained more experience...I became more aware of the dynamics of SP[social presence].. it really was a light bulb moment. I'm not sure when I first recognised SP... I think it was in my 5th unit...but in my 6th unit I definitely understood the importance and some of the difficulties encountered by students completing online studies. I think that is when I really appreciated SP and why some students do not develop a great SP during a course.*

These comments underscore the importance of ability in promoting relational aspects of interaction.

Responses also indicated that social presence was important in online environments for a variety of reasons related to promoting interpersonal interaction, enhancing relations between individuals, promoting trust and feelings of safety in the environment, and the development of community. Social presence was considered an essential component of interaction which pushed beyond the superficial to more meaningful and deeper levels of interaction.

> *Julie:* *I believe SP is important because you can't build a real community of learners without it. It is impossible to just interact about the course in a "neutral" kind of way, without revealing one's underlying values, beliefs and "self", and still achieve real, meaningful and deep learning. Interactions that do not allow for or involve the building of SP are superficial.*

4.4.6   Post Process Analysis

Overall, Eval2 provided less information than the other cases in this study. This was due to a lower number of respondents in this case and generally lower levels of social-relational activity in Eval2 indicated by the respondents. As a result, the case yielded relatively little new information about social presence, social-relational activity and learner support in the overall case finding. However, the case did provide a number of useful points of confirmation of findings from other cases.

Regarding social presence, respondents indicated that this phenomenon includes the notion that there are *known* others in the online environment and that

social presence provides information about those others which can be used to inform decisions about ongoing interaction with those others. As in the previous case, social presence was seen to contribute to a progressive development from initial, superficial interpersonal interaction to deeper interaction on a more ongoing basis and the development of interpersonal relations. In particular, social presence was credited with creating feelings of safety and trust in the online environment. Respondents indicated that they were not particularly aware of their own presence and confirmed that the development of skills related to cultivating personal presence in these environments occurs over time with more experience in these environments.

As for social-relational activity, respondents compared Eval2 to other courses they had studied in. Generally, Eval2 was seen to be less interactive, less collaborative and somewhat less supportive than other courses. This was linked to previously identified conditions for ongoing interaction and relations, including ability, opportunity and interest/need. However, as the course progressed, respondents were able to cite instances of interaction, the development of relationships and some, albeit limited, sense of community.

Regarding learner support, responses to this issue were limited due to the limited number of participants in the research group, but generally these responses focused on three aspects of infrastructure: roles of course participants, community structures and course design. Participants identified a number of important roles for both learners and the facilitator. For learners, these included contributing to discussions early and often, maintaining a positive social atmosphere/tone, making personal introductions and personal disclosure and being committed to the notion of community. For the facilitator, the roles included creating an inviting social atmosphere, prompting learner responses and responding to emergent issues in the course.

Community structures, including explicit roles, clear processes and facilitating structures, were seen by some of the group as an essential component of the infrastructure on an online course. In particular, this was seen to imply a set of rules for participant activity which includes timely response/contribution and maintenance of a positive social climate through the use of netiquette. Critical discourse within these community structures was identified as a very important aspect of learning in text-based online environments.

Respondents also confirmed the critical nature of the course infrastructure and the complementary relationship between the static (infrastructural) elements of the course content and the more dynamic elements. They highlighted the role of explicitly collaborative tasks in motivating interaction and promoting social-relational activity. In particular, respondents noted that learning tasks need to be within the learners' Zones of Proximal Development (see Vygotsky, 1978). Assessments which demanded individual activity were seen to undermine the development of strong community infrastructure. Notably, participants commented on the negative impact of studying during a shortened term with major holidays which distracted from study.

4.5   Case 3: EdEn3

The case EdEn3 is the first of two cases studied as subsequent versions of the same course. This feature of the research design allowed for comparison between the two cases drawn from this one course. One notable point of difference between these two cases is the facilitation. In EdEn3, the course was team facilitated by an experienced facilitator and a relative novice who each taught half of the course. In EdEn4, the course was taught by a single facilitator with limited experience. One further point of comparison is the timing of the course within the academic calendar. EdEn3 was studied during the shorted summer term, which was identified as potentially problematic. EdEn4 was studied in the full academic term at the beginning of the subsequent academic year. Notably, respondents in EdEn3 highlighted this issue as problematic in terms of compressed timescales for relational activity.

4.5.1   Questionnaire

For EdEn3, the respondent cohort included five members, which was considered ideal for this study. The cohort was characterised by variety as it included a mixture of experienced and novice members. Respondents reported participating with differing levels of frequency and different levels of expertise. Importantly, all respondents (5 of 5) indicated that they were usually or always comfortable communicating in this medium.

Number of respondents	Experience with online education		Frequency of activity	Expertise with CMC	Comfort with CMC	Preferences for learning activity
	Courses	Teaching				

	Taken		activity							
5	5+	2	Yes=3	Always	2	Expert	0	Always	2	Individual activity=4
	3-4	2		Regular	2	Very capable	1	Usually	3	
	1-2	1	No= 2	Occasional	1	Capable	4	Sometimes	0	Collaborative activity=1
	0	0		Rare, never	0	Novice	0	Rarely, never	0	

Figure 4.4 Baseline data for EdEn3

Regarding the issues of social presence, experience in the online social-relational environment and learner support, responses indicated a limited sense of social-relational activity in the early stages of the course, with 3 of 5 respondents indicating that they did not have a clear sense of knowing others in the course or of identifying other participants as peers. Most respondents (4 of 5) were able to identify personal, professional and personality details of their peers. However, this was not attributed to social-relational activity. Rather it was attributed to early coursework related to the creation of personal web pages which contain information about course participants. As the pages represented static (read only) content rather than opportunities for interpersonal interaction, the identification of personal details was not indicative of social-relational activity. In other words, the provision of personal information in static information pages precluded the need to interact in order to get this information. As a result, there was little interpersonal interaction. However, there were indications of respondents' awareness of social presence and related issues. All respondents (5 of 5) indicated that they were conscious of how others perceived them when communicating online. Also all respondents indicated that they identified the value of social presence, with most (4 of 5) indicating that it was an important element of online learning environments.

On the subject of learner support, responses suggested that the course was generally supportive, with all five respondents characterising the course as "supportive" or "very supportive" along the five dimensions of support identified in the questionnaire. The group showed a preference for in-person support from the facilitator, as well as preferences for supportive course design and peer support. However, most of the group (3 of 5) responded that they had not provided peer support in the course.

Issues identified for exploration in the ongoing process included:

1.   the definition of social presence

2. examining the role and function of social presence including identifying the benefits of social presence

3. participants' experiences with learner support, particularly peer support.

4.5.2 Interview 1

Respondents commented generally on the definition, role and function of social presence in online environments as well as the function of social-relational mechanisms and the development of community. All respondents (5 of 5) acknowledged the benefits of social presence, interpersonal interaction and collaborative activity, citing improved learning outcomes and overcoming the isolation of distance education.

> *Kevin:*   *If you are talking about a constructivist model where collaboration and interaction is important then social presence is key to the success and effectiveness of the collaboration and therefore learning*

Social presence was viewed as a sense of both knowing others and presenting yourself to be known. The results of this included a sense of belonging to a group of participants who are 'all in the same boat'. Social presence was also identified as a fundamental element of a progression from (a) preliminary interaction that is mostly polite to (b) establishing tentative connection to (c) a deepening sense of relationship and the beginnings of community. This provided valuable confirmation of findings in previous cases. One respondent put it this way:

> *Kevin:*   *Connecting starts by finding commonalities, geographic, experiences, professional things etc. You get a few positive comments and there's suddenly a connection that wasn't there before, it's a sort of currency. Sometimes you can trade on it.*

However, some respondents also expressed anxiety and caution with regard to the development of community. In particular, they noted that such progression is not automatic and suggested that it is supported by certain conditions such as a foundation in knowing other participants, the existence of a common goal within the group and a willingness to move beyond polite interaction to more critical discourse. These observations support the findings in other cases regarding the critical role of motivation to interact in promoting the development of social presence and relational aspects of interpersonal interaction.

Respondents commented specifically on EdEn. Generally they noted that, while the more experienced facilitator was supportive and approachable, the course seemed somehow slow to get started. Multiple respondents referred to experiences with other courses in indicating an expectation of more social-relational activity and the evident lack of community development in this course. While specific reasons for this were not given, results above may suggest some lack of a need for or interest in ongoing interaction and social-relational activity.

Issues identified for ongoing investigation included:

1. The role and function of social presence with regard to getting to know other participants, trust, rapport and creating content.

2. Further exploration of participants' experiences with the benefits of interaction

3. The current state of community in EdEn3

4. The cultivation of personal social presence

5. General levels of support in EdEn3 including the role of peer support and in-person supports provided by the facilitation team.

4.5.3   Focus Group 1

As in other cases, the purpose of the first focus group was to begin to develop shared understandings of the issues in question. In this respondent cohort in particular, the first focus group included clear instances of the respondent group coming together on points of conflict and negotiating to points of consensus. Illustrative responses are included below with reference to particular points.

Interaction was generally valued in the group.

Rich   : …interaction provides an opportunity to gauge your progress and understandings of concepts with others. This interaction provides motivation for performing the work, which is conducive to deeper learning.

Mary: [I] much prefer online learning to distance learning where there was no interaction. Online you have all the benefits that a distance course affords you, like flexibility over when you study but it's the inclusivity of being part of a group that interaction gives you that really is a plus. […] you meet such a wide variety of people, all with different degrees of experience. You learn more, as you get such a variety of responses and opinions it's much more fun to read the opinions and work of a wider group and more motivating to

> *get different feedback. […] the best part of online interaction is the same as in a face-to-face class, when you meet people and it goes beyond the set up of the course and you get to know a bit more about them as individuals.*

Reasons for the value placed on interaction included getting exposure to new perspectives and new ideas, gauging one's own progress against others, developing shared understandings and identifying commonality between yourself and others. It was also noted that interaction can have a motivational effect and other affective benefits (such as 'feeling good', developing confidence), which are conducive to deeper learning.

Respondents saw social presence as related to the persona that one assumes online and they way that is conveyed to others.

> *Kevin:*   *For me social presence is the form and persona that I assume and represent myself in an online environment. It is constructed in the context of how I wish others to experience me and "see" me in this environment. It is my online presence and the textual version of my "voice" in the online space. The depth and manner of my social presence depends largely on the tone, quality and the extent to which I am responded to by others and the manner, depth and tone of representation of the respondent's social presence in turn.*

Responses provided both confirmation of findings from other courses and new information about the cultivation of personal presence. However, the cultivation and monitoring of presence were not considered straightforward.

> *Rich:*   *Personally, I have a lot of trouble reflecting on my own personal social presence. It's the same in a physical sense. I have no idea how I am perceived when I meet or converse with someone, I might think I was being friendly and funny, where I might have been perceived as intrusive and obnoxious...how can you know how your personal social presence is perceived?*

> *Kevin:*   *My take on my own personal social presence is probably based on the nature of the responses I get. If the situation enables it then connecting with others becomes an issue of how usefully and caringly I respond to others and how this is reciprocated. […] Typically I will respond most frequently and as a priority to those I have established some sort of rapport with. The quality, relevance, helpfulness and tone of*

my response is how I would measure my Social Presence as I do with those who are responding to me.

These comments provided confirmation of earlier findings regarding online learners' awareness of their own presence and the importance of feedback from others in this process. Moreover, respondents pointed out that the development of social presence, while important, was not automatic and required careful attention, including attention to the structural elements of the course:

> *Kate:*   *I think that many students will make an effort but a lot will do the minimum. So social presence should be encouraged […] it should be integrated in the course. For example, after all our webpages were published (this was a great initial idea, I thought), a follow-up task could have been to write a message to each person commenting on a point in common.*

These comments again highlight the role of motivation (as either interest or need) identified in earlier cases in promoting relational activity in these environments. Other responses further explicated the need to cultivate skills related to online interaction and the role of both the facilitator and the course infrastructure:

> *Kevin:*   *My sense is that the development of social presence in an online course takes more time, effort and care than is usually allowed for in the course structure. […] The success of this depends a lot on the tutor/teacher's ability to facilitate this activity and deal with the issues of group process, inclusion and emotional safety.*

Social presence was viewed as closely related to notions of connection, relationship and the development of a sense of community. However, there was a distinction made between social presence and connection:

> *Mary:*   *Social presence I think is just the belief that you know something about the person involved and connectivity is where you feel you have "connected" [with] another person in some way whether it be shared beliefs, interests, or solutions to the same problem.*

Comments suggested progression from the establishment of social presence to other relational states. In particular, it was suggested that social presence may provide the

basis for establishing commonality between participants and so provide a basis for "connection".

> *Kevin:* *The terms Social Presence and developing connectivity are closely related and part of a the same process, however I don't believe you can have connectivity without adequately developed social presence of each of the participants. If you like one serves as the gateway to the other.*

The notion of *commonality of purpose* was important to the development of connection. This is seen as directly linked to the notion of interest/need in relational activity. Commonality of purpose provides an explicit common interest or need which underpins ongoing interaction and promotes a sense of connection. There was a suggestion that this sense of connection developed over time, particularly if there was a certain 'intensity' of interactions. This interaction was seen to foster trust and respect within groups. Taken together, these points provided further confirmation of the role of social presence in the progression of social-relational activity within the course, particularly with regard to ability, opportunity and interest. Furthermore, they provided valuable additional insights into these phenomena with regard to the relationships between the various social-relational mechanisms.

Regarding community in EdEn3, respondents agreed there seemed to be little community development and attributed this to a combination of course design and facilitation.

> *Mary:* *…there seems to be less community development in this course than in others I've been in. Partly I think this is because of a lack of reason to interact. The first activity was an individual one, the second in anonymous groups of three. In the first activity there was no reason to interact, although perhaps if there had been an informal discussion area people might have responded to the info on the personal websites and this could have been encouraged by the tutors.*
>
> *The second activity although it allows you to get to know the members of your team a bit better is anonymous, so you don't know who created the work or who is really giving the feedback. I understand the rationale for posting the webquests anonymously, it reduces inhibitions of providing constructive criticism but perhaps it isn't necessary. The other two courses I have done online when feedback has been asked for, it has been given just as freely. And sometimes it helps to know the person when receiving feedback as you can look at it against the work they themselves have submitted.*

Kevin: *I agree [...] about the lack of a sense of community in this course and the reasons for this. My thinking is that this course is very task focused and not a lot of effort has gone into trying to build a sense of community or opportunities for its development. To some extent it represents the tension and challenge of finding a balance between the needs of the curriculum and fitting in the learning activities [...] I also think that the course facilitators either aren't paying much attention to this aspect, or that they are under such tight time constraints that they have sacrificed this aspect in order to get through the material. I have had a much stronger sense that I was part of a community in other courses and I definitely feel a sense of community and shared experience and interest with my [group work] buddies, largely as a result of the collaboration and sense of goodwill extended by all.*

Respondents agreed that interaction and participation should be purposeful, or it will not attract interest. Given the other demands on adult learners' time, purposeful interaction was seen to attract the most attention. This contributes to differing degrees of presence between different individuals. One respondent described her participation this way:

Kate: *I have only started being "active" on the DF [discussion forum] with the webquests. Before that, there was no real reason for me to get involved too much so I did the minimum. I said hello and asked a couple of questions. Things take time, in "real life" an in an "online environment". You can see who, in a real class, would seem very comfortable and active from day 1. I am more one who observes and does not take part until she knows or feels she has something to say, in a real class or here. However, when there is real need to communicate, then I am happy to participate because it is interesting, I am glad to give my feedback and happy to read feedback on my work. So maybe social presence just depends on whether it is well constructed into the course through tasks...*

Again, these comments highlight *motivation* as it relates to a need to interact and engage with relational aspects of interaction. In particular, it highlights the negative effect of anonymity in undermining relational activity.

Reports on levels of support in the course were mixed, but all respondents seemed to agree about the role of the facilitator in providing support through: (a) the structure of the course to accommodate flexible approaches by adult learners; and (b)

responses to emergent issues. The development of trust and consistency of presence seemed to be key issues. Respondents also characterised the social presence of the two course facilitators: one was perceived to be easy going and light, the other more reserved. However, it was noted that these perceptions were still evolving. Respondents identified various roles for facilitators in promoting interaction, most notably the importance of responding to learners' posts. Responsive facilitation was highly valued.

> Rich: *I was one of the ones that requested clarification and I felt we were being ignored. It was about 2 weeks from the initial question to when a response came […] There is nothing that I find more rude then being left hanging, even a quick response saying that our request has been heard and that a response will come in 2 weeks would have been better then no response. In regards to learner support, this was a clear failing.*

As a result of these discussions, a number of issues were highlighted for further investigation, including:

1. The relationship between social presence and connection, relationship development among participants and community.

2. The generation and sustenance of interpersonal interaction in online learning environments

3. The role of the course design in promoting social-relational activity

4. The concept of anonymity and its effects on community development

5. Exploration of learners' experiences of learner support in EdEn3

6. Ongoing perceptions of the facilitation team, their social presence and the provision of in-person support.

4.5.4   Interview 2

The second round of individual interviews confirmed respondents' general valuing of social presence and interpersonal interaction. Their comments provided insight into a number of aspects of social-relational activity in online environments including trust, rapport and anonymity. They also reiterated the importance of design and infrastructure in creating an interactive and supportive course.

On the importance of interaction, connection and collaboration:

Kevin: *...the quality of the work accomplished and the learning achieved in this context is directly related to the quality of interaction, engagement and connection.*

Kate: *The interaction in this course has helped me evaluate my "level"... I have been able to compare myself with others, I have read stuff from people who have a lot of knowledge and experience in this field... I also learned and felt reassured when I saw that others had the same problems, or questions... I felt motivated by feedback....*
[...]
The quality of some people's work was extremely motivational... For me it has been a great exercise to give feedback to others and to put my work out there to be looked at...

Kevin: *I seem to learn at a greater depth and the quality of that learning is raised because I'm feeling part of a shared enterprise...I work that much harder and think that much more deeply when I think others are depending on my input. I think I care more when others are involved.*

These comments provided positive examples in which positive, productive interaction and relational experiences are linked to a clear purpose for interaction. This is linked to notions of social presence and interpersonal interaction as supportive.

