

Student Experiences of Social, Cognitive, and Teaching Presence in Online Graduate-Level
Communication Courses: A Mixed Methods Study

by

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Dedication

I dedicate this thesis to my parents, Charles and Sharron, for their support of my academic pursuits and their unwavering faith in me.

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Abstract

This exploratory study sought to examine students' experiences of a social, cognitive, and teaching presence – the three elements comprising the Community of Inquiry framework – in online, graduate-level communication courses at Mount Saint Vincent University. Employing a sequential mixed methods approach, qualitative and quantitative data were collected from two non-probability samples. For each phase of the study, participants were drawn from the population of graduate students enrolled in one or more of four 13-week courses offered by the Department of Communication Studies during the winter 2015 semester. During the first, qualitative phase of the study, a sample of nine students responded to a series of “trigger questions” designed to encourage reflection with respect to students' experiences of online learning in their current courses. During the quantitative phase, a sample of 14 students responded to the statistically validated Community of Inquiry survey. Designed to measure student experiences of online learning in terms of social, cognitive, and teaching presence, the survey consists of 34 Likert-scale questions. For this study, the survey included one additional Likert-scale question pertaining to student satisfaction.

Qualitative analysis revealed that (1) participants desired a higher level of social presence in their online courses and viewed online learning as a largely independent experience; (2) cognitive presence at the group level may be stymied by insufficient social presence at the individual level; (3) frustrations surrounding technological limitations did not translate to dissatisfaction with online learning; (4) participants would generally recommend online learning to others; and (5) teaching presence is central to shaping participants' online learning experiences. Quantitative analysis of the survey responses resulted in high scores across all three presences with social presence receiving the lowest score and teaching presence receiving the highest. Correlations

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between the three presences and student satisfaction could not be calculated. However, the majority of survey respondents indicated that they were either satisfied or very satisfied with their course experiences.

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Chapter I: Introduction

More than 2,000 years have passed since the Greek philosopher, Plato (427-347 BCE), sought to cultivate an elite community of scholars in the city-state of Athens. Widely regarded as the first institute of higher learning in the Western World, the Academy gave institutional form to the ideal of a “community of learners.” While today’s universities bear virtually no resemblance to their Platonic forebears, the ideal of the community of learners endures. Indeed, despite centuries of pedagogical, socio-cultural and technological changes, the construct of community has remained foundational to the higher learning experience. Supporting this assertion, D. Randy Garrison (2007), states that “higher education has consistently viewed community as essential to support collaborative learning and discourse associated with higher levels of learning” (p. 61).

Among those who work in the field of post-secondary teaching and learning, there is general consensus surrounding the benefits of a strong sense of community. Perceived benefits include, but are not limited to, increased student retention, enhanced knowledge construction, higher levels of course satisfaction, and increased motivation (Roberts & Lund, 2007). Given its capacity to facilitate face-to-face interaction in a setting free of technological mediation, the traditional classroom has, not surprisingly, been historically viewed as the ideal forum for the cultivation of community among learners. However, a plethora of technological advancements – beginning with computer-mediated communication (CMC) and progressing to second-generation Web (Web 2.0) applications – have profoundly altered the teaching and learning experience. As observed by Walter Archer, Randy Garrison, and Terry Anderson (1999), “disruptive technologies” inevitably serve as a catalyst for change, forcing instructors and institutions to rethink existing approaches to higher education. Nowhere is this ‘disruption’ more evident than

in the explosive growth of online learning.

Growth of Online Learning

Over the past three decades, online learning has transitioned from “educational outsider” (Harasim, 2012, p. 84) to the institutional mainstream. In the United States (U.S.), the ascension of online learning has been documented by Elaine Allen and Jeff Seaman, co-directors of the Babson Survey Research Group (BSRG), through a series of annual reports beginning in 2003. Utilizing self-reported data from an estimated three quarters of U.S. post-secondary institutions, their longitudinal research has been recognized as the leading barometer of online learning for more than a decade. Consistent with past findings, their 12th report, published in 2015, reveals that online enrolments continue to outpace those of the overall student population. Further, the vast majority of post-secondary institutions have identified online learning as pivotal to their strategic growth. In 2014, 70.8% of academic leaders agreed with the statement, “Online education is critical to the long-term strategy of my institution.” This figure, which represents an all-time high in the report series, stands in sharp contrast to the less than half of academic leaders (48.8%) who agreed with the same statement in 2002 (Allen & Seaman, 2015, p. 15).

Just as support for online learning reached a new high in 2014, a mere 8.6% of institutions reported that online learning is *not* critical to their long-term strategy – an all-time low in the report series (Allen & Seaman, 2015, p. 15). Less positive, however, were the results with respect to perceived support of online learning among faculty members. Only 28% of academic leaders agreed with the statement, “Faculty at my school accept the value and legitimacy of online education.” This figure has remained virtually unchanged since 2002 when 27.6% of chief academic officers agreed with the same statement (p. 21).

The 2015 report marks a significant milestone in that the authors were no longer reliant

on BSRG-administered surveys for the collection of enrolment numbers. Rather, they enjoyed the benefit of newly accessible information from the 2012 and 2013 U.S. Integrated Postsecondary Education Data System (IPEDS). Since 1993, IPEDS has been providing publicly available data on enrolments, program completions, graduation rates, faculty and staff, finances, tuition levels, and student financial aid. It was not until the fall of 2012, however, that the IPEDS mandate was expanded to include the tracking of distance education enrolments and growth rates in addition to attitudinal research on distance learning itself. Further, unlike those administered by the BSRG, the completion of IPEDS surveys – which are administered three times annually (fall, winter, and spring) – is compulsory for all institutions that seek to obtain federal assistance.

With the addition of distance learning to the IPEDS mandate, Allen and Seaman herald the “coming of age for online and distance education” (2015, p. 3). The authors identify several advantages of IPEDS data over their previous data collection processes. Foremost among these is IPEDS’ “official status” as the nation’s primary education database. Hence, the enrolment numbers contained in the report are no longer based on a BSRG survey sample. Rather, they represent the full universe of U.S. post-secondary institutions.

As with any transition, the move to IPEDS data is not without its issues. Namely, due to differing collection methods and definitions of online learning, the IPEDS enrolment numbers are not directly comparable to previous BSRG results. While both data sources reflect the same overall patterns of growth, IPEDS reported a smaller estimate of the number of students learning online – 5,257,379 students in 2013 – as compared to the previous BSRG estimate of 7,126,549 for the same year. Addressing this discrepancy in an appendix to the 2015 report, external consultants Phil Hill and Russ Poulin present the results of their own “spot checks” of distance education enrolments contained in the IPEDS database. Conducted in the summer of 2014, their

investigation revealed a number of irregularities. These include, but are not limited to, the following: (1) a flagship state university that reported no distance enrolments because “their student record system was not updated in time to report” (p. 43); (2) two large state systems that did not report more than 100,000 online enrolments among degree-seeking continuing education students, despite IPEDS’ instructions to include this category; (3) widespread confusion with respect to reporting of blended and hybrid courses; and (4) inconsistent or incorrect manual consolidation of enrolment numbers among institutions with “self support” units that operate independently from the rest of the campus; i.e. institutions whose data systems are frequently not connected. Having identified these and other discrepancies, Hill and Poulin offer the following recommendation:

The higher education community needs to have reasonably consistent definitions in this age of reporting and accountability. Since everyone is content with their own process, it might be time to engage the accrediting community to help raise the question to the level of a serious policy issue worthy of further consideration. With their leadership, we may be able to develop definitions that meet data reporting needs in the short term, while providing flexibility for innovations in the long term. (2015, p. 45)

While the Allen and Seaman reports succeed in quantifying the growth of online learning in the United States, the Canadian landscape is less clear. In Canada, education (both P-12 and post-secondary) is a provincial responsibility with each province determining its own needs and quality assurance framework (Parker, 2008). This absence of national coordination has led to a lack of concrete data with respect to the growth of online learning nationwide. As a result, experts must rely on a veritable labyrinth of sources when reporting the ‘state of play’ for online

learning in Canada. Illustrative of this complexity is the caveat offered by A. W. (Tony) Bates (2011) in the *2011 Outlook for Online Learning and Distance Education*:

The evidence in this report is drawn mainly from news reports, institutional websites, personal contacts and communications with colleagues, academic books and journal articles, and, most influential of all, attendance at local workshops and national conferences where participants demonstrate and discuss their activities in online learning and distance education. Despite the wide range of sources, this report is inevitably a personal and incomplete view of the current situation, given the lack of reliable national data. (p. 12)

Notwithstanding the challenge of systematic data collection, few would dispute that online learning is growing rapidly across Canada. In *Online Learning in Canada: At a Tipping Point – A Cross-Country Check-Up 2012*, Contact North, Ontario's distance education and training network, reports that "online learning is thriving across the country at the post-secondary level and that new investments are being made to support its continued growth and development, particularly in Ontario and in British Columbia" (Contact North, 2012, p. 2). The report identifies six Canadian post-secondary institutions "which have a significant, strategic focus on distance education and online learning" (p.8), while classifying a larger number of institutions – including Mount Saint Vincent University – as "dual mode" (p. 12).

At this point, it is important to acknowledge the growing confluence between distance education and online learning. Distance education – alternately termed "distance learning" – has undergone a dramatic metamorphosis over the past century. From its earliest incarnations of "correspondence and broadcast education" (Moore, 2012, p. 66) to current models that emphasize increased student-teacher and student-student interaction (Bates, 2008), distance

education has given rise to a robust body of scholarly research. The genesis of this research can be traced to 1972 when, at a presentation to the World Conference of the International Council for Correspondence Education, Michael Grahame Moore argued for the need to define, legitimize, and articulate a pedagogical theory for this unique form of teaching and learning. Subsequent to this presentation, Moore developed the first theory of distance education. Grounded in John Dewey's concept of transaction, the theory of transactional distance "showed that teaching and learning in separate locations is better understood not as an aberration from the classroom, but as a significantly different pedagogical domain" (Moore, 2012, p. 67).

As noted by Linda M. Black (2012), scholarly interest in distance education accelerated throughout the latter portion of the 20th century, leading to the growth of distance education research centres such as the Centre for Distance Education (CDE) at Athabasca University. According to Black, the growth of such dedicated research centres can be attributed to a number of factors: (1) positive research findings about the effectiveness of distance education; (2) socio-economic justifications for distance education, particularly in developing countries; (3) increased funding for research; and (4) the birth of large single-mode distance institutions employing specialist academic researchers.

As previously mentioned, there is a distinct lack of clarity between online learning and distance education as it exists today. Indeed, the two terms are frequently used interchangeably both within and outside scholarly circles. Mike Allen, Kikuko Omori, Nancy Burrell, Edward Mabry, and Erik Timmerman (2012) define distance education as "instruction in which there is no expectation for the physical co-presence of the learner and instructor" (p. 143). Of particular significance is the fact that 'distance' is not necessarily geographical, but, rather, may be psychological or social. Illustrating this point, Bates (2015) presents survey data regularly

collected from distance students at the University of British Columbia (UBC). When asked about their reasons for taking a distance course, fewer than 20% of students identified issues related to distance or travel. In fact, of the approximately 10,000 UBC students enrolled in at least one distance course, more than 80% reside in the Greater Vancouver Metropolitan Area and almost half within the city of Vancouver itself. As explained by Bates, “the main reason for most UBC students taking fully online courses is the flexibility they provide, given the work and family commitments of students and the difficulty caused by timetable conflicts for face-to-face classes” (2015, p. 318).

Given the rich history of distance education – a full account of which is beyond the scope of this thesis – it is reasonable to view online learning as a subset of the field (Moore, 2012). Further, the term “online distance learning” – once a popular means of distinguishing the correspondence model of distance education from Web-enabled applications – is arguably redundant in today’s post-secondary environment. That said, there remains a need to define online learning for the purpose of this research. Linda Harasim (2012) defines online learning as “the use of online communication networks for educational applications, such as: course delivery and support of educational projects, research, access to resources and group collaboration” (p. 27). Of additional significance is the criteria employed by Allen and Seaman (2015) in their classification of online *courses* as compared to, for example, “traditional,” “Web facilitated,” and “blended / hybrid.” The authors distinguish an online course as one in which at least 80% of course content is delivered in an online format. They further note that – unlike traditional, Web-facilitated and blended / hybrid formats – online courses “typically have no face-to-face meetings” (p. 7). While this classification criteria merits acknowledgment, it is nonetheless problematic in its specificity. Simply put, it presents a challenge to the extent that it views the

identification of online courses through a quantitative lens, requiring a judgment of what does and does not constitute 80%. For this reason, I have adopted a simpler perspective on online learning throughout my research, identifying an online course as any in which a significant portion of discussion is conducted through an online application such as Moodle or Blackboard Collaborate. (See Appendix A for a complete list of definitions and terms pertaining to distance learning technologies and concepts.)

Background to the Study

The benefits associated with a strong sense of community among learners – combined with the growth of online learning in higher education – have led to a rise in research activity surrounding the creation of community in online courses. Since the late 1990s, a wide variety of studies have concluded that the online environment can both foster and sustain a learner-centred sense of community (Schackelford & Maxwell, 2012). Conspicuously absent, however, has been a dominant theoretical framework that insightfully explains the online learning experience.

Over the past 15 years, this void has been filled by the Community of Inquiry (CoI) model developed by Randy Garrison, Terry Anderson, and Walter Archer (2000). Based on the concept of practical inquiry introduced by John Dewey (1933), the CoI was initially conceived as a framework for the optimal use of computer conferencing as an educational tool (Garrison, Anderson, & Archer, 2000). However, concomitant to the growth of online learning and, in particular, the ubiquity of two-way communication platforms in higher education – the CoI has evolved to its present-day status as the most frequently cited theoretical framework in the academic literature of online higher education (Kupczynski, Ice, Wiesenmayer, & McCluskey, 2010).

At its core, the CoI is a process model that explains the online learning experience in

terms of three elements or ‘presences.’ These presences – social, cognitive, and teaching – are both multidimensional and interdependent (Swan, Garrison, & Richardson, 2009). As explained by Norman Vaughan, Martha Cleveland-Innes, and Randy Garrison (2013), “It is at the convergence of these three mutually reinforcing elements that a collaborative constructivist educational experience is realized” (p. 11).

In their support of the CoI framework, Karen Swan, Randy Garrison, and Jennifer Richardson (2009) have argued that “constructivist approaches and community are necessary for creating and confirming meaning and are essential for achieving effective critical thinking” (p. 44). The authors proceed to emphasize that the creation of community is especially vital in online higher education “because it (community) cannot be taken for granted, nor, for that matter, can inquiry” (p. 44). The CoI framework will be explored in greater detail in the following chapter.

Research Opportunity

Given the fiscal and human resources that universities are allocating toward online graduate-level education, it is important to understand whether student expectations are successfully being met. As reported by the Association of Universities and Colleges of Canada (2011), the population of graduate students has, over the past three decades, grown at a significantly faster pace than that of undergraduates. Bearing in mind that, as expected, the total number of undergraduate students far exceeds the total number of graduate learners, there exists a striking difference between the two rates of growth. More specifically, between 1980 and 2010, graduate enrolment in Canada increased by 146.7% as compared to an undergraduate increase of 80.7% during the same period. Concomitant to the accelerating growth of graduate education, institutions are facing unprecedented competition with respect to recruitment and retention. This

competition is especially daunting when comparable graduate-level programs are offered by multiple universities through online platforms. Because online learning provides “flexibility of access, from anywhere and usually anytime” (Ally, 2008, p. 16), prospective students are no longer forced to prioritize an institution’s physical location when making the decision to choose one university over another. While factors such as program reputation and affordability will invariably remain considerations for the majority of learners, the decision-making process – with respect to both enrolment *and* withdrawal – is increasingly influenced by the quality of the overall student experience. As “sense of community” has been identified as a key contributor to student satisfaction (Dawson, 2006; Liu, Magjuka, Bonk, & Lee, 2007), institutions would be prudent to examine the extent to which a sense of community is, in fact, being achieved in the online environment. With a more nuanced understanding of graduate students’ perceived sense of community, universities will be better equipped to address issues of course design, student satisfaction, and faculty preparedness – each of which may, ultimately, have a significant impact on enrolment, attrition, and overall ‘competitiveness.’

By examining student experiences of social, cognitive, and teaching presence – the three elements of the Community of Inquiry framework – this thesis adds to existing research on the creation of a community of inquiry among graduate students enrolled in online courses. Notably, while a number of studies have employed the Community of Inquiry framework to explore graduate students’ perceptions of social, cognitive, and teaching presence in such disciplines as engineering (Akyol, Garrison, & Ozden, 2009), education (Arbaugh, Bangert, & Cleveland-Innes, 2010), and economics and management sciences (Nagel & Kotzé, 2010) to name but a few, the framework has not yet been applied to the study of communication graduate students. This is not to imply that the Community of Inquiry model has been absent from studies of

communication students' perceived sense of community. However, such studies – such as that conducted by Sarah Mabene, Jennifer Edwards, and Dan Malone (2014) – have occurred at the undergraduate level with only cursory references to the CoI framework. Thus, this research fills a disciplinary void that exists within the academic literature specific to the experiences of communication students at the graduate level.

Purpose of the Study and Research Questions

The purpose of this exploratory sequential mixed methods study was to examine students' experiences of social, cognitive, and teaching presence in online graduate-level communication courses. Through this two-phase approach, qualitative data assumes priority in answering the research question. The collection and analysis of the qualitative data is then followed by the collection and analysis of the quantitative data. This second phase is designed so that it follows directly from the results of the first, qualitative phase. Thus, the researcher interprets the extent to which the quantitative findings help to explain the qualitative results (Creswell & Plano Clark, 2011).

In the context of the current study – and consistent with the exploratory sequential approach – qualitative data was collected from a sample of Master of Public Relations and Master of Arts (Communication) students at Mount Saint Vincent University. The qualitative data consisted of students' responses to a series of questions about their online learning experiences, both in their current courses and in general. It should be noted, however, that, in lieu of the series of questions, I had planned to employ student journals or 'reflection logs' as the vehicle for qualitative data collection. This revision to the study, which was necessitated during the implementation phase, will be discussed in the methods section of Chapter III.

Upon receipt of the students' qualitative responses, the quantitative data was collected through the statistically validated Community of Inquiry survey. The results of the survey served to elucidate student perceptions of social, cognitive, and teaching presence in the online environment. As will be discussed in greater depth in the methodology portion of Chapter III, the mixed methods approach was utilized in an effort to provide better insight into graduate students' online learning experiences than would have been obtained through either quantitative or qualitative methods alone.

The study was guided by a single, overarching research question. This overarching question was as follows:

RQ: How do communication graduate students experience social, cognitive, and teaching presence in online courses?

To help answer the above, the qualitative aspect of the study was guided by the following question and sub-question:

RQ1: How do communication graduate students describe their experiences of community in online courses at Mount Saint Vincent University?

Below is the more specific sub-question relevant to the qualitative component:

- Which aspects of the course have an influence on students' experiences of social, cognitive, and teaching presence?

For the quantitative component of the study, the research question was as follows:

RQ2: What are the respective impacts of social, cognitive, and teaching presence on student satisfaction in online courses?

Lastly, the mixed methods research question was as follows:

RQ3: Do the qualitative and quantitative results reflect similar or different experiences of social, cognitive, and teaching presence in online courses?

Organization of the Thesis

This thesis consists of five chapters, beginning in Chapter I with the introduction to the context of the study, the research opportunity, and the research questions. Chapter II presents an integrative literature review connecting four areas of research: (1) a historic overview of conceptualizations of community; (2) social constructivism as a learning theory; (3) the role of community in online learning environments; and (4) a description of the Community of Inquiry theoretical framework, its components, and implications for online learning. Chapter III describes the methods and methodology employed for the study. The first portion of the chapter presents an overview of mixed methods research, including its historical foundation, a discussion of the typology-based approach to mixed methods designs, and considerations in the selection of design type. The second portion of the chapter describes the design of the current study, the sampling techniques employed, and the methods through which the qualitative and quantitative data were collected. Chapter IV presents the analyses and results of the qualitative and quantitative data in a narrative, contiguous format. Finally, Chapter V presents a summary of the research findings, a discussion of the study limitations, and concluding comments.

Chapter II: Theoretical Foundations: A Review of the Literature

To contextualize the role of community in today's post-secondary landscape, it is important to appreciate the concept at a more foundational level. To that end, this literature review begins with an overview of community as it has been examined in the scholarly literature across various disciplines. It then presents an overview of social constructivism as a learning theory, followed by an examination of community as an essential element of successful online learning environments. The literature review concludes with a description of the Community of Inquiry theoretical framework and its constitutive components of social, cognitive, and teaching presence.

Understanding Community

The concept of community has long been the object of scholarly debate. As early as 1955, in an attempt to establish an authoritative definition, sociologist George Hillery codified 94 occurrences of "community" in the sociological literature of the time. While Hillery's analysis failed to produce the desired singular definition, it revealed that most social scientists "are in basic agreement that community consists of persons in social interaction within a geographic area and having one or more additional common ties" (Hillery, 1955, as cited in Bruckman, 2006, p. 617). Paradoxically, instead of advancing the case for consensus, Hillery's analysis led to further debate and disagreement among sociologists (Clark, 1973). The vehemence of this debate is perhaps best exemplified by Margaret Stacey's 1969 article, "The Myth of Community Studies," in which she dismissed community as a "non-concept" to be eschewed in scholarly literature (Stacey, 1969, p. 137).

Despite the widespread debate that pervaded scholarly discussions, sociologists largely agreed with Hillary's identification of geography as an essential feature of community. However,

by the late 1970s, even this seemingly uncontroversial characteristic would be challenged.

Examining the relationship between neighbourhood and community in an urban context, Barry Wellman and Barry Leighton (1979) espoused a network analytic approach wherein communities are a product of both strong and weak interpersonal ties. Because such ties can exist over distance, communities need not be restricted to the locality of neighbourhoods. The authors argued that a network analytic approach “largely frees the study of community from spatial and normative bases. It makes possible the discovery of network-based communities which are neither linked to a particular neighborhood nor to a set of solidarity sentiments” (Wellman & Leighton, 1979, p. 367). In this instance, the authors’ network analytic approach would portend their use of social network analysis for the understanding of community in the digital age.

