EXAMINING EXPERIENCES OF ONLINE LEARNERS USING STUDENT SERVICES: A COMMUNITY OF INQUIRY STUDY

By

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A Thesis submitted to the

School of Graduate Studies

in partial fulfillment of the requirements of the degree of

Master of Education

Post-secondary Studies

Memorial University of Newfoundland

September, 2016

St. John's Newfoundland

ABSTRACT

Much of our understanding of the online learning experience is based on research focused on in-classroom involvement despite considerable research that suggests student retention and persistence is also influenced by non-classroom experiences. Research on the impact of student affairs and services (SAS) on online learning experiences, although growing, remains limited. This study investigates the impact of student support services on the experiences of online community college learners using the Community of Inquiry (CoI) framework. Cited more than 3000 times in educational literature, this framework defines a worthwhile educational experience as the interplay of three key elements: cognitive presence, social presence and teaching presence. The current study uses the CoI framework to examine out-of-classroom interactions. Using a mixed method approach, quantitative findings show no statistically significant relationships between the CoI presences and student support services. However, analysis of qualitative data reveals insight on the impact of student support services on teaching and social presence.

ACKNOWLEDGEMENTS

As a working parent and an online learner, completing this thesis has been an exercise in determination, frustration, patience, and elation. Ironically, the topics explored in this report resonate greatly with me, particularly those on motivation and persistence. On that note, I must acknowledge the incredible people who played a profound role in keeping me on track and focused on the endgame.

I thank my supervisors, Dr. Dale Kirby and Dr. Gabrielle Young for their guidance and advice in conducting my first piece of major research. I would also like to extend a special thank-you to Dr. Gerald White whose expertise and remarkable patience had a powerful influence on my belief that I could finish this work.

I express sincere gratitude to Kathleen Allen for permission to conduct research at the provincial community college and to all the participants who volunteered their time to share their experiences. Dr. Karmen Bleile, whose encouragement and hilarious wit was always well timed, thank you so much.

Finally, to my family who have been unfailingly supportive and understanding throughout this entire process. My dad who has been a constant source of wisdom and inspiration (and corny jokes!). My mom who gave me exactly the right amount of love and encouragement, and a gentle push now and then. I love you! My husband who has been steady, kind and supportive through what has seemed a never-ending process. Last, but not least, my daughter, Adee, you are amazing. I will enjoy no longer having to say "I have to work" when I really want to spend time with you.

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Glossary

Terminology relevant to this study is defined below:

Online learner.

An online learner is a student whose participation in learning is mediated by web-based technologies and involves asynchronous and/or synchronous interactions with faculty, staff and other students. For the purpose of this study, an online learner is primarily participating in online courses, but may also be taking traditional, face-to-face classes. It is typical for online learners to experience time constraints as a result of having many competing priorities including family and work responsibilities. Students choose online learning options to participate in programs that serve their goals (e.g., professional advancement) while allowing for adequate work-study-life balance (Crawley, 2012; Hornak, Akweks & Jeffs, 2010; Shea, 2005).

Online education, online learning, e-learning.

The terms online education, e-learning and online learning are used interchangeably in this report and refer to programs and modes of learning that integrate information and communication technologies (ICT) in the delivery of post-secondary education (Kanuka & Kelland, 2008).

Online learning community.

Online learning communities consist of groups of people who share common interests or goals and are separated geographically and in some instances temporally, although today's technology does make real-time, computer-mediated communication much easier (Schwier, 2007). "Members of a learning community may be students,

lecturers, tutors, researchers, practitioners, and domain experts." (Corich, Kinshuk & Jeffrey, 2007, p. 89).

Attrition.

The term "attrition" denotes a reduction in the number of enrolled students in a program or course and has been described as analogous to turnover in a work environment (Cabrera, Nora & Castañeda, 1993).

Persistence.

Persistence refers to the choice of a student to continue in their studies toward program completion.

Retention.

Retention is defined as an educational institution's capacity to retain enrolled students with a view toward program completion.

Non-traditional/adult learners.

For the purpose of this study, the terms 'non-traditional' and 'adult' learner are used interchangeable to refer to learners aged 25 or older who are engaged in post-secondary study. Non-traditional or adult learners are characterized as self-directed and motivated by key life events or needs which makes their return to study a purposeful choice. They interpret new information and ideas by relating it to prior knowledge and experiences (Kenner & Weinerman, 2011).

Traditional learners.

Traditional learners are students between the ages of 18 and 24 and are often referred to as millennials, the net generation, or digital natives. Often attending post-secondary institutions right out high school, millennials are commonly characterized by

the way in which digital technology is integrated into their daily lives and relationships, their orientation toward team and collaborative approaches, and their optimistic outlook (Emeagwali, 2011).

Student affairs curriculum.

Student affairs 'curriculum' is grounded in student development theory which focuses on "cognitive, physical, moral, social, career, spiritual, personal and educational dimensions" (Fried, 2003, p. 121). The content of the student affairs curriculum is taught using counselling, training and coaching techniques in formal and informal settings (e.g., new student orientation, one-on-one conversations respectively) (Fried, 2003).

Student affairs and services

The terms *student affairs* and *student services* are often used interchangeably, among a variety of other labels, to identify support services and programs that deliver the student affairs curriculum. These may include academic advising, career development, counselling services, student leadership, disability support services, and registration and financial services (Hardy Cox & Strange, 2010; Dungy, 2003). For clarity and consistency in this report, *student affairs and services* will be referenced using the acronym SAS.

Developmental advising.

Developmental advising characterizes a relationship between an academic advisor and a student that is based on a mutually agreed upon set of responsibilities for both advisor and student. This student-driven relationship provides support and guidance in developing problem-solving and decision-making skills, higher-order thought processes,

and insights into individual goals as well as the goals of higher education (Appleby, 2008).

Whole student development.