Rich: *Definitely, I consider it [interpersonal interaction] a learning support. I think in online environments, collaborative learning (as in we are all working towards the same goal) is key to effective and deep learning. In this context we are all sort of teaching each other.*

Mary: *I think you feel greater peer support if there is a strong social presence in a course –*
[...]
I think there is a greater sense of a person's social presence the more they contribute - and usually if people are responding more often to discussions you get more variety of feedback. If someone is active on the discussion boards and responds to postings then it seems to encourage more people to participate as well.

> Rich: *I like to think of learning as reducing and removing confusion... My need in the context of learning is to remove my confusion on a particular subject or topic so that I have a better understanding. Community/social pres/interaction/etc. are a support mechanism for reducing this confusion...*
>
> *[…]*
>
> *For example, I might read a reading, but still have confusion on that subject. By going to the community I can address these gaps in my understanding or correct misunderstandings.*
>
> *[…]*
>
> *I think the community aids in the motivation for learning...*
>
> *[…]*
>
> *By knowing that you are part of a community that is striving towards the same goal, it helps in motivating yourself to do better.*

Respondents also explored the relationship between these concepts and related notions of connection, engagement and promoting ongoing interaction.

> Kevin: *For me to know whether or not I want to engage with you I need to know more than just surface details. I also want to know if you are on anything like a similar wavelength.*

> Interviewer: *What do you see as key ingredients or conditions to promote interaction?*
>
> Rich: *I think that there are definitely keys that help. In regards to group (social) conditions I think humour, facing conflict, risk taking and social non-topic discussions are important. But I think that time availability is important too. If people do not put in the time, quality interaction will be dampened.*

> Kevin: *Engagement and connection come about because the individuals involved feel safe enough to disclose personal things about themselves such as anxiety about the process of learning, about being "good enough" in the situation, not wanting to feel silly or stupid. It's no different than in face-to-face situations, I think you learn most from those with whom you engage and connect with at more than a superficial level.*

They also commented on the role of design in promoting interaction as it related to ability, opportunity and need to interact.

> Kevin: *There needs to [be] attention paid to the way people in the course, learners and tutors are organised to engage with each other some of the typical ways this is attempted is*

shallow in the extreme
[…]
and far too little attention is paid the value of warming people
up to each other. If I was designing a course that had its
focus on group work I would try to have activities that
progressively had people engaging with other[s] at a deeper
and deeper level. When I had judged that sufficient depth had
been achieved I would then be setting the groups loose on the
major enterprise.

These comments confirm findings from other cases regarding the nature and role of supportive infrastructure in online courses.

Relational activity seemed to be valued in the group. Trust and rapport were also seen as potentially beneficial relational states.

Rich: *I think trust and rapport is important. I think generally people*
will interact better if they feel comfortable. For example, as a
teacher I make sure I am open and approachable. I find that if
I am unclear about something small, I will not bother clearing
it up if I feel as though I am bothering people. But if I have
developed relationships with the community based on a good
rapport...I will interact more. Even if it is something small.

Respondents also highlighted the potentially negative effects of anonymity in undermining relational communication.

Mary: *I think anonymity undermined community in [EdEn3] in the*
way it was introduced, initially all discussion[s] were made
with peoples real names, and so personalities began to
become clearer then as community started to develop the next
task was a anonymous group task so you had nothing to peg
the comments to and then the feedback was given in different
anonymous names still so there was no prior assumptions by
which you could judge the bias or merit of the feedback given.

Kate: *We were working on a webquest...and I expected the*
connection to deepen...After that we were asked to give
feedback on each others' work...This could have deepened the
connection but it was done anonymously... so in the end it
actually diminished it.

These responses lend important insights into these social processes and the social-relational mechanisms which constitute them. They confirm the role of social presence in the progression of relationships in online learning environments. Further, they indicate some important considerations for the cultivation of these

relationships, including consideration of both static infrastructural elements and the dynamic relational aspects of the course. Perhaps most importantly, these responses highlight the potential link between social presence and learner support and confirm that participants in online learning environments view social presence as a supportive element of these environments.

4.5.5   Focus Group 2

In the final focus group, discussions focused not only on confirming the findings of this particular cohort but also on confirming related ideas from other cohorts in the study. As such, the issues identified for further exploration included:

1. Further exploration of the role and function of social presence with regard to context, commonality, trust, rapport and supporting ongoing interpersonal interaction
2. The nature of social presence and the development of skills related to the sending and receiving of social presence cues
3. The role of anonymity in online interactions
4. The link between social presence and community development.

Regarding social presence and community development, respondents indicated that social presence is not just awareness of the existence of others in mediated interactions but also it is awareness that they are 'real' people, with personalities, preferences, histories and particular back grounds. The role of social presence in a particular course was viewed as related to the tasks set by the course designers and the intended activity of the learners. As such, activity should be purposeful (related to a need to interact); it is necessary for designers to link intended learning activity to clear (explicit) purposes. Social presence was seen to develop over time, requiring a combination of time and 'intensity of interaction' to generate a sufficient volume of cues (as relational information) about other participants. This is interpreted as directly linked to opportunity and creating opportunities for ongoing interaction. Moreover, respondents suggested that the development of social presence could, and perhaps should, be facilitated by course leaders by way of both example and structure, providing opportunities for participants to improve their abilities with relational aspects of online communication. These course leaders were generally seen to be the teaching staff, but may also be learners who assume some

teaching/leadership roles. The lack of positive social presence through either an absence of presence or 'negative' social presence was seen as problematic because it precludes high quality interaction (e.g., 'deep' discussion).

More specifically, respondents indicated that EdEn3 was something of a disappointment. They cited a lack of involvement by the facilitators, generally limited interpersonal interaction, distinct lack of community and, importantly, some sense of lack of support provided through interaction and community. The following comment was typical of responses:

> *Mary:*　　　　*If I was a beginner at online learning - i.e., if this was my first module - I would be in serious trouble at the moment. There is not too much activity on the board. Items are posted but there is not much by way of interaction regarding the postings. […]*
> *Not being a beginner - (this is my 4th module) I feel a little more confidant to go it alone but every now and then I realise that I must be missing out on a lot of learning - comments from others do make you think and links given out do encourage reading into issues I may otherwise missed. Compared to the other modules done - I would say that activity on the discussion board has been a disappointment. […]*
> *Presence of facilitators - I would say that they have been more absent than present but then I am an advocate of "leading from the front". I think they could have whipped up more enthusiasm.*

Responses also indicated that the course design contributed to this lack of interaction.

> *Kevin:*　　　　*In an earlier post I made the point that some courses, by their nature, involve more discussion than others. Some of the other courses I've done have involved more interaction. […]*
> *Apart from the webquest activity, which I found a real challenge as there were four of us in the group, most of the work has been of an individual nature. While invitations to comment on other's work are consistently made, there is no compelling reason to do so. In the webquest it was absolutely essential that the four of us communicate on an almost continual basis. This led to a large amount of interaction and very productive collaboration. In this case there was a really compelling reason to communicate and so we did. […]*
> *Within the group of four there was a fairly high level of SP, in*

contrast with the rest of the course where it's at a fairly low level.

On the topic of reading and conveying social presence as a conscious activity, there were indications that respondents viewed this as potentially both conscious and unconscious, depending on the level of experience and skill of the particular participants. It was suggest that relative novices are more conscious of their presence and make greater efforts to be polite. More experienced online participants, on the other hand, are more 'direct and forthright' in their postings and are less conscious of conveying presence as they develop not only more skill with social presence, but also greater tolerance for the ambiguities of CMC.

As to the role and function of social presence, respondents confirmed its role in providing the following benefits: (a) social presence of an individual helps other participants create context for the messages of that individual and so helps participants make sense of those messages; (b) social presence also provides information which others in the environment can use to make decisions about further interaction. This information includes traits in the other party such as willingness to participate, openness to suggestion, a sense of curiosity or willingness to question, points of commonality with and difference from ourselves, willingness to share solutions or answers, a sense of humour, a degree of tolerance for others' views, warmth, conforming with norms of behaviour. Such decisions to interact were also seen to depend on the atmosphere in the course and the relative degree of safety and the extent to which activities promote an environment of safe self-disclosure; (c) social presence provides a basis for trust of and respect for others. If this respect is mutual, it is the basis for rapport. Notably, anonymity was seen to undermine the beneficial effects of social presence.

4.5.6   *Post Process Analysis*

Information collected in EdEn3 provided a number of points of general confirmation of emergent understandings of the nature and function of social presence in online learning environments as well as further valuable insights into learner support in online courses.

Responses confirmed the notion of social presence as providing information about an 'other' party in online interactions. This information was seen as important to developing a notion of that other as a *known* entity. The sense of 'knowing'

others was seen as a basis for the development of interpersonal relationship, connection and, in the wider sense, community. Social presence was also seen as important for its role in promoting ongoing interpersonal interaction. In particular, it was seen to provide information upon which online participants make decisions regarding ongoing interaction. These decisions were related to notions of feeling safe, trust of the other party, commonality and some sense of connection. These decisions were also related to the notion of *interest* posited above which provides a reason to interact and relate with one another on an ongoing basis. 'Positive presence' was seen to signal willingness to interact and invite further interaction. 'Negative presence' was seen to inhibit further interaction.

Notably, responses in EdEn3 were characterised by not only direct experience in EdEn3, but continual reference to respondents' experiences with other courses. There was a strong sense of unrealised expectation in participants and comments indicated that, while the course was not unsuccessful, it could be better. This was partly related to a limited number of opportunities to interact and a lack of a reason to do so. In particular, respondents comments on the relative dearth of social presence in the course and related this to the (relatively) slow development of interpersonal relationships and sense of community in the course. Whilst respondents acknowledged the importance of social presence as part of promoting interpersonal interaction and the flow-on effects of community development, they often referred to more general experiences outside this course.

In this group, there were a relatively high number of negative examples provided regarding learner support. In general, participants indicated dissatisfaction with the course infrastructure, but made suggestions for improvement both explicitly and implicitly. Briefly, these include:

1. *Group structure.* Group structure in the course consisted of small workgroups of between three and four members. These groups were seen to be beneficial for completing the first assessment task, but generally detrimental to the creation of community within the course as they left the group highly segmented with little feeling of being a single cohort within the course.

2. *Orientation activities.* The initial learning task was to create a personal webpage. While this was seem by most as a useful way to find information about peer learners, it was noted that there was little, if any, follow-up on this

activity so that any benefit realized from it was quickly lost as learners turned their attention to assessment related tasks. Respondents suggested that a more effective task would include interpersonal interaction to promote interaction and help provide opportunities for the development of interpersonal relationships.

3. *Congruence between task, activity, outcome and assessment: implied values.* Some participants noted that there was conflict between the values of constructivist pedagogies and the reliance on (mostly) individual assessment tasks which mitigated against the creation of course community and/or collaborative endeavours. More explicitly collaborative tasks were suggested.

4. *Flexibility.* Some respondents commented that the course timeline was too inflexible, especially during the busy summer term. They suggested that balancing the supportive structure of the course with responsive flexibility was valued by adult learners.

5. *Roles: facilitator.* A number of respondents compared the facilitator in this course with other online course facilitators to highlight a perceived lack of facilitator activity in this course. The comments indicated high expectation of active, supportive facilitation. In particular, some respondents commented on the lack of timely response from the facilitator and the negative impact this had on both interaction and the sense of the facilitator's presence. The overall implication was a need to re-evaluate the role of the facilitator in this course.

6. *Rules as they support interaction.* A number of participants noted the negative tone of discussions early in the course as learners struggled to adjust to the new institutional online environment. For some, the negativity was very off-putting and seemed to undermine efforts to establish the course community or create an inviting course environment. Some suggested that clearer rules for participation would help address this issue.

Together these suggestions provide valuable supplementary information about the infrastructure and its role and function to support the dynamic elements of the course.

As the second case to be based upon the course EdEn, EdEn4 provided an opportunity to study differences between the two versions of the course. In addition to the issue of facilitation identified above, this case provided an opportunity to study differences between courses offered in the shorter summer term and other academic terms, which was highlighted as problematic by respondents in both cases studied during the summer term. Also of interest was the issue of course design and the extent to which the design of EdEn affected the experience of different cohorts in similar ways.

4.6.1   Questionnaire

For EdEn4, the respondent cohort included 6 members. The majority (4 of 6) were relatively experienced, having completed at least 5 online courses. All respondents indicated that they were at least regular participants in the course and all rated themselves as capable with CMC. Most (5 of 6) were usually or always comfortable communicating via CMC. However, the majority (4 of 6) indicated that they preferred individual learning activities to more collaborative work.

With regard to participant experience with social presence and other social-relational mechanisms, responses were mixed. On the one hand, all respondents indicated that they were conscious of how others perceived them in the course. On the other hand, most participants (4 of 6) indicated that while they could recognize some names in the course, most were unfamiliar and they did not have a sense of others in the course as their peers. Furthermore, while all respondents were able to identify differences between participants in the course, only 4 of 6 were able to identify a personality trait of one of the other participants. These seemingly mixed responses highlighted the state of social-relational activity within the course as one area for further exploration in the dialogical process.

Number of respondents	Experience with online education		Frequency of activity		Expertise with CMC		Comfort with CMC		Preferences for learning activity
	Courses Taken	Teaching activity							
6	5+ 4	Yes=1	Always	4	Expert	1	Always	4	Individual activity=4
	3-4 1		Regular	2	Very capable	4	Usually	1	
	1-2 1	No= 5	Occasional	0	Capable	1	Sometimes	1	Collaborative activity=2
	0 0		Rare, never	0	Novice	0	Rarely, never	0	

Figure 4.5 Baseline data for EdEn4

On the topic of learner support in EdEn4, respondents indicated that they found the course generally supportive. However, they highlighted problems with both the course design and facilitation in the early phases of the course, with half of the respondents (3 of 6) indicating that the course design was not very supportive and one-third (2 of 6) respondents indicating problems with the facilitation. These results are particularly significant given that the respondents indicated a clear preference for in person support from facilitators and peers as their preferred sources of support along with the course design. It would seem that respondents' expectations in this regard were not being met at the time that the questionnaire was administered. Overall, EdEn4 was rated lowest of all four cases in terms of the five dimensions of support identified in the questionnaire.

Issues highlighted for further investigation in the ongoing process included: (a) exploration of respondents' experience with both facilitation and learner support in the early phases of the course, including the identification of particular problems; (b) clarification of respondents' experiences with the social-relational aspects of the course; and (c) respondents' personal definition and experience with social presence.

4.6.2   Interview 1

In the first interview, respondents confirmed the notion that they found EdEn4 lacking in terms of both sense of community in the course and levels of support in the early stages, but that things in the course may have been changing for the better. Responses indicated that, while they had begun to form relationships with a small group of peers as part of a collaborative task due to greater opportunity to interact with that small group, they had little sense of others in the course cohort and had not gotten to know any of the others. It was recognized that there was a significant number of non-participants (i.e., 'lurkers') in the course and this was seen to undermine the development of whole-course community. It seemed that there was little motivation to interact or engage with social-relational processes. Rather, participants were focused on tasks that were premised on individual activity:

> *Interviewer:* *Have you experienced much of a sense of community in EdEn? Why?*
> *Barb:* *Some, I think there are a number of regular contributors but there must be several "lurkers" on the course too. So there is not as much [of] a community as I felt on my first course […]*

Interviewer:	*Ok...so there is a limited sense of community in EdEn... […] So what HAS produced a sense of community in EdEn (in whatever limited way)?*
Barb:	*The regular contributors... each time you go to a discussion you fine familiar names and can build a picture of their personality.*
Interviewer:	*In the questionnaire, you indicated a fairly limited sense of getting to know others in the course...Have your opinions on that changed?*
Barb:	*No. I think it is the pressure to get to the work rather than spending as much time learning about the other students. No requirements (assessment) to know them too well except for the recent group task.*

Respondents noted the development of a sense of community within small groups, including interdependence, commonality and trust arising as a result of the relationships among small group members.

Interviewer:	*I got the sense from the questionnaire that you know some people in the course fairly well and others not at all well...is that so?*
Frank:	*Well, I would probably say I don't know anyone "really" well, but I made a connection with the people I worked with on a group project. We still are e-mailing each other bitching about things in the course and asking each other['s] advice, etc...What is "knowing"?*
Interviewer:	*good question...what is it to you?*
Frank:	*I feel a connection with them...* *[…]* *there is a common goal we share, we are working on something together* *[…]* *I respond to posts that "move" me or spur me on to further reflection, and I respond, I see other responses to my post, but I still don't feel a "connection" as much as I do with people I am working with*
Interviewer:	*Also, what cues do you use as a basis for getting to know someone?*
Frank:	*For this assignment I just responded to students who replied to my posts, and I put out the idea of perhaps working together on the assignment. From that, a private e-mail correspondence started happening with a couple of people I felt I "clicked" with then we talked about what we were supposed to be doing, where did you read that, etc. We had to form a group first. Once we agreed on forming the group, we were a "team". Perhaps at that point we were more comfortable*

> *[…]*
> *I didn't want to be working on a group assignment with anybody who wasn't going to pull their weight, number 1, and who I didn't feel an affinity with.*

Comments also supported the notion of creating motivation as either a personal interest or a need to interact.

> *Nora:*   *Often a sense of community or discourse between individuals does not happen by invitation. It has to be structured. In this course it was in a number of ways...For instance, the introductory information and posting of personal webpages.... By making at least 1 mandatory group project....By stating things like "respond to 3 postings" - even if it is not a mark requirement. It gets people interacting. Without this guidance and structure, people will tend to hide behind their computers, do the tasks required and move on.*
>
> *Interviewer:*   *[…] can you take this one step further for me? Can you make the link between, say, introductory information and personal web pages and community development?*
>
> *Nora:*   *By reading through the information, you have a sense of who the person is - where they are from, what their educational background or area of expertise is, their interests, etc. all of which helps you to identify with them and perhaps feel you share a connection or common interest with.*
>
> *Interviewer:*   *Did you experience that in EdEn?*
>
> *Nora*   *Yes. This was the direction we were given to initially form our groups for a group task. Find others with interests similar to yours (didn't really work out exactly this way for our group, but it did force you to look through other people's pages and search for areas to connect with).*

Respondents also commented on issues of support. As in other groups, they indicated relatively high expectations of the facilitator as a source of support and a valuing of active, responsive facilitation, including a visibly present instructor.