While the notion of community generated a vast array of perspectives during the pre-Internet era, the advent of the World Wide Web and, in particular, Web 2.0, served to intensify the volume and scope of scholarly discourse. In their investigation of place and identity in mediated communities, Lewis Goodings, Abigail Locke, and Steven Brown (2007) present a historical overview of community in the context of online interaction. Noting that Internet and media researchers continue to debate the application of community to online environments, they credit Internet pioneer and researcher Howard Rheingold with conceptualizing and popularizing the term “virtual community.” Recounting his experiences with the first wave of Internet-based communication forums, which emerged in San Francisco in 1985, Rheingold defined virtual communities as “social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace” (Rheingold, 1993, p. 5).

Goodings et al. (2007) argue that Rheingold's definition served as the impetus for the emergence of objectivist approaches to the study of online communities. Also known as the sociological approach, the objectivist perspective was rooted in Rheingold's identification of size ("enough people") as a characteristic of virtual communities. The dominance of objectivist or sociological approaches was reinforced by Barry Wellman and Milena Gulia (1999) through their use of social network analysis (SNA) as both a framework and a quantitative methodology. Closely related to the broader field of graph theory, social network analysis employs visual representations to capture the number and strength of relationships among individuals, groups, and social institutions in both online and offline environments. Considered a milestone in the study of community, Wellman and Gulia's social network analysis is frequently referenced in scholarly accounts of the evolution of community network research (Bruckman, 2006; Matzat, 2010; Yuqing, Harper, Terveen, Kiesler, Riedl, & Kraut, 2012). While it remains a popular approach to the study of community networks among sociologists today, SNA has gained favor among other disciplines, such as mathematics and computer science, that seek to understand network relationships in quantitative terms.

While the benefits of objectivist or sociological approaches have been well documented (Cheliotis, 2013; Haythornthwaite & Gruzd, 2007), scholars acknowledge that such approaches do not generally address the second element of Rheingold's definition of virtual communities, "sufficient human feeling" (Rheingold, 1993, p. 5). Simply stated, objectivist approaches do not explore the extent to which communities may be felt or experienced.

Comparing the characteristics of face-to-face and computer-mediated communication (CMC), Amitai Etzioni and Oren Etzioni (1999) were among the first to explore the potential of hybrid systems to both form and sustain communities. The authors viewed community in terms

of two co-existing attributes: (1) bonding and (2) shared culture. They noted that bonding, in particular, requires a high level of encompassing – as opposed to specific – knowledge of others. According to the authors, the attainment of encompassing knowledge is dependent on three criteria: (1) the ability to anchor various items of knowledge about those with specific identities and, thus, compose broad and inclusive images of others; (2) trust in the basic accuracy of communications from others, often requiring the authentication of message content in CMC environments; and (3) a sense that one is able to hold others accountable, and that members of the group are reasonably responsible individuals. One of their more controversial contentions, they argued that “for communities to evolve and be sustained, they must be able to marginalize or de facto exclude people who are found to be frequently irresponsible or otherwise antisocial” (Etzioni & Etzioni, 1999, p. 243).

Describing the most basic conditions for bonding as a means of community building, Etzioni and Etzioni (1999), provide the following example:

One would expect a group of individuals who meet for the first time – for instance, at a scientific meeting – to share only technical communications (like their findings and methods) to bond much less than a similar group of scientists who share personal information (a recent divorce, the serious illness of a child, etc.) and discuss their personal feelings and life histories. (pp. 242-243)

While the above example may indeed appear self-evident, it nonetheless reinforces the importance of personal information-sharing as a condition of bonding. While face-to-face communication has traditionally been viewed as the ideal forum for the sharing of personal details, such sharing has increasingly become characteristic of CMC. Further, because users of CMC frequently choose to maintain anonymity, there exists the strong potential for sharing of

more intimate information and, accordingly, bonding within the CMC environment. In their discussion of hybrid communication systems, the authors emphasize the role of CMC in maintaining bonds when geographically dispersed persons temporarily come together, for example, at a business conference or other activity related to public life. Having established personal bonds in the face-to-face environment through the development of shared understanding, participants proceed to rely on CMC for bond maintenance in the longer term, thereby helping to ensure the sustainability of the community. Writing in the pre-Web 2.0 era, Etzioni and Etzioni ultimately conclude that “the proper combination (of face-to-face and CMC systems) promises to meet more of the prerequisites of community than either of them could separately” (1999, p. 247).

In sharp contrast to Stacey’s aforementioned dismissal of community as a “non-concept” (1969, p. 137), Robert Booth Fowler presented more than 100 theories of community in his 1991 book, *The Dance with Community: The Contemporary Debate in American Political Thought*. Examining ‘types’ of contemporary communities, ranging from religious and global to participatory and existentialist, Fowler contends that virtually all understandings of community are rooted in “the notion of commonality, of sharing in common, being and experiencing together” (1991, p. 3). He further argues that sharing implies an affective or emotional dimension – characteristics that, as will be discussed in the following section, are assumed to be necessary – although not sufficient – for the creation of community in online and distance learning.

To illuminate the lens through which human feeling may be viewed as an essential characteristic of community, Goodings et al. (2007) invoke Maria Bakardjieva’s (2003) conceptualization of “virtual togetherness.” Bakardjieva argued that, within extant research into virtual communities, the majority of studies focus on the development of group cultures that

emanate from the interaction of online participants. However, scant research has attempted to relate online interaction to users' everyday lives and goals. Through an ethnographic study of the Internet practices of 21 domestic users in Vancouver, Bakardjieva achieved support for an interpretation of virtual togetherness that is distinct from virtual community. Defining virtual togetherness as "a continuum of forms of being and acting together...growing from the technology of the Internet" (p. 294), she rejects the notion that virtual togetherness is an essential characteristic of community. Rather, she argues, community is a possible form of virtual togetherness (Bakardjieva, 2003).

According to Goodings et al. (2007), Bakardjieva's research exemplifies the subjectivist or psychological approach to the examination of community. With its emphasis on experiences of interconnectedness as a subjective property of social ties, it is an approach that the authors espouse in their own investigation of the online community MySpace (Goodings et al., 2007). Broadly informed by the discourse and identity research of Bethan Benwell and Elizabeth Stokoe (2006, as cited in Goodings et al., 2007) and by John Dixon and Kevin Durrheim's (2000) conceptualization of "place identity," the authors support the contention that virtual communities are characterized by a shared sense of place – one that is discursively formulated through conversational exchanges. The creation of such shared sense of place would proceed to earn scholarly attention across multiple disciplines, but, most notably, within the context of distance education and online learning.

Social Constructivism as a Learning Theory

While the above discussion reflects the diversity of community-focused research in such areas as sociology, psychology, and Internet and media studies, the concept of community is of increasing interest to education and pedagogical scholarship. Indicative of this interest is the

variety of contexts in which “community” has been popularized in education literature in recent years. Within the pedagogical research that has been reviewed for this thesis, authors have explored the concept of community through examinations of knowledge communities (Harasim, 2012), communities of practice (Jorgensen, 2002), community-embedded learning (Kazmer, 2007), learning communities (Melton, Graf, & Chopak-Foss, 2009; Rovai, 2002a), and communities of inquiry (Garrison, Anderson, & Archer, 2000; Lipman, 1991) among others. Common to all of these applications of the term “community,” regardless of research context, is the underlying pedagogical philosophy of constructivism.

Together with objectivism, constructivism is one of the two major epistemologies of the 20th and 21st centuries. While objectivist epistemology fostered behaviorist and cognitivist theories of learning, the emergence of constructivism led to the widespread adoption of social constructivist and online collaborative learning theories (Harasim, 2012). In contrast to the objectivist understanding of the authority of knowledge, constructivist epistemology holds that knowledge is based on contemporary conventions and is constructed through the perceptions and interpretations of individual social agents. As noted by Harasim, objectivist and constructivist approaches can be viewed simultaneously as both epistemologies and pedagogies. At the most fundamental level, objectivist or behavioral approaches represent an instructor-centred approach to learning, while constructivism reflects a student-centred perspective.

Grounded in the work of Russian psychologist Lev Vygotsky (1978), social constructivism posits that, “in order for learning to occur, information must be processed by the learner in a social context” (Roberts & Lund, 2007, p. 488). Distinct from other forms of constructivism, which focus on individual learners and the process through which they negotiate meaning based on personal experiences and beliefs, social constructivism prioritizes the roles of

interaction and collaboration in the ‘construction’ of knowledge. Specifically, the occurrence of interaction – both learner-to-learner and learner-to-instructor – is instrumental in fostering the learner’s cognitive development. In the learner-to-learner context, this development takes place through collaboration with more knowledgeable peers and/or the appropriate knowledge community (Harasim, 2012). The instructor, meanwhile, serves as both guide and facilitator, creating a ‘safe’ and respectful environment in which learners feel free to share their ideas (Huang, 2002). Thus, viewed through the lens of social constructivism, higher-order learning is best achieved when students make sense of new information through collaboration with others (peers and instructor), ultimately transforming new information into meaning. Further, it is important to note that social constructivist pedagogies do not diminish the value of the learner’s existing knowledge and beliefs. They do, however, require the learner to exhibit a degree of ‘open-mindedness’ if the negotiation of meaning is to successfully occur in a social context.

By the end of the 20th century, a growing body of scholarly research had begun to reflect the paradigmatic shifts that were occurring across the post-secondary landscape. Foremost among these was the mainstream adoption of the World Wide Web (the Web) as an educational tool. As noted by Bates (2005), the proliferation of the Web coincided with an increasing emphasis on the social construction of knowledge – an emphasis that was led, beginning in the mid-1990s, by some of North America’s most influential learning theorists. Among these were Charlotte Gunawardena, Constance Lowe, and Terry Anderson (1997) who, employing a grounded theory approach, developed the Interaction Analysis Model for Examining Social Construction of Knowledge in Computer Conferencing. More commonly known as the Interaction Analysis Model (IAM), it “explicitly attributes the success of asynchronous discussion-based online learning and critical thinking to social constructivism” (Buraphadeja &

Dawson, 2008, p. 139). Matthew Lipman, meanwhile, was strongly influenced by Vygotsky's social constructivism in his conceptualization of inquiry as a community process:

Unfortunately, autonomy has often been associated with a kind of rugged individualism: the independent critical thinker as a self-sufficient, cognitive macho type, protected by an umbrella of invincibly powerful arguments. In reality, the reflective model is thoroughly social and communal. (Lipman, 2003, p. 25)

In their discussion of social constructivism as it pertains to online learning, Swan, Garrison, and Richardson (2009) invoke the work of philosopher and educational reformer John Dewey (1859-1952). They state that "inquiry and community were at the core of John Dewey's educational philosophy and practice" (p. 44). Arguing for the reassertion of social constructivist pedagogies as essential to the achievement of higher-order learning, the authors proceed to stress the centrality of inquiry and community to the online environment: "Together, the two constituting notions of community and inquiry form a pragmatic organizing framework of sustainable principles and processes for the purpose of guiding online educational practice" (p.45). It is this subject – the creation of community in online learning – that comprises the next section of this literature review.

Community in Online Learning

While abundant studies have examined students' sense of community within the traditional classroom setting (Greenhow, Robelia, & Hughes, 2009), a growing body of research explores the creation of community in online and distance learning. Consistent with the social constructivist pedagogical philosophy, the experience of community is widely regarded as a critical component of online learning initiatives. In particular, student sense of community has been linked to learning outcomes (Liu, Magjuka, Bonk, & Lee, 2007); perceived learning (Shea,

2006); student satisfaction (Ouzts, 2006); and retention (Dawson, 2006) in online courses. Given that much of the empirical research has demonstrated lower retention rates in fully online environments than in their face-to-face counterparts, the challenge of retention is of special concern to both instructors and administrators (Diaz, 2000; Frydenberg, 2007).

Drawing upon previous studies by Sarah Carr (2000) and Alfred P. Rovai (2002a), Michelle Drouin and Lesa Rae Vartanian (2010) argue that “a lack of physical presence may cause or exacerbate online students’ feelings of being isolated and disconnected from their instructors, their classmates, and their school” (pp. 148-149). Such feelings of isolation and disconnection have, in turn, been associated with low student persistence (i.e. retention problems) in online and distance education. Indeed, the drop-out rate in distance education programs has been cited as ranging from 10%–50%. Further, it is generally assumed to be up to 10%–20% higher than that of traditional classroom programs (Exter, Korkmaz, Harlin, & Bichelmeyer, 2009). While a number of factors may influence a student’s decision to withdraw from a course, Sense of Community (SoC) has emerged as potential mitigating variable.

Social psychologists David McMillan and David Chavis (1986) defined sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (p. 9). Supporting the definition proposed by McMillan and Chavis, Rovai (2002a) theorized that classroom community consists of four key components, regardless of whether said community be physical (face-to-face) or virtual. He describes these components as follows: (1) a sense of membership in the community and feelings of friendship between members of the learning community (“spirit”); (2) a perception that community members can be trusted and relied upon to be genuinely interested in one another's welfare and supportive of one

another's learning (“trust”); (3) a sense of mutual benefit from interactions, both in supporting specific tasks and in fulfilling social or emotional needs (“interaction”); and (4) a transformative interactive learning process through which students meet their common learning goals (“common expectations: learning”). According to Rovai, “a strategy that enhances these four dimensions should result in stronger feelings of community” (2002a, p. 12). Based on a review of the literature, he suggests that such strategies be developed with attention to seven factors: (1) the reduction of transactional distance between learners and instructors (i.e. emphasis on dialogue over structure); (2) enhancing social presence; (3) social equality (e.g. ensuring that some students do not dominate discussions to the detriment of others); (4) small group activities; (5) group facilitation by the instructor; (6) teaching style and learning stage (i.e. matching teaching style to students’ individual stages of self direction as much as possible); and (7) community size (a maximum of 20-30 students per instructor).

Among Rovai’s contributions to online learning research is the Classroom Community Scale (CCS) survey instrument (2002b). The 20-item, statistically validated questionnaire consists of two subscales: connectedness and learning. Rovai describes connectedness as “the feelings of the community of students regarding their connectedness, cohesion, spirit, and interdependence” (p. 206), while he defines learning as “the feelings of community members regarding interaction with each other as they pursue the construction of understanding and the degree to which members share values and beliefs concerning the extent to which their educational goals and expectations are being satisfied” (pp. 206-207).

Starr Roxanne Hiltz, Murray Turoff, and Linda Harasim (2007) contend that community is especially vital in asynchronous learning environments, which are entirely devoid of face-to-face interaction. The authors explain that, in the absence of opportunities for the organic

development of student relationships in a face-to-face context, instructors must rely significantly on the technological affordances of asynchronous platforms. Fortunately, modern technologies hold unprecedented potential to successfully foster strong and cohesive communities among asynchronous learners.

Hiltz, Turoff, and Harasim argue that the asynchronous nature of interaction can facilitate more extensive student involvement in group projects and discussion activities over time, thereby supporting the creation of a community of learners. They further argue that student retention efforts are supported through a collaborative approach to asynchronous technology. According to the authors, studies have suggested a positive relationship between post-secondary drop-out rates and instructional models in which faculty “present” or publish information on the Web (Hiltz, Turoff, & Harasim, 2007). Like Rovai (2002b), they emphasize that the determining factor in quality of online learning is not the technology itself, but, rather, the design of the course.

The relationship between course design and quality of the online learning experience has been documented by a number of researchers. Among them is Norm Vaughan (2010), who described an institutional initiative to support faculty in the redesign of nine blended courses during the fall 2006 and winter 2007 semesters at the University of Calgary. Based on the Community of Inquiry framework developed by Garrison, Anderson, and Archer (2000), the Inquiry Through Blended Learning Program (ITBL) yielded significant improvements in active and collaborative learning among students (Vaughan, 2010).

While the concept of a community of inquiry was originally introduced in the elementary school context by Matthew Lipman (1991), the framework developed by Garrison et al. (2000) is distinct in that it sought to illuminate the process through which a community of inquiry can be

achieved in CMC and online environments. It is an examination of this theoretical framework that comprises the remainder of this literature review.

Community of Inquiry Framework

With its genesis in the model of practical inquiry as conceptualized by John Dewey (1933), Garrison et al. (2000) developed the Community of Inquiry (CoI) model as a theoretical framework for the study and implementation of computer-mediated learning. Karen Swan and Phil Ice (2010) recount the impetus for Garrison et al.'s groundbreaking work:

The CoI framework was developed to help them make sense of issues confronting their new online graduate program, a program in which computer-based discussion forums played a central role. Because the pedagogy behind online discussion forums assumes that students will work together, not independently as in traditional distance education, a new theoretical model was needed to explain and explore the online educational experience. Thus was born the CoI framework. (p.1)

As noted in Chapter I, the CoI is a process model that explains the online learning experience in terms of three multidimensional and interdependent elements (Swan, Garrison, & Richardson, 2009). In developing the model, Garrison et al. (2000) argued that a worthwhile learning experience is achieved when learning is viewed as a product of three presences: social presence, cognitive presence, and teaching presence. In the context of the CoI, a presence is defined as “a sense of identity created through purposeful and open communication” (Garrison, 2016, p. 70). To visually demonstrate the interrelated nature of the presences, the researchers developed the graphic presented in Figure 1.



Figure 1. CoI Framework (Garrison, Anderson, & Archer, 2000, p. 88)

While the above graphic is unquestionably the most well known among CoI researchers, it is worth noting that an aesthetically ‘modernized’ and online interactive version (maintaining the original relationships among the presences) has since been developed. Precipitated by Randy Garrison and Zehra Akyol’s research into shared metacognition in online discussions in a collaborative community of inquiry (2011a), Garrison developed the updated version for the CoI website in 2013 (R. Garrison, personal communication, September 3, 2015). Aside from the Flash animation that provides website visitors with an interactive experience, the most significant update to the graphic is reflected in the addition of exogenous variables, such as communication medium and discipline standards, which, representing the influence of the larger organizational system, help to create a meaningful learning experience (R. Garrison, personal communication, September 3, 2015). The updated model is presented in Figure 2 and was first published (i.e. beyond the CoI website) in Garrison’s most recent book, *Thinking Collaboratively: Learning in a Community of Inquiry* (2016).

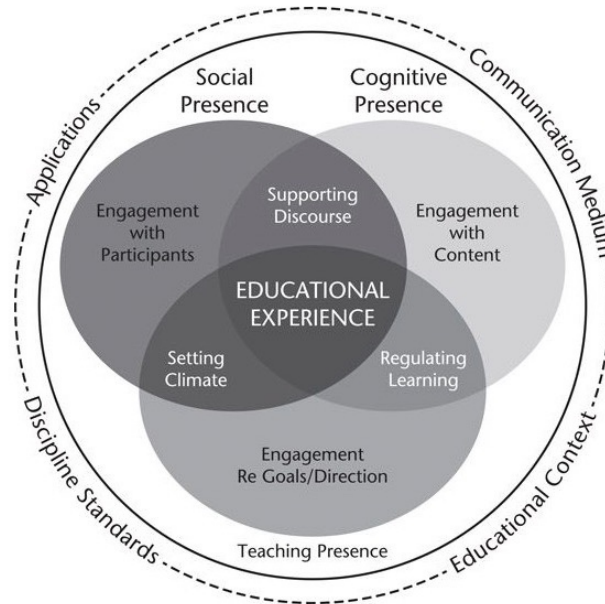


Figure 2. Updated CoI Framework (Garrison, 2016, p. 58)

Within the CoI framework, each of the three presences reflects key categories that operationalize various elements of the teaching-learning transaction. The categories, along with examples of corresponding indicators, are displayed in Table 1.

Elements	Categories	Indicators (examples only)
Social Presence	Open communication	Risk-free expression
	Group cohesion	Group identity/collaboration
	Personal/affective	Socio-emotional expression
Cognitive Presence	Triggering event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Applying new ideas
Teaching Presence	Design & organization	Setting curriculum, methods
	Facilitating discourse	Shaping exchange

	Direct Instruction	Resolving issues
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Table 1. Community of Inquiry Categories (Garrison, 2016, p. 62)

In fewer than 15 years, the CoI has become the most cited theoretical framework in the scholarly literature on online learning. As explained by Madelaine Befus (2014), the increasing volume and diversity of CoI research is especially striking when one considers that the framework was developed for application to text-based, asynchronous learning, thus preceding the era of Web 2.0 and the introduction of such technological milestones as Web CT, Skype, Blackboard Collaborate, and Moodle to name few. Further, the CoI holds additional appeal vis-à-vis its adaptability to any form of collaborative thinking and learning (Garrison, 2016). Recent research, for example, has explored the framework beyond the confines of higher education, examining the ways in which it can support an inquiry-based approach to learning in the K-12 context (Prediger & Vaughan, 2014).

Also contributing to the growth of the CoI has been the development of an open-source quantitative research instrument. Beginning in December 2006, Ben Arbaugh, Marti Cleveland-Innes, Sebastian Diaz, Randy Garrison, Phil Ice, Jennifer Richardson, Peter Shea, and Karen Swan (2008) began the daunting task of creating a quantitative survey to measure student experiences of online learning in terms of the three presences and their corresponding categories. The resulting 34-item, Likert scale questionnaire was statistically validated in 2007 and, since its inception, has been administered by more than 90 institutions. While it is difficult to provide a precise count of the number of students who have completed the survey, current estimates are close to three million (P. Ice, personal communication, September 2, 2015).

Increasing use of the survey instrument has also been documented through phase one of an applied meta-analysis of quantitative and mixed methods studies. From August 2013 through

April 2014, the Community of Inquiry Research Integration and Practice Alliance conducted a review of empirical studies that met the following three criteria: (1) citation of the seminal CoI article (Garrison et al., 2000), (2) citation of the article reporting the validation of the instrument (Arbaugh et al., 2008), and (3) use of the CoI survey instrument by the article author(s).

Preliminary results indicate that the CoI survey is increasingly being used to measure the effects of specific changes (i.e. “before and after”) in areas such as course design and instructional tools (Befus, 2014).