A focus on learners as "whole people" acknowledges the complexity of students' lives and that their role as a student often represents one among many different roles attributed to an individual. These roles may involve responsibilities to a family and/or community, and may reflect diverse socio-economic, educational and cultural backgrounds. These varying roles and the circumstances that lead to a decision to engage in post-secondary study inform development of a sense of self and purpose (Helfgot, 2005). Whole student development is "the core function of the student affairs profession" (Braxton, 2009, p. 573). In practice, SAS professionals help students craft meaningful educational and career goals that reflect their developing sense of self and purpose (Helfgot, 2005).

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Chapter One – Introduction

The Advisory Committee for Online Learning (ACOL) (2001), created by the Council of Ministers of Education, Canada (CMEC) and Industry Canada, identifies online learning as a "powerful and transformative" (p. 9) means to meet Canada's need for increased access to high quality education. It points to online learning as being crucial to developing and maintaining Canada's social and economic prosperity as well as its capacity to compete in the global marketplace where knowledge and information are key commodities.

Expectations of when and where work and learning can happen are shaped by the rapid integration and pervasiveness of technology in many aspects of our professional and personal lives (Johnson, Adams, & Cummins, 2012). In 2005, Statistics Canada found that 6.4 million Canadians used the internet for education, training or school-related work (McKeown & Underhill, 2007). A national review of Canadian colleges and universities conducted by Contact North (2012), Ontario's distance education and training network, estimates that there are between 875,000 and 950,000 students registered in online post-secondary study, and approximately 92,000 to 100,000 of those students are studying online on a full-time basis. Today's post-secondary education (PSE) participants, including both traditional-age learners (18-24 years) and non-traditional or adult learners (25 years and older), are looking for learning experiences that reflect today's technological realities and provide access to educational opportunities with greater flexibility to effectively manage competing work-life priorities (Akyol & Garrison, 2010; Chyung, 2001; Hornak, Akweks, & Jeffs, 2010; Pullan, 2009). At the same time, businesses are making professional development opportunities more accessible to

employees through strategic partnerships with colleges and technical institutes that can provide effective e-learning options to help businesses maintain productivity levels while increasing the professional capacity of individual businesses (Contact North, 2012).

Advancements in internet and communication technologies are shaping the way we share knowledge and exchange ideas, and they feature more prominently in our day-to-day lives. As a result, the landscape of post-secondary education continues to evolve in response to increasing demands for greater accessibility and higher quality educational experiences both in the traditional classroom and in online learning environments (Shea, 2005; Shelton, 2011; Smith, 2008).

Canada's educational technology sector has made significant contributions to the development of important online educational technologies including learning management systems like WebCT and Desire2Learn, the Eluminate Live web conferencing platform, and interactive whiteboard resources like SMART Boards. Despite these contributions, many Canadian institutions and instructors have been slow to adopt common technologies used in blended and fully-online learning environments at the post-secondary level (Contact North, 2012). This discrepancy underscores the challenges facing many post-secondary institutions in the drive to maximize online learning alternatives. These challenges include the following: financial constraints resulting from the global recession in 2008; reduced government funding; increased pressure to respond to projected labour shortages; the need for a greater percentage of the workforce to have a post-secondary credential; a lack of sufficient infrastructure to support technology-rich and web-based learning; insufficient technological knowledge among faculty, staff and key decision-makers; and a lack of strategic planning and policy

initiatives regarding the development, administration, and quality assurance of online programs (Canadian Council on Learning, [CCL] 2009b; Contact North, 2012; Ellis, 2010; Garrison & Kanuka, 2008; Moneta, 1997).

Despite these challenges, universities and colleges are, to varying degrees, developing their online offerings in efforts to respond to student demands and to remain competitive in the PSE market. Royal Roads University, Thompson Rivers University, Athabasca University, Memorial University of Newfoundland, TÉLUQ, and Centre collegial de formation à distance were all highlighted in a report on online learning in Canada released by Contact North (2012). These institutions were noted for having a "significant strategic focus on distance education and online learning" (p. 8). Thirteen colleges and technical institutes, mainly from Central Canada and the Prairie provinces, with the exception of the British Columbia Institute of Technology and the College of the North Atlantic, were also highlighted for having "a strong and dedicated focus to online and distance education" (Contact North, 2012, p. 13).

However, persistently low retention rates among online learners compared to traditional face-to-face learners continues to be an issue at the post-secondary level, which has led to questions about the quality of online offerings (Boston & Ice, 2011; Hall, 2011; Heyman, 2010; Hirner & Kochtanek, 2012; Simpson, 2003). In fact, attrition rates for online courses have been reported to be as much as 20 to 50 percent higher than those for traditional, face-to-face courses (Clay, Rowland, & Packard, 2008; Herbert, 2006; Ludwig-Hardman & Dunlap, 2003). Research points to a variety of factors that contribute to non-completion of online courses including incongruence between perceived student interest and course structure, lack of confidence in the learning

environment, personal conflict and/or motivation, inadequate academic skills, and technical issues (Chyung, 2001; Clay et al., 2008; Simpson, 2003). LaPadula (2003) points out that it should not be assumed that online learners are somehow more advanced in their development of self-understanding or their future academic or career plans.

1.1 Statement of the Problem

Kleinglass (2005) argues that the development of online learning programs has focused primarily on implementing educational technology to deliver academic content while student affairs and services (SAS) has been a minor player in shaping the online learning experience (p. 26). According to McEwen (2003), "the primary goals of student affairs professionals are to facilitate students' development, to understand and design educationally purposeful environments, and to be experts about organizations and how they function" (p. 154). Nuss (2003) underscores two fundamental and defining principles of the practice of SAS, which are the persistent emphasis on the development of the whole student, and the sustained commitment to support the institutional and academic mission (p. 65). In order to achieve these goals, the SAS "curriculum" has evolved to include interpersonal communication, conflict resolution, life and career planning, group leadership and participation, and the development of social- and civic-mindedness among learners (Fried, 2003; Hardy Cox & Strange, 2010). This curriculum is delivered through a variety of support services and programs including, but not limited to, academic advising, career development, counselling services, student leadership, disability support services, and registration and financial services (Dungy, 2003; Hardy Cox & Strange, 2010).