> *Frank:*   *Perhaps the instructor's personality comes through in their postings and directions. That's a good thing.*
>
> *Interviewer:*   *OK, I understand that. So, seeing the instructor as a person is a good thing... (Yes?)*
>
> *Frank:*   *[…] Definitely. I want to know the instructor as a person. I want to know they went fishing yesterday and caught a huge fish.*
>
> *Interviewer:*   *OK...is seeing the (other party) as a person also important for everyone (peer learners, guests in the course, other staff)?*

> Frank: *I think that adds to the mix. After all, it is online, what else do you have but typing? Anything that makes it a little more personal to the learner is good.*

There were suggestions that, while the course was "not bad", it lacked an active, supportive facilitator. This was seen to limit the levels of structure within which course participants were working and the levels of support experienced by course participants.

Responses indicated an awareness of social presence amongst respondents. Common elements of their personal definitions of social presence included knowing other parties and being known to the group, as well as a sense of belonging to a group. This was seen to promote feelings of safety and trust within the cohort, aid in meaning making and promote interaction.

> Interviewer: *What is social presence to you?*
> Nora: *Feeling as if you belong and that there are others sharing your concerns and experiences....Not being nameless/faceless...Actually experiencing other's personalities*
> Interviewer: *OK...and is it important? Why/why not?*
> Nora: *If the goal is one of shared experiences, learning from others or collaborative work, you must feel safe within the environment in order to "put yourself out there" with respect to anything - ideas, concerns, questions, answers....If you are expecting feedback from others, its important to know who they are...what experience they have had, in order for you to evaluate their response.*

Respondents also introduced the notion of empathy in online relations.

> Interviewer: *OK...tell me more...How does this happen? What information allows you to understand them better?*
> Kay: *It's like getting in the other person's shoes, putting you in their situation and then replying*
> Interviewer   *How do you know what their situation is?*
> Kay: *Well if the initial posting (whatever that might be) was read carefully u get some idea of their point of view.*

Issues identified for further exploration included:

1. establishing consensus on a definition of social presence and its role in online learning environments

2. exploring the cultivation of personal social presence online

3. investigating the possible relationship between social presence and interpersonal interaction

4.   establishing the relative importance of peer support in online learning

5.   further scrutinising participant experiences and expectation with regard to the role of facilitation within the course, including promoting social-relational activity and in the provision of support.

4.6.3   Focus Group 1

Responses in the focus group suggested a number of aspects of social presence which were consistent with findings in earlier cases. Respondents indicated that this included the sense that others in the course are real people, a sense of empathy with other participants and a feeling of knowing others in the course, including a possible sense of connection with others and also belonging to a group.

> *Kay:*   *I feel making a connection is the most applicable concept as it entails a sense of sympathy/empathy for the other parties, sense of mutual respect between people and a feeling that maybe I am starting to "know" others in a course.*

In particular, some respondents were outspoken about the role of social presence in supporting social-relational activity and collaborative work. Some suggested that social presence was vital for informing choices about roles in collaborative work as it allowed for the identification of individuals with particular skills and so created opportunities for the development of interdependence within groups as individuals were matched to particular roles.

> *Eileen:*   *…if you can get a fair idea of someone's skills, job, interests, work experience, hobbies, etc you can put things into context. Especially in a situation where you need to work as a group and submit results fast, it helps tremendously if you can quickly identify "the person who is interested in a similar work-based activities as you are", "the person who has the skills to design a website quickly", "the persons who will respond to your e-mails/postings quickly and in a positive, supportive manner", "the person who has a nice style of writing", "the person who is interested in learning about similar topics or tools as you are", etc.*

Notably, respondents distinguished between positive and negative social presence. Generally, social presence is considered positive, but it was noted that this can also be negative and have negative effects. These negative effects include alienation of

some participants, undermining any sense of community and precluding further interpersonal interaction.

> Kay: I would like to add my view regarding Kath's point on the impact of "negative social presence". I think social presence can either be "positive", "negative" or "neutral" (from my experience). This is the only online course where I have witnessed negative social presence among some participants where some postings (whatever the reason) are too vitriolic. I tend to shy away from such discussions either totally or make my presence felt in a minimal way-- thus the term "neutral". I experienced "positive social presence" with the small group in the webquest task. Every message that we exchanged had words of support, encouragement and enjoyed an open exchange of ideas and views in a "professional" manner.

Regarding general discussions of positive social presence, respondents viewed this as generally beneficial. It was seen to promote a sense of safety and trust within the online environment. It was also seen as a motivating factor and a potential "confidence booster". Respondents identified flow on effects of social presence including greater amounts of interpersonal interaction and the development of a sense of community.

> Kath: Social presence, if positive, certainly does promote interaction. There is a degree [of] curiosity involved...if you see others posting often, you'd like to know what they're talking about. Up until this current course, I have not read one post that I didn't find interesting and fruitful.
>
>   Interaction is stifled either when a party's comments or questions are ignored or if there is too much negativity within the discussion(s).

> Eileen: I found that people respond to me more often and more enthusiastically after I shared my views with them and after I was present in discussions. The same goes the other way around. If someone is sharing thoughts or openly asks for help, it is easy for to give constructive feedback and advice. If a person never joins a discussion and remains "invisible" and then only joins to submit a 4-page proposal asking for feedback, I may be less inclined to read through his/her proposal and spend a lot of my precious time on it.

Increased interpersonal interaction was particularly valued by respondents who viewed it as an opportunity 'to streamline and sort out' personal perspectives, benchmark individual progress against the group and provide opportunities to seek support.

> *Frank:*   *I feel more motivated to do the coursework when I feel I am part of a group of learners journeying on the same path. How do I get there? How do I feel like I am part of the group? Through contact with the facilitator and the other students in the course, over time. Mutual respect and trust grow.*
>
>   *I don't like working in a vacuum. It wreaks havoc on my motivation. When I read a provocative posting and respond to it, and others read it and respond, it creates a bond. I feel others DO know how I'm feeling. A connection is made. I want to come back to the discussion areas to see what else is happening in the course, how it's progressing, and make a contribution. If the connection isn't there, it's not as enjoyable for me.*

> *Nora:*   *For myself, being part of an environment that fosters positive discourse (an environment of trust, mutual respect, etc.) is important because I feel more confident in participating in discussions. As Kay also stated, it provides a forum for me to articulate my thoughts on a particular topic, albeit in a written form, allowing me to either deconstruct information, reflect or construct new meaning.*
>
>   *I like the statement that "the community is a social-relational environment and an individual is involved in a number of relationships at any given time". As Eileen mentioned, there are differences in the relationships between group members for our major task, as opposed to relationships with other people in the course who you know only from random postings. […] I would rather like to feel a sense of "belonging" with the overall group and a stronger sense of "connection" between members of my smaller group who I would engage in more personal dialogue (family issues, kids, etc.) through e-mails.*

In terms of promoting interpersonal interaction, respondents noted that they tended to seek out others who have certain types of commonality with them. These include commonality of purpose, similar levels of commitment to group work, mutual respect and a willingness to share. Commonality is seen to stimulate interest in further interaction.

Nora: This is the first course within this degree program that I have had to work with other people on a task. Luckily our group worked very well together. We initially formed our group by identifying common interests from our introductory webpages. Although this wouldn't have necessarily been enough to create a successful working group, it did help us to identify a topic of interest to focus on for our project. From there we divided up the tasks by initially finding out who had skills in specific areas (subject knowledge, webpage design experience, etc.). Because we were in a smaller group environment, we were able to have these types of discussions and learn more about each other's different skills and abilities. We all stayed in constant contact, did the jobs we negotiated, and tried to support each other as much as possible along the way.

Kay: …for me just the common sense of purpose may not be enough to connect and work together. Dominating attitude of others can be a real put off. In our group task in the initial stages, we discussed individual working styles and then sought common grounds. In our group of three, I said I preferred if everyone contributed on each aspect of the "quest" rather then working on their own set tasks. …We both soon agreed that though we will divide the work but each one of us was free to make suggestions, seek help and edit any part of "quest" with justified reasons at any time. I think finding a middle ground to work was important for me as it helped me connect with others and maintain the open and positive environment.

Eileen: I tend to interact with people who show an interest in similar issues as I do. I also tend to interact with people who show that they are willing to learn together and who have a positive and professional attitude. The easiest people to interact with are the people who show an interest in something I said, because they approach me.

Also a sense of history in the relationship was seen as an important form of commonality insofar as participants with shared history have some degree of shared experience, i.e., they've 'been through' the same things.

Eileen: Social presence surely promotes interaction. I can still remember a few names of people who were very present in previous online courses. I may or may not have worked with them on an assignment, but if I see their names again in another unit, they are the first ones I approach.

Respondents commented on their own efforts to cultivate a personal social presence. Strategies noted included responding to peers in a beneficial way that was positive, motivational or constructive, being genuine in responses and responding to others in a reciprocal way.

The facilitator was seen to play a vital role in promoting social-relational activity in online courses.

> *Kath:* *...I believe that a facilitator should be "visible" on the discussion boards regularly...even daily. This can be done unobtrusively while still maintaining "presence". I liken this type of facilitator to the teacher who circulates the room in the classroom as opposed to the one who sits at his/her desk all day. The one who circulates doesn't necessarily "interfere" and may contribute nothing to a discussion per se, but being there is often enough to motivate and maintain a positive atmosphere.*

While respondents acknowledged learners' needs to take responsibility for their learning and be proactive, the facilitator was seen to play an essential role in drawing together individuals and groups of individuals and promote the sort of interpersonal connection that underpins community in online courses. This was seen to involve the facilitator making personal connections with individual members of the course and then helping them connect with one another.

> *Frank:* *I remember in the last course someone enrolled late and was floundering and ready to drop out. The facilitator took it upon himself to e-mail [a] few people asking them if they could read her post and respond. This was all on the QT...The facilitator made it clear that he didn't want her to know he had asked us to help her. The comments and support she was given was enough to help her over the hump and she actually decided to stay in the course. She was quite touched and strengthened by everyone.   I thought that was very astute of the facilitator to do that.*

> *Kath:* *I think the facilitator who demonstrates an air of concern for the students is always involved in some way or another. They model appropriate discussion and motivational speech, they are there to draw students into the environment and foster community building. In short, the ideal facilitator is always present. In an online environment such as this, a post from a facilitator only once in a "blue moon" is worse than a*

classroom teacher sitting at his or her desk all day. At least you can still see the teacher at the desk. Lack of ongoing facilitator visibility and positive contribution, is like a classroom teacher sitting out in the hallway, or worse yet, staying home.

Peer support was highly valued in the respondent cohort. Peers were seen as nearly as important as the facilitator in the provision of in-person support. In particular, the concept of empathy was seen as an important component of the provision of peers support and this was seen as related to social presence.

Kath: *Peer support, next to facilitator support has been a "rock" for me, especially when I've found someone who shares my seriousness about post-graduate studies. I have had instances when I wasn't understanding a topic and posted my confusion. Several individuals gave their insights as well as links to research to help me. I have done the same for others. I have helped a couple of peers edit their assignment drafts and they have reciprocated. On the topic of empathy, it has been awesome to have my peers share feelings of frustration on an assignment, etc. Together we've overcome these hurdles. So in answer to the question, I find peer support invaluable and welcome the chance to be of support to my colleagues.*

This confirmed findings from other course regarding the importance of supportive course infrastructure.

Respondents also pointed out that peer support is not automatic and is greatly enhanced if the course design includes specific structures which promote peer--peer interaction in a supportive way.

Eileen: *Course design can also promote peer support: I remember a unit where you were required to give your feedback to a conference paper proposal of two peers. It was great learning for me, not only to receive 2 pieces of feedback on my own proposal, but also to try and help someone else to improve his/her proposal. The insights were great!*

Issues identified for further exploration in the ongoing process included:

1. exploration of the social-relational mechanisms identified by the group (connection, commonality, trust, rapport, empathy, etc.) and their function in the online environment

2. the role of and function of social presence with respect to these social-relational mechanisms

3.   the notion of reciprocity in interpersonal interactions

4.   respondent experiences with in-person support, i.e., peer support and
       facilitator support.

4.6.4   Interview 2

Respondents confirmed the role of social presence in: (a) creating a context for making meaning of others" messages; (b) aiding the establishment of relationships; (c) promoting interpersonal interaction; and (d) providing affective benefits such as motivation and a sense of belonging.

Regarding the function of social-relational mechanisms and the relationships between them, respondents indicated that both a sense of history and points of commonality provide a starting point for interpersonal connection. These were both seen to provide an opportunity to begin interactions with another party and also provide a need for ongoing interactions. Those interactions led to a greater sense of "knowing" the other party. This, in turn, led to feelings of trust, respect, empathy and the development of context within which to make sense of others' messages.

Reciprocity was seen as an important part of the relation between individuals. Respondents indicated that the 'two-way' quality of reciprocal relations led to greater feelings of connection and feelings of trust. Empathy was also seen as particularly important to help individuals relate to one another.

> *Kath:*   *Empathy in an online experience is being able to understand a peer's frustrations, understandings of a reading....it develops quickly for me. I have no trouble relating to what I'm going to call "genuine" posts. …Yes, it relates to social presence....If we're talking about positive social presence...most people post in "earnest". They either want help, they want to discuss a topic or they want to share. What I consider to be "non-genuine" posts are chatty type babblings that aren't contributory. To be honest, I hadn't seen this type until taking [EdEn]...I couldn't empathize at all with the poster because I thought she was abusing the discussion board with silliness.*

In particular, interviews focused on the concept of trust and the extent to which respondents trusted other participants implicitly or if such trust was earned. Responses on this point were mixed and this was identified as an area for further exploration.

Interviewer: *Regarding "trust", do you trust other online participants automatically or must others earn trust in their relationships with you?*

Frank: *They need to earn it. I don't trust strangers on the street either, unless I can tell by their look or the way they talk that they are trustworthy...On the other hand, I would have a certain level of trust of others enrolled in the course. I would like to think they are students just like me who want to learn something*

Interviewer: *Ok...so some trust, but more can be earned?*

Frank: *Perhaps that is going into the area of respect. I trust someone in an online course to be honestly trying to learn along with me. Interacting with them solidifies this feeling I have. That is a stronger feeling of trust, I guess. If I am working in a group with them it is more important to me that I trust them to do what they said they would do. If they are in the general group of students in a discussion area, yes, I trust them all at first.*

[…]

Interviewer: *In the focus group, you mentioned: "Peer support, although you might argue that it is unnecessary in the larger picture, does add to the overall experience" Tell me about that...how does it add? You value it?*

Frank: *Peer support adds to my overall experience because of the feeling I get from it. It makes me feel like I am part of the group working in the course. Peer support helps me when I feel I am getting off track. I may just be feeling unsure of myself. Peer support helps me feel connected. Yes, I value it. If it's not there, however, I can fend for myself.*

Respondents also commented on the role of the facilitator, particularly as a source of support. The social presence of the facilitator was highlighted as a key component of responsive, supportive facilitation, along with the facilitator's ability to read the social presence of others. Responsive facilitation was seen as a combination of the facilitator 'being there' (being present) and also knowing the learners who are being responded to.

Kath: *...this type of social presence is also "person specific"...I guess what I mean is that the "breadcrumbs" that are dropped are carefully considered to be the motivational nudge a student needs […] I guess it's partially experience...and partially intuition. Social presence as far as a facilitator is concerned is knowing when to provide it. When to jump in and when to shut up. And let the students lead.*

4.6.5   Focus Group 2

It was widely acknowledged in the respondent group that social presence was an important aspect of online learning in text-based online learning environments. Respondents agreed that social presence is individual and variable. That is, different online participants exhibit different degrees of social presence and different indicators of being 'present'. Most participants cited experiences with both positive and negative social presence.

Social presence was variously defined by participants as a feeling of (a) belonging to a class or learning community; (b) knowing other participants in an online course; (c) positive relations between online participants, which may imply trust, commonality and interpersonal connection; (d) others who are 'out there' doing what you are doing…that you are not alone/isolated in your learning activityand providing a sense of companionship; and (e) being a 'real person' who is not nameless or faceless.

Social presence was generally seen to be established through a number of actions including (but not limited to):

1.   Acknowledging personal responsibility for group activity/contributions to the collective/working in the interest of the 'greater good'

2.   Responding to/participating in online communicative exchanges (discussions, chats, e-mails, etc.)

3.   Showing interest in others

4.   Making an effort to 'be part of the group'

5.   Speaking about personal experience

6.   Making responses conversational

7.   Personal disclosure

8.   Displaying humour and emotion

9.   Making a conscious effort to 'be seen', contribute to discussions, not just participate vicariously

Social presence was seen as important for its role in realizing a number of benefits for learners in online environments. These included:

1.   The ability to identify other individuals and their unique characteristics, skills and abilities

2.   A sense of accountability/responsibility to the group

3.   A sense of 'history' in a relation with another person/people

4. A sense of common purpose, whether this be specific to a task (e.g., assignment) or generally to "learn well"

5. Interdependence in learning activity

6. Providing a basis for rapport (mutual respect)

7. Promoting trust

8. Increased interpersonal interaction

9. Increased motivation

10. Empathy i.e., the ability to put oneself in another person's place.

11. A sense of connection with others

12. A sense of commonality with others

13. An ability to create context and situate the responses of others and to make meaning from their comments

14. Helping to identify an "other" party in dialectic situations.

15. Helping individuals reference their progress against others in the group

16. Promoting a sense of belonging.

Other indirect benefits of social presence included improved cognitive activity as a result of interpersonal transaction. Examples included the benefits of dialogue (refining ideas, articulating an argument or case, collecting inputs from other points of view, working toward consensus, considering problems from otherss points of view) and collaborative activity (sharing workload, enriched thinking from multiple perspectives, synergy, etc.).

> *Kath:*   *…I feel that interaction IS essential…I suppose if one wants to learn in a "bubble" of his/her own thoughts and opinions, interaction and support [are] not necessary. I can't imagine learning and growing without the perspectives and insight of others. I agree, we CAN learn without these things but I believe that our growth will be incomplete.*

Notably, a number of the positive effects of social presence were seen to be undermined by: a lack of facilitator presence/modelling; too much negative presence; over emphasis on individual work, including assessment; and/or learning tasks and division and segmentation of the course community.