Before proceeding to a discussion of the individual presences, it is important to note their dynamic nature within the CoI model. As is clearly illustrated by the Venn diagrams displayed in Figures 1 and 2, the three core elements of the CoI are distinct but overlapping. What is less obvious, however, are the shifts in focus that occur throughout a course of study. In their mixed methods examination of social, cognitive, and teaching presence among 16 graduate students enrolled in a nine-week, fully online course, Zehra Akyol and Randy Garrison (2008) determined that social presence assumes priority at the beginning of a course when it is crucial to establish the conditions for open communication. In turn, open communication is a vital prerequisite to group cohesion, the third category of social presence. Indicators of cognitive presence, meanwhile, became more readily recognizable as the course progressed and students became more deeply engaged in course content. Finally, teaching presence, while critical to the initial development of social presence, assumed an even greater role near the mid-to-end of a course as both students and instructors sought to ensure that the intended learning outcomes were achieved (Akyol & Garrison, 2008). Notably, of the three constructs, only teaching presence exhibited continuous growth from the outset of the course until its completion. To illustrate the progression of the three presences over time, the authors presented their findings in a scatterplot as shown in

Figure 3.

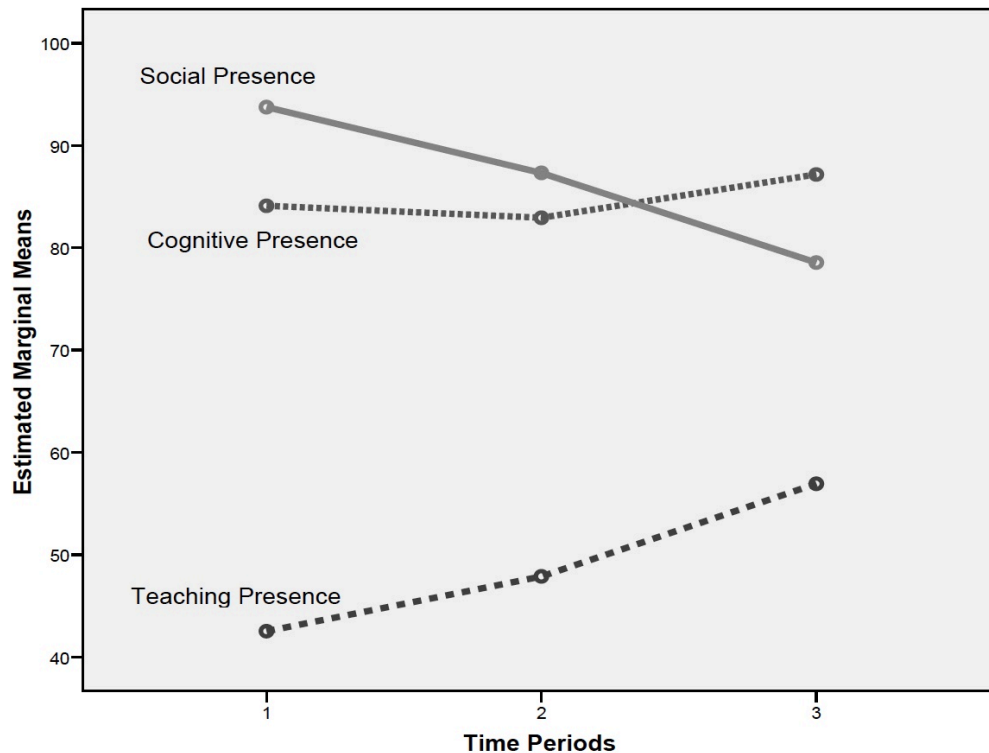


Figure 3. Elements of CoI Over Time (Akyol & Garrison, 2008, p. 14)

While they assume varying degrees of emphasis throughout a course of study, it is imperative that the three presences maintain a balance within the CoI – a challenge that is no small feat given the complexity of the model, its constituent constructs, and the variety of exogenous variables at play. With this background information in mind, the following sections describe the three presences and their respective roles in supporting a collaborative, constructivist learning experience.

Social presence.

Of the three elements that comprise the CoI framework, none have evolved so dramatically as the concept of social presence. Indeed, the first theory of social presence, developed by John Short, Ederyn Williams, and Bruce Christie (1976), was introduced more than two decades before the CoI model itself. In contrast to present-day interpretations, which focus

on feelings of connection and belonging among two or more people, Short et al. viewed social presence as a quality of communication media. As explained by Patrick Lowenthal and Joanna Dunlap:

The research of Short et al. (1976) focused less on how groups of people develop a feeling of ‘connectedness’ and develop a sense of ‘belongingness’ and more on how communication media – and the degree to which people are perceived as ‘real’ and ‘there’ as a result of the communication media and situation – influence communication. (2014, p. 22)

Short et al. argued that low bandwidth media, such as text-based, computer-mediated communication, foster less social presence than, for example, media that provide for the communication of visual or verbal cues (Swan, 2003). It is important to note that Short et al. developed their theory of social presence based on examinations of participants’ attitudes toward various media in settings unrelated to education or learning. In fact, the vast majority of early social presence research was conducted in organizational and business environments, which, as explained by Patrick Lowenthal (2009) exhibit very different dynamics from those found in classroom and online learning contexts.

In contrast to Short et al., Garrison et al. (2000) viewed social presence as an entity that develops over time and is influenced by various factors in a given communication context. These include participants’ familiarity with each other, level of commitment, length of time in using a communication medium (e.g. CMC), and personal motivation. In their seminal article, Garrison et al. (2000) defined social presence as “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as “real people” (i.e. their full personality) through the medium of

communication being used” (p. 94). Accompanying this definition, the authors identified three social presence categories: (1) emotional expression, (2) open communication, and (3) group cohesion (Garrison et al., 2000), all of which were developed through an extensive review of CMC literature in tandem with an exploratory analysis of a computer conferencing transcript.

To provide researchers with a tool for the identification of social presence categories in CMC environments, they further analyzed a variety of computer conferencing transcripts, coding key words and phrases – or synonyms thereof – and subsequently ‘assigning’ transcript content to the categories deemed most appropriate by the researchers. For example, the category of emotional expression was associated with the use of emoticons and autobiographical narratives among other emotional cues. Open communication, meanwhile, was reflected through examples of risk-free expression along with acknowledgement and encouragement of fellow learners. Finally, the category of group cohesion was associated with willful collaboration, helping, and freely supporting one’s peers (Garrison et al., 2000).

As early as 2001, however, Liam Rourke, Terry Anderson, Randy Garrison, and Walter Archer relabeled the above categories “to reflect better the nature of the emergent indicators that define them” (2001, p. 6) in the content analysis process. Emotional expression was changed to affective responses; open communication was changed to interactive responses; and group cohesion was changed to cohesive responses (Rourke, Anderson, Garrison, & Archer, 2001).

Given the accelerated pace at which online learning has evolved over the past 15 years, it is little surprise that the CoI categories and indicators have been subject to refinement since the comparatively nascent period of computer conferencing. However, I have chosen to include the early re-labeling by Rourke et al. (2001) not because it reflects the most current nomenclature in the framework, but, rather, because the authors provided a tabular display, which, in my view,

presents a succinct overview that has withstood the test of time. Thus, with the caveat that categories have since been re-labeled and refined, the following table provides a useful guide for the assessment of social presence in asynchronous and – although not intended by the authors at the time – synchronous learning environments.

Category	Indicators	Definition	Example
Affective	Expressions of emotions	Conventional expressions of emotion, or unconventional expressions of emotion, includes repetitious punctuation, conspicuous capitalization, emoticons	“I just can’t stand it when...!!!!” “ANYBODY OUT THERE!”
	Use of humor	Teasing, cajoling, irony, understatements, sarcasm	The banana crop in Edmonton is looking good this year.
	Self-disclosure	Presents details of life outside of class, or expresses vulnerability	“Where I work, this is what we do...” “I just don’t understand this question.”
Interactive	Continuing a thread	Using reply feature of software, rather than starting a new thread	Software dependent, e.g. “Subject: Re” or “Branch from”
	Quoting from others’ messages	Using software features to quote others’ entire message or cutting and pasting selections of others’ messages	Software dependent, e.g. “Martha writes:” or text prefaced by the less-than symbol <.
	Referring explicitly to others’ messages	Direct references to contents of others’ posts	“In your message, you talked about Moore’s distinction between...”
	Asking questions	Students ask questions of other students or the moderator	“Anyone else had experience with WEB CT?”
	Complimenting, expressing appreciation	Complimenting others or contents of others’ messages	“I really like your interpretation of the reading.”

	Expressing agreement	Expressing agreement with others or content of others' messages	"I was thinking the same thing. You really hit the nail on the head."
Cohesive	Vocatives	Addressing or referring to participants by name	"I think John made a good point." "John, what do you think?"
	Addresses or refers to the group using inclusive pronouns	Addresses the group as <i>we, us, our group</i>	"Our textbook refers to..." "I think we veered off track..."
	Phatics, salutations	Communication that serves a purely social function, greetings, closures	"Hi all." "That's it for now." "We're having the most beautiful weather here."

Table 2. Model and Template for Assessment of Social Presence (Rourke et al., 2001)

Although a complete account of the evolution of social presence is beyond the scope of this thesis, it is important to acknowledge that advances in social presence research have been accompanied by periodic redefinition of the construct itself. As of this writing, social presence is defined as "the ability of participants to identify with the group or course of study, communicate purposefully in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities" (Garrison, 2011, p. 34). As indicated in Table 1, the current categories of social presence are (1) open communication, (2) group cohesion, and (3) personal / affective (Garrison, 2016).

According to Garrison et al. (2000), the primary function of social presence is the support of cognitive presence, thereby indirectly facilitating the process of critical thinking in a community of learners. However, where there are affective goals for the educational process – that is, when it is deemed important for students to find the interaction in the group to be both enjoyable and fulfilling – social presence may also be viewed as a direct contributor to the success of the educational experience.

Because it holds the potential for misunderstanding – particularly by those unfamiliar with the CoI – some clarification is warranted with respect to the purpose of ‘enjoyable’ and ‘fulfilling’ interactions among learners. Garrison (2016) explains:

The key at the outset is to have clear norms and guidelines as to how participants are to engage socially and emotionally with the community to sustain motivation and persistence. However, the goal is not to make everybody feel emotionally comfortable... *To focus excessively on interpersonal relationships is to risk obscuring and undermine the reasons why the participants are there* (emphasis mine). They are there for a particular academic purpose – to engage in a worthwhile and meaningful collaborative thinking and learning experience. (p. 93)

Indeed, to appreciate the role of social presence, one must be mindful of its primary function as a support for higher-order learning. In this respect, and as will be explained in the subsequent discussion of teaching presence, the importance of instructor leadership cannot be overemphasized. As noted by Garrison (2016), when students feel that the academic focus has been compromised in favor of an emphasis on non-academic socialization (i.e. ‘fun,’ regularly ‘getting off track,’ etc.), they are more likely to be dissatisfied with their educational experience. In many instances, dissatisfaction can be observed through reduced participation in discussions and a general resistance to inquiry-based learning.

Cognitive presence.

Defined by Randy Garrison, Terry Anderson, and Walter Archer (2001) as “the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry” (p. 11), cognitive presence represents a collaborative approach to thinking and learning. As explained by Garrison (2014), the

collaborative process helps to remove the human bias to look for evidence of what one already believes. Thus, where cognitive presence flourishes, there exists an interplay between the construction of personal meaning and the confirmation of understanding through collaboration with others. More plainly, cognitive presence represents a process of inquiry through reflection and discourse; that is, personal reflection and open sharing of ideas.

Within the CoI framework, cognitive presence is operationalized by the Practical Inquiry Model developed by Garrison et al. (2001). Based on Dewey's (1933) concept of practical inquiry, which, in turn, was grounded in the scientific method, the model consists of four phases: (1) a triggering event, (2) exploration, (3) integration, and (4) resolution. Recalling the CoI elements, categories, and indicators presented in Table 1, examples of cognitive presence indicators are, respectively, as follows: (1) sense of puzzlement (understanding the problem), (2) information exchange, (3) connecting ideas, and (4) applying new ideas / critical assessment of the 'solution.'

Among the greatest challenges with respect to cognitive presence is the timely progression of students through the four phases of inquiry. In particular, early research revealed that students frequently move from a triggering event to exploration (phases one and two) only to remain 'stuck' in their discourse, thereby failing to progress to the key phases of integration and resolution.

As illustrated in Figure 4, the Practical Inquiry Model is framed along two dimensions. The vertical axis represents the psychological and sociological sides of the educational process described by Dewey; that is, it reflects the learner's private and reflective world juxtaposed against the community's shared world of discourse (Swan et al., 2009). As explained by Swan et al., "practical inquiry iterates imperceptibly between these two worlds" (2009, p. 46). Garrison

(2014) describes the learner's movement along the vertical axis as a fusion of reflection and discourse; personal responsibility and shared control; and independence and connectivity. The horizontal axis, meanwhile, represents the more latent aspects of the learning process – the interplay between perception (awareness) and conception (ideas) – both of which operate at the interface of the private and shared worlds. Finally, each of the four quadrants reflects “the logical or idealized sequence of practical inquiry (i.e. critical thinking) and correspond to the categories of cognitive presence” (Akyol & Garrison, 2011b, p. 236).

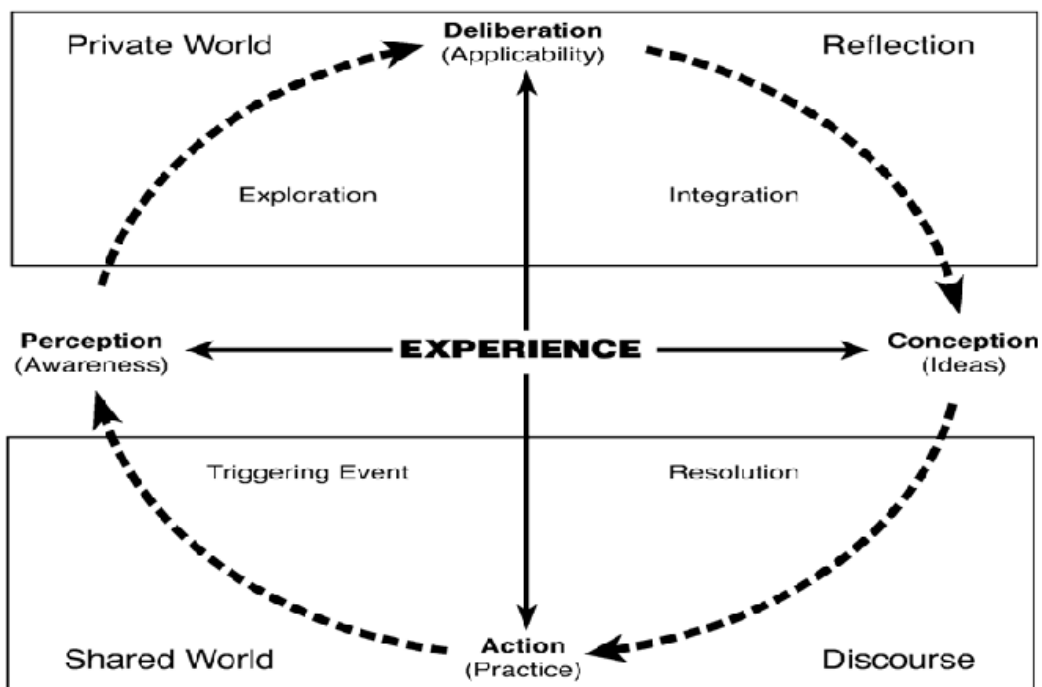


Figure 4. Practical Inquiry Model (Garrison, Anderson, & Archer, 2001, p. 9)

As stated by Garrison (2016), multiple studies have highlighted the role of the instructor in supporting the progression of students through the four phases of inquiry. Specifically, the design and organization of learning tasks, in concert with the facilitation of discourse, play a pivotal role in supporting students' advancement beyond exploration. In an analysis of threaded discussions by 22 graduate students, Katrina Meyer (2003) employed the Practical Inquiry Model to determine the prevalence of higher-order thinking in an asynchronous environment.

Coding each student posting as reflective of one of the four phases of inquiry, she concluded that learners require greater time for critical reflection in order to reach the more advanced phases of integration and resolution. Further, “faculty may need to be more directive in their assignments for threaded discussions, charging the participants to resolve a particular problem, and pressing the group to integrate their ideas or prepare a resolution of the matters under discussion” (Meyer, 2003, pp. 63-64).

In a separate study of online discussion postings by two groups of graduate students, Hua Bai (2009) compared the posts of those who had no knowledge of the four phases of practical inquiry with those of students who had been provided with the Practical Inquiry Model as a guide for the facilitation of discourse and critical thinking. Results indicated that, when made aware of the model and its four phases, students were more likely to move beyond the exploration phase in the quality of their online discourse. These findings are especially significant in that they cohere with Garrison’s (2016) assertion that metacognitive awareness of the inquiry process (i.e. ‘learning about learning’) is vital to the full development of cognitive presence among learners.

A growing body of research also demonstrates that collaborative inquiry fosters a sense of learner achievement, satisfaction, and positive knowledge-building dynamics (Garrison, 2011). Of particular note is a study by Young Ju Joo, Kyu Yon Lim, and Eun Kyung Kim (2011) in which the authors conclude that cognitive presence is a *predictor* of both satisfaction and retention. Garrison (2016) emphasizes the importance of such findings in affirming that learners must identify with the academic goals of the community in order to remain satisfied with the educational experience.

Teaching presence.

Terry Anderson, Liam Rourke, Randy Garrison, and Walter Archer (2001) define teaching presence as “the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (p. 8). Based on their extensive review of the literature examining online teaching responsibilities, the authors identified three dimensions or categories of this construct: (1) design and organization; (2) facilitating discourse; and (3) direct instruction. These categories, along with examples of associated indicators, are presented in Table 3.

Categories	Indicators	Examples
Design & organization	Setting curriculum	“This week we will be discussing. . .”
	Designing methods	“I am going to divide you into groups, and you will debate. . .”
	Establishing time parameters	“Please post a message by Friday. . .”
	Utilizing medium effectively	“Try to address issues that others have raised when you post.”
	Establishing netiquette	“Keep your messages short.”
	Making macro-level comments about course content	“This discussion is intended to give you a broad set of tools/skills which you will be able to use in deciding when and how to use different research techniques.”
Facilitating discourse	Identifying areas of agreement/disagreement	“Joe, Mary has provided a compelling counter-example to your hypothesis. Would you care to respond?”
	Seeking to reach consensus/understanding	“I think Joe and Mary are saying essentially the same thing.”
	Encouraging,	“Thank you for your

	acknowledging, or reinforcing student contributions	insightful comments.”
	Setting climate for learning	“Don't feel self-conscious about 'thinking out loud' on the forum. This is a place to try out ideas, after all.”
	Drawing in participants, prompting discussion	“Any thoughts on this issue?” “Anyone care to comment?”
	Assessing the efficacy of the process	“I think we're getting a little off track here.”
Direct instruction	Present content/questions	“Bates says...what do you think?”
	Focus the discussion on specific issues	“I think that's a dead end. I would ask you to consider...”
	Summarize the discussion	“The original question was Joe said.... Mary said.... We concluded that.... We still haven't addressed....”
	Confirm understanding through assessment and explanatory feedback.	“You're close, but you didn't account for.... This is important because....”
	Diagnose misconceptions	“Remember, Bates is speaking from an administrative perspective, so be careful when you say....”
	Inject knowledge from diverse sources, e.g., textbook, articles, internet, personal experiences (includes pointers to resources)	“I was at a conference with Bates once, and he said... You can find the proceedings from the conference at www....”
	Responding to technical concerns	“If you want to include a hyperlink in your message, you have to....”

Table 3. Categories and Indicators of Teaching Presence (adapted from Anderson et al., 2001, pp. 6-10)

Of the three elements comprising the CoI framework, teaching presence has been the most researched and is understood to be “the backbone of a community of inquiry” (Garrison,

2016, p. 88). Indeed, it is teaching presence and, in particular, the collaborative leadership that it requires, that sustains a continuous balance among all three constructs – a balance that, as previously noted, is essential to a collaborative, constructivist learning experience.

Akyol and Garrison (2008) are among the researchers who have documented a significant relationship between teaching presence and cognitive presence, perceived learning, and satisfaction. Further, perceived learning and student satisfaction have been linked to each of the three categories of teaching presence (Shea, Pickett, & Pelz, 2004), while, as an entity unto itself, teaching presence has been linked to the development of a sense of community in online courses (Shea, Li, Swan, & Pickett, 2005). More recently, in a quantitative study of the causal relationships among the three presences, Randy Garrison, Marti Cleveland-Innes, and Tak Shing Fung (2010) concluded that student perceptions of teaching presence “predicted a significant direct effect on perceptions of cognitive presence” (p. 34), while perceptions of teaching presence were significantly associated with those of social presence.

Yet, despite the volume and breadth of research that surrounds it, teaching presence holds the potential for misunderstanding when it is erroneously viewed as ‘instructor presence.’ On the contrary, both the teaching presence construct and the CoI itself are predicated on the expectation that all participants will assume the responsibilities of both teacher and student. As explained by Norm Vaughan, Marti Cleveland-Innes, and Randy Garrison (2013), it is in light of this shared responsibility that the construct was labeled *teaching* presence as opposed to *teacher* presence.

Notably, the sharing of responsibilities does not diminish the importance of instructor leadership. While “the perceived democratic potential of asynchronous communication produced many advocates for the ‘guide on the side’ approach” (Garrison, 2006, p. 32) during the early

years of online learning, the CoI requires instructors to exhibit considerable leadership in each of the three teaching presence categories, all while *modeling* the behaviours that support students in becoming more “metacognitively aware and... assum(ing) increasing responsibility and control of their learning” (Vaughan et al., 2013, p. 13). In this sense, the instructor is neither the ‘guide on the side’ nor the ‘sage on the stage,’ but, rather, a combination of the two – a combination that, like the three elements of the CoI itself, will vary in ‘weighting’ depending upon the needs and skills of the participants.

The question thus arises as to how instructors can foster a learning environment in which students embrace this shared responsibility – not only for teaching presence, but for elements of social and cognitive presence as well. To that end, Vaughan et al. (2013) present seven principles of online and blended learning, deductively derived from the CoI framework. Recalling Garrison’s metaphorical description of teaching presence as the “backbone of a community of inquiry,” it should come as no surprise that the principles have been organized around the three teaching presence categories: design and organization; facilitating discourse; and direct instruction.