In addition to instructional content, student support services, institutional connectedness, and student satisfaction are important factors in assessing online program quality (Hirner & Kochtanek, 2012; Hornak et al., 2010; Lee, 2010; Shelton, 2011). The Institute for Higher Education Policy established 24 benchmarks that are indicative of quality online programs, among which student supports were described as providing general program information such as admission requirements, registration, finances and fees, technical support and training, library and resource assistance, and making sure that questions and complaints are dealt with quickly and accurately (Merisotis & Phipps, 2000). Online service development has tended to increase the accessibility of "administrative core services" to students and prospective students in areas such as admissions, registration, student records, student accounts, course scheduling, and technical support (LaPadula, 2003; Shea, 2005). However, while they are important, these services do not reflect the full scope of a whole-student development philosophy and students continue to ask for greater online access to developmental services like academic and career advising, mental health counselling, and other services that promote a sense of community (Conover, 2008: LaPadula, 2003; Pullan, 2009; Woods, 2008).

SAS practitioners contribute to the learning enterprise by a) helping students make sense of their experiences and draw connections between in-class and out-of-class experiences, b) creating opportunities for students to develop a sense of belonging, c) helping students navigate important life and career transitions, and d) facilitating on-going academic and social connections within the institution and the broader community (Nuss, 2003). Some researchers contend that in the rush to satisfy growing demands for online learning options, and to contend with increasing financial pressures, post-

secondary institutions have overlooked the needs of online students and neglected the development of comprehensive online support services that reflect those available to on-site students (Conover, 2008; Kleinglass, 2005; Pullan, 2009). By developing a complete complement of online services that include personal services, student communities, communications and academic services in addition to the administrative core, institutions support the needs of both online and on-campus students, and may also influence retention rates (Nichols, 2010; Pullan, 2009). The findings of Heyman's (2010) study, conducted with a panel of 20 experts in post-secondary education, point to the need for greater emphasis on developing student supports and fostering student connections with the institution in addressing retention issues among online learners. These findings are consistent with Tinto's Interactionalist Theory, which emphasises the importance of academic and social integration on student success, (Braxton, Hirschy & McClendon, 2004). Heyman's findings are also supported by those of numerous researchers who contend that academic and social engagement fostering a student's sense of belonging are critical factors in retaining both traditional and online students (Astin, 1993; Boston & Ice, 2011; Herbert, 2006; Pascarella & Terenzini, 2005).

1.2 Purpose of the Study

The demand for greater access to a broader complement of student services presents an opportunity to examine the role SAS practitioners have as teachers of the SAS curriculum. In addition, it is integral to consider how to effectively deliver that content and engage students in the virtual learning environment in a way that is consistent with the fundamental principles of the practice of SAS. Akyol and Garrison (2008) argue that meaningful learning occurs within a collaborative community of inquiry, and in the

context of online environments, learning communities are foundational to successful learning online (Palloff & Pratt, 1999). Garrison, Anderson, and Archer's (2000) Community of Inquiry (CoI) process model offers a well-tested framework to explore the dynamics of online educational experiences. The CoI concept is grounded in teaching and learning theory, in particular the notion that learning is a social activity (Garrison, Anderson, & Archer, 2010).

The purpose of this study is to examine the experiences of online learners who engage student services in one and two-year community college programs and to acquire a better understanding of the impact of student services on those experiences. This research will examine the role of student services in cultivating a community of inquiry among online learners by applying Garrison, Anderson, and Archer's (2000) CoI model. While earlier studies have investigated online learning experiences using the CoI framework, this study represents a novel application of the CoI framework in that it focuses on student experiences in engaging the SAS curriculum through a variety of services and programs delivered by SAS professionals, as opposed to discipline-specific content delivered by academic faculty or industry experts. By positioning SAS practitioners as instructors or facilitators of the SAS curriculum, the results of this study may provide a new lens through which to examine the role of SAS in online learning culture and highlight opportunities for greater collaboration between academic and SAS divisions. This research could be used in the strategic development of comprehensive online student services and may also provide a baseline for future research examining the practice of SAS in online learning contexts using the CoI framework.

1.3 Significance of the Study

Post-secondary education is an important factor in cultivating both individual and community prosperity. The Organization for Economic Co-operation and Development (OECD) ranks Canada above average in terms of the number of working-age people (24 to 65 years) with PSE qualifications (CCL, 2009a). Despite consistent growth in PSE participation, social, economic and demographic factors have been driving significant shifts in Canada's national and regional economies and making further increases in PSE participation a national imperative. The global recession of 2008-2009 highlighted Canada's strong position in relation to competitor nations in the areas of productivity and international competitiveness, which can be linked "to the extent to which the Canadian workforce is highly educated, the continued investment in its education and training in the workplace and the focus of the commitment to education" (Contact North, 2012, p. 4). Labour shortages across Canada are projected to be in the millions by 2031 and are already being felt in some provinces (Contact North, 2012). In order to respond to significant projected labour shortages and to meet the needs of the emerging knowledge-based economy, the percentage of Canadian workers with a PSE credential will need to rise to 75 to 80 percent by 2031 from current levels of 60 to 66 percent (Contact North, 2012).

Online education provides a viable means of addressing these important social, economic, and labour force issues by increasing access to post-secondary education and training (ACOL, 2001). The nature of online study also responds to growing demands among traditional and non-traditional students to be able to participate in education without the constraints of time and place that would be present in a face-to-face learning

environment. Non-traditional or adult learners now make up a significant proportion of the student population and present with multiple competing priorities (e.g., families and jobs) and circumstances that affect the way in which they engage in learning (Heyman, 2010). Adult learners seek out programs and educational delivery options that allow them to balance competing work-life priorities while achieving personal or career goals (Burns, 2011). Garrison and Kanuka (2008), Shea (2005), and Pullan (2009) all observe that it is not only adult learners who are seeking greater flexibility and access to education, but traditional students (i.e., 18 to 24 year olds) participating in full-time, on-campus study are also facing increased pressures and responsibilities (e.g., financial) that may impact their ability to physically attend class, participate in academic or social activities, or access support during traditional office hours.