> Kath: *...I reflected upon the group activity at the start of this course. We were instantly put into "pods" that limited or eliminated the chance for us to interact with the rest of the group.*
>
> *In a past course I took there was a "practice" that I thought helped students interact with one another and that was to review the scholarly comments of the person who posted "before ours" and/or "after ours". Naturally, there were guidelines to this review and commentary and it formed part of our grades, as I can recall. In each discussion, the peer to whom we responded was usually "new" as it depended upon the randomness of the postings. I got to know more people that way (i.e., interact) and meet course requirements simultaneously. There seemed to be a deliberate attempt to discourage division and segmentation. Maybe it was accidental. But it worked.*

> Frank: *...the positive effects of social presence may be undermined by a poor course design. I'm talking about the organizational aspects of the course; perhaps this would be called the course framework. It could have been better. This had a negative effect on my motivation.*

Notably, these negatives indicate some lack of the necessary conditions identified above: ability, opportunity and interest.

Regarding support in general, learner support was considered to include a variety of academic, affective, administrative and technical support devices including (but not limited to) course design, learning environment design and configuration (technical infrastructure), learning processes and the tasks which comprise them, facilitator activity, learning materials, social infrastructure (the relationship between tasks, expected learner activity and the *affordances* of the technology, i.e., the relative abilities of the various technologies and media to allow particular activity) and explicit support mechanisms provided by the university. The types of support that seemed most often linked to social presence were (a) affective support and (b) academic support. Both were provided under the banner of 'social support' which includes support provided though interpersonal interaction between participants in the online environment.

There was consensus that social supports are valued in online learning. The term *valued* here is distinguished from *necessary* as most participants added that social supports were not essential to learning, but were valued in that they provided

an important enhancement of the online learning experience. Some indicated that this is one of the key differences between traditional (correspondence) distance education and more contemporary online approaches. A minority of participants expressed that interpersonal interaction is *essential* (and/or necessary) to learning and indicated a very high value placed on social support. Comments indicated that, while learning may be possible without interaction, such learning was somewhat limited or may be impoverished when compared with the opportunities for learning in an interactive networked environment. There was not consensus on this issue and further investigation may be necessary.

> Kath: *In my learning experience even those "solo" assessment items can be enriched by the perspectives of other peers. Quite frequently I have used my peers' ideas in my papers (I have even quoted them!). I have taken correspondence courses as a teenager and I have attended face-to-face instruction in undergrad. I just don't feel that I get the same thing out of a few text-books or inanimate resources that I do out of people. I like to toss around ideas and working alone obviously doesn't afford that option.*
>
> *So...there is the greater perspective that Kay indicates but I also feel very strongly affected by my peers' input, in the way I handle personal assignments. I truly believe that I have enriched myself as an individual by taking in their perspectives and theories.*

When linking support to social presence, affective supports were widely cited. These include increased motivation arising from a sense of belonging, trust between participants, the ability to benchmark learning progress against other learners, the stimulating effects of positive interpersonal interaction and the combination of a sense of commonality with participants and being somehow 'connected' to them. The affective supports also included improved attitude toward study and a general 'buzz' from positive, productive interpersonal interactions/transactions.

Academic supports were those generally related to improved learning outcomes in task-oriented learning activity. The task orientation is significant as most participants related anecdotes which cited very task specific needs for academic support, while affective support (above) was described in a much more holistic, integrated, ongoing way.

Of particular interest to the group when discussing learner supports was the role of the facilitator. Participants placed a high value on active, participative facilitation, which included providing support in the learning process. It was generally agreed that, while peer supports were important and could be effective, participants had expectations of clear and present facilitation from the teaching staff.

4.6.6   Post Process Analysis

Post dialogical process analysis of the information collected in EdEn4 revealed a number of points of confirmation regarding the nature of social presence and its role and function in online learning environments. This analysis also yielded information which enhanced the emerging understanding of the relationship between social presence and learner support in these environments.

In particular, respondents explicitly confirmed notions of the nature of social presence as including the identification of an 'other' party in online interactions and the sense that the other party can be known. *Being known* was seen to have important implications for identifying other parties as real and salient social actors. This in turn was seen as a basis for ongoing interpersonal interaction, and the development of relationships between individuals and within groups. It was also seen as providing a basis for other social-relational mechanisms, including the identification of points of commonality, the development of interdependence, promotion of trust and the creation of context which allows for meaning making in interactive exchanges. Notably, there is a distinction between being a 'real' person and being a real and salient social actor. Respondents commented on the extent to which the assumed others were real people, but that those 'others' did not become real members of the course or potential partners in interaction until they established some positive social presence. Responses also supported findings from earlier cases about the importance of conditions for ongoing interaction and relational activity, including ability, opportunity and interest.

Regarding learner support in EdEn4, responses indicated that social supports were valued and these were seen to be enhanced by positive social presence and the related interpersonal interaction. While not all respondents indicated that this was essential, it was considered highly valued.

Regarding other aspects of learner support in EdEn4, there were mixed views of the infrastructure in this course. Therefore the responses identify both supportive

infrastructure and suggest more supportive structures by implication. These included:

1. *Course design.* Participants highlighted a number of negative issues with the course design, including a lack of clear objectives in the learning process, poor content selection by the course designers, a lack of clear instructions or overview of the course process, a lack of space for off-task ideas sharing and some conflict between the values of constructivist pedagogies and the implied roles for learners in the course. In particular, the workload of the course and the emphasis on individual assessments were seen to work against interpersonal transactions and the development of community. Also, the number of on-task discussion topics was seen as too high to be easily managed. On the positive side, some participants noted beneficial interaction with both the facilitator and peer learners. Also, the netiquette discussions were seen as important to supporting the emphasis on positive social interaction in the course. Overall, it was suggested that any positive effects of social presence and the development of the course as a dynamic social space were undermined by poor course design.

2. *Group size/structure.* Some participants commented that the use of small workgroups produced a segmented cohort with little sense of 'groupness' in the course as a whole. It was suggested that this worked against the development of social support structures.

3. *Facilitator involvement.* Comments on the facilitator's involvement were mixed. In particular, it was suggested that she do more to model appropriate behaviour in the environment and demonstrate the use of various course tools.

These results confirm similar findings in EdEn3 regarding the infrastructure of the course and its role in supporting learners.

5   CHAPTER 5: DISCUSSION AND CONCLUSIONS

As detailed in earlier chapters, this study is concerned with the nature, role and function of online social presence and how it relates to learner support in online learning. It is guided by four main aims:

1. to understand the concept of social presence in the context of online learning environments through understanding how these environments work, including not only the parts of online learning systems, but also the interconnected systems of activity which comprise these contexts;

2. to ground the understanding of online social presence in the experiences of users of these environments, i.e., online learners;

3. to inform the design, development and use of online learning environments through understanding of the relationship between online social presence and social processes which constitute learning activity in online learning environments;

4. to improve the provision of online learner support through the understanding of the relationship between social presence and learner support in online learning environments and use that understanding to inform the provision of learner support in online learning programs.

This study is focused on *learning* in technology enhanced (online) environments and how practitioners of online learning can best facilitate and support the learning process.

The context for this study is online learning as part of formal education. Information was drawn from four online postgraduate courses in education offered at a regional Australian university.

The discussion of conclusions of this study is grouped around three key themes which are derived from a synthesis of the findings from Chapter 4. The first theme is *learners' responses to the combination of technological and institutional determinism and the dehumanising effects of the use of technology*. This includes understanding of the politics of technology and the nature of mediation as a dehumanising force. It also includes understanding the nature of social presence, its establishment and sustenance and how it functions as a response to the effects of technology. The second theme is *understanding the social processes which constitute learning activity in these environments*. This theme re-emphasises

learning as an active social process and focuses on understanding the effects of mediation on the progressive development of social-relational activity in online environments. The particular focus is on the processes of interaction, the development of relations, collaboration and the development of learning communities. The third theme includes *assertions for re-imagining learning support in the context of these mediated social processes*. Emphasis is on the combination of supportive structures and responsive dynamic support in online learning environments. Following from the previous point, community structures are identified as excellent models for re-imagining learner support in online learning.

5.1   Social Presence as a Response to Mediating Technologies: Humanising Online Learning

The use of networked computing and communications technology in online learning contains a conflict between technological determinism and human agency (see Bakardijieva & Feenberg, 2002).

On the one hand, the use of technologies is potentially dehumanizing. This is particularly so where they are applied as tools of a strict efficiency or as part of a rationalist agenda which seeks to maximize a cost-benefit ratio rather than realize maximum benefit. Interaction in these systems occurs between individual users and the technological interface and these technologically mediated experiences are structured and controlled by the technology itself. Experiences are designed to be 'painless': fast, reliable and anonymous. These experiences are characterized by values of efficiency and convenience. They create efficiencies in the form of convenient 'short cuts' not only for the user as client, but also for the provider in automated processes freed from the need for human control. Human--human interaction is limited as it may be viewed as costly or inefficient. In educational contexts, the technology determines how these environments are used in the service of *education* and the *commercial interests* of education providers, not of *learning*.

On the other hand is the argument that human agency is essential to the process of technological development and use (Williams, 1974) and that the development and use of new technological systems inevitably involve negotiation and struggle amongst users (Bakardijieva & Feenberg, 2002). Networked technologies and the environments which are built within them are seen as potentially much more democratic (Hodgson, 2002; Rheingold, 1993; Turkle, 1995)

and more 'open' than their face-to-face analogues (D. R. Garrison, 1997; Turkle, 1995). They allow a certain 'interpretive flexibility' by users that enable them to be applied in ways different from those intended by designers (Bakardijieva & Feenberg, 2002).

This situation is a sort of tug-of-war between these opposing forces and the associated values. Barkardijieva and Feenberg (2002) summarize the situation this way:

> In the early stages of development of technology, it is fairly easy to uncover the role of human agents in this process….Later, as technology is stabilized, its design tends to dictate users' behaviour more successfully, and agency recedes into the background, at least until new demands emerge to challenge established designs. (p.186)

This situation indicates tension between the opposing forces of human agency and technological determinism in the evolution, development and use of technology.

The findings of this study reflect these oppositional forces of determinism and human agency. They highlight the determinism of technological, administrative and other structures within formal education and the role of those structures to not only organize and facilitate activity, but also to constrain and otherwise control learner activity in ways which create conflict with learners needs. Examples of this determinism include the limited capabilities of the CMC tools in the learning management system, the constraints of the structuring and access protocols for collaborative activity and lack of user control in structuring and representation of technology mediated activities such as asynchronous discussions. In short, the technological infrastructure of the online learning system examined in this study limits learners' activities and their choices about how to engage with learning as an active process.

Findings indicate that this determinism is being challenged, in Bakardijieva and Feenberg's (2002) terms, by "new demands" in the form of online learning communities in formal educational settings. These communities challenge the status quo of online learning programs which are a legacy of traditional distance education. These online learning communities, the socially situated learning approaches employed in them and the related values of learning as an active, participative, social, human endeavour challenge notions of scalable production for distance programs, one-size-fits all learning materials and anonymous, automated provider--

client relationships. They challenge teaching practices which are rooted in transmissive views of education and learning. Moreover, particular to the context of this study, these communities challenge the ways in which education providers support and facilitate learning. Participants in these online learning communities demand a more flexible technological infrastructure which accommodates activity within the social infrastructure of a community approach to learning.

Remarkably, despite these conflicts, online learners, including those participating in this study, continue to realize success with online approaches which utilize community structures and embrace learning as an active social process. A key feature of this success is learners' ability to adapt and change in order to overcome the limits inherent in the systems they work within. In particular, social presence is an example of learners' ability to adapt and change to realize benefit in the face of adverse or limiting conditions. Contemporary views of social presence identified by participants in this study represent a new way of *thinking about* and *using* the concept of online social presence. Rather than being considered a feature of media, social presence is a manifestation of human agency. It is a quality of human actors in technology mediated environments.

Contemporary notions of online social presence are an example of what Feenberg (1999) refers to as a *democratic rationalisation* by online learners.   This term describes user interventions which defy barriers to productive activity. These are *rationalisations* in the sense that they realise economic benefits for users and they are *democratic* in the sense that they are premised on user agency (Bakardijieva & Feenberg, 2002). In response to the challenges of technological and other forms of determinism and the limits of technology and media, online practitioners (facilitators and learners) have learned to overcome the limits of existing systems to create more productive structures. Social presence and the related development of interpersonal relations which promote collaboration and the development of community represent online participants' efforts to humanise their learning experiences and realise some of the potentials of online learning as an active, social process which leverages the technological connectivity, but which overcomes the limits of the mediating technologies to create productive social connectivity amongst the online cohort. This represents an important shift away from technological determinism toward human agency in the use of online learning environments.

5.1.1 A Basis for Social Presence

As Gunawardena (1995) points out, communicative failures in online environments occur much more often at the social than at the technical level. Interactions in these environments are predominantly text-based. The relative 'leanness' of the textual medium limits the sociability of these environments and creates conditions which make communication in this medium potentially difficult. These conditions include the lack of contextual information, distance between actors created by the media and imbalances in the sender--receiver relationship caused by a lack of synchronous two-way interaction (Riva, 2002). These conditions necessitate the development of particular skills and the employment of particular techniques to convey not only topical content in messages, but also relational information and other social presence cues in order to improve the sociability of online environments.

Although technology gets much of the attention in online learning, it is people who make online learning environments productive (see Baym, 1998). Online social presence is a human response to the difficulties of communication in computer mediated environments and contemporary notions of online social presence are a means to make these lean media environments productive. Whilst the term *social presence* was originally used to describe the qualities of media and their respective abilities to create the illusion of non-mediation (Short et al., 1976), users of virtual environments, including online learners, have appropriated the term to describe the combination of skills and abilities which allow them to achieve, in Short et al's terms, salient interpersonal interactions. Because social presence is conveyed in the cues contained in messages and the way that those messages are interpreted, social presence is dependent on the actors involved in a communicative exchange. The nature of the message is influenced by the medium and so the ability to convey a sense of social presence is also affected by the medium, but is not an inherent quality of the medium. It is how people use the medium that matters. In other words, *social presence is a quality of people in online environments,* conveyed through their use of media and communications tools. Participants in technology mediated environments cultivate social presence in order to achieve meaningful interactions, establish and maintain relations and create productive social systems in these environments. This proposition emphasises human activity over the capabilities (or limitations) of technology.

5.1.2   Social Presence and Online Experience

Online experiences are often referred to as *virtual*. This implies that they are *not real*. On the contrary, they are certainly real, but they are mediated. Online learners do not experience one another directly. The communicative tools and other elements which are employed in online learning environments mediate the learning activity and affect the experience. Whilst the technology affords connectivity, it also introduces distance between participants through the mediation of interactions.

Returning to the point that online social presence is a human response to the limits of lean media in online environments, social presence has an important role in humanising the experience of doing and being in online learning environments by diminishing the media effects which interfere with learner experiences of one another. Consider the following progression of interaction in the environment (Figure 5.1):
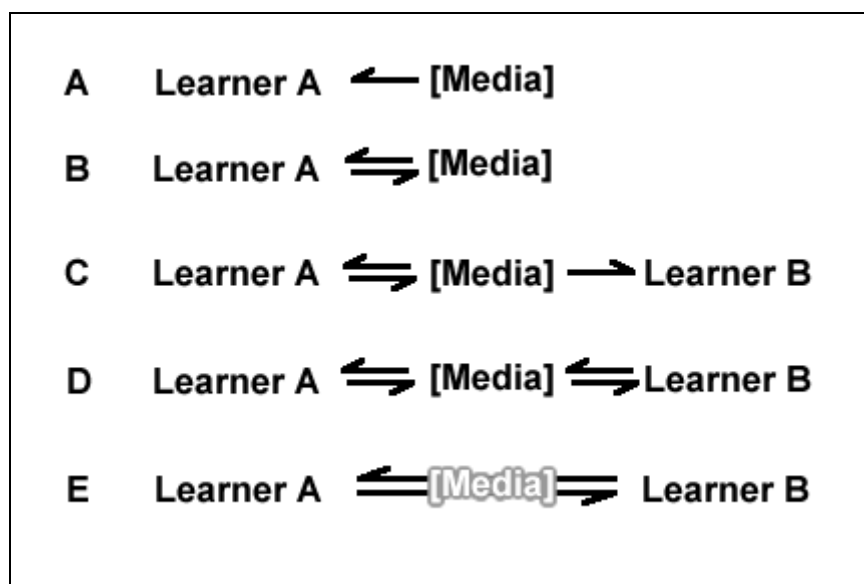

Figure 5.1 Progression of mediated interaction

At first (line A), individual actors in online environments interact with media and media tools. This may include textual content, web interfaces and a range of other media elements. In the most basic situations, the individual is receptive, and relatively passive. Information flows from the media elements to the actor. In more sophisticated systems, like many contemporary web-based interfaces, there is the provision for a two-way process (line B). Individuals have the opportunity to act upon the media elements (or vice versa), which in turn react with some sort of response. At this point, interactivity is achieved. When a third party is introduced in

the form of another actor, the interactions are extended (line C). At first, an individual may be the recipient of a message from another which comes to them via the media. In most cases, they have the opportunity to respond, again via the media (line D). In this process, the medium is quite apparent. Whilst the actors are engaged in interactions, the medium introduces distance between the actors and so the interactions between the actors are indirect. The actors are not only physically distant from one another; they are also socially and psychologically distant. In psycho-social terms, the relative closeness of the actors is characterized by the terms *immediacy* and *intimacy* (Gunawardena, 1995). Most mediated interactions lack immediacy. Social presence counters this lack of immediacy by allowing actors to identify one another, to establish themselves as salient social actors and to begin to form relations with one another. As these relations develop, closeness between parties increases and with this sense of immediacy the obviousness of the mediating technology is diminished. The media become more transparent as the social and psychological distance between the actors is decreased (line E). Participants experience one another as though the interactions were more direct than they actually are. By making the media transparent and reducing the social and psychological distance between actors, social presence humanizes the experience of online interaction. It de-emphasizes the technology and media and emphasizes human--human contact. In doing so, social presence reinforces human agency in online learning environments and allows learners (and other participants) to create productive social systems within these environments.