The authors describe the seven principles as “the first step in providing specific practical guidelines to the design, facilitation, and direction of a collaborative community of inquiry” (Vaughan et al., 2013, p. 18). Table 4 presents the seven principles, the teaching presence category with which each principle is associated, and the corresponding social, cognitive, and, in the case of the final three principles, assessment challenges for instructors.

Principle	Teaching Presence Category
1. Plan for the creation of open communication and trust.	Design & organization: Social and cognitive challenge of designing a collaborative learning experience
2. Plan for critical reflection and	

discourse.	
3. Establish community and cohesion.	Facilitating discourse: Social and cognitive concerns associated with facilitating a community of inquiry
4. Establish inquiry dynamics (purposeful inquiry).	
5. Sustain respect and responsibility.	Direct instruction: Social, cognitive and assessment responsibilities of directing an educational experience to achieve the desired outcomes successfully
6. Sustain inquiry that moves to resolution.	
7. Ensure assessment is congruent with intended processes and outcomes.	

Table 4. Seven Principles of Online Learning and Corresponding Categories of Teaching Presence (adapted from Vaughan et al., 2013, pp. 17-18)

Chapter Summary

This chapter sought to deepen understanding of the concept of community while providing the necessary background to the theoretical framework that guides the current study. Once viewed exclusively through a geographic lens, “community” has been the subject of extensive scholarship as evidenced by the more than 100 theories that surround it (Fowler, 1991). The concept has attracted particular attention among education researchers since the late 20th century when social constructivism emerged as a viable alternative to behaviorist and cognitivist theories of learning. Grounded in the work of Lev Vygotsky (1978), social constructivism is predicated on the expectation that cognitive development is enhanced when students learn how to make sense of new information through collaboration with both peers and instructor.

The rise of social constructivism was led, beginning in the 1990s, by some of North America’s most influential learning theorists. Among these was Matthew Lipman (1991) who, strongly influenced by Vygotsky, introduced the concept of a community of inquiry in the

elementary school context. Lipman, like John Dewey before him, believed that critical reflection is both social and communal. Coinciding with the proliferation of the Web, this same decade period brought a surge in online collaborative learning theories. These included the Interaction Analysis Model for Examining Social Construction of Knowledge in Computer Conferencing (Gunawardena, Lowe, & Anderson, 1997). More commonly known as IAM, it was the first theory of online learning to explicitly credit social constructivism with the success of asynchronous, discussion-based, online learning and critical thinking (Buraphadeja & Dawson, 2008).

The 21st century brought increasing interest in the role of community in online learning. Consistent with social constructivist pedagogies, early studies linked sense of community to learning outcomes (Liu, Magjuka, Bonk, & Lee, 2007); perceived learning (Shea, 2006); student satisfaction (Ouzts, 2006); and retention (Dawson, 2006) in online courses. Among the more prominent researchers was Alfred Rovai (2002a), who argued that sense of community – whether face-to-face or virtual – is a product of four components: (1) a sense of membership and feelings of friendship, (2) trust and support of fellow classmates, (3) a sense of mutual benefit from interactions, both in supporting learning tasks and in fulfilling social or emotional needs, and 4) a transformative, interactive learning process through which students meet their common goals. Rovai's many contributions to online learning research also include the Classroom Community Scale (CCS) survey instrument (2002b), a statistically validated questionnaire designed to measure sense of community through two sub-scales: connectedness and learning.

Because it serves as the theoretical framework that guides the current study, the majority of the chapter was devoted to the Community of Inquiry (CoI) framework developed by Randy Garrison, Terry Anderson, and Walter Archer (2000). The most cited theoretical framework in

the literature of online learning, the CoI is a process model that explains the online learning experience in terms of three multidimensional and interdependent elements: social presence, cognitive presence, and teaching presence. Within each of these presences, there exist between three and four categories, each of which can be identified through the observation of various indicators. Within the construct of social presence, categories are (1) open communication, (2) group cohesion, and (3) personal / affective. Cognitive presence is constituted by the categories of (1) a triggering event, (2) exploration, (3) integration, and (4) resolution. Finally, teaching presence categories consist of (1) design and organization, (2) facilitating discourse, and (3) direct instruction. Grounded in the work of John Dewey, the CoI is predicated on the expectation that both students and instructors will assume varying degrees of responsibility in the creation of a collaborative, constructivist learning experience.

To measure student experiences of a community of inquiry in terms of the three presences, the CoI survey was developed between 2006 and 2007. Statistically validated in 2008, the survey consists of 34 Likert-scale questions and, to date, has been administered by more than 90 post-secondary institutions worldwide. Unlike the majority of end-of-course surveys – which, even for fully online courses – are derivative of those administered in the traditional classroom setting, the CoI survey was designed to account for the unique pedagogies of the online environment. Accordingly, it addresses instructional design issues such as effectiveness of media and layout – issues that are of increasing importance as instructional designers assume a more prominent role in institutional approaches to online learning (La Salle University College of Professional and Continuing Studies, 2012).

Lastly, this chapter presented seven principles of online learning, deductively derived from the CoI framework. Organized around the three constituent categories of teaching presence,

the principles provide instructors with a foundation for the development of specific tactics aimed at creating a collaborative community of inquiry in the online environment.

Chapter III: Methods and Methodology

This chapter provides an overview of mixed methods research, beginning with its definition and historical context. It then presents considerations in selecting a design approach, including the rationale for my use of an exploratory sequential approach to the current study. Following this introduction to mixed methods, I describe the sampling technique and the procedures that were employed in the recruitment of participants. The chapter concludes with a description of the qualitative and quantitative data collection processes.

Methodological Overview

Mixed methods research is based on the core assumption that, through a combination of qualitative and quantitative approaches, researchers may achieve a more complete understanding of a research problem than would be possible through either approach alone (Creswell, 2014). In selecting the methodology for the current study, it was this potential for nuanced understanding that impelled me to adopt what Abbas Tashakkori and Charles Teddlie (2003) have termed “the third methodological movement” (p. 697) in the social and behavioral sciences.

Defining mixed methods.

Definitions of mixed methods research are as diverse as the field itself. In the inaugural issue of the *Journal of Mixed Methods Research*, founding co-editors John Creswell and Abbas Tashakkori (2007) defined mixed methods as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods” (p.4). During that same year, Lynne Giddings and Barbara Grant described mixed methods as “a Trojan Horse for positivism” (2007, p. 52), arguing that mixed methods research is predicated on a positivist methodology that diminishes the value of qualitative methods and their theoretical underpinnings. Janice Morse and Linda Niehaus (2009),

meanwhile, countered the prevailing view of mixed methods as a necessary combination of both qualitative and quantitative components. According to the authors, mixed methods research comprises the integration of two distinct data sets, regardless of whether these represent both qualitative and quantitative approaches. Hence, provided that integration takes place, a mixed methods study could conceivably be comprised of two qualitative or quantitative strands. Most recently, Creswell (2014) has defined mixed methods research as “an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks” (p. 4).

Historical Context

Mixed methods research has its genesis in the work of Donald Campbell and Donald Fiske (1959) who employed a “multitrait-multimethod matrix” (p. 81) in an attempt to test the construct validity of select psychological traits. They argued that, through the use of more than one method during the validation process, researchers can help to ensure that the explained variance is the result of the underlying phenomenon or trait as opposed to that of the method itself. As explained by Thomas Bouchard (1976), the convergence or agreement between two or more methods “enhances our belief that the results are valid and not a methodological artifact” (p. 268, as quoted in Tran, 2015, p. 1345).

Describing their multitrait-multimethod approach as one of “multiple operationalism” (p. 101), Campbell and Fiske (1959) contrasted this new approach with single operationalism, the dominant approach to inquiry at the time. While Campbell and Fisk employed only quantitative methods in their work, they were nonetheless pivotal in encouraging the collection of multiple forms of data by other researchers.

Creswell (2014) contends that, during the early years of mixed methods research, the perceived value of multiple methods was based on the belief that no methods are devoid of bias or weakness. The collection of qualitative and quantitative data was thus viewed as a means of neutralizing the weaknesses of each approach. It was in seeking convergence across qualitative and quantitative methods that the concept of triangulation was born.

Triangulation.

Todd Jick (1979) states that Campbell and Fiske's multiple operationalism served as the impetus for the triangulation of data, a validation process that would soon become a tenet of mixed methods research. However, it was Eugene Webb, Donald Campbell, Richard Schwartz, and Lee Sechrest (1966) who are credited with originating the term:

Once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced. The most persuasive evidence comes through a triangulation of measurement processes. If a proposition can survive the onslaught of a series of imperfect measures, with all their irrelevant error, confidence should be placed in it. (Webb et al., 1966, pp. 3-4)

Sociologist Norman Denzin (1978) broadly defined triangulation as "the combination of methodologies in the study of the same phenomenon" (p. 291). While Webb et al. were the first to employ the term triangulation in scholarly literature, it was Denzin who described triangulation in terms of four different categories or types: (1) data triangulation, (2) investigator triangulation, (3) theory triangulation, and (4) methodological triangulation. In the context of the current study, I sought to achieve methodological triangulation or "triangulation validity" (Creswell & Plano Clark, 2007, p. 146) through the use of qualitative and quantitative approaches.

Tashakkori and Teddlie (2003) assert that the notion of triangulation is foundational to the evolution of mixed methods designs. Noting the early contributions of Campbell and Fiske (1959), Webb et al. (1966), and Denzin (1978) in the understanding of triangulation, they argue that it was not until the 1990s that techniques of triangulation reached their “fullest application” (Tashakkori & Teddlie, 2003, p. x). As explained by Creswell (2014), mixed methods research had, by then, moved toward the systematic convergence of qualitative and quantitative databases, giving rise to the idea of integration in different types of research designs.

Typology in Mixed Methods Research

The growth of mixed methods research has been accompanied by a typology-based approach to mixed methods designs. Also known as the typological approach, the typology-based approach “emphasizes the classification of useful mixed methods designs and the selection and adaptation of a particular design to a study’s purpose and questions” (Creswell & Plano Clark, 2011, p. 55). Within the body of scholarly literature, the first typology of mixed methods designs has been credited to Jennifer Greene, Valerie Caracelli, and Wendy Graham (1989), who, through an examination of 57 mixed methods studies, established a typology of designs based on specific characteristics and functions. In the decade following the seminal work of Greene et al., scholars have developed no fewer than 15 different typologies – each with its own criteria and terms – to describe and classify mixed methods designs (Creswell & Plano Clark, 2011). Examples of criteria include the following: (1) number of methodological approaches used; (2) number of strands or phases; (3) type of implementation process; (4) stage of integration of approaches; (5) priority of methodological approach; (6) function of the research study; and (7) theoretical perspective (Tashakkori & Teddlie, 2006).

While not the only approach to the design of mixed methods studies, the typology-based approach is, by far, the most prevalent in mixed methods research. In the course of presenting their own typology of mixed methods designs, Tashakkori and Teddlie (2006) argue that typologies bring important benefits to the field as a whole. The authors state that, in addition to serving as effective tools for the design of mixed methods studies, typologies help to establish a common language among researchers; provide structure and legitimacy to the field; and, finally, serve as useful pedagogical tools. Having described the value of typologies, they do, however, caution against the inclination to view existing typologies as representative of an exhaustive “menu” of designs (2006, p. 13). On the contrary, they argue that, because mixed methods designs hold the capacity to “mutate into other diverse forms” (p. 13), the creation of a complete taxonomy is not possible.

Types of Mixed Methods Designs

Indicative of the growth of mixed methods research is the number of designs that have emerged since the end of the 20th century. Tashakkori and Teddlie (2003) identified almost 40 different designs in the scholarly literature across a variety of social science disciplines. Contending that the various designs exhibit more similarities than differences, John Creswell and Vicki Plano Clark (2007) advanced the more parsimonious categorization of four primary design types, each of which gives rise to multiple variants. The four design types were as follows: (1) triangulation design, (2) embedded design, (3) explanatory design, and (4) exploratory design. To provide greater clarity to the design nomenclature, the authors subsequently renamed three of the four types. Triangulation design was changed to convergent parallel design, while explanatory design and exploratory design were changed to explanatory sequential design and exploratory sequential design respectively. The embedded design, meanwhile, remained

unchanged (Creswell & Plano Clark, 2011).

The convergent parallel design is a one-phase design in which the qualitative and quantitative methods are analyzed during roughly the same timeframe and with equal weight. As described by Creswell (2014), “the researcher converges or merges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem” (p. 15). The explanatory sequential design is a two-phase design in which the qualitative data is used to build upon or explain the quantitative results, while the exploratory sequential design, which also consists of two phases, is led by the qualitative component with the quantitative serving in the supporting or explanatory role. Finally, the embedded design is one in which one data set provides a supportive, secondary role in a study based primarily on the other data type. As explained by Creswell and Plano Clark (2011), the embedded design is frequently used when a researcher needs to embed a qualitative component within a quantitative design or vice versa. More recently, Creswell has reclassified the embedded design, moving it from the category of primary designs to that of design variants or “advanced mixed methods strategies” (2014, p. 13).

Selection of design type.

Creswell and Plano Clark (2007) emphasize that careful consideration should be taken in the selection of a mixed methods design. First and foremost, the design type should match the research problem. According to the authors, this initial ‘matching’ provides for a more manageable study that is simpler to implement and describe. Further, it provides the researcher with a framework and logic to guide the implementation of the research methods. Of additional importance are factors such as the researcher’s own level of expertise in both qualitative and quantitative techniques; the expectations of audiences, particularly when audiences value one type of evidence over others; and available resources such as funding for the hiring of

transcribers or research assistants. Finally, the authors submit that the choice of design should be guided by three decisions: (1) the timing of the use of the collected data, (2) the relative weight of the qualitative and quantitative approaches, and (3) the approach to mixing the two data sets. This latter consideration, the mixing decision, pertains to the procedure through which the qualitative and quantitative data sets will be explicitly related. As explained by Creswell and Plano Clark (2007), “a study that includes both quantitative and qualitative methods without explicitly mixing the data derived from each is simply a collection of multiple methods” (p. 83). To that end, the authors present three options for the effective mixing of data sets: (1) merging, (2) embedding, and (3) connecting. As will be evident in my discussion of the study results, I selected the first option, merging, as my approach to mixing the two data sets.

Philosophical Worldview

Creswell (2014) argues that the research approach – whether qualitative, quantitative, or mixed methods – represents an interplay of design, specific methods, and philosophical worldview. He states that “researchers need to think through the philosophical worldview assumptions that they bring to the study, the research design that is related to this worldview, and the specific methods or procedures of research that translate the approach into practice” (Creswell, 2014, p. 5).

Within qualitative, quantitative, and mixed methods research, there exist four dominant worldviews: (1) postpositivism, (2) constructivism, (3) transformative, and (4) pragmatism. Providing a succinct depiction of each, Creswell identifies four major elements associated with each position. For the postpositivist worldview, these elements are determination, reductionism, empirical observation and measurement, and theory verification. For constructivism, he cites understanding, multiple participant meanings, social and historical construction, and theory

generation. The transformative worldview is characterized as political, power and justice oriented, collaborative, and change oriented. Lastly, pragmatism is associated with consequences of actions, a problem focus, pluralism, and a real-world practice orientation.

Creswell states that, while philosophical worldviews often remain hidden in research studies, they are nonetheless influential throughout the research process. In light of this underlying, influential role, he suggests that researchers make explicit their worldviews in the course of planning a study. According to Creswell, a researcher's philosophical worldview may be based on a variety of factors. These include, but are not limited to, discipline orientation, past research experiences, and, in the case of student researchers, the inclinations of advisors and mentors (Creswell, 2014).

Integration in Mixed Methods Designs

Recalling that the definition of mixed methods presumes the integration of qualitative and quantitative data, it is important to understand the various means through which integration can successfully be achieved. Michael Fetters, Leslie Curry, and John Creswell (2013) contend that integration may occur at three levels in a mixed methods study: (1) design, (2) methods, and (3) interpretation and reporting. At each of these levels, integration may be accomplished through a variety of means.

The first and most obvious form of integration occurs with the conceptualization of the design. Each of the three primary design types – convergent parallel, explanatory sequential, and exploratory sequential – inherently lend themselves to integration. Further, integration can also be accomplished through advanced frameworks that incorporate one of the primary designs.

At the methods level, integration may occur through (1) connecting, (2) building, (3) merging, and (4) embedding. Integration through connecting occurs when one set of data links to

the other through sampling. For example, in a sequential study, interview participants may be selected from the population of participants who responded to a questionnaire. In this way, integration takes place through the sampling frame. The second form of methods integration, building, requires that one data set informs the approach to collection of another data set. For example, the results of a qualitative phase may inform the development of a quantitative survey. Third, integration through merging takes place when researchers bring together two data sets for analysis and comparison. Typically, the merging occurs *after* the qualitative and quantitative data are separately analyzed. Finally, integration through embedding occurs when data collection and analyses are linked at multiple points during a study.

At the interpretation and reporting level, integration can occur through the use of (1) narrative, (2) data transformation, and (3) joint displays. Integration through narrative takes place when researchers describe their qualitative findings in a single or series of reports. Fetters et al. (2013) identify three approaches to integration through narrative: (1) weaving, (2) contiguous, and (3) staged. The weaving approach requires that the qualitative and quantitative findings are reported together, usually on a theme-by-theme or concept-by-concept basis. In the contiguous approach, the qualitative and quantitative findings are reported in separate sections. Lastly, the staged approach is most frequently employed in multistage studies wherein the results of each step are reported in stages. In this approach, the data for each stage are analyzed and published separately.

Joint displays constitute the second approach to integration at the interpretation and reporting level. In this approach, researchers bring together the qualitative and quantitative data through visual means such as figures, tables, matrices, or graphs. Through the use of visuals, the

researcher can potentially gain new insights beyond the information obtained from the separate qualitative and quantitative results.

The third approach, data transformation, occurs in two stages. First, one type of data must be converted into the other type of data. For example, in qualitative content analysis, data are coded and, in most instances, the frequency of codes is then identified. These numeric counts represent a transformation from qualitative to quantitative data. In the second stage, the ‘transformed’ data are integrated with the data that has not been transformed. Using the example above, the numeric counts (formerly qualitative data) would be integrated with a quantitative database. The data sets could then be merged by comparing the transformed qualitative data with the original quantitative results.

As will be discussed later in the chapter, I employed the following approaches to integration for the current study: (1) design-level integration through an exploratory sequential design selection; (2) methods-level integration through merging, following separate analyses of the qualitative and quantitative data; and (3) integration at the interpretation and reporting level through a contiguous presentation of narrative.

Design of the Current Study

Employing the typology-based approach proposed by Creswell (2003), this thesis utilized an exploratory sequential design. As previously noted, the exploratory sequential design consists of two phases, beginning with the collection and analysis of qualitative data. The qualitative phase assumes priority in answering the study’s research questions, while the second, quantitative phase, serves in an explanatory or supporting role. The results of the two phases are then integrated during interpretation as the researcher examines the ways in which the qualitative findings help to explain the initial quantitative results. Creswell and Plano Clark (2007) state

that, while researchers may choose to use any combination of timing, weighting and mixing, “based on the underlying logic of the (various) mixed methods designs...these criteria are best used in certain combinations” (p. 84). The authors recommend the exploratory sequential design under the following conditions: (1) data collection takes place in two distinct phases, with the qualitative preceding the quantitative; (2) the qualitative data assumes priority in the study; and (3) the intent is to draw valid and well-substantiated conclusions about a particular phenomenon.

My decision to employ the exploratory sequential design was based on several considerations. First, consistent with my social constructivist worldview, I found great appeal in the emphasis on the qualitative component. Second, and as noted by Creswell and Plano Clark (2007), the separate phases contribute to a design that is “straightforward to describe, implement and report” (p. 78). Third, both qualitative and quantitative methods would examine the same phenomenon: communication graduate students’ experiences of social, cognitive, and teaching presence in online courses. Lastly, while recognizing that the two-phase approach requires considerable time to implement, I believed that I would have sufficient time to do so.

Sampling Technique

Anthony Onwuegbuzie and Nancy Leech (2007) identify 24 sampling schemes available to mixed methods researchers. Of these 24 designs, five are categorized as probability sampling schemes, while 19 are classified as purposive (non-random) sampling schemes. As defined in the *Dictionary of Public Relations Measurement and Research*, a purposive sample is “a non-probability sample in which individuals are deliberately selected for inclusion based on their special knowledge, position, characteristics, or relevant dimensions of the population” (Stacks, 2006, p. 17). Anthony Onwuegbuzie and Kathleen Collins (2007) submit that, while qualitative research has traditionally been associated with non-random sampling, whereas quantitative

studies have been associated with random sampling schemes, such associations are both outdated and inaccurate. In reality, non-random sampling is employed in the vast majority of mixed methods studies for both qualitative and quantitative components. According to the authors, non-random sampling remains the most popular form of sampling among mixed methods researchers, regardless of the research goal, objective, purpose, or question (Onwuegbuzie & Collins, 2007).

The current study employed non-random sampling for both qualitative and quantitative data collection. Specifically, a convenience sample was utilized in each case. One of the 19 forms of non-random sampling, convenience samples involve “choosing settings, groups and/or individuals that are conveniently available and willing to participate in the study” (Onwuegbuzie & Collins 2007, p. 286).

Of particular importance is the fact that non-random samples do not allow for generalizability of findings to the larger population. Thus, my qualitative and quantitative findings pertain only to the study participants. A complete discussion of the study limitations will be presented in Chapter V.

Recruitment of Participants

Using the convenience sampling technique, participants for the study were drawn from the population of graduate students enrolled in one or more of the four 13-week (0.5 unit) courses offered by the Department of Communication Studies at Mount Saint Vincent University during the 2015 winter semester. The courses, each of which featured an online component, were as follows: *Quantitative and Qualitative Research Methods in Public Relations* (GPRL 6101-18), *Media, Culture & Society* (GPRL 6105-18 and 19), *Public Relations & Public Opinion Research* (GPRL 6108-18), and *Project Seminar* (GPRL 6220-18). During the study planning phase, I contacted the course instructors via e-mail to provide an overview of the proposed investigation

and to answer any questions that they may have. The instructors were subsequently provided with the following documents: (1) the thesis proposal, approved by the thesis committee; (2) the application for research ethics clearance, approved by the University Research Ethics Board; and (3) a statement of informed consent specific to instructor support. (See Appendix B.) Within the statement of informed consent, instructors were asked to indicate their decisions with respect to two items: (1) agreement to allow recruitment of participants from their courses, and (2) permission to allow me to include direct quotations from students in my final report, provided that no identifying names are used. Each of the instructors returned the signed consent form, indicating agreement with the two items.