Online learning provides greater access to post-secondary learning opportunities, but the issue of retention among online learners is a primary concern since attrition rates are higher for students taking online courses than traditional, face-to-face courses (Clay et al., 2008; Herbert, 2006; Ludwig-Hardman & Dunlap, 2003). Herbert (2006) characterizes the issue of retention as "one of the greatest weaknesses in online education" (p. 1). The role of SAS in providing comprehensive psychosocial, intellectual, personal and professional support services has been acknowledged as a key factor in increasing the retention levels of students in traditional, face-to-face learning environments (Astin, 1993; Pascarella & Terenzini, 2005). Online support services are important for online learners and they can also have a positive influence on the experience of all students including those who participate in on-campus classes but do not generally access campus resources, finding web services more convenient (Hornak et al.,

2010). Taylor and Holley (2009) assert that changing the format of instruction to reflect the parameters of a virtual environment necessitates a change in the practice of SAS in online learning environments from simple service delivery to a focus on facilitating student learning outcomes. Given the context surrounding online education and the potential for online learning to play a key role in addressing labour force and training issues, it is critical that the issue of retention in online education be addressed. The impact of SAS in a traditional learning context is clear. It is possible that greater attention paid to the role of SAS in online learning environments may result in similar positive impacts on retention rates among online learners.

The study that follows is of significance in that it aims to address gaps in research regarding retention in online programs and, in particular, an absence in the literature regarding the practice of SAS in online learning environments (Boston & Ice, 2011; Conover, 2008; Heyman, 2010; Ice, Gibson, Boston, & Becher, 2011; Taylor & Holley, 2009; Zawacki-Richter, 2009).

1.4 Research Questions

This study seeks to answer the following research questions:

1. What are the experiences of online learners when engaging with student support services?
2. What impact do these experiences have on the overall educational experience of online learners?
3. How do online students perceive the nature and value of community in a virtual learning environment?

4. What impact do student services have on the development of a community of inquiry?

1.5 Conceptual Framework

The central concept of this study situates the SAS agenda alongside that of academic affairs by positioning SAS professionals as teachers of the SAS curriculum. The notion of "advising as teaching" is not new. Crookston (1972) forwarded this argument based on an assumption that teaching occurs in any situation where the interaction between teacher and student results in the growth and development of an individual, group or community. Ryan (1992) added further support to this view by conducting an exhaustive analysis of the characteristics of effective teachers and comparing them to characteristics of effective student advisors. Critical parallels were drawn from this analysis supporting the argument that developmental advisors, who are focused on whole student development, demonstrate characteristics consistent with effective teaching. It also illustrates a paradigmatic shift away from an instructional approach governing SAS to a learning approach (Appleby, 2008). Hurt (2007) follows this line of thinking by arguing that developmental advising is a form of teaching and uses Bloom's taxonomy as a basis to develop key learning outcomes associated with the advisor-student relationship. Taylor and Holley (2009) find that "effective student affairs practice in an online environment is oriented toward facilitating student learning rather than simple service delivery" (p. 82).

It is further argued that a re-alignment of SAS and academic affairs under a more collaborative agenda is an important step in responding effectively to the evolution of post-secondary education, successfully implementing institutional goals, and providing

relevant, meaningful learning experiences (Banta & Kuh, 1998; Brady, 1999; Cawthon, Boyd, & Seagraves, 2012; Frost, Strom, Downey, Schultz, & Holland, 2010; Hardy Cox & Strange, 2010; Levy & Polnariey, 2016; Sandeen, 2004; Seifert, Arnold, Burrow & Brown, 2011). From this vantage point, student affairs practitioners are well positioned to engage learners in meaningful interactions that facilitate learning and build a sense of community. As such, the central premise of this study is based on the concept that the curriculum of student affairs is focused on learning outcomes and that student affairs professionals are the teachers of that curriculum.

Primarily, this study will focus on understanding the role of SAS in creating a sense of community among online learners by examining online students' interactions with SAS programs and professionals. The CoI framework offers a solid model for studying online educational experiences. This framework is predicated on the assumption that the nature of inquiry is inherently social and that effective learning occurs in a community where cognitive presence, social presence, and teaching presence are core elements (Garrison, Anderson et al., 2010). Garrison, Anderson et al. (2010) believe that the dynamics of meaningful online educational experiences can be understood by studying the interplay of these core elements. Cognitive presence reflects the degree to which online learners explore relevant information, integrate new knowledge and ideas, and find solutions by applying newly acquired knowledge (Garrison, Cleveland-Innes, & Fung, 2010). Social presence can be understood as "the ability of participants in a community of inquiry to project themselves socially and emotionally … through the medium of communication being used" (Garrison et al., 2000, p. 94). Teaching presence acknowledges the role of moderator in facilitating and directing cognitive and social

processes for the purpose of helping students make sense of their experiences while pursuing meaningful learning outcomes (Garrison, Cleveland-Innes et al., 2010). The core elements of the CoI framework will be examined in greater detail in the next chapter.

In applying the CoI framework to this study, the core elements are reflected in the intellectual, psychological, and social well-being of students which is the focus of the SAS curriculum. In this context, teaching presence will reflect a many-to-many relationship between SAS professionals and students rather than the more commonly studied one-to-many, instructor-student ratio since the SAS curriculum is delivered through a variety of services and programs, and by more than one SAS professional.

1.6 Summary

This chapter establishes the important influence of technology on higher education and the critical opportunities that rapid technological change presents. Access to lifelong learning is identified as a critical socio-economic need driven by a reliance on knowledge and information across all facets of society. Improved access to quality online learning opportunities continues to be a vital strategy to enable the development of a competitive workforce and to engage communities in the learning enterprise. In this context, it is argued that role of SAS, as a key contributor to student learning, should be re-framed to meet the changing expectations of students and the evolving needs of industry and society. This study aims to contribute to that work by examining the experiences of online students who access SAS programs and professionals, as well as the impact of SAS on community in an online learning environment.