5.1.3   The Nature of Social Presence

As stated in Chapter 4, social presence is *an individual's ability to demonstrate her state of being in a virtual environment and so signal her availability for interpersonal transactions.* That is to say, social presence is the means by which online participants inhabit virtual spaces and indicate not only their presence in the online environment, but also their availability and willingness to engage in the communicative exchanges which constitute learning activity in these networked environments. Online social presence is conveyed by the combination of the messages online participants send and how those messages are interpreted by others. Messages contain cues which indicate the presence of the individual who sends them. Those cues include a variety of information about the senders, including

personal histories (cultural backgrounds, levels of education, professional experience), personalities (attitude, demeanour, sense of humour) and current circumstances (location, family situation, current professional context). These cues indicate that the sender of the message is both *real* in the sense of being a real person and *present* in the sense of being in (existing, inhabiting) the virtual environment. Together these qualities help online participants identify other salient social actors in the environment.

The definition above has a number of very important implications for activity in online environments, most notably that the *social presence of another party and that person's status as a real person implies that online participants experience interactions with that person as human--human interactions, not as human--machine interactions.* What follows is the potential for the development of relations between these two human actors. Moreover there is potential for the resulting relations with the 'other' parties to have the characteristics of human--human relationships. Within the dynamic social spaces which constitute contemporary online learning environments, social presence facilitates interaction and connection between participants.

The messages participants send also contain relational cues which indicate the state of the relationship between the sender and receiver of the message. These relational cues contain information regarding the nature of the interaction, the affective state of the sender and the relative cohesion of the social unit in which the sender and recipient are situated (Rourke et al., 2001). By reading and interpreting both the personal information cues and the relational cues, the recipient of the message is able to build a context in which to situate the message. As a result, the recipient is better able to make sense of the message.

The further implications of this definition are significant. Social presence demonstrated by individual participants creates the potential for the operation of a wide variety of social-relational activities. Participants get to know one another. They are able to develop a sense of connection to others and develop relationships. They experience belonging and a sense of being part of social units in the environment. They are able to overcomefeelings of loneliness or isolation through the identification of known others. They experience relationships characterised by social-relational constructs such as trust, respect, rapport and empathy, amongst others. They experience feelings of safety in the online environment and comfort

with the nature of social-relational activity which promotes a willingness to put themselves at risk through participation in interpersonal exchanges which require self disclosure or other behaviours which expose them to social risk such as critique, ostracism or ridicule. As a result of these relational aspects of online communication, participants experience a richer sense of *being* and *doing* in the online environment. In broad terms, social presence enhances learners' experiences of online learning by allowing them to cultivate and maintain productive relations with others in the online environment. Whilst these processes are relatively straightforward in face-to-face settings and are often taken-for-granted, the limitations of text-only media necessitate a re-conceptualisation of these processes in online environments and highlight the role of online social presence.

Given the nature of online learning environments as social-relational systems in which person-to-person interaction is a prevalent form of learner activity (D. R. Garrison & Anderson, 2003; D. R. Garrison et al., 2000, 2001; Steeples et al., 2002), these findings reinforce the notion that social presence is an essential component of these environments.

5.1.4   Creating and Sustaining Social Presence

There are several important extensions of the ideas posited above. Because social presence is a quality of people, it is dependent on the participants in the environment. This is consistent with arguments by Gunawardena (Gunawardena, 1995; Gunawardena & Zittle, 1996) that suggest that social presence can be cultivated. Moreover, the ability to convey social presence online can be learned. Indeed, it *must* be learned. Specifically, experience in the online environment is important. Novice online participants do not come to learning environments with the skills necessary to establish and cultivate their online presence, let alone engage in text-based dialogue and collaboration. Online participants learn to read and convey a sense of presence by watching others in the environment. Other participants serve as both positive and negative role models in the cultivation of social presence. Positive experiences provide exemplars for good practice in the cultivation of positive social presence. Negative relational experiences with other participants demonstrate unsuccessful strategies for conveying presence.

Findings from the study indicate three main conditions which promote the establishment and growth of an individual's social presence. First is the *ability* of

participants both to send and to read social presence cues. As stated above, learners don't come to online learning environments with these skills. They must be learned. In a cohort of novice online learners, the spontaneous development of social presence in a limited timeframe is unlikely. Therefore the realization of benefits associated with social presence within that timeframe is also unlikely. Online courses and programs must include attention to these skills as part of their designs. When necessary, online learning must include explicit teaching about online communication and the related communicative skills in order to provide a foundation for productive learning activity. The alternatives to this approach may lead to learner frustration, anxiety and, ultimately, failure with online learning (see, for example Hara & Kling, 2000). Next is the *opportunity* for participants to interact with one another. Social presence cannot be established, indeed cannot exist, without interpersonal interaction. Opportunities for interpersonal interaction are not difficult to create, but they should be carefully organized to maximize the benefits of such activity, including the cultivation of social presence and the resulting relations between participants. Whilst the technology facilitates the process, these opportunities for interaction need to be structured through design and facilitation in order to: (a) promote productive interactions; and (b) prevent learners from being overwhelmed by the demands of interaction within large groups; and (c) balance the needs for both flexibility and structure. Finally, online learners need *motivation* to engage in relational exchanges. Interpersonal interaction does not take place spontaneously. Moreover, it can be a demanding and costly process in terms of learners' time and effort. Therefore, learners need a clear reason to interact in order to make the interactions purposeful and, ultimately, profitable for themselves. This reason is provided by either *need*, as in the case of learning tasks which require interaction, or *interest*, as in the case of relations which motivate ongoing interaction and development of relationships.

Notably, an individual's social presence can be positive or negative. While any individual might be present in an online environment, her or his presence may indicate a variety of relational states: willingness or unwillingness to interact, availability (or otherwise) for ongoing exchanges and a variety of personal characteristics which make that individual more or less desirable as a partner in relational exchanges. Just as the development of social presence is dependent on the

individual, the qualities of the resulting presence are as well. The social presence of
an individual is as unique as that individual person.

5.2   Social Presence and Mediated Social Processes

Online social presence plays an essential role in online learning environments
by supporting the processes which constitute learning activity in these environments.
These processes include; (a) interpersonal interactions as transactions between online
learners; (b) the development of relations between participants which promote
productive interaction; (c) online collaboration in groups of online learners; and (d)
the development of online communities. Each of these points is explicated below.

5.2.1   Social Presence and Interpersonal Interaction

Interactions between individuals are an essential part of learning activity (e.g.
J. S. Brown & Duguid, 2000; Mayes, 2001; Mayes et al., 2002; Vygotsky, 1978;
Wenger, 1998). McIsaac, Blocher, Mahes and Vrsidas (1999) suggest that
interaction may be the "single most important activity in a well designed distance
education experience" (p. 122). Person-to-person interactions provide opportunities
for individuals to posit opinions, share ideas, consider alternative points of view and
interrogate one another with a view toward richer, more clearly articulated
understandings of the issues in question. Moreover, as reported by respondents in
this study, interaction has a supportive dimension.

Online social presence supports and facilitates learning by promoting
interaction. Social presence increases the immediacy of online exchanges, allows for
the development of relations between online participants and creates a
complementary cycle of transaction and relation which promotes ongoing
interaction. In order to understand this cycle, it is necessary to understand the nature
of online interaction.

The most basic person-to-person interactions are monologues, where one
party acts as the sender and the other as receiver. Consider the case of two learners
A and B: A makes a discussion board posting which includes an interpretation of a
concept from the course material. At this stage, the process is not fully interactive; it
is merely *active*. Activity and information flow in one direction: *from A*. Next, B
reads the posting and, based on her personal interpretation of the material, her
tentative understandings of the concept and A's interpretation, she is able to compare
her own view with those of B, interrogate those views and either confirm her

interpretation or alter it to accommodate aspects of A's interpretation. B interacts with the *content* (as expressed in A's ideas), the *context* (provided by the discussion forum and course environment) and the *person* (A, as manifested by her representation of herself in the message and any prior experience B has with her). However the overall value of this interaction is limited because it lacks one of the basic qualities of the highest forms of interactivity: *sharedness*. Information is still moving in one direction, from A. This one-way interaction is too limited to promote relational activity and so this example highlights one of the potential difficulties of CMC: an imbalance in the sender--receiver relationship in which the sender can attempt to get collaborative activity started, but has no way of knowing if the message is being received and by whom (Riva, 2002). This creates the potential for miscommunication or communication breakdown and limits the development of relations. The quality of sharedness responds to this problem by creating mutuality and balancing the relations between the parties.

If the scenario is extended and B posts a response to A in the form of a question, then the interactivity of the situation moves to the next level: from *action* to *reaction*. Within the reaction is the establishment of two-way communication. Balance in the sender--receiver relationship is restored. Because both parties have access to feedback, two-way interaction allows for products of the interaction to be 'shared' between the two parties. Therefore two-way interaction is potentially much richer and more powerful than one-way interaction because it introduces the possibility of reciprocal effects and/or mutuality in these relations and creates conditions in which collaboration can take place. From this point, it's possible to imagine the interactions continuing and extending: A responds with a more detailed explanation of the point, including an example to support the point. B responds to A and introduces more information as well as a question for A. A reads the new information, responds to B's question and makes a clarification of her earlier position. As the exchanges continue, the situation becomes truly *interactive* in that the interaction transcends reaction. Exchanges are interactive when messages relate to one another; later messages in sequence demonstrate relatedness to earlier messages (Beuchot & Bullen, 2005).

The brief presentation above begins to indicate the development of interactive processes, but it also introduces fundamental questions about the practicalities of human interaction via CMC as learning activity. Assuming that

these sorts of interpersonal interactions are beneficial, *why would A post her ideas*? *What would make B read them*? And, most critically, how is two-way interaction promoted, i.e., *what would make B respond*? An examination of the relational aspects of interaction provides a partial response to these questions.

<div align="center">

5.2.2   Social Presence and Relations.

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The findings in this study indicate that the development of relations between parties in online learning environments is closely related to the development of online social presence. Individuals gather information about the state of relations between themselves and others through the reading of social presence cues. Exploration of participant experiences with social presence led to a number of social-relational mechanisms which operate as a result of information provided in social presence cues and affect the experience of interactive, collaborative online learning. These influences are evident in a variety of social-relational mechanisms which arise from the combination of social presence cues and ongoing interaction. These mechanisms include commonality and like-mindedness, trust, feelings of safety, respect, rapport and interdependence.

5.2.2.1   Commonality and Like-mindedness

Commonality is something shared between individuals, i.e., something that is held *in common*. This is manifest as 'mutuality' and things 'shared' (e.g., shared purpose) such as common interests, common background (e.g., professional situation, educational history, family situation, location/shared cultural 'location'), shared problems, common aspirations, and shared purposes/goals (see also Hung & Chen, 2001).

Implied in commonality is the notion of reciprocity, i.e., that both parties are involved in the relation-- that it is *mutual*. However, findings indicate that this is not always the case. In some instances, the identification of points of commonality provides an entrée to such reciprocity. In this way, commonality is seen as an important genesis point for other social-relational mechanisms. Commonality is a precursor to establishing connection and feelings of an existing relation between individuals. This notion is associated with *familiarity* and *comfort*. Also, there is a distinction between 'connection' and 'belonging', the former being 'closeness' with a limited number of other individuals (perhaps related to intimacy) and the latter being a more general sense of membership in a larger, perhaps less closely

associated, group. A sense of connection was seen as an aid to meaning making as it helped create context for the comments of others and helped individuals make informed guesses/assumptions about the context and meaning of others' statements.

Following from the points above, commonality is also linked with 'groupness' and the notion of group cohesion. In particular, findings highlight the notion of "shared purpose" and indicate that shared purpose is perhaps the most important factor in creating a sense of cohesion and productive collaborative activity in group situations. Shared purpose promotes a sense of 'groupness' and seen as a defining characteristic of group formation and group membership. Notably, shared purpose describes not only specific task-oriented activity, but also more general notions of learning activity. This highlights an important distinction in researching online educational environments: the activity is purposeful and participants have (usually) paid for access, so activity is likely to be focused around similar (shared) purposes rather than serving divergent aims. The extension of this point is that the development of collaboration and community may be promoted in educational environments in which learners have made a commitment to some shared purposes (i.e., learning).

The implications of these points include the need to provide opportunities to identify points of commonality. This entails more explicit identification of particular learner characteristics which allow participants to identify others with common traits. Moreover, there is a need to create structures within the course which capitalise on particular sorts of commonality as a basis for developing relationships and ongoing interaction (e.g., interest groups). This was so in one of the four cases, OTea1, in which participants were grouped at the start of term according to their work contexts. In this situation, members of any particular group had commonality of professional experience, and in some cases, training or professional histories. This served to stimulate interaction and the development of relationships as the course progressed.

5.2.2.2 *Feelings of Safety and the Creation of a Safe Environment*

Another essential relational condition is the creation of an environment which is *safe* in the sense that it fosters feelings of trust and promotes interpersonal interaction. This is important for creating a stable, secure environment for basic communication, interpersonal interaction and critical discourse. This notion was

described in terms of "comfort", "confidence", "safety", diminished risk and, in particular, "trust".

A safe environment is one in which there is a generally positive atmosphere in which participants felt safe from rebuke, ridicule or other negative behaviours. It is populated by other participants whose behaviour was respectful and non-threatening. There are both tacit and explicit links between this notion of safety and rapport, respect, trust and "professional behaviour". A safe environment supports interaction by increasing participants' willingness to "put themselves at risk" through personal disclosure, testing of ideas, seeking clarification and admitting lack of understanding. Notably, respondents repeatedly referred to negative experiences in emphasizing the need for a safe environment. Negative feelings identified included embarrassment, exclusion, a sense of being offended, dismissal, lack of respect and being ignored.

The creation of a safe environment includes a variety of conditions: facilitator modelling, shared norms of behaviour, a sense of connection within the group, development of rapport and a general sense of positive relations between participants. The creation of a safe environment is supportive of learning activity, particularly when that activity involves interaction. However, findings include some ambivalence about the need for safety and suggested that over time (and through experience) online participants develop a "thick skin" and worry less about the feelings/responses/reactions of other participants in the environment. This may suggest that with increasing amounts of experience with CMC comes increased tolerance for ambiguity and potentially inflammatory statements by others.

These points suggest activities which can contribute to the development of a safe social-relational environment online, including: opportunities for group norming of behaviour, modelling of appropriate behaviours by the facilitator and moderation of inappropriate behaviours by either the group or the facilitator.

5.2.2.3 Trust.

Trust is an essential part of a productive online learning environment. Consistent with Tanis and Postmes (2005), findings indicate that trust includes both "trustworthiness" and "trusting behaviour". Trustworthiness is a precondition of trusting behaviour in most cases and is a subjective construct which varies from one

participant to another. Some respondents in this study indicated assumptions of trustworthiness in their learning peers; others indicated that trust had to be "earned".

Trust is experienced by online participants with three "C's":

1. *Confidence* in the other party, including confidence that the others would not act in a negative or unfriendly way as well as confidence that the other party can help, i.e., "has something I need", will provide an appropriate response, or help me in some way.

2. *Comfort* in interacting with others including putting themselves at risk through idea sharing, personal disclosure, etc. This idea is related to the creation of a safe environment.

3. *Courage* to "have a go" and participate actively in discussions and other interpersonal transactions. This also includes the courage to respond honestly and openly in ongoing dialogues.

Beneficial outcomes of trusting behaviour include the ability to be honest and open in interpersonal transactions as well as "deeper" conversations with more critical idea sharing about and analysis of the ideas in question.

Notably, trust promotes the development of interdependent relationships. Implications of these findings include the point that trust may be built and sustained incrementally, over time. Therefore supportive structures and supportive facilitation in online learning environments need to include a basis for trusting behaviours and provide opportunities for the development of trust through the demonstration of trustworthiness (as it relates to confidence in the other parties), comfort in the online environment and the exhibition of trusting behaviours in a willingness to participate in ongoing activities.

5.2.2.4 Respect.

Respect is a positive relational condition between people which includes notions of trust and admiration. It is a highly subjective construct and no clear criteria for respect are evident in the data. Much like trust, individuals have very personal ideas about the development of respect and how it is conveyed. Likewise, the actions of others in a relation are interpreted very subjectively as respectful or not. Interestingly, findings indicate a pattern in which instances of respect (positive) are cited when the respondent has respect for another (from me to you, I respect

him), while instances of a lack of respect are indicated the other way around, e.g., he didn't respect me.

In terms of the benefits, respect provides a basis for connection between individuals, particularly in the absence of a sense of "commonality". While participants may not *like* one another, they can still *respect* one another and that may provide a basis for ongoing productive relations. Likewise, respect may contribute to a sense of interdependence and facilitate collaborative activity, particularly when there is a strong task-orientation (shared purpose).

5.2.2.5 *Rapport.*

Rapport is a positive relational condition in which there is mutuality of trust and respect. Therefore rapport is clearly related to these other social-relational mechanisms. It is based on notions of commonality and shared purpose and may develop out of necessity in task-related activity.

Positive results of rapport included willingness to put oneself at risk in discussions, willingness to offer critique or take critical positions, willingness to make personal disclosures and enhanced feelings of "closeness" to other individuals. Respondents repeatedly referred to notions of "honesty", "trust" and "openness" when discussing experiences with rapport in online interactions. They cited a number of negative examples of behaviours which undermined and/or prevented rapport from developing, particularly where these behaviours were interpreted as indicating a lack of respect.

These points suggest that while rapport represents a highly desirable relational state, findings indicate that it is a result of advanced levels of relational activity, dependent upon other relational states as pre-conditions of establishing rapport. There were no clear indications of how this might be fostered and so this is an area for further study.

5.2.2.6 *Interdependence.*

Interdependence refers to the notion that learners both support others and need support from other learners. It manifests itself as explicit or implicit acknowledgement of the reciprocal relationships between individuals in the online learning environment. Examples include: recognizing how the contributions of individuals contribute to a collaborative effort, a sense of commitment to "the team" or "the group" or the "greater good" and expressions which indicate that there is

inherent value in collaborative activity based on reciprocal commitment to a shared purpose.

Interdependence is related to:

1. *Commonality* in terms of shared purpose, common views and the notion that "we're all in this together". Some respondents indicated that commonality formed the basis for group formation and identification of "like minded" others who might have similar goals (shared purpose). There is an explicit recognition of the contributions others can make to personal learning, often identified through difference.