As of February 9, 2015, the date on which participant recruitment commenced, a total of 57 communication graduate students were enrolled in the four courses, one of which – GPRL 6105: *Media, Culture & Society* – consisted of two sections. Of these two sections, one (GPRL 6105-19) employed online learning exclusively (i.e. using Blackboard Collaborate for weekly synchronous classes in conjunction with asynchronous, threaded discussions via Moodle), while the other (GPRL 6105-18) employed a modified hybrid approach in which students had the option of attending the weekly classes in a face-to-face classroom setting if geographically feasible. This section of the course also utilized the Blackboard Collaborate system for those students who were either unable to attend in person (due to distance) or who, for reasons of convenience or otherwise, preferred to participate via Blackboard Collaborate in lieu of attending the face-to-face classes. Like section 19 (GPRL 6105-19), this section of the course also employed the Moodle learning management system as a platform for asynchronous discussions.

At the outset of the study, two recruitment vehicles were employed. First, an e-mail was sent to all potential participants, on my behalf, by the administrative assistant for the Department

of Communication Studies. With the subject heading, “Invitation to Participate in Thesis Research on Online Learning,” the e-mail invited students to learn more about the mixed methods study by logging into a Moodle site that had been specifically developed for the thesis. The e-mail included a direct link to the Moodle site, which was accessible only to the 57 students. The e-mail also included the following information: (1) timing of the qualitative phase, February 9-March 8; (2) timing of the quantitative phase, March 22-April 5; (3) a statement informing students that they may participate in the qualitative phase, the quantitative phase, both phases, or neither one; and (4) contact information for the researcher and her thesis supervisor. (See Appendix C for a copy of the initial recruitment e-mail.)

The second recruitment vehicle, the study Moodle site, was also launched on February 9, the date on which the recruitment e-mail was disseminated. Like the e-mail subject heading, the Moodle site was titled “Invitation to Participate in Thesis Research on Online Learning.” It contained the following components: (1) a welcome message to students; (2) a letter of invitation / research overview; (3) a downloadable statement of informed consent for the qualitative phase of the study; (4) a downloadable list of questions to facilitate student journaling; (5) an “assignments” section through which students could upload their signed consent forms and journal entries; (6) a quantitative section, which would remain hidden until the deadline for the qualitative phase had passed; and (7) a forums section in which students could post any questions or concerns for my response. (See Appendix D for a copy of the letter of invitation and research overview posted on the study Moodle site. As well, see Appendix E for a copy of the downloadable statement of informed consent exclusive to the qualitative phase.)

Qualitative Method

As stated in Chapter I, the study sought to answer the following qualitative research question and sub-question:

RQ1) How do communication graduate students describe their experiences of community in online courses at Mount Saint Vincent University?

Sub-question to RQ1) Which aspects of the course have an influence on students' experiences of cognitive, social, and teaching presence?

After considering various options, such as focus groups and individual interviews, I ultimately chose to employ student journals as the vehicle for qualitative data collection.

Student journals as qualitative tool.

Since the 1970s, student journals have increasingly been employed as a means of facilitating student reflection. Within the purview of higher education, this increase has been especially striking. According to Jennifer Moon (2006), student journals have been employed as a learning tool across more than 30 disciplines. These range from the arts and humanities – areas that seem naturally conducive to the journaling process – to the sciences and applied sciences such as engineering and computer studies.

Regardless of the terminology that is used – for example, the terms 'learning logs,' 'reflection logs,' 'participation logs,' 'reflective journals,' and 'learning journals' are frequently employed interchangeably – student journals represent “an accumulation of material that is mainly based on the writer's processes of reflection” wherein this accumulation occurs “over a period of time, not ‘in one go’” (Moon, 2006, p.2). Alana James, Margaret Milenkiewicz, and Alan Bucknam (2008) further argue that, while student journals are viable sources of qualitative data, “the degree of insight that they offer is directly tied to frequency and quantity of the

writing” (p. 74). Thus, a single journal entry by one student may not be as indicative of a theme as would multiple entries in which one or more students allude to the theme regularly.

The progressive aspect of reflection – that is, the development of content over a period of time – was a key consideration in my decision to employ student journals as a qualitative tool. As indicated in the review of the literature pertaining to the CoI, social, cognitive, and teaching presence have been proven to vary over time in a collaborative, constructivist learning environment. By providing participants with a period of weeks in which to develop their journal entries, I hoped to obtain qualitative data that would allow me to determine not only the prevalence of the three presences, but also whether the emphasis on individual presences reflected progressive shifts similar to those documented in the CoI literature.

The process of journaling is associated with metacognition or, as described by Moon, “learning about one’s own process of learning” (2006, p. 26). Like the capacity to facilitate reflection over time, metacognitive awareness has been described as a benefit of both journal writing and the CoI. Recalling that cognitive presence is operationalized in the CoI by Dewey’s model of practical inquiry, which encourages metacognition in collaborative learning environments, I was also interested to learn that the writings of Dewey – along with those of Jürgen Habermas, David Kolb, and Donald Schön – have been influential in the evolution of reflective journaling (Moon, 2006).

The parallels between reflective journaling and the CoI, combined with the ‘richness’ of data associated with reflective journals, led to my selection of student journals as the vehicle for qualitative data collection. The following section presents my planned strategy for the attainment of meaningful content in the form of student journal entries – that is, content that would adequately support my analysis of students’ experiences of social, cognitive, and teaching

presence in their courses.

Trigger questions in journaling.

Having decided to explore the qualitative research questions through the analysis of student journal entries, the challenge of participant recruitment remained. Students were invited to submit journal entries in which they describe their feelings about their current course(s) and online learning in general. Recognizing that students may find the prospect of journaling to be somewhat daunting, I prepared six ‘trigger questions’ or ‘prompts’ to facilitate the journaling process. The trigger questions, which were designed to guide the participants in communicating their experiences and emotional responses to various aspects of their online courses, were presented in a downloadable Word document on the study Moodle site. (See Appendix F.) The questions were as follows:

1. In what ways do you interact with your instructor in this class?
2. In what ways do you interact with your fellow students?
3. How has your sense of community affected your learning in this course?
4. What does a sense of community look like or feel like to you?
5. Would you recommend online learning to other students? Why or why not?
6. Please provide any feedback that you wish to share about your current course or about online learning in general. Comments may pertain to any aspect of your experience whatsoever.

In a separate section of the Word document, students were also asked to identify their current course, program of study (MA or MPR), level of online course experience, and sex. One optional question pertained to age. By collecting this additional information, I aimed to explore possible associations between participant characteristics and specific attitudes or themes. For

example, comments emerging from students enrolled in the Master of Public Relations program might exhibit commonalities not evident among students in the Master of Arts (Communication) program.

Students were given the option of uploading their journal entries directly to me through the “assignments section” of the Moodle site or, alternatively, sending them via e-mail to my university (i.e. “@msvu.ca”) e-mail address. While I did not offer a prize draw or other tangible item as an incentive for participation, I nonetheless remained hopeful that participants would provide substantive reflections beyond direct responses to the trigger questions. To at least some extent, I attribute my optimism to the fact I had attended classes with some of the participants during the past year, even working together on a group project in one instance. Further, because the notion of “research karma” (i.e. participate in your peers’ research when possible, and they will likely return the favor by participating in yours) had been informally introduced to many of us, I believed that at least some of the students would participate in my study. In other words, my expectations were partially derived from what I considered to be the unwritten ‘Golden Rule’ of community among those of us who had come together in sharing the online learning experience of our graduate program.

Recruitment follow-up.

Regrettably, as of the March 8 deadline, none of the possible 57 participants had accepted the invitation to participate. A follow-up e-mail was then sent to the students on March 13. (See Appendix G.) In the follow-up e-mail, I stated that the deadline for submission of qualitative data had been extended to March 22, the date on which the quantitative phase was scheduled to begin.

In light of the lack of responses to the initial recruitment effort, and with grave concerns for the collection of qualitative data, I reluctantly decided to abandon the request for student journals.

Instead, in an e-mail sent on March 13, I requested that students consider replying to one or more of the six trigger questions. The questions were listed in the body of the e-mail and were also included in an attached Word document. Students were given the option of providing their answers in-line or in the Word document. I hoped that, by removing the request for journal submissions and allowing for in-line responses to the questions, the data submission process would be perceived as less onerous, thereby encouraging participation.

Because I held administrative privileges for the study Moodle site, I was able to determine whether students had visited the site since the initial recruitment e-mail was sent on February 9. Upon realization that numerous students had not logged into the site, while others logged in only once, it was reasonable to assume that the majority did not recognize the six questions as the trigger questions initially designed to facilitate reflection through the process of journaling.

Participant demographics.

The follow-up e-mail yielded responses from nine students, equating to a response rate of 15.79%. The nine participants represented four of the five winter GPRL classes (three of four possible courses, but with two sections of one course). The majority of participants (six of nine) were enrolled in the fully online section of GPRL 6105: *Media, Culture & Society*. One of the participants was enrolled in the hybrid section of this same course, while the two remaining participants were enrolled in GPRL 6101-18 and GPRL 6220-18. The characteristics of the participants are presented in Table 5 below. Course information has been excluded from the table in order to preserve the anonymity of the students.

Respondents	Total Number	Age Group	Program	Online Learning Experience
Female (n=7)	2	20-29	MPR	More than 2 courses
	2	30-39	MPR	More than 2 courses
	1	40-49	MPR	More than 2 courses
	1	Unknown	MPR	More than 2 courses
	1	Unknown	Unknown	Unknown
Male (n=2)	2	50-59	MPR	More than 2 courses

Table 5. Profile of Qualitative Participants

Approach to coding.

While a number of general impressions were formed after an initial review of the data, the qualitative analysis required a systematic process. To that end, I employed a variation of the thematic networks technique proposed by Jennifer Attride-Stirling (2001). The thematic networks technique consists of three broad stages of analysis: (1) reduction of the text, (2) exploration of the text, and (3) integration of the exploration. It also requires the establishment of a coding framework to guide the reduction of the text into meaningful segments. In this instance, the coding framework was based on the theoretical constructs guiding the study: social presence, cognitive presence, and teaching presence in an online community of inquiry.

At the outset of the qualitative analysis, I conducted a close read of the participants' responses, highlighting comments related to their experiences with, and thoughts on, online

learning. The participants commented on their experiences in their current course, past courses, and on online learning in general. In some instances, it was not possible to determine whether a comment pertained to the current course as opposed to past courses.

Following this initial close read, I proceeded to First Cycle coding of the data. As explained by Johnny Saldana (2013), First Cycle methods are processes that occur during the initial coding stage of a study. To create codes, I imported all of the highlighted comments into a free trial version of Atlas.ti for Mac, a software program that supports the analysis of qualitative data. Atlas.ti assigns a quotation number to each participant comment. I carefully reviewed all of the imported comments, assigning a descriptive code to each one. Examples of my descriptive codes included “can’t get to know fellow students as well as in face-to-face classes,” “safe space / feeling protected,” “structure of assignments has impact on community,” and “convenience of online learning.” A total of 50 codes were created. The codes and corresponding comments were compiled in a report, and a hard copy of the report was printed for my review and reflection. I then reviewed the codes and corresponding comments, assigning each of the codes to one of three categories: (1) social presence, (2) cognitive presence, and (3) teaching presence. Because many of the codes did not pertain directly to one of the three presences, I created a fourth category, which I labeled “non-community.”

With my free trial of Atlas.ti approaching expiration, I explored other software options available for the Mac operating system. I ultimately selected NVivo for Mac version 10.2, which I utilized for the remainder of the project. After importing the Atlas.ti data (including the codes and categories) into NVivo, I set up a hierarchical structure consisting of the four aforementioned categories; i.e. the three presences plus non-community. NVivo employs a “node structure” for the organization of data. Accordingly, each of the four categories assumed the

form of a top-level node. I subsequently refined the coding structure by establishing two branches or sub-nodes under each of the three presences. These sub-nodes were as follows: (1) course specific, and (2) non-course specific. The two sub-nodes did not apply to the non-community top-level node and, therefore, were not included under this category. I then re-examined each of the 50 codes, placing them under the appropriate sub-node where possible (i.e. for codes pertaining to the three presences only).

At this point, I began the process of Second Cycle coding. Whereas First Cycle coding is a means through which researchers can initially summarize segments of data, Second Cycle coding is the process of grouping these summaries into a smaller number of categories or themes (Saldana, 2013). Where codes were sufficiently similar, I merged them into a single code and, in some instances, renamed them to better reflect the concept at hand. I immediately noticed that the distribution of codes under the parent nodes and sub-nodes was strikingly uneven. For example, only one code was placed under “cognitive presence > course specific.” At the other end of the spectrum, twelve codes were placed under “social presence > non-course specific.” Codes pertaining to technology (e.g. use of Moodle, the chat function in Collaborate, etc.) were placed under both the social presence and teaching presence parent nodes.

During Second Cycle Coding, some of the original codes were placed under other codes as “sub-sets.” For example, “structure of assignments” was placed under “teaching presence > course specific > course design or management).” A total of eleven such sub-sets were created.

To view all of the comments coded at “course specific” and “non-course specific” for each of the three presences, I conducted a coding query in NVivo. The coding query revealed that participants provided non-course specific comments far more frequently than course specific ones. The qualitative analysis and findings will be presented in Chapter IV.

Quantitative Method

With respect to the quantitative component of the study, I sought to answer the following research question: RQ2) What are the respective impacts of social, cognitive, and teaching presence on student satisfaction in online courses? In this instance, the statistically validated Community of Inquiry (CoI) survey was employed.

Instrumentation.

As stated in Chapter II, the CoI survey was developed by Arbaugh et al. (2008) as a means of measuring student experiences of a community of inquiry in terms of the three presences and their corresponding categories. The validity and reliability of the instrument were confirmed by Karen Swan, Jennifer Richardson, Phil Ice, Randy Garrison, Marti Cleveland-Innes, and Ben Arbaugh (2008) through statistical testing at four institutions (n=287) during the summer of 2007. Specifically, a principal component analysis indicated construct validity of each of the presences, while high reliability indexes were reported through the calculation of Cronbach's Alpha. The data set yielded Cronbach's Alpha scores of 0.91 for social presence, 0.95 for cognitive presence, and 0.94 for teaching presence (Swan et al., 2008). In quantitative methodology, a satisfactory level of reliability is typically associated with an alpha of 0.70 or higher (Vogt, 2007).

Consisting of 34 questions, the CoI survey employs a Likert-type scale to measure student perceptions of social presence (9 questions), cognitive presence (12 questions), and teaching presence (13 questions). For each question, participants are asked to provide a response on a scale of 1-5 wherein 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree.

As noted in the review of the literature pertaining to the CoI, the three core presences are constituted by various categories. Within the CoI survey, these categories are represented as follows:

1. Social presence: personal / affective (three questions), open communication (three questions), and group cohesion (three questions)
2. Cognitive presence: triggering event (three questions), exploration (three questions), integration (three questions), and resolution (three questions)
3. Teaching presence: design and organization (four questions), facilitation (six questions), and direct instruction (three questions)

The survey was administered through LimeSurvey, a self-service tool that is available, free of charge, to Mount Saint Vincent University departments and researchers for the purpose of creating online surveys. In preparing the CoI questionnaire for LimeSurvey, I organized the sections as follows: (1) statement of informed consent; (2) participant information, including name, course, program of study, and online course experience; (3) optional demographic information: age and sex; (4) social presence questions (1-9); (5) cognitive presence questions (10-21); (6) teaching presence questions (22-34); (6) one additional Likert scale question pertaining to student satisfaction; and (7) an optional section for participant comments. (See Appendix H for a copy of the survey.)

Recruitment and follow-up.

As with the qualitative phase of the study, participants were recruited via e-mail and through the study Moodle site. The invitation e-mail highlighted the fact that students may participate in the quantitative survey even if they had not participated in the qualitative portion of the research.

The survey was scheduled to run from March 23 through April 12. As of April 12, twelve participants had fully completed the survey. In an effort to increase participation, the survey deadline was extended until April 26 at midnight AST. The extension yielded completed surveys from two additional participants for a total sample of 14. Of these 14, seven had also participated in the qualitative phase. (See Appendices I and J for copies of the invitation e-mail and follow-up e-mail respectively.)

Participant demographics.

Unlike the qualitative phase of the study, the quantitative phase yielded responses from participants representing all four courses. However, in this instance, none of the respondents were enrolled in the hybrid section of GPRL 6105: *Media, Culture & Society*. An overview of participant characteristics is presented in Table 6. Once again, course information has been excluded from the table in order to preserve the respondents' anonymity.

Respondents	Program	Age Group	Number of Online Courses (including current course)	Satisfaction Level
Female (n=10)				
	MPR	20-29	1	Neutral
	MPR	20-29	More than 2	Satisfied
	MPR	30-39	2	Very Satisfied
	MPR	30-39	More than 2	Very Satisfied
	MPR	30-39	More than 2	Neutral
	MPR	40-49	2	Very Satisfied
	MPR	40-49	2	Satisfied
	MPR	40-49	More than 2	Dissatisfied
	MA (Communications)	30-36	2	Satisfied
	MA (Communications)	unknown	More than 2	Satisfied

Male (n=4)	MPR	30-39	More than 2	Very Satisfied
	MPR	50-59	More than 2	Very Satisfied
	MPR	50-49	More than 2	Satisfied
	MA (Communications)	40-49	More than 2	Neutral

Table 6. Profile of Quantitative Participants

Procedure.

Following data collection, all responses were downloaded from LimeSurvey into a comma-separated file. The file was then exported into a trial version of IBM SPSS Statistics for Mac. Any personally identifying information was removed from the data, and a numerical code (ID number) was assigned to each of the 14 participants.

Recalling that the quantitative research question sought to determine the respective impacts of social, cognitive, and teaching presence on student satisfaction, I planned to calculate the correlation coefficient between each of the three presences (independent variables x) and level of satisfaction (dependent variable y). As explained by Peter Chen and Autumn Krauss (2004), simple correlation is a measure that determines the strength and direction between two variables x and y . Correlation coefficients can range from -1 through $+1$ where either of these values indicate a perfect degree of association between the two variables (negative and positive respectively).

For ordinal variables, such as those measured on a Likert scale, calculation of the correlation coefficient requires the use of nonparametric statistical procedures (Jamieson, 2004). Unlike parametric procedures, which assume data normality, nonparametric procedures do not rely on any assumptions about data distribution. For the current study, I intended to employ the Spearman rank correlation, a nonparametric test that is appropriate for the determination of association between ordinal variables that are not normally

distributed. With respect to variable distribution, it is worth noting that, upon exporting the data into SPSS, I conducted the Anderson-Darling normality test for each of presences and their respective categories. I also created scatterplots for each of the 34 presence-related survey questions (variable x) against measures of satisfaction (variable y). Results of the Anderson-Darling test (where $p < 0.05$ indicates non-normality) and the scatterplots exhibited non-normality and non-linearity respectively. While neither of these conditions precludes the use of the Spearman rank correlation, my small sample size presented an insurmountable challenge. Simply put, although I recognized that my use of a convenience sample would prevent me from generalizing the results beyond the study participants, I had nonetheless anticipated that I would be able to draw some correlations — or, at the very least, some loose associations — between the presences and course satisfaction for these particular students. Unfortunately, and as explained by Anthony Onwuegbuzie, a statistical power of 0.30, which is associated with 14 sets of responses, is insufficient for the generation of any meaningful results. In order to increase my statistical power to “slightly better than chance” for the measurement of even one variable, a minimum sample of 30 participants would be required (A. Onwuegbuzie, personal communication, July 27, 2015). With insufficient time to redistribute the survey – notwithstanding the fact that almost three months had passed since the students had completed their courses and participated in the quantitative phase – I was forced to accept the realization that I would be unable to answer my quantitative research question. Thus, Chapter IV will focus primarily on the qualitative results. I will, however, present descriptive statistics for each of the presence categories as calculated in SPSS. Further, and as recommended by Onwuegbuzie in light of my circumstances (personal communication, July 27, 2015), I will report the scores of the

quantitative variables of interest for each of the 14 participants in a tabular format. In this instance, the variables of interest are social presence, cognitive presence, teaching presence, and satisfaction, each of which is measured on a scale from 1.00 through 5.00. As explained by Matthew Miles and Michael Huberman (1994), such tabular displays are conducive to the identification of patterns through a procedure that they have famously termed cross-case analysis.

Chapter Summary

This chapter presented an overview of mixed methods research, followed by a description of the design employed for the current study. Included in the design description was an account of the participant recruitment process, sampling techniques, participant demographics, and data collection procedures for the qualitative and quantitative phases.

Mixed methods research has been defined as “an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks” (Creswell, 2014, p. 4). With its genesis in the early 1950s, it was not until the early 21st century that mixed methods research had gained significant traction within the scholarly community, prompting Tashakkori and Teddlie to term it “the third methodological movement” (2003, p. 697) in the social and behavioral sciences. In fact, by 2003, the authors had identified almost 40 different mixed methods designs across a variety of disciplines.

For the purpose of the current study, I reviewed a number of typology-based approaches to mixed methods designs, ultimately deciding upon the typology of designs presented by Creswell and Plano Clark (2011). Within the authors’ typology-based approach, there exist four primary design types. These are (1) the convergent parallel design, (2) the explanatory sequential

design, (3) the exploratory sequential design, and (4) the embedded design, which was subsequently reclassified as a “design variant” (Creswell, 2014).

Adhering to the guidelines proposed by Creswell and Plano Clark (2007) in the selection of design type, I determined that the exploratory sequential design – with its emphasis on the qualitative component – would be most conducive to answering my research questions. Having selected the design type, I proceeded to determine the means through which I would ultimately achieve integration of my qualitative and quantitative data. Following examination of the various options through which integration may be achieved in mixed methods studies, I selected the following approaches to integration in the current study: (1) design-level integration through an exploratory sequential design selection; (2) methods-level integration through merging (bringing together two data sets for analysis and comparison); and (3) integration at the interpretation and reporting level through a contiguous presentation of narrative.