The following four chapters provide key context and insight through an examination of relevant research and literature in the areas of SAS practice, the impact of

technology on the learning experience, retention in online study, the online student experience, and online communities, as found in chapter two. Chapter three describes the research methodology guiding this study including descriptions of mixed method approach and methods used to collect and analyze quantitative and qualitative data. Chapter four reports results of analysis and connects the findings to current research. Finally, chapter five provides conclusions, implications, and recommendations.

Chapter Two – Literature Review

The literature review that follows provides context for this study by exploring the current status of student affairs and services (SAS) in post-secondary education and the factors that have significantly impacted the practice of SAS. Technology has had a profound influence on post-secondary education. It is seen by many researchers and practitioners as a game-changer in terms of the practice of SAS and has even led some to consider the relevance of SAS in this new learning context (Sandeen, 2011). The collaboration between SAS and academic affairs is regarded as a key factor in responding effectively to new demands for quality learning experiences and moving forward successfully in the competitive PSE market. This chapter will consider these ideas in greater detail to establish a broad picture of the status of SAS.

In this study the SAS practitioner is positioned as teacher of the SAS "curriculum". The relationship between online students and their instructors has been shown to be a factor influencing retention and satisfaction in online programs and courses. Retention in online programs and courses is a major area of concern and it raises important questions about program quality and student satisfaction. As a central premise of this research, the literature surrounding SAS curriculum and the notion of "advisor as teacher" will be discussed along with online student retention and the experiences of students in online learning environments. The concept of community in learning environments is argued by some to be a critical component of student success and persistence in both on-site and online programs (Ludewig & Vogt, 2010; Ouzts, 2006). Learning communities help facilitate a sense of belonging among students by facilitating connections with peer groups, faculty, and the institution (Astin, 1993; Ludewig & Vogt,

2010; Ouzts, 2006; Pascarella & Terenzini, 2005; Sadera et al., 2009). The notion of community is central to the conceptual framework of this study; therefore, research on learning communities and their impact on learning in online environments is given particular attention in this chapter.

By focusing the literature review on these themes, this chapter provides a solid basis on which to build an understanding of the issues surrounding online learning and role of student affairs in today's learning environment.

2.1 The Current State of Student Affairs

Historically, the work of SAS centred on the extracurricular (e.g., clubs, societies, sports and recreation) as a means of contributing to the development of the whole student through outside-the-classroom experiences (Nuss, 2003). In the early 1900s, greater gender and racial diversity among the student body necessitated change in the practice of SAS to meet the needs of a new student population (Nuss, 2003; Taylor, 2008). Today, adult learners make up a significant majority of the post-secondary student population (Boston & Ice, 2011). The traditional, full-time residential post-secondary student is becoming less prevalent while the characteristics of part-time students (e.g., dealing with competing priorities like jobs and families, coming to campus just for class and then leaving, rather than participating in outside-the-classroom activities) are increasingly illustrative of both part-time and full-time students (Garrison & Kanuka, 2008). Merriam, Caffarella and Baumgartner (2007) identify three major social factors influencing adult learning today: 1) changing demographics, 2) globalization, and 3) technology. These factors have significantly influenced post-secondary education in terms of the scope and

method of information sharing, student mobility, multicultural learning environments, and the dramatic increase in web-based education and training programs and institutions.

Responding to change is a consistent feature in the history of SAS in post-secondary education. The 2010 report from the Task Force on the Future of Student Affairs appointed by the American College Personnel Association (ACPA) and the National Association of Student Personnel Administrators (NASPA) argues that "at no other time in history has the incentive for real change been more powerful or the consequences for not changing more significant" (p. 7). Cawthon et al., (2012) suggest that recent significant reductions in SAS operations at a few post-secondary institutions in the United States signal that the division of SAS is not immune to critical review in the current fiscal climate. In order to remain institutionally relevant SAS must change from the traditional model of service centred on the needs of residential, full-time students, to more innovative and entrepreneurial approaches that are based on a broader concept of "the campus" including both onsite and virtual environments, as well as the needs of a much more diverse student population (ACPA & NASPA, 2010; Ausiello & Wells, 1997; Cawthon et al., 2012; Kleinglass, 2005; LaPadula, 2003; Moneta, 1997; Sandeen, 2011; Taylor, 2008).

2.1.1 Student affairs curriculum.

Sandeen (2011) characterizes SAS as an emerging field of scholarship. Although agreement has yet to be achieved on the intellectual or theoretical basis of the work of student affairs, commitment to the fundamental mission of whole student development remains a central concept in the evolution of the field (Sandeen, 2011; Taylor, 2008). Whole student development acknowledges the integrated nature of human learning, and

the influence of relationships and perspectives on meaning making, strongly reflecting constructivist epistemology (Fried, 2012). Constructivism emphasizes the importance of individual perspective and "the interaction of cognitive, affective, and interpersonal elements in making meaning and interpreting events" (Fried, 2012, p. 50).

Fried (2012) describes the work of SAS as "experiential education intended to teach students how to live successfully in a complex society" (p. 26). The terms *advising* and *advisor* are often associated with the role of SAS professionals whose scope of responsibility encompasses developmental activities facilitating problem-solving, decision-making, and higher-order thinking skills (Appleby, 2008). Crookston (1972) argued that advising functions could be equated with teaching functions. This position is supported by Hurt (2007) who identified commonly shared attributes of developmental advising and teaching, including collaboration between educators and students, goal-directed behaviour, and a focus on problem-solving, decision-making, and evaluation skills. Appleby (2008) matched 28 indicators of effective teaching with indicators of effective advising, further supporting the notion that developmental advising can be equated with teaching.