2. *Trust* in the sense that, because the other parties are experienced only in mediated interactions, they must seem "trustworthy" and trust must be given for interdependent relationships to develop. The link here to social presence is evident.

3. *Specific identifiable personal characteristics* including skills, attitudes, beliefs, abilities and more which allow for individuals to be assigned (or sought out) for particular tasks. This is related to the notion of "division of labour" and creating a functional "whole" from a given set of "parts" in collaborative work.

4. A sense of both *commitment* to the group and *accountability* within the group. Notably, there is a potential conflict between commitment to collaborative processes and pervasive assumptions about the individual nature of study (and learning) in formal education. Likewise, there is some conflict about levels of accountability to the group. Some online learners viewed this as necessary, while others could not reconcile group orientation with expectations of individual learning processes.

However, responses also indicated some conflict over the notion of interdependence and differing expectations of interdependent relationships. To some degree, this may be related to expectations of individual work, one-to-one support from the facilitator and negative previous experience with collaborative work. Some respondents expressed frustration with collaborative work while others expressed frustration with differing levels of commitment between individuals with regards to collaborative work.

Overall, a clear understanding of interdependence has not emerged from these data, but there are indications that it is an important concept in social support insofar as that is related to "networks of support", collaborative and community work situations and supportive relationship building. Further research is need into learner experiences and expectations with regard to interdependence as it relates to collaborative activity and the development of community.

5.2.3   The Progressive Development of Relations

Relations between individuals develop progressively from a point of first contact. In this initial encounter, the sender establishes a social presence and the receiver is made aware of the presence of the sender as an 'other' party in the environment. The receiver forms an impression of the sender as *real* and *present* which encompasses such attributes as personality, background, and attitude. The receiver uses this information for two main purposes. The first purpose is to create a context for the other party's comments and so make meaning of them. This includes the recognition of the sender as a known party in the environment. The second purpose is to make informed decisions about the other party's availability and willingness to engage in ongoing transactions.

Relations between individuals develop over time based on the number of interactions and transactions between them, the intensity of those interactions and the working of the social-relational mechanism within those transactions. As the total number of transactions between individuals increases, the combination of social presence cues and social-relational mechanisms contributes to the overall development of the relationship. Individuals continue to cultivate a social presence which is read and interpreted by others, affecting their relationships. Likewise, a variety of social-relational mechanisms are called into play as individuals develop respect for one another's opinions, identify points of commonality, develop closeness and begin to trust one another. What emerges is a developing sense of history which contributes to the sense of the overall quality of the relationship. For some relationships, this quality is characterized as "deep", "meaningful", "close" or "intimate". For others, the relationship is more "shallow", "limited", "temporary" or "superficial".

Beginning with social presence as the basis for participant-other relations, findings indicate five main types of relational mechanisms which follow a

developmental progression. These include a) those which form a basis for 'me-other' (one way) relations; b) those which form a basis for mutuality, reciprocity or a 'shared-ness' in the relation; c) those which contribute to feelings of safety and the development of a risk-free environment; d) those which promote feelings of trust, including informing decisions about trustworthiness of other participants, and lead to the exhibition of trusting behaviors; and (e) those which lead to production in the completion of collaborative work (see also Murphy, 2004). These types of social-relational mechanisms work in concert with social presence to influence the development of relationships.

Notably, the stages in this progression are not discrete. Rather, they are relative positions. Relations are emergent and dynamic. They are in a state of constant flux -- sometimes developing, sometimes waning. There are not clear thresholds between these stages. Figure 5.2 below details illustrates these progressive stages and the relational mechanisms at work.

Progression of relations	Relational mechanisms at work
Me-other relations	Empathy Respect Admiration
Mutuality	Commonality Connection Likemindedness
Feelings of safety	Freedom from risk Comfort with others Confidence in others
Trust	Trustworthiness Trusting behaviours Willingness to put oneself at risk
Production	Group cohesion Rapport Interdependence

Figure 5.2 Progression of relations in online interaction

5.2.3.1   Basis for Me--Other Relations

Once social presence is established, participants' decisions about whether and how to respond to one another are influenced by basic feelings of relation between the parties. Social-relational mechanisms which operate here include: (a) *empathy*, defined as the ability to put oneself in the place of another. (This involves the

attribution of *sameness* between participants, at least with regards to the 'empathizee' being seen as the same as the 'empathizer'); (b) *respect*, which is the acknowledged value of another party or their attributes; and (c) *admiration*, which not only is acknowledged value but also includes a desire to be like the other party.

For each of these relational-mechanisms to exist, a participant must acknowledge the existence of another as a real person (as previously established through social presence) and relate the other party's situation to that participant's own. These mechanisms form the basis for ongoing relations between the two parties. Notably, the relations are largely undeveloped at this stage as interaction may be limited to one-way communicative exchanges.

5.2.3.2   Basis for mutuality

When communication becomes two-way, there is opportunity to develop mutuality, or sharedness in the relation. This sharedness is an important precondition for the development of more advanced relations between parties. Mutuality is built upon the identification of points of commonality, feelings of familiarity and a sense of "likemindedness".   This sense of mutuality is sometimes described as a sense of connection, which explicitly acknowledges the relation between individuals. These relational mechanisms contribute to a sense of reciprocity in the relation which opens the door to ongoing transactions between the parties.

5.2.3.3   Creation of a risk-free environment

To build upon mutuality and create sustained interaction, participants need to feel that the social environment is relatively safe. In the data, these feelings of safety are often characterized by notions of "comfort" combined with either a "freedom from risk" or a willingness to put oneself at risk because of a decision to trust fellow participants. Generally, these behaviours result in greater numbers of interactions between individuals and a greater depth or intensity in the interactions which take place. Results from the study indicate that these social-relational mechanisms facilitate "deep" interactions which move beyond "safe", superficial interactions into more provocative or less safe interactions.   The point is not to coddle learners, but to promote interactions which get beyond virtual 'small talk' to the heart of critical discourse and higher order thinking (e.g., evaluation, synthesis, analysis). As the relations between individuals become more intimate and closeness develops,

participants engage in greater personal disclosure and hypothesizing as they delve more deeply into the issues at hand.

5.2.3.4   Promotion of Trust

The relational mechanisms identified above have a cumulative effect as they promote the development of trust by informing decisions about the trustworthiness of the other party (Tanis & Postmes, 2005). In particular, these decisions are influenced by feelings of safety or freedom from risk in the learning environment mentioned above. Together, these feelings contribute to an individuals willingness to exhibit trusting behaviours which include personal disclosure, openness and a willingness to put themselves at risk. When these feelings of trust are characteristic of relations within a group, there are higher levels of group cohesion and feelings of closeness.

5.2.3.5   Production

When the ability, opportunity and motivation exist for the full development of positive relations, rapport develops between individuals and high degrees of cohesion exist within groups. Interactions may be frequent and intense. The conditions promote the development of collaborative activity in which participants share responsibility and activity in order to create shared products. They also create the potential for the development of a sense of community, including the interdependent relationships that exist between community members and the explicitly shared purposes of members.

Notably, the development of interpersonal relations requires a combination of time and a certain level of intensity in interaction to achieve. Relations do not develop instantly and they require attention in order to be cultivated and maintained. This remains one of the challenges for online learning in formal education: cultivating productive relations within the limited timeframe of a unit of study.

The development of relations and the progression of relational states are potentially beneficial to online learners in a number of ways. First, these relations support ongoing interpersonal interaction. As relations develop, they provide motivation for ongoing interaction and help online learners identify desirable partners for interaction. Also, relations provide a basis for collaborative activity in the development of shared purposes, rapport, group cohesion and interdependence. Finally, these relations are essential to the development of a sense of community

which transcends collaboration to create highly interconnected activity systems. These points are taken up in greater detail below.

5.2.4 Transactions: Mutually Supportive Interactions and Relations

Following the development of relations between individual actors is the relationship between social presence and the interactions which constitute learner activity in online learning environments. Social presence and interpersonal interaction are complementary: Social presence cannot exist without interaction, and ongoing interaction is facilitated by positive social presence. Interactions in the form of communicative exchanges provide opportunities for the transmission of the cues which are the manifestation of an individual's social presence. Once positive social presence is established, the immediacy of the communicative exchanges increases and relations begin to develop. Positive relations follow immediacy and these can lead to affective benefits: improved motivation, positive attitudes, sense of accomplishment and commitment to shared processes. As a result, the likelihood of ongoing interaction is increased. In this way, positive social presence promotes ongoing interpersonal interaction. A cycle is created: social presence continues to develop and works to provide relational cues to participants. Meanwhile, the relation between participants is in constant flux, becoming more or less intimate, characterized by more or less frequent interaction. This relation influences participants' decisions to commit to and participate in the ongoing interactions which constitute activity in online learning environments. Figure 5.3 below illustrates this cycle.
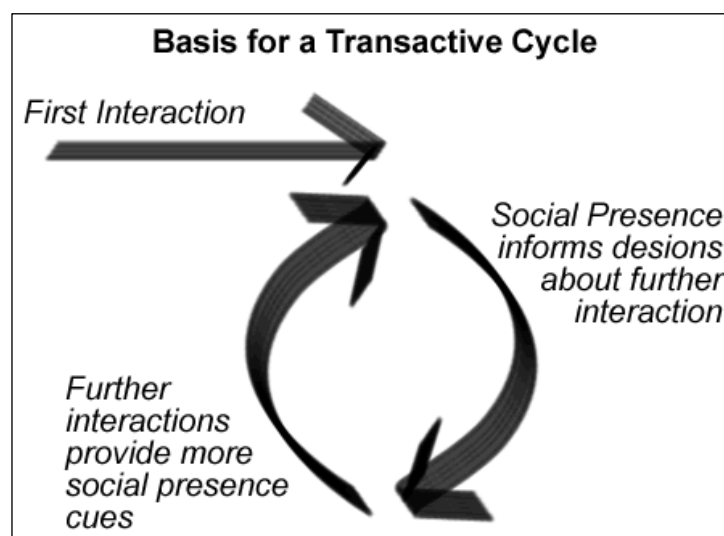

Figure 5.3 Basis for a transactive cycle

These two-way interactions are *transactions* because each of the parties is affected by the exchange (J. Garrison, 2001; Shin, 2002) . Each individual leaves the transaction affected in some way for having had the experience. Both are exposed to new (or different) ideas or points of view. Both have had their position interrogated, either externally by another party or as part of an internal dialogue. Both have had an opportunity to articulate a position and, in doing so, to re-enforce or refine their understanding of the concepts in question. Moreover, the transaction implies a relation between the two. There is a quality of sharedness implied by the exchanges which constitute the transactions. This reinforces the importance of relations in interactive learning processes.

5.2.4.1   Promoting and Sustaining Interaction

Results from the study suggest that individuals can use their personal online presence to promote and sustain interaction in online learning environments. Three main tactics have emerged. First, participants must be *available* for interaction with other parties. In text-based online learning environments, a lack of messages from a particular individual equates to absence from the environment. This absence indicates that participants are not available for interaction. Learners must indicate that they are indeed present in the online environment as a potential partner in communicative exchanges. Beyond establishing their presence, actors must cultivate a presence which signals their ongoing availability by (a) checking in regularly and remaining visible through the posting of messages; and (b) providing personal information which indicates their ongoing availability-- e.g., identifying conflicting commitments, work patterns and availability for future interactions. Second, participants must be *willing* to interact. Online interaction, dialogue and collaboration can be demanding. It is not surprising then that learners vary in their willingness to invest themselves in these processes. However, in order to cultivate and maintain positive presence online learners need to indicate their willingness to interact by maintaining an ongoing presence and establishing a relational position which invites interaction with other parties. Negative social presence (e.g. terse messages, inflammatory postings, impersonal communication) or lack of presence (i.e., 'lurking', absence) indicates unwillingness to interact and may preclude further interaction. Third, participants must *present themselves as attractive partners* in

interactive exchanges. Social presence is, in some ways, the 'face' of online participants. It is how they present themselves to the rest of the online cohort. For this reason, it is important that they don't preclude productive interaction and collaboration by presenting themselves as disagreeable, abrupt, rude, insensitive or otherwise undesirable as partners in critical online interactions. Whilst the determination of attraction in interactive partners is subjective, it is important that online participants are both (a) conscious of indications of negative presence and (b) vigilant about representing themselves as salient social actors in online learning environments.

5.2.5 *Social Presence and Collaborative Activity*

Collaboration is an essential component of contemporary online learning environments (Gunawardena & Zittle, 1996). Through collaborative endeavour, learners engage in coordinated activity, develop purposeful relationships and strive to produce, create, discover and solve problems (Murphy, 2004). Indeed much of the power of network structures which underpin online learning environments is related to the synergies created in collaborative processes.

In some ways, collaboration is an extension of the interactions identified above. Collaboration requires human--human interaction. However, as Murphy (2004) has observed, interaction does not guarantee collaboration. Collaboration is built upon a combination of particular types of interaction and relational mechanisms which support the development of collaborative outcomes. The interactions which constitute collaborative activity are not spontaneous. Moreover, they do not exist in a vacuum. They are part of a web of interpersonal relationships which influence the number, frequency and intensity of interactions (Salomon, 1993; Shin, 2002, 2003). The collaborative development of shared perspectives, the co-construction of meaning and the production of artefacts which represent that shared understanding (meaning) require that collaborators not only interact but also relate to one another in a way which emphasises the sharedness of the products that emerge. Social presence and interaction are important constituents of the development of collaborative processes in mediated environments.

Collaborative activity includes a combination of at least three types of interaction: interaction between the participant and the content under study; interaction of the participant with the context in which she is situated; and interaction

with the other people who are participants in the system (Barab & Plucker, 2002; Laurillard, 2002; Salomon, 1993). Notably, these types of interaction are not discrete; they are interrelated. Each of these types of interaction foreshadows a role for social presence in supporting collaborative activity.

5.2.5.1 *Interaction with content: Participant generated content in online environments*

The content of many learning programs (online, distance and face-to-face) includes those printed materials and other media elements which are provided by the institution plus notes and other information provided by the instructor. This content is relatively static. It is unchanged through the course, may not change from one offer of the course to another and it is often not interactive. In contrast, in the type of online course included in this study, the course content also includes learner-generated products including text, diagrams, media elements and other collaborative products. This content is much more dynamic than traditional course content in the sense that it is emergent over the course of a unit of study and changes from one term to the next with the course participants. Because of the addition of dynamic content to online learning environments, the relations between the learner and the content in these environments need to be carefully considered in order to promote collaborative activity.

Social presence has a role to play in the interactions between online learners and the content under study because it promotes both (a) the interactions between learners which generate dynamic content and (b) the interactions between the learner and the content which allow it to be used in learning processes. As indicated above, social presence promotes interaction between online participants through the development of relations and increased immediacy in communicative exchanges. As a result of positive social presence, the frequency and intensity of interactions are likely to increase. These interactions between learners generate dynamic course content which includes learners' tentative understandings of the issues under study, points of clarification, personal representations of concepts, requests for information and responses to others as part of ongoing dialogues. In the case of online learning environments containing significant amounts of participant generated content, the interactions between individual participants and the interactions between participants and content are intertwined, even inseparable. What emerges is a view of *people as*

content. To interact with dynamic content in online learning environments is *to interact with other learners.* Collaboration relies upon this interdependence between learners and content in the development of shared understandings, shared processes and shared products. Social presence supports these interactive processes in two ways. First, the affective benefits of social presence, including motivation, sense of achievement and positive attitudes that result from positive relations, provide the impetus for these interrelated forms of interaction. Second, social presence aids in the creation of context, which allows participants to make sense of these interactions. This point is expanded below.

5.2.5.2 *Social presence, context and collaboration*

As Riva (2002) points out, online environments lack the contextual cues present in face-to-face encounters. They lack visual cues which create relational contexts and they also lack the sense of place associated with physical spaces. As a result, online learners must find ways to create context for communicative exchanges and so make meaning from the messages. Social presence cues help online learners create the context for others' messages in three ways. First, they identify the sender of the messages as a known entity. This is one of the central characteristics of social presence. It allows the message to be situated in the context of what is known about the sender and particular meaning can be made from the context. Second, social presence provides information about the relation between the sender and receiver of the message through the inclusion of relational cues in textual messages. These cues help the receiver of the message create context around the relations between the sender and receiver. For example, receivers are able to situate the informational content of the message against the state of the relation between themselves and the sender. Messages may be interpreted quite differently depending on whether relations are helpful and supportive or competitive, confrontational or simply unfamiliar. Third, over time, social presence creates a sense of history in the relation between parties. This sense of history can be used to create context for ongoing interactions and the creation of meaning from such interactions. As such, social presence makes online collaboration possible by allowing for the creation of context in online environments.

5.2.5.3 Collaborative activity and relations

Shrage (1995) has suggested that collaboration exists as a progression of six stages:

1.   the establishment of social presence;

2.   the articulation of individual perspectives;

3.   the taking in of the perspectives of others;

4.   the co-construction of shared perspective and meaning;

5.   the identification of shared goals or purposes; and

6.   the production of shared artefacts.

As the development of collaboration moves from one phase to the next, participates realize higher degrees of collaborative activity. This progression implies important relationships between certain types of interaction and the progressive development of collaborative activity. It also indicates important roles for certain social-relational mechanisms in contributing to this development.

In relation to the social-relational mechanisms identified in this study, there is a five step progression of relations: from the establishment of social presence to a basis for me--other relations to mutuality in the relation to the establishment of a safe environment, and the development of trust and finally, to the development of interdependence, cohesion and rapport. Furthermore, these social-relational mechanisms indicate the interdependent relationship between interaction and relation. With ongoing interaction, relations may develop and progress, thereby stimulating further interaction.