The second half of the chapter was devoted to the particulars of the current study. Following a brief discussion of my rationale for the selection of an exploratory sequential design, I drew upon the work of Onwuegbuzie and Leech (2007), who identified 24 sampling schemes in mixed methods research, five of which are classified as probability sampling schemes, while 19 are classified as non-random sampling schemes. The current study employed non-random sampling for both the qualitative and quantitative phases. More specifically, convenience samples – a form of non-random sampling – were utilized in both instances.

A total of 57 communication graduate students were eligible to participate in the study. The qualitative phase was scheduled to run for four weeks, from February 9 through March 8, 2015. The less time-consuming quantitative phase, meanwhile, was scheduled to run for two weeks, from March 22 through April 5. With respect to recruitment of participants, two vehicles

were utilized for both phases: (1) e-mails to prospective participants, and (2) a Moodle site, which had been developed specifically for the thesis.

For the qualitative data collection, I planned to employ reflective journals from participating students. Unfortunately, my intended vehicle yielded no submissions by the deadline of March 8. At this point, I was forced to adjust the study, abandoning the request for journal entries in favor of a request for responses to six questions pertaining to online learning. Accordingly, the qualitative deadline was extended to March 22, providing an additional two weeks for submissions. This revised approach yielded nine submissions, equivalent to a response rate of 15.79%.

The quantitative phase, which utilized the CoI survey instrument, was scheduled to run for three weeks from March 23 through April 12, 2015. As of April 12, a total of twelve participants had completed the survey, seven of whom had also completed the qualitative phase. With the hope of increasing participation, I extended the survey deadline by two weeks until April 26. The extension yielded completed surveys from two additional participants for a total of 14, equivalent to a response rate of 24.56%.

While the quantitative results exhibited both non-normality and non-linearity, it was the small sample size ($N=14$) that precluded the attainment of any meaningful results with respect to the impact of the three presences on student satisfaction. At this point, I accepted the realization that I would be unable to answer my quantitative research question. Nonetheless, out of respect for those who took the time to participate in the survey, Chapter IV presents the non-generalizable descriptive statistics for the 14 participants who completed the CoI questionnaire.

Chapter IV: Findings

This chapter presents the qualitative and quantitative findings with respect to student experiences of social, cognitive, and teaching presence as conceptualized in the CoI framework. It begins with an overview of the qualitative coding results, providing a tabular display of the coding frequencies across seven categories: (1) social presence: course specific; (2) social presence: non-course specific; (3) cognitive presence: course specific; (4) cognitive presence: non-course specific; (5) teaching presence: course specific; (6) teaching presence: non-course specific; and, (7) non community-related / other. (See Table 7.) Following a brief discussion of the coding results, I will present key findings from the qualitative analysis. The findings will not be presented in any particular order of significance, as it is my opinion that all findings are significant, particularly in light of the small sample size. In other words, I do not accord greater importance to a finding that is based on several participants' comments than to one that is based on a single participant's comment. That said, while some findings may be prefaced by such quantitative qualifiers as "the majority of participants," etc., my purpose in so doing is solely to support the identification of patterns among the participants.

Findings will be supported by participants' comments in their own words, in conjunction with my interpretation of the extent to which their comments help to answer the overarching research question, "*How do communication graduate students experience social, cognitive, and teaching presence in online courses?*" Subsumed under this research question are the qualitative research question and sub-question: RQ1: "*How do communication graduate students describe their experiences in online courses at Mount Saint Vincent University?*" and "*Which aspects of the course have an influence on students' experiences of social, cognitive, and teaching presence?*" The chapter concludes with the presentation of the CoI survey results.

Qualitative Coding Frequencies

In their classic 1994 text, Matthew Miles and Michael Huberman describe qualitative analysis in terms of “three concurrent flows of activity: data condensation, data display, and conclusion drawing / verification” (Miles & Huberman, 1994, p. 10). The authors purposively refer to data condensation in lieu of the more commonly used “data reduction” because, in their view, it more accurately captures the robust nature of analysis. “By condensing, we’re making data stronger. We stay away from data reduction as a term because that implies we’re weakening or losing something in the process” (Miles, Huberman, & Saldana, 2014, p. 12).

I have chosen to preface my findings with this brief nod to data condensation because it resonated with me as I explored the myriad approaches that have evolved in the arena of qualitative analysis. In particular, I was struck by the authors’ contention that data condensation is not separate from analysis. Rather, it is *part* of analysis (Miles & Huberman, 1994). They further argue that “the researcher’s decisions – which data chunks to code and which to pull out...which evolving story to tell – are all analytic choices” (Miles, Huberman, & Saldana, 2014, p. 12). Indeed, my own analytic choices, which vacillated considerably throughout this process, have ultimately resulted in the following coding frequencies among the nine qualitative participants.

Social Presence		Sample Comment
Course specific	7	“(I would recommend) this type of constant interaction class for sure. If you’re on your own in a bubble, it might not be as engaging or valuable.” (S4)
Non-course specific	27	“Because demographically participants range from those who have gone from high school to university and right into grad school and others like me with 10 or even 20 years’ experience I find it often challenging to connect on a personal note, and for those I do, the encounters are brief and have built slower than I would have anticipated.” (S5)
Total	34	

Cognitive Presence		Sample Comment
Course specific	1	“I find that with the beginning of each course I struggle because of a distinct

		lack of community offered by virtual learning. This is eased in time slightly as I connect with the subject matter.” (S6)
Non-course specific	4	“Providing answers in the fora takes time and is a real challenge - this is good because writing well is a core competency in the academic field and of course in communications generally.” (S8)
Total	5	

Teaching Presence		Sample Comment
Course specific	13	“I do think that the teacher and their delivery has a significant impact on how one perceives distance learning. (<i>Current instructor – name withheld</i>) for example, is excellent. I have had others however that are not as strong in distance education.” (S2)
Non-course specific	18	“In the Collaborate sessions that we have, we usually only see our professor’s face / video feed, and maybe a static picture of our peers on the Moodle site beside their post. It’s hard to develop relationships and community that way – for me anyway.” (S7)
Total	31	

Non-community		Sample Comment
N/A		“I always feel like I have to explain it's a real program. I say "some of us are live online, and others are in a classroom. It's a live, interactive, real class". It's not the university of the Phoenix, which I don't know much about, but seems less legitimate to me. I feel like I have to clarify that to people who I tell I'm doing a graduate program online.” (S4)
Total	11	

Table 7. Course-specific and Non-course Specific Coding Frequencies and Participant Comments

As noted in Chapter III, participants provided non-course specific comments far more frequently than course specific ones. Social presence generated the highest number of comments (34), which primarily focused on issues of interaction, sense of belonging, safety, and the development of personal relationships. Teaching presence generated 31 comments. In this instance, participants focused largely on the categories of design and organization and facilitation of discourse. Cognitive presence, meanwhile, generated only five comments, only one of which was course specific. The lack of course-specific comments is surprising, particularly given that one of the trigger questions was, “How has your sense of community

affected your learning *in this course?*”. However, participants unanimously chose to provide non-course specific replies. Lastly, the category of non-community generated eleven comments pertaining to the benefits of online learning such as convenience and flexibility. Also in this category, one participant expressed concerns regarding understanding and perceived credibility of online learning among those not familiar with this form of education. (See the sample comment by Participant S4 in Table 7.) The qualitative coding structure is included in Appendix K.

Qualitative Analysis

As I seek to tell the story of the participants in the current study, I have made the conscious choice to steer away from discussion of findings that, while not without merit, are unlikely to provide new insights to the reader. Thus, findings that I deem to be superficial or anticipated, such as “participants communicate with their instructors via e-mail,” will be discussed only as they pertain to the theoretical interests of the study. Further, while a selection of participant comments has been presented in Table 7, it is in the following section that I have strived to represent the participants’ voices as fully as possible. For this reason, each finding will be supported by numerous comments even when said comments are representative of the same idea.

Key findings.

Finding #1: *Participants conveyed a strong desire for greater social presence in online courses, but only moderate recognition of the relationship between social and cognitive presence.*

In their discussion of theme-identification techniques, Russell Bernard and Gery Ryan (2010) encourage researchers to ask not only “What is here?”, but also “What is missing?” (p.

62). It was in considering this latter question that I was struck by the dearth of comments pertaining to the relationship between social and cognitive presence in online courses. As a matter of clarification, I did not expect that participants would employ terms such as social, cognitive, and teaching presence, nor did I expect that they would at any point refer to “constructing and confirming meaning,” “a critical community of inquiry” or similar descriptors that, while well known to those acquainted with the CoI framework, would be unfamiliar to the participants. My findings are thus based on my interpretation of their remarks within the context of the theoretical framework that guided the study.

While the vast majority of participants conveyed the desire for a greater sense of connectedness with their peers, very few spoke directly to the relationship between sense of community and learning. In fact, in response to the question, “How has your sense of community affected your learning in this course?”, only one participant explicitly posited that learning is negatively influenced by a lack of community:

“I’ve taken many online courses. There is less community in online courses and I feel like it negatively affects learning (more difficult to create a safe space as you can’t really get to know your fellow students to the degree one would like.)” – Participant S1

Of particular note is her parenthetical reference to the importance of a safe space that fosters personal connections. Strongly implied is the relationship between learning and an environment that is conducive to all three categories of social presence: (1) personal / affective (“get to know your fellow students”); (2) open communication (“more difficult to create a safe space”); and (3) group cohesion (“there is less community”). What remains ambiguous, however, is the conceptual frame that she brings to her understanding of the learning experience.

Recalling that social presence indirectly facilitates the process of critical thinking in a collaborative community of learners (Garrison et al., 2000), it is important to be mindful of the increasing emphasis on affective goals, as opposed to purely cognitive ones, in the educational process. In the context of the participant's comment, I believe it is unclear as to whether she views a lack of community as detrimental to the achievement of *specific learning outcomes*, including the development of critical thinking skills, or whether she aimed to convey a relationship between community (social presence) and *enjoyment* of her student experience (i.e. an affective goal) – a relationship that, in her experience, was absent.

Below is a comment from a participant in response to the optional, open-ended question that concluded the CoI survey. The question was worded as follows: “Should you wish to submit any comments about your online learning experience, please feel free to do so. All comments are confidential.”

“The only thing I noticed in this course that was different from the other MSVU course, as well as other institutions, was that the participants were not as keen as others. There was less discussion and online posting, which wasn't as rich of an experience. I still got what I wished for in my learning though.” – Participant S13

Although this student did not participate in the qualitative phase of the study, I include her comment because, of the 17 ($N=17$) students who participated in one or both phases, she is the only one to specifically state that she achieved her learning objectives (“I still got what I wished for in my learning though”) while acknowledging that she would have preferred a more collaborative experience. In this sense, she appears to view ‘learning’ through the more traditional cognitive lens than through an affective one. Further, in response to the five-point Likert-scale question, “Please indicate your level of satisfaction with your current course,” the

participant indicated that she was “very satisfied” with her online experience. Thus, although she would have *preferred* a more collaborative experience, it (collaboration) was not a determinant of course satisfaction.

While only one student (Participant S1 above) spoke directly to the impact of sense of community on learning in terms of “positive vs. negative,” all of the qualitative participants commented on the *nature of learning*, the *nature of community*, or both, in the online environment. The following quotations capture the sentiments of those who viewed their online learning experiences as largely independent and uncollaborative:

“The learning in this course and online courses generally is more solitary. We communicate with classmates through Moodle but the interaction is delayed. Unlike social media the 'call and response' feeling of social media posts or text messaging is not there. Responses are delayed; in many cases there are no responses to Moodle posts.” – Participant S8

“Discussion is severely truncated by the technology. Conversations are no longer conducted in a round, they are linear. I have found that this can be isolating. Confidence can be drawn from that connection and without it, I have found myself hesitant to contribute to conversations.” – Participant S6

“Online learning can be an isolating experience for some, and even though I have introversion tendencies, I like face-to-face contact in small groups and feel I can form better relationships that way.” – Participant S7

“For those looking to belong, distance learning is probably not the way to go...It offers ease of use, but little meaningful interaction, and for those requiring immediate validation, this is not for you either.” – Participant S5

Participants frequently described online learning as an independent, solitary, and, in some cases, even isolating experience. Ironically, such descriptions are more evocative of early distance learning models than the collaborative, constructivist ideal of today. Further, while the majority of participants expressed at least some level of dissatisfaction with respect to the potential for “belonging” and “personal connection” in the online environment, dissatisfaction in these particular areas (i.e. elements of social presence) did not appear to translate into dissatisfaction with their online learning experiences overall. Illustrative of this disconnect is the fact that, in response to the question, “Would you recommend online learning to other students? Why or why not?”, none of the participants stated that they would categorically *not* recommend online learning. Rather, responses ranged from “it depends” to “definitely” (would recommend). Responses to this question will be explored in Finding 4, which discusses the benefits of online learning as identified by the participants.

Finding #2: Cognitive presence at the group level may be stymied by insufficient social presence at the individual level, particularly in the categories of group cohesion and open communication.

Several participants expressed hesitancy to contribute to group discussions – whether through Moodle postings or during synchronous sessions using Blackboard Collaborate. As indicated by the following comments, participants experienced this hesitancy for various reasons. These include feelings of insecurity or so-called ‘imposter syndrome,’ as well as apprehension with respect to challenging one’s peers.

“The ideal community means a supportive network, and online learning is difficult for people who are less secure about their answers, skills and abilities. People write differently than they speak so the amount of discussion posts and reading and responding to them can be

intimidating as well. It's hard to participate fully if you fear looking like you don't belong in a post-grad program or not as intelligent as others." – Participant S7

Because the potential for collaborative inquiry cannot be maximized without participation from all learners, it is important to note comments that speak to insecurity in the course environment. Although expressed in various forms, the desire for a safe space was echoed by the majority of participants. To elaborate, while all nine ($N=9$) participants conveyed a desire for a sense of belonging and connection with classmates, seven ($n=7$) specifically spoke to issues that are, within the corpus of the CoI literature, associated with the social presence categories of open communication and group cohesion, both of which are facilitated by a learning climate that prioritizes safety and risk-free expression. Below are two additional comments that are indicative of the importance that participants placed on these categories. Each comment was provided in response to the question, "What does a sense of community look like or feel like to you?"

"Simply put, freedom to express opinions and to ask questions." – Participant S3

"For me it involves a feeling of connection in the way that you feel interested, valued, protected and known." – Participant S6

Related to the importance of feeling valued and known, one participant commented specifically on one of the indicators associated with group cohesion: being addressed by name. In response to the question, "How has your sense of community affected your learning in this course?", she writes:

"The more interaction I have, the more people remember my name, and the more I feel like I'm a part of a community, the more engaged I am and interested I am. I am more excited about class if I feel like my presence is valued." – Participant S4

This participant, who felt very positively about her current course in which she enjoyed

“constant interaction,” also raised the use of names in response to the question, “What does a sense of community look like or feel like to you?”. She writes:

“People say hi, remember my name, know what I contribute, make jokes, and offer the same information back so I can interact on a more personal level than just talking about course work.” – Participant S4

Also related to the connection between risk-free communication and cognitive presence, one student raised the issue of intellectual agreement. I interpreted her comment below as a statement that students may be apprehensive about expressing disagreement with their classmates:

“It’s also tough I think because this lack of collegiality / personal relationships with your classmates can make intellectual disagreement seem personal, which is clearly no one’s ideal situation.” – Participant S1

In the context of my interpretation, her comment invokes the problem of “pathological politeness” (Archer, 2003, as cited in Dron & Anderson, 2014, p. 34) that emerges when group members are reticent to challenge the ideas of others. Unfortunately, this politeness can significantly hinder the potential for collaborative inquiry. Keeping in mind the inherent overlap among some of the findings, it is now worth recalling the comment from Participant S13 in Finding 1: “The only thing I noticed in this course... was that the participants were not as keen as others. There was less discussion and online posting, which wasn’t as rich of an experience.” I refer once again to her comment because it too conveys the importance of full participation to the achievement of both cognitive and affective goals.

Finding #3: There exists frustration surrounding technological limitations and course format. However, frustrations did not translate into dissatisfaction with online learning.

Participants expressed strong views about various aspects of course design and organization, particularly with respect to the limitations of technology and the set-up of hybrid courses. One student, who participated in both phases of the study, took the time to comment twice about the need for guidelines surrounding the use of the chat function in Blackboard Collaborate. Below is the input that he provided during the qualitative phase:

“I find the chat function in collaborate is misused by many students. In all three online courses I have had students routinely treat the chat stream like a twitter interaction - not staying on topic; commenting about what's going on where they are (home). It's a difficult medium to use to comment substantively about theory and the serious material in courses. None of the instructors have tried to modulate but to be fair it would be hard to do so. An in person course I took had a Facebook group component...and in that case the prof did directly correct students on how to post more seriously as required by the course material.” – Participant S8

This participant, who was satisfied with his online experience, reiterated these concerns during the quantitative phase, this time mentioning the use of emoticons and paralanguage, which are among the indicators of social presence (personal / affective). At this point, it is worth noting that students will exhibit different ‘thresholds’ for social presence (Lowenthal & Dunlap, 2011). Participant S8 appears to require and, indeed, *prefer*, a lower level of social presence than do other participants. Alternatively, he simply prefers to experience social presence in a different and, perhaps, more ‘formal’ way. Of additional interest is his reference to a “proper purpose” for the use of the chat stream. His comment, which raises the issue of differing expectations for the use of technology, is as follows:

“I find the chat stream in moodle distracting when people treat it like a social media channel...use of slang such as 'lol' and 'omg' in reply to classmates' posts; use of emoticons;

conversations straying from the subject of the course into less formal observations that are more appropriate to the personal realm of Facebook or similar. Even when used for a proper purpose- ie. providing a comment on the theory, or lecture or asking a question, the format and structure of chat stream does not provide a logical conversation stream.” – Participant S8

He was one of several participants who expressed concerns about the establishment of netiquette, one of the indicators of teaching presence. While empathizing with instructors, Participant S9 also expressed the need for moderation of the technology.

“I also believe there is a distinct etiquette to online learning that requires management by the professor / instructor. As an example, I have witnessed professors who, after delivering a 5-10 minute piece of lecture or personal anecdote, have had to catch up with people who were fiercely typing during that time. Students wouldn’t speak over a professor in a classroom, and yet it happens online.” – Participant S9

Once again noting the overlap among my findings, it is worth recalling the comment by Participant S6 in Finding #2: “Discussion is severely truncated by the technology. Conversations are no longer conducted in a round, they are linear.” In this sense, she echoes Participant S8’s contention that “the format and structure of (the) chat stream does not provide a logical conversation stream.” Unlike Participant S8, however, Participant S6 indicated that the format had a negative impact on her confidence, resulting in hesitancy to contribute to class discussions. Not included under Finding #2 was the remainder of her comment:

“This is an issue as generally conversation is a large part of the grade. Therefore it can become forced and therefore less meaningful and insightful.” – Participant S6

Participant S6 was one of two who suggested that participation requirements led to less meaningful contributions from students. Participant S3 offered similar feedback:

“This particular course is asynchronous, so community was established through the required forums, in which we had to participate for grades. As a result of the requirements of this course, I have found as time went on people were replying more frequently and in greater length than required.” – Participant S3

Underscoring the diversity among participants’ feedback, the above comments stand in stark contrast to earlier ones by Participants S8 and S13 who commented, respectively, that “in many cases there are no responses to Moodle posts,” and “there was less discussion and online posting, which wasn’t as rich of an experience.”

In response to the open-ended question at the end of the CoI survey, one of the quantitative phase participants, an out-of-province student, commented on instructors’ ability to simultaneously moderate both online and classroom discussions:

“There is a lack of standard when it comes to instructor's ability to facilitate simultaneous online/classroom discussion, to use moodle's capacities. Overall technology on campus should be improved to allow more engagement from online participants (can't hear, see discussions)” – Participant S14.

Implicit in Participant S14’s comment is the issue of design and organization with respect to hybrid courses. Participant S9, who has been an in-class participant in hybrid courses, expressed similar concerns.

“Worse is when blended learning environments challenge in-class students with dividing attention between the professor and the chatbox which is consistently updating with thoughts, objections and questions. I have witnessed frustration among students who either feel like they can’t keep up with both “sides”, and also among students who – by the time their question is

addressed – feel it’s a lost point. Both of which are the product of differing expectations and etiquette in online learning environments.” Participant S9

Also in response to the open-ended question at the end of the CoI survey, Participant S15 conveyed frustration with the hybrid format:

“I have really enjoyed my experience as an online student. However, I do not enjoy when a class is multi-mode. When the instructor has students in the class and online, it takes away from the online experience, and I found it very frustrating and challenging at times.” –

Participant S15

Once again, however, this participant’s frustration with the hybrid format did not appear to translate into dissatisfaction with online learning overall.

Finding #4: Despite the lower level of social presence offered by online learning, participants would generally recommend online learning to others.