The work associated with SAS is often characterized as simply a collection of activities (Taylor, 2008). However, from an organizational perspective, Taylor (2008) argues that work of student affairs is situated both in management and in educational philosophy reflecting service delivery and administration, and student development and student learning, respectively. Ludeman, Osfield, Hidalgo, Oste, and Wang (2009), also contend that effective SAS practice should enhance student learning outcomes by providing support for academic, personal, social, cultural and cognitive development. The

Council for the Advancement of Standards in Higher Education (CAS) (2014), articulates the domains and dimensions of student learning outcomes, which guide the work of student affairs, as: a) *knowledge acquisition, integration, construction, and application* which is further clarified by dimensions including understanding, connecting, constructing, and relating knowledge, b) *cognitive complexity* described as critical thinking, reflective thinking, effective reasoning, and creativity dimensions, c) *intrapersonal development* which speaks to the dimensions of self-appraisal, self-understanding, and self-respect; identity development, ethics and integrity, and spiritual awareness, d) *interpersonal competence* made evident through meaningful relationships, interdependence, collaboration, and effective leadership dimensions, e) *humanitarianism and civic engagement* which reflects understanding and appreciation of cultural and human differences, social responsibility, global perspective, and a sense of civic responsibility, and f) *practical competence* articulated as the pursuit of common goals, effective communication, technical competence, managing personal affairs, managing career development, demonstrating professionalism, maintaining heath and wellness, and living a purposeful and satisfying life.

Forty-five functional areas reflecting standards of program and service delivery, designed to meet the student learning outcomes listed above, include academic advising, career services, learning assistance, registrar, and student leadership, among others (CAS, 2016). SAS professionals emphasize the role of community as a means of engaging students in a wide of range of learning opportunities. Student engagement has been shown to be an important factor in success and achievement in post-secondary education (Astin, 1993; Pascarella & Terenzini, 2005).

Today, Web 2.0 technologies, featuring more technology-enabled communication and collaboration, are reshaping traditional concepts of community and engagement (Chen, Lambert, & Guidry, 2010). Despite the potential for enhanced access to services and resources as a result of the rapid growth in information and communication technologies, students report finding it difficult to access information on programs and services, often leaving them unaware of the supports available (Center for Community College Student Engagement (CCCSE), 2010; Taylor 2008; Wiggers & Arnold, 2011). Findings of the 2010 CCSSE survey show that, while community colleges offer a wide range of programs and services, students either do not access these services because they do not know how, because they are inconvenient, or because they do not know services exist. One recommendation from the CCCSE (2010) report emphasized the value of intentionally integrating student services into the classroom experience as a way to ensure students are aware of available supports, and to connect services to the academic curriculum in a more meaningful way (CCCSE, 2010). The next two sections will discuss the impact of technology on SAS, and the imperative for greater collaboration between SAS divisions and academic affairs.

2.1.2 The impact of technology.

The rapid rise of technology has had a profound impact on post-secondary education. It has significantly changed the nature of learning and the interactions among students, faculty and staff. This is evidenced in part by the tremendous growth and investment in massive open online courses (MOOCs) in particular in the United States where university systems across five states have partnered with Coursera (a California-based company offering free online university courses) “to develop and evaluate the

potential of technology that is fueling dramatic changes in how higher education is designed and delivered" (Marklein, "Universities Bolster MOOCs", 2013, para. 2). The Clayton Christensen Institute for Disruptive Innovation, a non-profit think tank, points to a growing number of people 25 years or older and already part of the workforce seeking post-secondary education and modern skills training (Weise & Christensen, 2014). To meet this growing demand, Weise and Christensen (2014) identify online competency-based education as a "tectonic shift" in post-secondary education and an innovation "most likely to disrupt higher education" (p.iv) due to its capacity to provide lower cost, stackable credentials that can more easily be modified to meet the changing needs of the knowledge-based economy.

The rapid growth of technology and its impact on industry and education is a compelling factor driving SAS leaders to re-think and re-frame their role in shaping the student experience in today's learning context (Garrison & Kanuka, 2008; Hornak et al., 2010; Kleinglass, 2005). Innovative uses of new and existing technology such as virtual worlds (e.g., CarletonVirtual http://img.csit.carleton.ca/vcu/), collaborative tools like course wikis and blogs, as well as mobile and game-based learning, are changing how institutions engage students in the learning enterprise (Contact North, 2012; Johnson, Adams & Cummins, 2012). Online and on-campus students have electronic access to course materials, work collaboratively with peers in geographically disparate locations, engage in both synchronous and asynchronous discussion, and participate virtually in both inside- and outside-of-the-classroom activities.

Watson (2008) argues that the provision of a high quality student experience represents critical competitive advantage among post-secondary institutions. Students

expect technology to enable them to contribute, participate, and engage in learning and services in manner that is personal and service-oriented. Institutional websites are an essential platform for communication and relationship building. Jones and Meyer (2012) point to current research findings that showed 50 percent of potential students eliminated an institution from consideration because of negative experiences on that institution's website. Students expect more than just information on a page; they expect a functional website where they can easily access educationally relevant tools and resources, personalized service, and a community of their peers (Hornak et al., 2010; Meyer & Jones, 2011; Shea, 2005). Institutional websites are also an important feature of the "broader campus concept" and can play an important role in building community by supporting a variety of constituent groups including new and current students, as well as faculty and staff (Meyer & Jones, 2011).

Many institutions have deployed customer relationship management (CRM) systems to cultivate relationships with potential students and provide customized, personalized service that reflect individual interests and needs (Hornak et al., 2010). Portal technology has been increasingly implemented by post-secondary institutions with the promise of more customized services for students. However, these technologies tend to be deployed as means of facilitating secure transactions (e.g., tuition payments and access to grades), rather than as an integrated source of customized information and services (Shea, 2005). Students are often left having to search out additional services by navigating a system of "highly distributed and unfocused" resources (Taylor, 2008, p.26). Online self-service systems are intended to foster client loyalty and retention by providing convenient, consistent and high quality support (Cooper, Lichtenstein & Smith, 2011). A

number of institutions have introduced self-service options, most commonly for those services characterized as the administrative core such as admissions, financial aid, course registration, and student accounts. However, tutoring, career and academic advising, counselling, and mental health services have seen limited development, despite demand from students for access to more comprehensive supports (LaPadula, 2003).