It is possible to map the progressive development of collaborative activity, interaction and relations and compare these three processes (see Figure 5.4 below). As the figure shows, there is a correspondence between Shrage's (1995) six stages of collaboration and the development of relations between individuals in online interactions. In the early stages of collaborative activity, activity is individual. Interactions are one-way, consisting of monologues which articulate individual positions and allow the perspectives of others to be considered. Relational activity is focused on building a foundation for relations through the identification of real and present others, the establishment of me--other relations and the development of mutuality. As the process moves forward, the interactions between individuals become more involved: they are more likely to be two-way; they occur with greater frequency and intensity. Relations between participants are complex and emergent,

based on the cumulative effects of prior relations, influenced by recent and ongoing interactions. Collaborative activity includes the identification of shared points of view and shared purposes. The mutuality of relations strengthens the connections between individuals. As relations develop, participants experience feelings of safety, trust and notions of belonging to a wider group of individuals. As collaboration develops to the point where there are shared products, interactions are likely to be part of an ongoing spiral of activity in which one exchange is deeply embedded as part of an ongoing dialogue. Relations exist not only between individuals but also between an individual and groups of others in webs (or networks) of interdependent relationships.
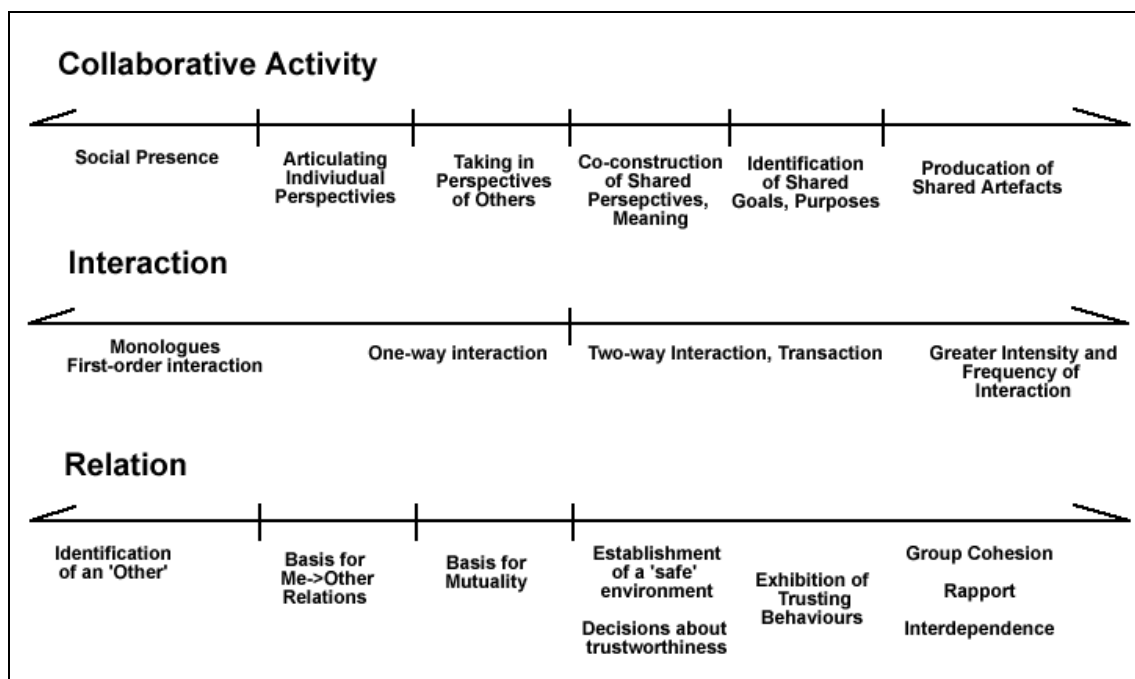

Figure 5.4 The comparative development of collaborative activity, interpersonal interaction and relations

All three processes (interaction, the development of relations, collaboration) are supported by social presence. To reiterate: *Social presence promotes interaction as part of a mutually reinforcing cycle of activity. Furthermore, social presence supports the development of relations between individuals and contributes to the creation of conditions which support collaboration.*

5.2.6   Social Presence and the Development of Community

A significant portion of the literature on learning communities has worked to establish the significance and value of community structures in promoting learning (e.g. A. L. Brown & Campione, 1990; Bruckman, 2004; D. R. Garrison & Anderson,

2003; George, 2002; Hung & Chen, 2002; Hung & Nichani, 2002; Lave & Wenger, 1997; Wenger, 1998). Implicit in this literature is the assumption that such communities either already exist or can be created. However, much less of this emergent theory base has addressed the development of communities directly, particularly in the context of formal education. As a result, much less is known about whether communities can be designed, particularly in online environments. Whilst much of the attention on online learning communities has focused on the usability of technology, much less attention has been paid to sociability and facilitating the interpersonal interactions which comprise activity within communities (see Barab, Kling et al., 2004b; Preece, 2000). The findings from this study provide a partial response to these problems by identifying a clear role for social presence in the social processes which promote the development and sustenance of online learning communities in formal education.

Following the promotion of sustained interaction, the development of relations and the promotion of collaborative activity outlined above, social presence also supports the development of online learning communities. Just as collaboration may be viewed as an extension of interaction, so community may be viewed as an extension of collaboration. Collaboration is the lifeblood of communities (Murphy, 2004). It is the means by which they are productive. Communities situate collaborative activity within a combination of structures which organize and facilitate collaboration in order to provide benefit for the community and its members.

Drawing from theories of situated cognition and Vygotskian thought which underpin contemporary online learning, Hung and Chen (2001) have posited a framework for informing the design and development of vibrant and sustaining communities. The four dimensions of this framework are:

- *Situatedness*-activity must be situated in a context which allows for the appreciation of relationships and the rich interconnectedness between meaning and context.
- *Commonality*-a shared purpose gives participants identity and a shared basis for understanding, including common tools and communicative techniques.
- *Interdependence*-variety of particular needs, skills and abilities within a community creates a need to interact and opportunity to learn from others.

- *Infrastructure*-the structures which support the activity of the community and facilitate the processes which define the activity of the community

Social presence plays a role in creating or sustaining each of these dimensions of community. Social presence promotes *situatedness* by aiding in the creation of context. As indicated above, social presence cues provide information about other participants and allow them to be known. *Being known* in this case implies a sense of individuals' backgrounds (personal history, culture, experience, location) that allow for the creation of context for them as salient social actors and also for the creation of context for their messages. Social presence also provides information about the state of relations between participants which leads to a sense of history in the relations. Moreover, social presence allows for the creation of a social context through the development of a safe, supportive and otherwise productive environment for interaction. Together these factors contribute to the development of context which includes elements of the past (personal histories, histories of the relationship), present (current activities, the current state of relations) and future (ongoing availability and willingness to participate in collaborative activity) and allows online learning activity to be situated in these contexts.

Social presence promotes *commonality* in a number of ways. It aids in the identification of existing commonalities through the identification of characteristics of known others and the matching of those traits to personal characteristics. It also promotes the development of commonality through the progressive development of relations which include the quality of sharedness. Within communities, social presence allows community members to cultivate and display personal identities which indicate membership status in a community. Such membership implies certain types of commonality such as shared purposes and shared modes of operation.

Social presence supports the development of *interdependence* through the progressive development of relations. It provides a foundation for individuals to project themselves into the community as real and salient social actors. Further it allows them to relate to one another and cultivate relationships which are characterised by sharedness, cohesion, frequent and intense interaction and levels of rapport between individuals. Highly developed relations lead to the development of interdependence in which learners are connected in webs of activity. To affect one part of the web is to affect all of the interconnected members.

Social presence promotes the development of *community infrastructure* by supporting the structures which comprise that infrastructure, including *rules and processes*, *accountability mechanisms* and *facilitating structures* (see Hung & Chen, 2001). The rules and processes organize activity within the community and structure the collaboration which constitutes the operation of the community. These supportive structures include explicit and tacit roles for community members, and the identification of processes which define *ways of doing* and *ways of being* within the community. Because social presence allows community members to cultivate individual identities and project themselves into the community, it allows individuals to assume (or be assigned) particular roles within the community's processes based on their unique combination of knowledge, skill and ability. This allows the community to divide labour between members in ways which serve the needs of the community and its members. Accountability mechanisms provide governance of the rules and processes. Because social presence makes community members known to one another, and allows them to be identified, it promotes the development of individual accountability within online communities. This is particularly relevant in technology mediated communities in which the technological infrastructure allows for the creation of robust democratic accountability mechanisms in which all community members play a role in ensuring the accountability of all other members. This would not be possible without the means to identify other members provided by social presence. Facilitating structures allow communities to operate by providing venues and mechanisms for activity. In the case of online communities, these structures generally include the technological infrastructure (networks, communications tools and software applications) but also include the ways in which this infrastructure is employed to achieve the aims of the community. As detailed earlier in this chapter, social presence aids in the creation of a social infrastructure consisting of presence, interaction, collaboration and community which works in tandem with the technological infrastructure to allow learner members to make the technology productive.

5.2.7   Summary: Social Presence and Mediated Social Processes

In relation to the focus of this section, social presence is essential to online learning because it provides a support for the social processes which constitute learning activity in these environments. Social presence promotes online interaction

by making participants known to one another and allowing them to inhabit the online learning environments. Social presence provides a foundation for the establishment of relations between individuals and within groups of online learners. Moreover, it facilitates the progressive development of these relations by both supporting ongoing interactions and providing a stream of relational cues which indicate the state of the relation between the parties. Acting in concert with interaction and relation, social presence supports collaboration through the development of relations which lead to sharedness, trust and productive transactions between participants. Finally, social presence supports the development of community through the promotion of collaborative work and the creation of supportive structures which organize that collaborative activity for communal benefit.

5.3 Re-conceiving Learner Support in Online Learning Environments.

As demonstrated by the preceding discussion, social presence has an important supportive role in online learning environments: it supports the processes which constitute learning activity in these environments. However, the supportive nature of online social presence also extends to the provision of learner support in online learning environments. As identified in the previous chapter, social presence enhances the provision of learner support in two ways. First, it enhances the provision of dynamic, responsive supports provided by other human actors. Second, it promotes the development of supportive structures (i.e., infrastructure) which act as a form of static learner support in the learning communities which occupy online learning environments. The view of learning as an active social process necessitates a re-conception of not only the nature of learner support in online learning environments but also the means by which that support is delivered.

Following these points, Thorpe (2002) has posited a model of learner support in more traditional (i.e., Nipper's (1989) *second generation*) distance education and used this to inform the development of a revised model for learner support which reflects the nature of activity in more contemporary collaborative online learning environments.

In the traditional distance model, learner support is essentially a three party system involving learners, teaching staff and the course materials (see Figure 5.5). Support is provided most often in the person of the teacher, and the interactive channel between the teacher and the learner is heavily trafficked as learners seek out

responsive in person support from the resident 'expert' in the environment. This support is dynamic and responsive; it is provided both *on demand* and, in the case of skilled teacher practitioners, *just in time*. Support is also provided in the interactions between the learner and the course materials, particularly where these are "designed for learner engagement and include many activities and approaches designed to encourage an active learning process" (Thorpe, 2002, p. 114). This model potentially includes an additional source of support in the form of a tutorial session or residential school, but this is not a constant feature of these distance education programs. Notably, learning in this model is an individual endeavour and most of the learner support is individual. Learners operate more or less in isolation, using the teacher as their main point of contact with the education provider.
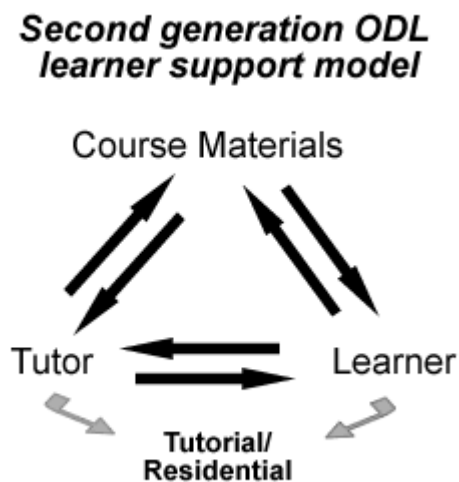

Figure 5.5 Second generation learner support model

Adapted from Thorpe, 2002

By contrast, the model suggested by Thorpe (2002) for collaborative online distance education (i.e., more like Nipper's (1989) third generation) includes four parties: The learner and teacher are still present, but the course materials are replaced with the learner group and web resources are added as an additional source of support (see Figure 5.6). The technologies employed in this third generation model create connectivity and provide opportunities for all the participants to be available to one another. This is a critical difference between the second and third generation models as learning in this model is not exclusively individual; it is collaborative. The pedagogies employed in this third generation model de-emphasise static course materials as content delivery mechanisms. Rather than

relying extensively (or even exclusively) upon a package of prepared one-size-fits-all materials, instructional designs emphasize learner activity alongside content as part of a learning process and allow for the development of dynamic learner generated content as part of the learning process. Consequently, the provision of learner support shifts from being the sole responsibility of the teacher (with help from the materials) to a collaborative form of support in which the learner group plays a key role. The channel between the individual learner and the learning group becomes an important source of responsive support in addition to the channel between the individual learner and the teacher. Moreover, the teacher is able to provide support not only to individual learners, but also to the entire learner group. Additional support is also provided through the use of web-based resources. In the most basic sense, these may replace the static content of course materials, but in more sophisticated systems these resources may include rich multimedia content, dynamic information feeds and conferencing tools which allow learners to access content experts from outside the course.
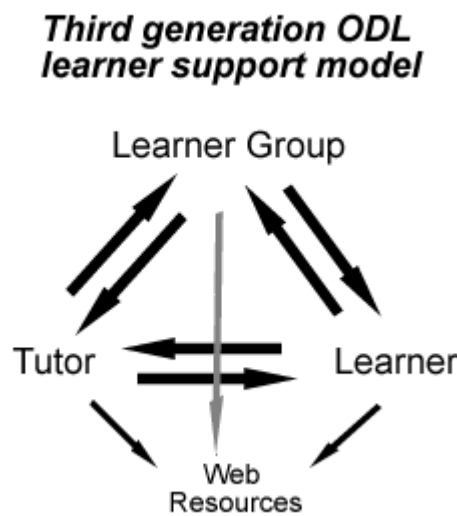

Figure 5.6 Third generation learner support model

Adapted from Thorpe, 2002

While there is merit in Thorpe's (2002) collaborative ODL learner support model, ongoing research and development in the areas of learning communities provides opportunities for the further progression of this collaborative support model. Most notably, contemporary notions of community include both the members of a community and the combination of resources which they bring to bear

on the activities of the community. In the case of the collaborative support model posited by Thorpe, there is opportunity to combine the learner group and web resources to focus on a single unit: *the learning community*. Such a community would include learners and teachers as well as other potential members such as subject matter experts and other specialist members who provide support (e.g. technical or administrative support). In the revised model (see Figure 5.7), the primary channel for the provision of support to individual learners is the one between the learner and the course community. The channel between the teacher and the individual learner is less frequently used as teachers utilize the channel between themselves and the course community as the main means of providing support. Supports to meet particular individual needs are still available but rather than coming mainly from the teachers, these supports come from a variety of community members, including peer learners, subject matter experts and specialist staff and also from dynamic support mechanisms with the community such as frameworks or other tools which arise from collaborative process within the community.
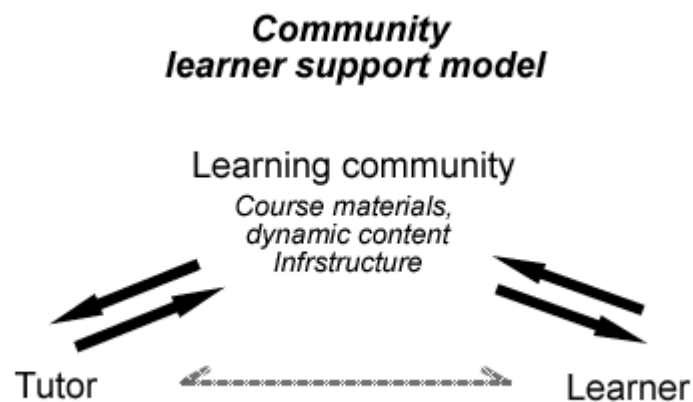

Figure 5.7 Community learner support model

This community learner support model has significant implications for the design and development of community based online learning systems. In addition to attention to (a) technological aspects of design which create functional, user-friendly environments and (b) pedagogical concerns such as an emphasis on learning as a participative social activity in a rich, authentic context, designers who wish to employ community models of learner support also need to develop (c) consideration of support in terms of both static and dynamic support structures which meet

learners' needs and (d) community structure and function in the creation of vibrant communities. Points (a) and (b) are not unique to this community support model; they also apply to the collaborative support model identified by Thorpe (2002). However, points (c) and (d) represent new challenges in the design, development and implementation of online learning communities which employ a communal support model. In order to achieve these aims, online educators and education providers must consider community models and explore the functioning of productive communities to identify supportive structures which can be incorporated into designs for more supportive online learning communities.

5.4   Discussion Summary

In summary, this chapter describes three key findings of this study. First, social presence exists as a response to the dehumanising effects of technology and functions to humanise technology mediated social activity in online learning environments. Second, social presence plays an essential role in facilitating mediated social processes, including (a) the promotion of interaction, (b) the development of relations between human actors in these environments, (c) the progression of collaborative processes and ultimately (d) the establishment and operation of community structures. Third, the function of social presence and its role in the development and sustenance of social activity in online learning environments inform a re-conceptualisation of learner support in these environments, including a particular emphasis on the development of supportive learning communities.

Taken together, these findings reframe the challenge of high quality technology enhanced education. They highlight the need to re-imagine not only local, situated pedagogical practice for online learning, but also to re-imagine the institutional systems, structures, roles, rules and processes which support that practice. What follows is a number of key implications for improving good practice in online learning for online teachers, online learners, designers, support staff, administrators and other stakeholders who control the development and use of online learning environments. These implications are discussed in the next section.

5.5   Implications and Areas for Further Research

This study is concerned with online learning in higher education. More specifically, it is concerned with good practice in the facilitation of and support for

online learning as informed by understanding of mediated social processes, particularly the nature, role and function of online social presence in online learning environments. This study is exploratory. It seeks to generate theory through the identification, explication, understanding, analysis and synthesis of learner experiences with online learning in a particular context. As such, the scope and applicability of the findings are inevitably limited. It is necessary, then, to consider the findings not as absolute prescriptions or recipes, but as *suggestions* and *indicators*. The findings suggest practices which must be re-considered and evaluated, like all situated practice, in context. Moreover, they link with emergent research and practice in online learning to indicate areas for further study in this dynamic and changing field. Notably, when situated against the backdrop of emergent theory with online communities, mediated social processes and online learning activity, the findings of this study highlight some conflict between the status quo of higher education, including current forms of online delivery, and the practice of high quality online learning suggested by this study and others (e.g. Coomey & Stephenson, 2001; Gunawardena & Zittle, 1996; Laurillard, 2002; Levy, 2006; Postle et al., 2003). This is hardly a discovery. Academics and others in higher education have known for some time that online delivery and online learning have some way to go to live up to the promises of the transformation of higher education (Hedberg, 2006). However, these conflicts highlight implications for ongoing research and development with online learning communities. This final section of the dissertation identifies key implications and issues for further consideration in not only the practice of online learning in text-based online learning environments but also in ongoing research in this area.