Although none of the six trigger questions asked participants to indicate a preference between face-to-face and online courses, several participants chose to do so. Among the other participants, a preference for in-person learning was strongly implied. I was particularly struck by comments suggesting that participants would recommend online learning *in spite of* the lack of community as opposed to *because of* their experiences of community. In response to the question, “Would you recommend online learning to others? Why or why not?”, two such comments were as follows:

“Definitely. It’s a cost-effective way, especially for working professionals who can’t take two years away from their life and career. Since starting, I have met two individuals also studying or registered in the program from my home town of (withheld). One, who I would

consider a mentor, I actually shared a class with. However, it did not draw us closer, and it has not produced a greater sense of community here.” – Participant S5

Participant S5’s response of “definitely” is even more notable when one considers his comment under Finding #1: “For those looking to belong, distance learning is probably not the way to go... It offers ease of use, but little meaningful interaction.” Participant S9, who would “absolutely” recommend online learning, offered a similar perspective:

“Ultimately, I am in favour of online learning but am saddened by the loss of personal connection that comes with in-person, in-class learning. When given the option, I would choose in-class learning every time.” – Participant S9

Not surprisingly, participants indicated that they would recommend online learning for reasons related to convenience, accessibility, and cost-effectiveness. One student presented the ‘pros and cons’ of online learning in a bulleted list. However, while the positives pertained only to the aforementioned benefits, the negatives pertained directly to the experience of community or, more precisely, the lack thereof. In her view, they are as follows:

“Disconnected feeling to the subject matter; Miss out on that peripheral learning that happens in a classroom; You don’t necessarily feel connected to your university (you feel connected instead to the degree at the end).” – Participant S6

Also striking were several comments suggesting that online learning is best suited to those who are comfortable working independently. Recalling the comments in Finding #1 from those who described online learning as an independent and uncollaborative experience, participants further indicated that they would recommend online learning to students who hold strong time management skills and do not require a personal connection with others:

“Online learning is not for everyone. I see it as a means to an end to accomplish a goal that would otherwise be unattainable, but I find community very hard to develop as I enjoy face-to-face contact. Online learning also requires a great deal of organizational and time management skills. I find you’re more accountable when you have to be in class to hand things in rather than meeting a dropbox deadline for a professor you’ve never met – not that I have missed a deadline.” – Participant S7

“So for those looking to belong, distance learning is probably not the way to go. However, for those who are confident in their skills and time management distance learning provides an exceptional option for maintaining income flow while expanding your skill and knowledge base.” – Participant S5

Given that the pedagogy behind online discussion forums assumes that students will work collaboratively, comments such as the above merit attention. One student – who stated that, while he prefers the in-class experience, he would recommend online learning to others – lamented the loss of visual cues in the online environment:

“For me, there is a physical dimension to community which I lose via online learning. It is true that through an online class we can hear each other and read the message stream, but I find that a lot gets communicated through visual cues. Even the silence as a student thinks of an answer or is working out how to answer a question is meaningful; one feels for the classmate and in that sense experiences a sense of community with them. This is absent in online learning via Moodle.” – Participant S8

Like others, this participant spoke of the affective dimension of online learning. His reference to silence is particularly noteworthy as it pertains to the social presence category of open communication, indicators of which are risk-free expression and willingness to share. As

explained by Marti Cleveland-Innes (2014), those who are silent wield a great deal of power in that people can imagine what they might be thinking. To help achieve a community of inquiry, instructors should, therefore, be looking out for those who are not contributing and facilitating to ensure that they feel safe and that they do participate.

Like Participant S6, who presented the ‘pros and cons’ of online learning, Participant S8 commented from a comparative perspective. The only participant to comment specifically on the benefits of discussion forums as vehicles for skill development (i.e. writing and critical thinking), he spoke to the value of both online and face-to-face classes:

“The challenge and learning opportunity that is provided by Moodle is writing - this is its main benefit in my view. The challenge of in person classes is the requirements to be articulate in terms of spoken language. The latter is more difficult in my view, and yet to describe your theory or point of view in spoken language represents a more personal and more fulfilling experience. Overall I prefer the in class experience, but see value in online learning as well.” –

Participant S8

Participant S8’s feedback above is notable in that he was the only participant to report benefits of online learning not related to convenience, cost-effectiveness, or accessibility. That said, it is important to be mindful of the fact that none of the trigger questions asked students to comment on the benefits of online learning. Had one of the questions done so, other participants may have provided similar input.

As mentioned in Finding #1, none of the participants stated that they would categorically *not* recommend online learning to others. However, as illustrated by the comments thus far, not all participants are enthusiastic about their online experiences, particularly with respect to sense

of belonging and the forging of personal connections. Participant S1 offered a tepid recommendation of online learning below:

“It depends. If it’s a student’s only option, by all means...But it’s vastly inferior to the classroom experience, so I’d tend to be less of a fan of it.” – Participant S1

I thus conclude this finding with the caveat that – although students would generally recommend online learning despite the lower level of social presence that it offers – the recommendations tend to be based on benefits not related to collaboration or the development of a community of inquiry.

Finding #5: Teaching presence is paramount in shaping participants’ online learning experiences.

While participants expressed very strong views about the technological aspects of teaching presence (i.e. netiquette) as represented by Finding #3, they also spoke to other items related to all three categories of this construct. These included: (1) structure of assignments (design and organization); (2) encouraging student contributions (facilitating discourse); and (3) responding to technical concerns (direct instruction). The following comments are representative of those who offered opinions in these areas:

“A sense of community in a classroom sense to me means a certain level of connectivity or relatability. I think this has developed in this course because of the structure of the assignments and prior interaction with most of my classmates in other classes.” – Participant S2

“This is one of the better courses I’ve taken because I had little experience with post-secondary graduate research. It gained my interest and I have been encouraged to pursue further initiatives by the instructor.” – Participant S5

“There were some inconsistencies with the syllabus and with what was online in moodle, which proved to be frustrating for many students, myself included. Again, when work is so unpredictable, I like to be able to schedule and plan around my class workload. But the prof did get it all cleared up.” – Participant S3.

Instructor flexibility – particularly with respect to consideration for students who are also full-time employees – was a top concern for Participant S3 above. She continues:

“(Instructor name withheld) has been very flexible, which is wonderful. I think when the majority of students are full-time working professionals, flexibility has to be a requirement. I encountered another prof once who balked if we had to miss one class... which sometimes happens.”

One participant reported that flexibility is a characteristic of online learning itself – one that encourages communication between students and instructors. This participant, who resides locally, offered the following statement:

“I have interacted with the instructor via email and also in-person (on campus) at her office. We have also connected via Collaborate sessions throughout the term. The online nature of this course (and others) is flexible, and generally results in encouraged access between students and faculty.” – Participant S9

This same participant was one of several who indicated that their online experience was shaped by the instructors’ delivery, instructor decisions with respect to the structure of course assignments, etc., and instructors’ overall approach in setting the learning climate. Two such comments are as follows:

“I do think that the teacher and their delivery has a significant impact on how one perceives distant learning.” – Participant S2

“I have had positive and negative experiences with online learning – all deriving from the way in which the teaching and learning environment was shaped by the course syllabus and expectations.” – Participant S8

As teaching presence is central to the development of a community of inquiry, this fifth and final finding is not surprising. However, because it both confirms and highlights the importance of the instructor and the teaching presence construct in general, I believe that it merits inclusion among the study findings.

Quantitative Findings

As noted in Chapter III, the CoI survey was completed by 14 participants, seven of whom also participated in the qualitative phase of the study. The CoI survey results are presented in Table 8 below. The first column presents the mean scores for the three categories of social presence: personal / affective expression (three questions), open communication (three questions), and group cohesion (three questions). The second column presents the mean scores for the four categories of cognitive presence: triggering event (three questions), exploration (three questions), integration (three questions), and resolution (three questions). The third column presents the mean scores for the three categories of teaching presence: design and organization (four questions), facilitation (six questions), and direct instruction (three questions). The bottom row presents the total mean score for each presence. In all instances, participants provided a rating on a scale of 1 through 5 where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

Social Presence	Mean	(SD)	Cognitive Presence	Mean	(SD)	Teaching Presence	Mean	(SD)
Personal / Affective	3.12	1.26	Triggering Event	3.67	0.79	Design & Organization	4.25	0.88

Open Communication	3.76	0.96	Exploration	3.72	1.03	Facilitating Discourse	3.83	0.95
Group Cohesion	3.36	0.91	Integration	3.67	0.89	Direct Instruction	4.26	0.71
			Resolution	4.05	0.78			
Social Presence Total	3.41	1.07	Cognitive Presence Total	3.77	0.90	Teaching Presence Total	4.06	0.93

Table 8. CoI Survey Results

Of the three presences, teaching presence was rated the most highly with a mean score of 4.06 on a scale from 1-5. Within teaching presence, participants provided the highest ratings to the indicators for direct instruction (i.e. The instructor helped to focus discussion on relevant issues in a way that helped me to learn; the instructor provided feedback that helped me understand my strengths and weaknesses; and the instructor provided feedback in a timely fashion). Cognitive presence indicators were also rated highly with a mean score of 3.77. Finally, social presence received the lowest rating with a mean of 3.41. Within this presence, the lowest ratings were associated with the category of personal / affective communication (i.e. Getting to know other course participants gave me a sense of belonging in the course; I was able to form distinct impressions of some course participants; and online or web-based communication is an excellent medium for social interaction). The coherence between the qualitative findings and the CoI survey results will be discussed in Chapter V. Examining the quantitative results exclusively, however, the prominence of teaching presence is not surprising. As stated in the review of the literature, teaching presence has been proven to not only be central to the development of a community of inquiry, but to assume a greater role near the mid-to-end of a course (Akyol & Garrison,

2008). Given that the CoI survey was administered from March 23 through April 26 (i.e. at the end of the semester), the survey results accord with the literature in this area.

Further, the results do not reflect a troublesome imbalance among the three presences. While the presences will assume varying degrees of emphasis throughout a course – with social presence being dominant at the beginning and teaching presence at the end – a community of inquiry requires a relative balance among all three (Akyol & Garrison, 2008). With mean scores of 3.41, 3.77 and 4.06, the quantitative results appear to indicate the balance that is necessary in a community of inquiry.

The most conspicuous finding, in my opinion, pertained to the category of resolution in cognitive presence (i.e. I can describe ways to test and apply the knowledge created in this course; I have developed solutions to course problems that can be applied in practice; and I can apply the knowledge created in this course to my work or other non-class related activities). Recalling the Practical Inquiry model that operationalizes the CoI, the greatest challenge for instructors lies in ‘nudging’ students forward from a triggering event to resolution. As documented in the literature, students frequently do not move beyond the exploration phase. Thus, the high mean score (4.05) in the resolution category is striking and would appear to indicate strong skills on the part of the instructor in advancing the participants to integration and resolution.

As recommended by Onwuegbuzie (personal communication, July 27, 2015), I have presented the scores of the quantitative variables of interest for each of the participants in a tabular format. They are presented in Table 9 below. The first four columns present participant demographics with respect to sex, program of study, online experience, and age

range. The last four columns present participants' mean scores for social, cognitive, and teaching presence, along with responses to the question pertaining to student satisfaction.

Sex	Program	Online Experience (courses)	Age Range	SP	CP	TP	Satisfaction
Female (n=10)							
	MPR	More than 2	20-29	3.67	3.25	3.67	Satisfied
	MPR	1	20-29	2.89	2.92	3.89	Neutral
	MPR	More than 2	30-39	3.00	3.83	4.44	Very satisfied
	MPR	2	30-39	4.00	4.50	4.78	Very satisfied
	MPR	More than 2	30-39	3.78	3.33	3.33	Neutral
	MPR	2	40-49	2.56	2.83	3.67	Satisfied
	MPR	2	40-49	3.89	4.58	4.78	Very satisfied
	MPR	More than 2	40-49	4.44	4.58	5.00	Very dissatisfied
	MA	More than 2	n/a	4.11	3.92	4.44	Satisfied
	MA	2	30-39	3.44	3.67	3.56	Satisfied
Male (n=4)							
	MPR	More than 2	30-39	3.78	4.00	4.67	Very satisfied
	MPR	More than 2	50-59	3.44	3.67	3.44	Satisfied
	MPR	More than 2	50-59	3.00	3.75	4.56	Satisfied
	MA	More than 2	40-49	1.78	4.00	3.56	Neutral

Table 9. Participant Demographics and CoI Survey Scores

As illustrated by Table 9, four of the participants reported that they were “very satisfied” with their online course experience, six were “satisfied,” three were “neutral,” and one was “very dissatisfied.” Social presence received the lowest score (1.78) from a student enrolled in the Master of Arts (Communication) program, while teaching presence received the highest score (5.00) from a student enrolled in the Master of Public Relations program. However, aside from the fact that two male participants – both between the ages of 50-59 and enrolled in the MPR program – reported being “satisfied,” there does not appear to be any discernible pattern between responses and participant characteristics. That said, it is interesting to note that the highest scores across all three presences, including the score of

5.00 for teaching presence, were reported by the one participant who indicated that she was very dissatisfied with her course experience.

Chapter V: Discussion and Conclusion

This chapter presents a discussion of the study findings, beginning with an examination of the coherence between the qualitative and quantitative results. It then re-visits the guiding research questions to determine the extent to which they were successfully answered by the study. The chapter concludes with a discussion of the study limitations, recommendations for future research, and final thoughts.

Mixed Methods Results

Examining the qualitative and quantitative findings together, I identified two items of interest. First, with respect to the category of social presence, the CoI survey results were commensurate with feedback provided by the qualitative participants. More specifically, the qualitative participants expressed a preference for face-to-face courses and, in several instances, suggested a desire for greater personal / affective expression (i.e. getting to know their classmates as ‘real people’), open communication (comfort participating in class discussions), and group cohesion (risk-free communication / comfort disagreeing with others). With this observation, however, come some caveats. While the CoI scores for social presence were the lowest among the three presences, the scores themselves were not low per se. Further, although numerous studies have reported the social presence scores of participants, it would appear that none to date have sought to determine an *ideal* amount of social presence (P. Lowenthal, personal communication, October 6, 2015). Thus, should an ideal score exist, it is possible that the quantitative results were in the range of ‘ideal,’ despite the qualitative participants’ desire for greater social presence overall. It is also important to keep in mind that the qualitative data was obtained only after the initial deadline of March 8 had passed. In fact, all of the qualitative responses were provided between March 13 and March 20; i.e. at the end of the semester. Given

that social presence has been shown to decrease throughout a course, it is to be expected that the qualitative feedback would suggest a comparatively lower level of social presence among participants.

The second area of interest pertained to teaching presence and, in particular, the lack of coherence between the qualitative and quantitative findings in the category of design and organization. Recalling that the qualitative participants shared strong concerns about divided attention between communication occurring through the ‘chat’ function in Blackboard Collaborate vs. the direct instruction taking place (i.e. netiquette) – in addition to concerns about the hybrid course format overall – one would expect the quantitative feedback to reflect similar concerns in the form of a low score for design and organization. On the contrary, the mean score in this category was 4.25, second only to direct instruction (4.26) across all ten categories measured by the survey. In this instance, I believe that the inconsistency between the qualitative and quantitative results is attributable to a disconnect between the CoI survey questions and the category indicators. More precisely, while the indicators for design and organization include establishing netiquette and utilizing the medium effectively, the corresponding survey questions do not address these areas explicitly. Rather, they ask participants to indicate their agreement or disagreement with respect to the instructors’ communication of course topics, goals, how to participate in course learning activities, and due dates for assignments. Had one of the questions pertained specifically to technology, the CoI survey results might have been different.

Of additional relevance is the fact that the category of facilitating discourse received the lowest mean score (3.83) within the teaching presence construct. In this instance, some of the survey questions ask participants to rate the extent to which the instructor kept students on task, engaged, and participating in productive dialogue. Just as there was significant overlap among

my findings, I believe that there is substantial overlap among the category indicators. More specifically, facilitating discourse (i.e. keeping students on track) would appear to overlap with design and organization with respect to netiquette and instructor moderation of technology.

Before proceeding to the discussion of the initial research questions, it is worth noting that, while none of the CoI survey questions pertain to technology in the areas of teaching or cognitive presence, one such question is included within the social presence section of the instrument. Stated as “online or web-based communication is an excellent medium for social interaction,” this question falls within the social presence category of personal / affective expression – the category that received the lowest ratings among quantitative participants. At the American Public University System, this single question has been shown to account for close to 20% of the variance in likelihood that a student will withdraw from a program of study (Diaz & Ice, 2012). While I cannot speak to whether a future incarnation of the survey will include a similar, technology-related question in the area of teaching presence, such as “online or web-based communication is an excellent medium for *learning*,” I believe that the replies to such a question would have been fruitful to this study.

Discussion of Research Questions

This study was guided by the overarching research question, “How do communication graduate students experience social, cognitive, and teaching presence in online courses?” The qualitative phase of the study was guided by the following question and sub-question:

RQ1: How do communication graduate students describe their experiences of community in online courses at Mount Saint Vincent University?

- Which aspects of the course have an influence on students' experiences of social, cognitive, and teaching presence?

The quantitative research question was as follows:

RQ2: What are the respective impacts of social, cognitive, and teaching presence on student satisfaction in online courses?

Lastly, the mixed methods research question was as follows:

RQ3: Do the qualitative and quantitative results reflect similar or different experiences of social, cognitive, and teaching presence in online courses?

With respect to RQ1, the qualitative findings reveal that communication graduate students describe their experiences of community as largely lacking in terms of meaningful personal interactions and relationship building. Revisiting the review of the literature, this description invokes Drouin and Vartanian's contention that "a lack of physical presence may cause or exacerbate online students' feelings of being isolated and disconnected from their instructors, their classmates, and their school" (pp. 148-149).

That said, participants did not express dissatisfaction with their learning experiences overall. Further, among those who expressed frustration in areas such as "getting off track" (i.e. as a result of communication in the 'chat' stream), this frustration did not appear to translate to reduced participation. I raise this point because the literature suggests that, when students feel that the academic focus of a course has been compromised in favour of non-academic socialization, they are more likely to be dissatisfied with their course experience – dissatisfaction which is often manifested in reduced participation (Garrison, 2016). Among the qualitative participants, however, this did not appear to be the case. For those who did express a hesitancy to participate, their hesitancy was generally related to feelings of insecurity as opposed to a

perceived compromising of the academic focus. It is also important to be mindful of the fact that the goal of a community of inquiry is not to ensure the emotional comfort of all members. As stated by Garrison, “As important as developing interpersonal relationships is, they must be allowed to develop naturally through substantive interactions around the cognitive interests and demands of a deep and meaningful learning experience” (p. 93). Thus, while instructors play a key role in supporting the development of social presence, students’ feelings of security and, indeed, enjoyment, are a *byproduct* of a positive collaborative learning experience – not the goal ‘product’ itself.

Examining the qualitative sub-question, the findings suggest that technological limitations, course format (hybrid vs. asynchronous), course structure (syllabus and nature of assignments), and instructor approach (flexibility, setting the learning climate, etc.), are foremost in influencing students’ experiences of social and teaching presence. Indeed, there appears to be a confluence between social and teaching presence throughout the participant responses, further underscoring the key role of teaching presence and its indicators. Student perceptions of cognitive presence, meanwhile, appear to be influenced by the level of class participation. However, I found it challenging to evaluate this construct in light of the fact that, while participants commented on issues related to learning, they did not generally offer comments pertaining to cognitive presence indicators such as sense of puzzlement, information exchange, connecting ideas, and applying new ideas. Consequently, I connect class participation to cognitive presence, as it is defined by the CoI, based solely on feedback indicating the desire for more or, in some cases, less, participation from fellow students.

As noted in Chapter III, I was unable to answer the quantitative research question, RQ2, in light of my small sample size. I will discuss this in the following section, which addresses the limitations of the study.

With respect to the mixed methods research question, the qualitative and quantitative results appear to reflect similar experiences of social presence, particularly in the category of personal and affective expression. However, they reflect different experiences of teaching presence, most prominently in the category of design and organization. The qualitative data, in my opinion, does not sufficiently address cognitive presence to the extent that I can comment on the degree of similarity between the qualitative feedback and the survey scores.

Study Limitations

This study suffered from several limitations. First, the qualitative phase assumed a different form from that which I planned. As noted in Chapter III, I intended to employ student journals as the qualitative data collection tool, but was forced to abandon this approach when I did not receive any submissions by the March 8 deadline. Had I anticipated that data collection would be as challenging as it was, I would have selected a different qualitative tool, such as participant interviews or content analysis of course discussion forums. As it stands, while I believe that the data obtained through the trigger question responses was indeed rich, I would have prepared different questions had I known that my data would be limited to question replies. More specifically, I would have developed questions with a stronger focus on the three presences of a community of inquiry than on sense of community per se.

Second, because of the small sample size, my quantitative phase yielded only descriptive statistics for the study participants. While I recognized that a convenience sample would not yield any generalizable findings, I had planned to calculate correlations between the three

presences and student satisfaction among those who participated. Regrettably, the small sample eliminated this possibility.

Third, because the study utilized non-random samples, the findings pertain only to the study participants and are not generalizable to the larger population of communication graduate students. Further, one half of the quantitative phase participants had already participated in the qualitative phase. It is possible that participation in the qualitative phase may have influenced the survey responses of these participants.

Lastly, the study is limited by reliance on participants' comments without additional, in-depth probing. In other words, the qualitative findings are based solely on my interpretation of participants' written responses and – in the absence of follow-up with the participants themselves – it is not possible to know whether I have interpreted the meaning of their comments as they intended.

Recommendations

Despite the aforementioned limitations, I believe that this study produced important findings with respect to students' experiences of community and online learning in general. I view it as a starting point for further exploration of the extent to which students experience both a sense of community and a community of inquiry in their online courses at Mount Saint Vincent University. To that end, I recommend that future studies maintain the exploratory sequential design, but explore sense of community and a community of inquiry as two separate entities. With respect to the former, I recommend that the study be replicated in its intended form (i.e. using student reflection logs for the main, qualitative strand), but employing the Classroom Community Scale (Rovai, 2002b) as the quantitative tool. With respect to the latter, I recommend that the study employ face-to-face interviews to allow for more in-depth probing of

participants' experiences, particularly in the area of cognitive presence, in conjunction with the CoI survey. Through findings from separate studies of sense of community and the community of inquiry, I am confident that the university would obtain more finely focused results in each of these areas – results that could not only inform instructional design, but also university advancement initiatives.

Addressing the issue of sample size, I further recommend that the university consider administering the CoI survey at the end of all online courses. As has been demonstrated by the American Public University System, the CoI survey results hold the potential for rich inferential statistics, particularly when considered in tandem with other variables such as enrolment and withdrawal rates.

Final Thoughts

This study provided rich insight into participants' experiences with, and perceptions of, online learning. While the findings reveal that participants largely view online learning as an independent and uncollaborative experience, they also suggest that participants are not dissatisfied with their online experiences overall. Course design, instructor approach, and exogeneous variables, such as the features of technology, emerged as central to shaping participants' experiences in their online courses.

On a personal note, although this study did not proceed as I envisioned, it has only served to intensify my interest in academic research and the Community of Inquiry framework in particular. It has also heightened my appreciation of the research process. I look forward to bringing this stronger appreciation and interest to future studies.

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Appendix A

Definitions and Terms

The study requires an appreciation of various technologies and concepts. To that end, the following definitions are provided for the reader:

Asynchronous: “computer-mediated communication (CMC) systems that allow ‘anytime’ communication via the Internet, systems such as computerized conferencing or bulletin boards that support threaded discussions” (Hiltz, Turoff, & Harasim, 2007, p. 55)

Blackboard Collaborate: an online learning and collaboration platform designed specifically for education and offering “a real time teaching and learning experience through virtual classrooms...on the Web or on mobile” (Blackboard Inc., n.d.)