The question facing SAS researchers and practitioners is how can technology be effectively integrated into SAS practice while maintaining its fundamental goals to support the institutional mission and facilitate whole student development (Ausiello & Wells, 1997; Conover, 2008; Hornak et al., 2010; Kleinglass, 2005; LaPadula, 2003). Hornak et al. (2010) suggest that a generational divide may make adoption of technology a challenge for those practitioners who have spent a significant portion of their career developing skill and comfort in face-to-face interactions, as evidenced by the recurrent use of on-campus orientations despite growth in online programs. Another example is the persistence of solely face-to-face counselling despite demands for more flexible access to counselling services and advances in internet and communication technology (ICT) to address security concerns (Curry, 2010; Shepell-fgi, 2013).

Contact North (2012) identifies significant barriers to the development of online learning in Canada that include, among others, a lack of knowledge regarding current technologies among some students, faculty and staff, a lack of strategic focus on online learning, and course design and quality issues limiting student engagement (p. 16). Effective integration of technology in SAS practice requires entrepreneurial leadership, a strategic and clearly articulated vision for technology in SAS, engagement of stakeholders in establishing a technology strategy that upholds the central humanistic values of student

affairs practice, and comprehensive policy development that reflects the interests of all students regardless of learning mode (Ausiello & Wells, 1997; Moneta, 1997; Taylor & Holley, 2009).

Opening the door to innovative and effective uses of technology in SAS practice requires new approaches to management that balance divisional accountability for meeting outcomes efficiently, within the constraints of current budgetary realities, and support the creative evolution of services to reflect student expectations. The transition from primarily face-to-face support to more technologically enriched services will be met with some degree of resistance and will highlight competency gaps among faculty and staff. Comprehensive and on-going professional development is critical to the successful integration of technology. The administrative needs of post-secondary colleagues and personnel must be considered alongside learner expectations for access to service outside traditional work hours (Ausiello & Wells, 1997; Garrison & Kanuka, 2008; Kleinglass, 2005; Moneta, 1997). Moneta (1997) characterizes a successful student affairs manager as one who is adaptive and stays up-to-date on emerging technologies, recruits staff invested in using technology, offers flexible working options (e.g., telecommuting), emphasizes professional development, maintains student learning as a core value of student affairs, and operates in greater collaboration with academic affairs (p. 15).

2.1.3 Collaboration between academic and student affairs.

Collaboration between divisions of SAS and academic affairs is fundamental to enhancing the quality of the learning experience (Ausiello & Wells, 1997; Frost et al., 2010; Kezar, 2003). Academic and SAS divisions first emerged as separate units based on a reallocation of resources distinguishing inside- and outside-the-classroom activities.

Faculty were primarily responsible for student learning inside-the-classroom and non-faculty personnel supported outside-the-classroom activities (i.e., personal and social development). As a result, 'learning' has traditionally been seen as the sole responsibility of academic faculty although research has shown that mutually reinforcing social and academic experiences have a positive influence on intellectual growth and development (Chickering & Reisser, 1993; Pascarella & Terenzini, 2005). SAS professionals have attempted to reframe their role as educators by focusing on student learning in addition to service delivery, since the 1930s (Fried, 2012). Despite these efforts, some argue that the divide between the divisions of SAS and academic affairs persists as a result of misperceptions, alienation, and competition between these units for institutional resources (Kezar, 2003). Fried (2012) suggests that the barrier between divisions of SAS and academic affairs is predicated on fundamental philosophical and pedagogical differences. SAS professionals typically view teaching and learning as a constructivist process focused on experience and reflection. In contrast, traditional academic approaches that reflect the positivist paradigm emphasize "information transfer, repetition, and application but not personal phenomenology or meaning making" (p.17). Fried (2007) points to evidence supporting the position that learning occurs across all domains (e.g., intellectual, social, emotional, physical, spiritual and vocational) and argues that academic and SAS professionals are key partners in all student learning.

The impact of globalization and technology on the economic and educational landscape also demand new approaches to learning. The evolution of information and communication technology, the rapid pace of technological change, the high cost of post-secondary education, and the demand for quality programs are all factors driving post-

secondary institutions to examine the quality of their programs as well as the quality of the overall learning experience they provide. Watson (2008) contends that competition among institutions for post-secondary students will be won based on the quality of the student experience provided both on-campus and online. Integration of inside- and outside-the-classroom activities is a key strategy that puts the student at the centre of learning experience and creates a "seamless" learning environment requiring collaboration between divisions of SAS and academic affairs (Coleman, Little & Lester, 2006; Frost et al., 2010; Kezar, 2003; Núñez, 2012).

A partnership can manifest in a multitude of ways including formal organizational structures (e.g., learning support centres, academic support and advising centres), curricular innovations (e.g., service learning opportunities), and programmatic activities (e.g., orientation and leadership programs) that are steered by joint committees of academic and SAS professionals (Coleman et al,, 2006). In an online learning environment where students need the same, if not more support than students studying in face-to-face environments, the demand for student-centred support is ubiquitous and faculty teaching online courses are often the primary contacts for students (Crawley & Fetzner, 2013). A strong partnership presents the potential for greater knowledge sharing between SAS divisions and academic affairs leading to clearer information and more effective referrals for faculty, staff and students. SAS professionals and academic affairs may also partner on ways to maximize the institution's learning management system (LMS) and broaden the learning experience by embedding access to supports in online course design. This type of approach creates opportunities for students to have meaningful and timely contact with faculty and SAS professionals through synchronous

and asynchronous LMS features including video conference, chat, and discussion boards (Crawley & Fetzner, 2013).