5.5.1 *The Nature, Role and Function of Social Presence in Online Learning Communities*

Perhaps most significant among the implications of this study is the contribution to understanding of social presence in contemporary online learning environments. While social presence was identified as a critical element of online learning more than a decade ago (Gunawardena & Zittle, 1996), ongoing research has not produced a shared understanding of social presence as a practical component of online learning environments (Biocca et al., 2003). The findings of this study provide an experientially-grounded definition of social presence, an indication of its

role in dynamic mediated social-relational systems such as online learning environments and its function with respect to mediated social processes such as ongoing interpersonal interaction, collaboration and community development. These findings indicate a number of areas for further research including: (a) further understanding of the establishment and cultivation of social presence not only in other text-based online environments but also in environments based on other media; (b) the performative nature of social presence and the implications for participant activity in online learning environments; (c) further work on the relationship between social presence and the development of relations in online learning environments; (d) further work on the supportive nature of social presence as it relates to learning as defined in a variety of contexts, e.g., cognitive learning, affective learning and others; and (e) further study on social presence in a variety of contexts including online courses based on other models of online delivery, blended learning programs and courses in other domain areas.

5.5.2 Understanding Mediated Social Processes

Another key finding of this study is the development of understanding of the mediated social processes which constitute learning activity in online learning environments. The findings with regard to the relationship between social presence and interaction, the progressive development of relations and the development of collaboration and community all indicate implications for practice for designers, developers and facilitators in terms of the creation of a social infrastructure within online learning environments which supports these social processes. These implications include (a) explicit acknowledgement of not only social presence, but also the progressive growth and maturation of relations as part of the development of collaborative activity; (b) the complementary roles of the social and technological infrastructure of online learning environments; and (c) indications of a developmental approach to community establishment and maintenance with particular attention to an infrastructure of roles, rules and tools which facilitate the operation of the community (see Hung & Chen, 2001, 2002). Areas for further research include additional work with the study of relational states and the particular relational mechanisms at work in each stage of the progressive development; investigation of the relationship between the development of relations and

membership of online communities; and protocols for the promotion of collaborative activity in particular contexts.

5.5.3   Values of Online Learning Communities

Within the respective respondent cohorts and within the collective case as a whole, there was some conflict between the values of education as it relates to learning (as exemplified in online learning communities) and the values of education as a commercial enterprise which serves students' interests. In the light of the relatively recent development of commercial relationships between education providers seeking to cater to expanded markets and lifelong learners seeking to 'learn in order to earn' in competitive labour markets, there are a number of questions about the expectations of both parties with regard to the issues of learning support and facilitation as well as learner activity as part of both limited learning processes within a course or other single unit of study and also in a program or wider unit of study.

The values of education for learning, which are espoused by online learning communities, emphasize individual stakeholder "buy-in" to the collective endeavours of the community. The community exists both *because of* its members in terms of their individual contributions to the community and *for the benefit of* its members in terms of creating a whole that is greater than the sum of its parts. The development of learning communities requires the commitment of time, effort and other scarce resources. However, this collaborative, community-centric position is potentially at odds with the rational commercial agendas of higher education providers and learners seeking education as a means/end proposition to higher wages and professional advancement. Those positions value a high benefit:cost ratio. In order for learning communities to be successful, they must present a value proposition for members and allows members to realize greater benefits for their investment in the community. This highlights a key area for further consideration in both practice and ongoing research and development in the employment of community models. Suggested areas for development include (a) comparative research between formal and informal learning communities; (b) comparative research between time limited (e.g. task-based communities) and sustained community structures (e.g. communities of practice) and (c) the use of learning communities in formal education in a sustained way: in programs instead of courses,

institutional communities for both current students and alumni and creating professional communities with ties to education providers to promote linking between learning and practice.

5.5.4   *Roles for Stakeholders in Online Learning Communities*

The findings highlight some discontinuity between learner expectations of activity, ideals of community participation and actual activity in text-based online learning environments which are based on community learning models. This discontinuity is manifest in the data as a conflict between (a) a preference for individual learning activity and an unwillingness to commit to communal approaches and (b) the high value placed on relational development, interpersonal interaction and sense of community as a supportive feature of productive online cohorts.

This discontinuity includes roles for learners and tutors as well as for other stakeholders on the periphery of online learning communities. At the heart of these issues is the question: *What does is mean to be a learner participant in text-based online learning communities?* Likewise, *what does it mean to be a teacher in these contexts or to be some other member of the community?* The answer is not straightforward. Because community models may be more democratic and egalitarian than other structures, roles must be carefully considered for all stakeholders. Learners must be prepared to assume more control not only for their own personal learning, but also for the functioning of the community as a whole. They are asked to play roles and follow rules which, while not directly related to learning activity, are part of larger interconnected systems of activity within community structures. Tutors, facilitators, e-moderators or other agents of the education provider are asked to assume roles of community membership which require them to distribute responsibility and power within the community. Decision making and leadership are shared processes.

Findings from this study highlight the need for the development of understanding around roles within the learning environments. Notably, respondents indicated that, in most cases, they were unwilling to assume more responsibility for the operation and management of the learning community. Whilst they were happy to have input into decision making, they were unwilling to invest time or energy in roles that they associated with traditional teaching, including structuring, support and creating accountability within the learning environment. In other words, online

learners who participated in this study rejected the roles they might be asked to play in 'ideal' online learning communities. These findings underscore the need for further research and development related to roles within learning communities, particularly as they relate to expectations of various stakeholders with regard to activity, participation, responsibility and the distribution of power in online learning communities.

5.5.5   *Reconsidering Learner Support in Text-based Online Learning Communities*

Further to the suggestions above about the creation of supportive community structures, the discussion of values in online learning communities and the roles of participants in these environments, there is a need to reconsider learner support with regard to the questions of (a) learner needs vs. learner wants; and (b) responsibility for the provision of high quality learner support.

With regard to the creation of highly responsive learner support systems, there is some danger of creating systems which are, in a sense, too responsive. The point of learner support is not to cater to every whim of individual learners, but rather to provide adequate support to allow learners to realize success in their respective learning endeavours. The focus must remain squarely on *learning* as a measure of success and support must be linked to learner *needs* with regard to learning as opposed to focusing on *program completion* and learner *wants* with regard to their learning. The point is not to discount learner preferences with regard to content presentation, learning activity or assessment structures as part of a 'one size fits' all model of education. Rather, it is to create and support pedagogically sound learning programs which account for a diversity of learner interests and seek to meet learners' needs within the program. Ideally, the community support model proposed above will cater to a variety of member (learner) preferences whilst emphasizing learning as part of a productive community system.

These issues relate to questions of responsibility and control within online learning communities. More specifically, *who has responsibility for learner support in these democratic and egalitarian learning community structures?* Further to the points above regarding roles, this issue highlights a particular area for further research: working out the balance of shared responsibilities for learner support in online learning communities. How much responsibility do learners assume for their own learning? How much responsibility do learners assume for the learning of their

peers? What responsibilities are assumed by the education provider and its agents (facilitators, tutors, subject matter experts, etc.)?

5.6 Final thoughts

As David Kolb points out, learning has become a necessity in contemporary societies:

> That learning is an increasing preoccupation for everyone is not surprising. The emerging 'global village', where events in places we have barely heard of quickly disrupt our daily lives, the dizzying rate of change, and the exponential growth of knowledge all generate nearly overwhelming needs to learn just to survive. Indeed, it might well be said that learning is an increasing occupation for us all; for in every aspect of our life and work, to stay abreast of events and to keep our skills up to the "state of the art" requires more and more of our time and energy. (1984, p. 2)

Online learning exists as a manifestation of and a response to this need to learn. Moreover, it exists as an adaptation of educational institutions and their efforts to retain currency in a rapidly changing world (Ferreday, Hodgson, & Jones, 2006). For nearly 20 years, academics have been considering the potentials of a 'new paradigm' for higher education in which networked computing and communications technologies might motivate a stronger focus on more flexible and dynamic learner-centric learning (Mason & Kaye, 1990). Despite this, transmissive, didactic, teacher-centred approaches to teaching persist not only in face-to-face teaching but also in technology enhanced teaching. As Laurillard (2002) argues in her seminal book *Rethinking University Teaching*, "the academic community is failing to learn the lessons of experience" (p. 6). Academia has been unable to overcome the inertia of existing educational models, traditions, structures and values. Despite the fact that many institutions have sought to embrace technologies, most have done so without re-imagining their pedagogical practices or, perhaps more importantly, *without changing the structures which govern and support those practices*. Good practices in technology enhanced learning are not being taken up nearly as quickly as the technologies themselves due to the determinism of existing structures in formal education. Moreover, practitioners have been unable or unwilling not only to re-imagine but also to reinvent their practice in order to move beyond the status quo and embrace new practices. Even where academics have been

able to think differently about what they do, this has not been sufficient to precipitate change. Innovative technology enhanced learning occurs in isolation, disjointed from the mainstream of education. Institutions which provide higher education have not embraced the paradigm shift that has been suggested by the openness and flexibility of these technologies.

The challenge then is for universities not only to re-imagine their practices but also to re-invent them in response to changed markets, a new set of learner needs that accompanies changed learner demographics and a more contemporary state of the art of teaching and learning. Accompanying this challenge is opportunity provided by networked computing and communications technologies to provide alternatives to the status quo and facilitate the necessary changes and to help higher education providers to structure and manage high quality educational experiences for their clients whilst continuing to service these increasingly diverse and dispersed student cohorts.

This study responds to the challenge of re-imagining higher education in the light of the development and use of more flexible, learner-centric approaches to educational delivery and learning. By drawing from the experiences of online learners and the knowledge they have acquired as a result of their experiences, this study seeks to embrace the opportunity to re-imagine the practice of higher education provision. The responses of the participants in this study highlight two key conclusions: first, that online learning has great potential to produce quality learning experiences which are highly valued by learners; second, that there is much more work to do to understand the intricacies of good practice in online learning.

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Appendix A: The research questionnaire

Participant Information: General Experiences with Online Teaching and Learning

1. Including this course and any others which you may be in this semester, how many online courses have you taken?
    - i. None
    - ii. 1-2
    - iii. 3-4
    - iv. 5 or more

2. How many other distance education courses have you taken which were not offered wholly online?
    - i. None
    - ii. 1-2
    - iii. 3-4
    - iv. 5 or more

3. How much experience do you have teaching online?
    - i. None
    - ii. Less than 1 year
    - iii. 1-2 years
    - iv. 2+ years

4. In online courses you have participated in as a teacher or learner, how often did you use the computer mediated communications (CMC) facilities (e-mail, threaded discussion forums, synchronous chats, etc)?
    - i. Never/Rarely
    - ii. Occasionally
    - iii. Regularly
    - iv. Always, nearly everyday

5. How often do you communicate with other participants in this course using methods other than CMC?
    - i. Never/Rarely
    - ii. Occasionally
    - iii. Regularly
    - iv. Always, nearly everyday

7. How would you describe your expertise with CMC?
    - i. I'm a novice
    - ii. I'm capable, but still learning
    - iii. I'm very capable
    - iv. I'm an expert

8. What is your comfort level with CMC?
    - i. I'm very uncomfortable communicating this way.
    - ii. I'm sometimes uncomfortable communicating this way.
    - iii. I'm usually comfortable communicating this way.
    - iv. I'm almost always comfortable communicating this way.

9. Which learning activities do you prefer? Rank the following activities from 1-6 where '1' indicates the activity you most strongly prefer to do and '6' indicates the activity you least prefer to do.

      ___ Read course study materials, articles and text books.
      ___ Participate in synchronous chats.
      ___ Participate in whole-class asynchronous discussions.
      ___ Work on collaborative projects in a small group.
      ___ Write individual assignments.
      ___ Work on individual projects which are not written (for example: develop websites)

Participant experiences with this course

10a. How would you describe your relationship with your peers in this course?

    i. It is a tight group, a real community. I feel like I know these people.
    ii. I recognize many of the names in the course and have communicated with some of the group. I feel like I 'know' some of them.
    iii. I only recognize some of the names in the course, others are very unfamiliar. I don't have a clear sense that most of these people are my peers.
    iv. I can't say that I 'know' anyone. I'm still struggling to recognize most of the names and I haven't really connected with anyone.

10b. What is the basis for your answer in 10a? Refer to any specific incidents or situations that support your answer.

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11. How many people in the course do you feel you 'know'?
Without referring to the discussion forums, for how many of your peers could you identify:

(a) a personal detail?	(b) a professional detail?	(c) a personality trait?
i. None	i. None	i. None
ii. 1-3	ii. 1-3	ii. 1-3
iii. 4-5	iii. 4-5	iii. 4-5
iv. More than 5	iv. More than 5	iv. More than 5

12a. Think of another learner in this course whose postings you have read. In 3-5 sentences, describe that person below. What do you know about them as a student? A professional? A family member? A human being?

12b. For the person you described above, choose the word in each row that describes that person. You may select 'I don't know' if you are unsure or have no basis for your answer.

A	Dominant	Submissive	I don't know
B	Emotional	Stoic	I don't know
C	Composed	Free flowing	I don't know
D	Similar to me	Different from me	I don't know
E	Formal	Casual	I don't know
F	Task oriented	Socially oriented	I don't know
G	Intimate	Distant	I don't know
H	Familiar with me	Unfamiliar with me	I don't know
I	Affectionate	Cold	I don't know
J	Inclusive	Selective	I don't know
K	Trusting	Wary	I don't know
L	Involved	Detached	I don't know

12c. Do you know all of the other participants in the course as well as the individual you have described above?
   i.   Yes
   ii.   No

> 12d. If not, why not? What is the difference between participants in terms of how well you have gotten to know them?

13a.   Think about the facilitator in this course. In each row below, there is a pair of words. Choose the word that best describes the facilitator. You may select 'I don't know' if you have no basis for your answer.

A	Dominant	Submissive	I don't know
B	Emotional	Stoic	I don't know
C	Composed	Free flowing	I don't know
D	Similar to me	Different from me	I don't know
E	Formal	Casual	I don't know
F	Task oriented	Socially oriented	I don't know
G	Intimate	Distant	I don't know
H	Familiar with me	Unfamiliar with me	I don't know
I	Affectionate	Cold	I don't know
J	Inclusive	Selective	I don't know
K	Trusting	Wary	I don't know
L	Involved	Detached	I don't know

13b. What is the basis for your responses above? In one paragraph, describe the basis for your impressions of the facilitator, referring to specific incidents whenever possible. Remember that this information will remain confidential.

14a.   When communicating online, are you conscious of how others perceive you?
    i.   No. I am not conscious of it.
    ii.   Yes, but only sometimes.
    iii.   Yes, I usually think about it when using CMC.
    iv.   Yes, I always think about it when using CMC.

14b. If so, how does it affect your behaviour? If possible, give an example of how your behaviour has been affected.

15.   How would others in this course describe you? Chose one word in each row. If you are unsure or have no basis for your answer, you may choose 'I don't know'.

A	Dominant	Submissive	I don't know
B	Emotional	Stoic	I don't know
C	Composed	Free flowing	I don't know
D	Similar to me	Different from me	I don't know
E	Formal	Casual	I don't know
F	Task oriented	Socially oriented	I don't know
G	Intimate	Distant	I don't know
H	Familiar with me	Unfamiliar with me	I don't know
I	Affectionate	Cold	I don't know
J	Inclusive	Selective	I don't know
K	Trusting	Wary	I don't know
L	Involved	Detached/distant	I don't know

16. Some online educators have argued that social presence is an important aspect of online learning environments. Would you agree with this statement? Why/why not?

17a   How would you characterize each of these aspects of the course in terms of meeting your needs as a learning in this course? Please choose one response for each of the 5 areas.

1.   **Technology**
(web platform, communication facilities, technical support, etc)

    i.   Very supportive. I've had no problems at all
    ii.   Supportive, but I could suggest some changes
    iii.   Not very supportive. I've had problems and finding answers has been difficult
    iv.   Terrible. I can't make sense of this and it's having a negative impact on my study

2.   **Course Design**
(instructional process, course content, assessments)

    i.   Very supportive. I've had no problems at all
    ii.   Supportive, but I could suggest some changes
    iii.   Not very supportive. I've had problems and finding answers has been difficult
    iv.   Terrible. I can't make sense of this and it's having a negative impact on my study

3.   **Facilitation**
(activities of the course teaching staff during the course)

    i.   Very supportive. I've had no problems at all
    ii.   Supportive, but I could suggest some changes
    iii.   Not very supportive. I've had problems and finding answers has been difficult
    iv.   Terrible. I can't make sense of this and its having a negative impact on my study

4.   **Peer Interaction**
(communication and other forms of contact between participants in the learning environment)

    i.   Very supportive. I've had no problems at all
    ii.   Supportive, but I could suggest some changes
    iii.   Not very supportive. I've had problems and finding answers has been difficult
    iv.   Terrible. I can't make sense of this and its having a negative impact on my study

5.   **Course Social Infrastructure**
(clear roles and responsibilities, rules for participation, level of inclusion, etc.)

    i.   Very supportive. I've had no problems at all
    ii.   Supportive, but I could suggest some changes
    iii.   Not very supportive. I've had problems and finding answers has been difficult
    iv.   Terrible. I can't make sense of this and its having a negative impact on my study

17b　　Where do you seek support? How important is each of these course components to you for providing support? Rank these course components from most important (5) to least important (1) in terms of their importance to you in providing support.

	Technical
	Course Design
	Facilitation
	Peer Interaction
	Course Social Infrastructure

(item 18 omitted)

19a.　In general, do you feel that this course is supportive?
    i.   Yes
    ii.   No

> 19b. What changes would you like to make the course more supportive? If possible, please refer to any incidents where you did not feel your needs as a learner were being met.

20a.　Have you provided support for others in the course, either explicitly or tacitly?
    i.   Yes
    ii.   No

> 20b. If so, briefly describe the situation below.