Blended course: a course “that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings” (Allen & Seaman, 2014, p. 6).

Blended learning: “the organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies” (Garrison & Vaughan, 2008, p. 148)

Collaborative constructivism: a framework developed by D. Randy Garrison and Walter Archer (2000); Garrison and Archer trace the origins of collaborative constructivism to (John) Dewey (1916) who argued that “the ideal of growth results in the conception that education is a constant reorganizing or reconstructing of experience” (p. 52) where such reconstruction “may be social as well as personal” (p. 54).

Community of inquiry: “a cohesive and interactive community of learners whose purpose is to critically analyze, construct, and confirm worthwhile knowledge” (Garrison & Vaughan, 2008, p. 9)

Community of Inquiry framework: a theoretical framework that “attempts to explain the educational experience from a process perspective...is formed by the intersection of three main elements – social presence, cognitive presence and teaching presence. It has been shown to be a useful theoretical framework and tool to study and design online learning experiences” (Akyol & Garrison, 2008, p.4).

Cognitive presence: “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication” (Garrison, Anderson, & Archer, 2000, p. 89)

Distance education: “instruction in which there is no expectation for the physical co-presence of the learner and instructor” (Allen, Omori, Burrell, Mabry & Timmerman, 2012, p. 143)

Dual mode: “institutions with both on-campus and distance offerings” (Daniel, 2012, p. 92)

Moodle: an open-source learning platform featuring a variety of customizable modules. In particular, the forum module allows instructors and students to engage in asynchronous, threaded discussions (Moodle, 2014).

Online learning: “the use of online communication networks for educational applications, such as: course delivery and support of educational projects, research, access to resources and group collaboration” (Harasim, 2012, p. 27)

Social presence: “the ability the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities” (Garrison, 2009, p. 352)

Synchronous hybrid course: a course in which “mutually exclusive groups of online and on-campus students are taught simultaneously using real-time audio and video technology” (Butz, Stupnisky, Peterson, & Majerus, 2014, p. 211)

Teaching presence: “the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison, & Archer, 2001, p. 8)

Appendix B

Statement of Informed Consent for Instructors

Statement of Informed Consent Related to Qualitative Data Collection (Journal Entries)

Consent Decision:

By selecting "I agree to participate," you confirm that you:

- 1 Understand what is required of the student participants based on reading the letter of invitation, thesis proposal, journal trigger questions and the quantitative survey
- 2 Understand that your participation is voluntary and you are free to withdraw at any time
- 3 Understand the provisions for confidentiality
- 4 Understand that sensitive data relating to your course and your instruction may be collected

- I agree to participate in the journaling process.
- I do not agree to participate in the journaling process.

If you indicated "agree" above, please indicate whether you grant permission to the researcher to include direct quotations from your journal entries in her final thesis report as well as any possible future scholarly publications and presentations.

- Yes, the researcher may include one or more of my comments under a pseudonym.
- No, the researcher may not include any of my quotations regardless of the use of a pseudonym.

Your name: _____

Signature	Date (mm/dd/yyyy)

Please upload this consent document to the designated section of the study Moodle page.

Appendix C

Initial Recruitment E-mail

Subject: Invitation to Participate in Thesis Research
Date: Monday, February 9, 2015 at 10:10:32 AM Atlantic Standard Time
From: Kathryn Britten
To: Kathryn Britten
CC: Alla Kushniryk

Dear student:

As a graduate student in the Department of Communications, you are invited to participate in a mixed methods study of student experiences of online learning. I am conducting this study, in fulfillment of my MA (Communications) thesis requirements, under the supervision of Dr. DeNel Rehberg Sedo.

All of the study details, including statements of informed consent, have been posted on a Moodle site that has been developed specifically for this thesis. The Moodle site will be accessible beginning Monday, February 9. It is titled, "Invitation to Participate in Thesis Research on Online Learning." When you log into Moodle, you will see it listed among your current courses along with Groodle, Department of Communication Studies Graduate Program, etc. Should you be interested in learning more about the study, just click the link.

The qualitative phase of the study will run from February 9 – March 8. The quantitative phase will run from March 22 – April 5. You may participate in the qualitative, the quantitative, both phases, or neither one.

Should you have any questions about this research, you may contact me at helen.dolan@msvu.ca. You may also contact my thesis supervisor, Dr. Rehberg Sedo, at denel.rehbergsedo@msvu.ca.

We believe that this is a very worthwhile study and thank you in advance for any consideration that you may give to this request!

Sincerely,
Helen Dolan

Appendix D

Letter of Invitation and Research Overview (Moodle Site)

Title: Student Experiences of Social, Cognitive and Teaching Presence in Online, Graduate-Level Communications Courses: A Mixed Methods Study

Date of Ethics Clearance: January 26, 2015

February 4, 2015

Dear student:

You are invited to participate in a study of student experiences of social, cognitive and teaching presence in online, graduate-level communications courses at Mount Saint Vincent University. The study will be conducted by Helen Dolan, a student in the Master of Arts (Communications) program, under the supervision of Dr. DeNel Rehberg Sedo. It is a sequential, exploratory mixed methods study, meaning that it will be conducted in two phases. You may participate in the qualitative phase (February / March 2015), the quantitative phase (March 2015), both phases, or neither one.

Research Purpose:

The purpose of this research is to gain an understanding of how communications graduate students experience online learning. The study is based on a theoretical framework known as the Community of Inquiry (CoI). At its core, the CoI is a process model that explains the online learning experience in terms of three elements or “presences.” These presences – social, cognitive and teaching – are multidimensional and interdependent (Swan, Garrison, & Richardson, 2009). It is when these three mutually reinforcing elements come together that a collaborative constructivist educational experience is realized (Vaughan, Cleveland-Innes, & Garrison, 2013).

This research will add to the growing body of literature on the Community of Inquiry and will support the Department of Communication Studies in discovering new ways through which it can enhance the online learning experience for both students and faculty.

Social, Cognitive and Teaching Presence:

According to the CoI, social presence is “the ability of learners to project themselves socially and emotionally in a community of inquiry” (Rourke, Anderson, Garrison, & Archer, 1999, p. 52). Cognitive presence is defined as “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication” (Garrison, Anderson, & Archer, 2000, p. 89). Finally, teaching presence refers

to “the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison, & Archer, 2001, p. 8).

The Study:

- **Qualitative Phase**

During the qualitative phase, you have the option of providing journal entries about your experiences as an online learner in your current course. To encourage the journaling process, the researcher has prepared a series of open-ended questions for contemplation. These questions will be posted on a Moodle site that has been developed specifically for this study. If you choose to participate in the journaling process, do not feel constrained by these questions. They are intended only as a guide to stimulate thought.

You may provide as many or as few journal entries as you like. Depending upon the number and length of your entries, this phase may require anywhere from ten minutes to a few hours of your time. There is no “right” or “wrong” content for your journal entries.

You will upload your journal entries to the study Moodle site where they will be retrieved directly by the researcher.-

Your instructor will not know whether you have participated in the study.

Journal entries will be accepted at any time between February 9 and March 8, 2015. Your journal entries should be uploaded to the study Moodle site by midnight AST on Sunday, March 8, 2015. You may upload as many or as few entries as you like.

- **Quantitative Phase**

During the quantitative phase, you will be invited to answer the statistically validated Community of Inquiry survey. The survey uses Likert-scale questions, asking you to answer on a scale of 1-5 from strongly agree – strongly disagree.

The quantitative survey will require approximately 10-15 minutes to complete. The first question of the survey will ask for your consent for the researcher to analyze and disseminate results based on your answers. By selecting “yes,” you will have agreed to participation in the study.

You do not have to complete the survey in one sitting.

Although it would be greatly appreciated if you would participate in both the qualitative and quantitative phases, you should not feel obliged to do so.

Privacy and Confidentiality

Your participation in this study will be confidential, but not anonymous, in that the researcher will know that you have participated.

Please note that quotations from your journal entries may be included in the completed thesis. However, your name will not be attributed to such quotations. Rather, the researcher will assign pseudonyms to any quotations that she may choose to include.

While extremely unlikely, it is possible that – even with the use of pseudonyms – some participants may be identifiable to themselves, their classmates, or their instructors purely on the basis of the selected comments in the completed thesis report. *The researcher will make every effort to select quotes that do not pose a threat to participants' confidentiality.* Nonetheless, one cannot entirely discount the possibility of participant identification.

In the statement of informed consent for the qualitative phase of the study, you will be asked to indicate whether the researcher has your permission to include any of your direct quotations in the completed thesis or in future scholarly publications / presentations. (Please keep in mind that your real name would not be attributed to any quotations. Rather, a pseudonym would be used.)

Data Security:

Data will be collected through the study-specific Moodle site and LimeSurvey, both of which are hosted on a secure Web server that provides data encryption between the researcher's Web browser and the Web server itself. Physically, the Web server is in a secure location at the MSVU data centre. All data will be permanently deleted after five years. However, should you choose to withdraw from the study at any time, your data will be deleted immediately.

Psychological Risks:

This study carries minimal psychological risks. However, the process of journaling may give rise to unpleasant feelings such as anxiety or resentment. Should you experience such unpleasant emotions, you may choose to withdraw from the study. Psychological support is also available from MSVU Counselling Services. Located in Evaristus Hall, room 218, Counselling Services provides free, confidential, one-on-one support to all registered MSVU students.

Dissemination of Results:

The results of this research may eventually be published in a scholarly journal or presented at academic conferences. However, any such presentations will report only aggregated findings, which in some instances may be illustrated by short, anonymous quotes carefully selected so as not to breach individual confidentiality.

This study has been granted clearance according to the recommended principles of Canadian ethics guidelines and Mount Saint Vincent University policies.

Should you have any questions whatsoever about the study, you may contact the researcher at helen.dolan@msvu.ca or 902.425.4516. Alternatively, you may contact Dr. DeNel Rehberg Sedo, Helen's thesis supervisor, at denel.rehbergsedo@msvu.ca. You may also contact the chair of the University Ethics Review Board c/o Mount Saint Vincent University Research Office at research@msvu.ca or 902.457.6350.

To receive a copy of the study findings, or a link to the website highlighting these findings, please contact the researcher directly at helen.dolan@mvsu.ca.

References:

- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1-17.
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Appendix E

Statement of Informed Consent: Qualitative Phase

Statement of Informed Consent Related to Qualitative Data Collection (Journal Entries)

Consent Decision:

By selecting "I agree to participate," you confirm that you:

1. Understand what is required of the student participants based on reading the letter of invitation, thesis proposal, journal trigger questions and the quantitative survey
2. Understand that your participation is voluntary and you are free to withdraw at any time
3. Understand the provisions for confidentiality
4. Understand that sensitive data relating to your course and your instruction may be collected

- I agree to participate in the journaling process.
 I do not agree to participate in the journaling process.

If you indicated "agree" above, please indicate whether you grant permission to the researcher to include direct quotations from your journal entries in her final thesis report as well as any possible future scholarly publications and presentations.

- Yes, the researcher may include one or more of my comments under a pseudonym.
 No, the researcher may not include any of my quotations regardless of the use of a pseudonym.

Your name: _____

Signature	Date (mm/dd/yyyy)

Please upload this consent document to the designated section of the study Moodle page.

Appendix F

Questions to Facilitate Student Journaling

All responses will be kept confidential.

Part I: Course Information (Required)

Your name: _____

- GPRL 6101-18 Quantitative and Qualitative Research Methods in Public Relations
- GPRL 6105-01 Media, Culture & Society
- GPRL 6105-19 Media, Culture & Society
- GPRL 6108-18 Public Relations & Public Opinion Research
- GPRL 6220-18 Project Seminar

Program of Study: MPR MA (Communications)

Online experience:

- This is my first online course.
- I have taken two online courses including this course.
- I have taken more than two online courses including this course.

Part II: Demographic Information (Optional)

Age: _____

Gender: Female Male Prefer not to say

Part III: The following questions are intended only to encourage the journaling process. Please do not feel constrained by them. Further, you are not obligated to answer any of these questions per se.

Please feel free to use the space below to write your journal entries.

Journal entries will be accepted at any time between February 9 and March 8, 2015. Your journal entries should be uploaded to the study Moodle site by midnight AST on Sunday, March 8, 2015. You may upload as many or as few entries as you like.

1. In what ways do you interact with your instructor in this class?
 - a. In what ways do you interact with your fellow students?
2. How has your sense of community affected your learning in this course?

- a. What does a “sense of community” look like or feel like to you?
3. Would you recommend online learning to other students? Why or why not?
4. Please provide any feedback that you wish to share about your current course or about online learning in general. Comments may pertain to any aspect of your experience whatsoever.

Appendix G

Follow-up E-mail to Prospective Participants: Qualitative Phase

Subject: Seeking Your Help for Thesis Study

Date: Friday, March 13, 2015 at 1:32:28 PM Atlantic Daylight Time

From: Helen Dolan

To: DeNel Rehberg Sedo, Kathryn Britten, Helen Dolan

Dear fellow Graduate Public Relations students:

I am writing with the hope that you will consider participating in the qualitative phase of my thesis research on online learning. You may recall receiving an e-mail invitation from me (sent via the Department) on February 9. At that time, the qualitative phase was scheduled to run from February 9 – March 8. However, because I have not received any responses, the qualitative phase has been extended to March 22 at midnight. At that time, the quantitative survey will open.

In the interest of good “research karma,” I am asking you to do me the favour of reading the informed consent information on the Moodle site, “Invitation to Participate in Thesis Research on Online Learning,” and, should you agree, please respond to one or more of the attached questions. You may e-mail your responses directly to me. **All of your responses will be confidential.**

Your response to this e-mail (if you choose to answer any of the questions) will be interpreted as an acknowledgement of informed consent. In other words, there will be no need to scan and upload the consent document on the Moodle site.

Since I will be unable to complete my thesis if I don’t receive any qualitative data, I sincerely hope that you will consider contributing to the study. Your help would be tremendously appreciated!!

Many thanks in advance,
Helen Dolan

Questions:

1. In what ways do you interact with your instructor in this class?
 - a. In what ways do you interact with your fellow students?
2. How has your sense of community affected your learning in this course?
 - a. What does a “sense of community” look like or feel like to you?
3. Would you recommend online learning to other students? Why or why not?
4. Please provide any feedback that you wish to share about your current course or about online learning in general. Comments may pertain to any aspect of your experience whatsoever.

From: Kathryn Britten <Kathryn.Britten@msvu.ca>

Date: Monday, February 9, 2015 at 11:10 AM

To: Kathryn Britten <Kathryn.Britten@msvu.ca>

Cc: "alla.kushniryk@msvu.ca" <alla.kushniryk@msvu.ca>

Subject: Invitation to Participate in Thesis Research

Dear student:

As a graduate student in the Department of Communications, you are invited to participate in a mixed methods study of student experiences of online learning. I am conducting this study, in fulfillment of my MA (Communications) thesis requirements, under the supervision of Dr. DeNel Rehberg Sedo.

Appendix H

Community of Inquiry Survey: Downloadable Version From Study Moodle Site

All responses will be kept confidential.

Part I: Course Information (Required)

Your name: _____

- GPRL 6101-18 Quantitative and Qualitative Research Methods in Public Relations
 GPRL 6105-01 Media, Culture & Society
 GPRL 6105-19 Media, Culture & Society
 GPRL 6108-18 Public Relations & Public Opinion Research
 GPRL 6220-18 Project Seminar

Program of Study: MPR MA (Communications)

Online experience:

- This is my first online course.
 I have taken two online courses including this course.
 I have taken more than two online courses including this course.

Part II: Demographic Information (Optional)

Age: _____

Gender: Female Male Prefer not to say

Part III: CoI Questionnaire

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Teaching Presence					
The instructor clearly communicated important course topics					
The instructor clearly communicated important course goals.					
The instructor provided clear instructions on how to participate in course learning activities.					
The instructor clearly communicated important due dates/time frames for learning activities.					

The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.					
The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.					
The instructor helped to keep course participants engaged and participating in productive dialogue.					
The instructor helped keep the course participants on task in a way that helped me to learn.					
The instructor encouraged course participants to explore new concepts in this course.					
Instructor actions reinforced the development of a sense of community among course participants.					
The instructor helped to focus discussion on relevant issues in a way that helped me to learn.					
The instructor provided feedback that helped me understand my strengths and weaknesses.					
The instructor provided feedback in a timely fashion.					
Social Presence					
Getting to know other course participants gave me a sense of belonging in the course.					
I was able to form distinct impressions of some course participants.					
Online or web-based communication is an excellent medium for social interaction.					
I felt comfortable conversing through the online medium.					
I felt comfortable participating in the course discussions.					
I felt comfortable interacting with other course participants.					
I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.					
I felt that my point of view was acknowledged by other course participants.					
Online discussions help me to develop a sense of collaboration.					
Cognitive Presence					
Problems posed increased my interest in course issues.					
Course activities piqued my curiosity.					
I felt motivated to explore content related questions.					
I utilized a variety of information sources to explore problems posed in this course.					

Brainstorming and finding relevant information helped me resolve content related questions.					
Online discussions were valuable in helping me appreciate different perspectives.					
Combining new information helped me answer questions raised in course activities.					
Learning activities helped me construct explanations/solutions.					
Reflection on course content and discussions helped me understand fundamental concepts in this class.					
I can describe ways to test and apply the knowledge created in this course.					
I have developed solutions to course problems that can be applied in practice.					
I can apply the knowledge created in this course to my work or other non-class related activities.					
Satisfaction					
Overall, I was satisfied with this course					

Should you wish to submit any comments about your online learning experience, please feel free to do so. All comments are confidential.

Appendix I

Recruitment E-mail Specific to Quantitative Phase (CoI Survey)

Subject: Community of Inquiry Survey

Date: Monday, March 23, 2015 at 5:48:59 PM Atlantic Daylight Time

From: Helen Dolan

To: DeNel Rehberg Sedo, Helen Dolan

Dear fellow graduate student:

Thank you to everyone who participated in the qualitative phase of my thesis research on online learning. I am writing today with the hope that you will consider participating in the second and final phase of the study: the Community of Inquiry (CoI) survey.

The survey should take about 10-15 minutes to complete. **You may participate in this quantitative phase even if you did not participate in the qualitative.**

Additional information, including the statement of informed consent, can be viewed on the survey page at <http://surveys.msvu.ca/index.php?sid=17488&lang=en>. The survey will run from today, March 23, through April 12.

I recognize that this is an extremely hectic time of year for everyone, and greatly appreciate your participation!

Sincerely,

Helen Dolan

Appendix J

Follow-up Recruitment E-mail: Quantitative Phase

Subject: Final Appeal: Community of Inquiry Survey
Date: Tuesday, April 21, 2015 at 8:34:45 AM Atlantic Daylight Time
From: Helen Dolan
To: Helen Dolan

Good morning all,

I am writing with the hope that, if you have not already done so, you will consider completing the [Community of Inquiry survey](#), which constitutes the second phase of my thesis research.

The survey deadline has been extended until this Sunday, April 26, at midnight.

Your participation would be tremendously appreciated. The additional data would *truly make a huge difference* to my thesis.

As indicated in my original e-mail (below), the link to the survey may be found at <http://surveys.msvu.ca/index.php?sid=17488&lang=en>.

I thank you for your time and hope that everyone has enjoyed a good semester!

Sincerely,
Helen Dolan

From: Helen Dolan <helenkdolan@gmail.com>
Date: Monday, March 23, 2015 at 5:48 PM
To: DeNel Rehberg Sedo <DeNel.RehbergSedo@msvu.ca>, Helen Dolan <helen.dolan@msvu.ca>
Subject: Community of Inquiry Survey

Dear fellow graduate student:

Thank you to everyone who participated in the qualitative phase of my thesis research on online learning. I am writing today with the hope that you will consider participating in the second and final phase of the study: the Community of Inquiry (CoI) survey.

The survey should take about 10-15 minutes to complete. **You may participate in this quantitative phase even if you did not participate in the qualitative.**

Additional information, including the statement of informed consent, can be viewed on the survey page at <http://surveys.msvu.ca/index.php?sid=17488&lang=en>. The survey will run from today, March 23, through April 12.

I recognize that this is an extremely hectic time of year for everyone, and greatly appreciate your participation!


Sincerely,

Helen Dolan

Appendix K

Qualitative Coding Structure (NVivo Screen Shot)

Name	Sources	Refere...	C
▼ Cognitive Presence	3	5	
▼ Course Specific	1	1	
Connection with Material	1	1	
▼ Non Course Specific	3	4	
Connection with Material	1	1	
Level of Participation	2	2	
Skill Development	1	1	
▼ Non-Community	7	11	
Benefits of Online Learning	4	5	
Personal Learning Style	1	1	
Public Perception of Quality	1	1	
Time Management and Self-Directed Learning	3	4	
▼ Social Presence	9	34	
▼ Course Specific	5	7	
Belonging, Connection	3	3	
Interaction (with both peers and instructor)	3	4	
▼ Non Course Specific	9	27	
▼ Belonging, Connection	4	7	
With Other Students	3	4	
With the Program	1	1	
With the University	3	3	
▼ Interaction (with both peers and instructor)	5	7	
Impact of Interaction on Learning	4	5	
Intellectual Disagreement	1	1	
Loss of Face-to-Face	3	6	
Use of Chat (Emoticons, Slang, etc.)	1	1	
Safety, Trust, and Protection	4	4	
Sense of Community in General	9	9	

▼ ● Teaching Presence	8	31
▼ ● Course Specific	6	13
● Connection with Instructor	3	3
▼ ● Course Design or Management	4	7
● Structure of Assignments	3	4
● Flexibility	1	1
● Technological Problems or Issues	1	2
▼ ● Non Course Specific	6	18
● Blended Format	1	2
● Design or Management of Courses Gener... 	4	7
● Flexibility	1	1
▼ ● Learning Environment	1	1
● Instructor Overall Approach	4	5
● Online Learning Inferior to Face-to-Face	5	8
▼ ● Technological Problems or Issues (inc. ap...	5	7
● Management of Chat Function	2	2