Technology plays a critical role in facilitating institutional collaboration. Although SAS divisions and academic affairs are typically structured in silos independent of each other, access to student information across academic and student success systems can begin to breach these barriers by sharing key insight about student progress and performance. EDUCAUSE, a non-profit organization focused on advancement in higher education, presents a concept for system integration based on a "holistic approach to sharing the responsibility of student success" that connects education planning, progress tracking, advising and counselling, and early-alert systems cutting across "traditionally discrete units" to optimize the use of technology in teaching and learning, and improve student outcomes (Brooks, 2015, p.3). The depth and breadth of knowledge shared between SAS divisions and academic affairs, anchored by their common interest in student learning, and supported by a comprehensive digital ecosystem has the potential to significantly enhance the student experience.

Learning analytics is an emerging field of educational research and is defined by some researchers as large amounts of data gathered from course management and student information systems to manage student success by focusing on student learning behaviours (van Barneveld, Arnold & Campbell, 2012). While the role of analytics in higher education is still being contemplated, there is an understanding of its value in key areas of continuing concern to the post-secondary sector, namely, recruitment and retention. As mentioned previously, retention in online programs tends to be significantly lower than traditional, face-to-face programs, and puts the quality of online programs into

question (Boston & Ice, 2011; Hall, 2011; Heyman, 2010; Hirner & Kochtanek, 2012; Simpson, 2003). Since the mode of learning for online students is primarily computer mediated, the role of learning analytics in understanding the factors associated with retention and persistence in online programs seems promising.

2.2 Online Student Experiences

Most students today come to post-secondary education with the expectation that they will be able to engage in the learning process, interact with their peers, and access services through technologies that are personal, service-oriented, and foster a sense of community (Crawley, 2012; Strange & Banning, 2015; Watson, 2008). Scott, Sorokti, and Merrell (2016) distinguish Web 2.0 technologies by their collaborative characteristics and capability to incorporate user-generated content, highlighting the potential for important innovation in education "by promoting self-directed learning, creativity, and collective intelligence" (p. 75). However, while informal and self-directed study are increasingly common practice in online learning, higher education institutions have been slow to integrate these methods, persisting with formal, closed course management systems as the primary learning experience platform.

The impact of the college or university experience on students has been well researched and documented (Astin, 1984; Bean & Metzner, 1985; Pascarella & Terenzini, 2005; Tinto, 1988). In 2008, Watson argued that the 21st century student experience is the most important element of success for students and institutions, in particular due to the competitive climate among post-secondary institutions waged primarily on the basis of the quality of support for students, and the overall student experience. An institution's ability to capitalize on Web 2.0 technologies in crafting superior student experiences

begins with their "virtual face" (Hornak et al., 2010; Jones & Meyer, 2012). Access to web-based information and support services is critical for students studying at a distance or online as these students likely partake in this mode of study with the expectation that travel to the campus will not be required. The needs and expectations of all learners, regardless of their mode of study, are served by making information and services more accessible online (Crawley, 2012; Hornak et al., 2010; Jones & Meyer, 2012, Shea, 2005). However, institutional websites have been found to be lacking in web-based information and services for distance and online students. Jones and Meyer (2012) evaluated 40 institutional websites and found that online support services for students were not only difficult to find, but also tended to cater to on-campus populations where access to services usually required a visit to campus for a face-to-face interaction.

Cultivating meaningful experiences that meet the needs and expectations of today's learners requires a deeper understanding of online student characteristics, their perceptions of online education, and the factors that influence their experience. (Crawley, 2012; Lee & Tsai, 2011; Motteram & Forrester, 2005). Historically, students elected to pursue online or distance learning opportunities as a result of factors preventing them from attending on-campus such as incompatible work schedules, disability, or family obligations. Therefore, the online student demographic tended to skew toward non-traditional or adult learners (Crawley, 2012). While these factors are still legitimate influences on the decision to choose online learning options today, they are no longer solely the domain of the non-traditional learner as more traditional-aged students (i.e., 18 to 24 years old) are splitting their time between study and work, and therefore, expect more flexible learning options (Shea, 2005). Beyond the value of online learning as a

convenient, flexible option for those managing competing priorities, Pullan (2009) points to the Millennial generation as a growing consumer of online education as a preferred learning mode on the basis that it is more aligned with their digital skills, in addition to convenience and flexibility.

While the online student population is diversifying, the adult learner remains a majority constituent (Boston & Ice, 2011). Distinguishing characteristics of adult online learners include, in particular, their capacity to engage in self-directed learning and their ability to demonstrate high levels of internal motivation (Pullan, 2009). Fostering motivation is key to effective teaching and learning, resulting in student satisfaction and academic achievement (Hartnett, 2016; Kim & Frick, 2011). Simpson (2012) argues that students studying by distance are particularly vulnerable to loss of motivation. Simpson also contends that institutions need to be proactive in reaching out to these students as they may be less likely to take that initiative on their own. Although research on the subject is limited, studies focused on motivation in web-based learning environments identify factors that influence student motivation including those related to instructional design, learner support, self-efficacy, autonomy, learning preference, and sense of belonging (Hartnett, 2016; Kim & Frick, 2011; Street, 2010). Motivation has been identified as a key factor in cultivating sense of community (Hartnett, 2016). Kuong's (2015) study of adult students' perceptions of online education considered motivational factors and the influence of sense of community on their experience, which showed that a lack of social connection may decrease participants' satisfaction with online learning and impact their perception of the quality of online learning. These findings validate results of research with online graduate students conducted by Kim, Liu, and Bonk (2005),

which showed positive correlations between students' satisfaction and their sense of community in the class as well as at the school level.

Satisfaction with online study is often expressed in terms of its convenience and flexibility. However, students studying online also share concerns and anxieties with regard to adapting to a new learning environment, balancing priorities, and feelings of isolation (Motteram & Forrester, 2005). Research on online orientation programs highlights their value in reducing student anxiety by sharing key information and expectations, fostering a sense of identity as a student, as well as a sense of belonging to the institution (Motteram & Forrester, 2005). Student support is recognized as a key component of quality online learning experiences (Heyman, 2010; Nichols, 2010; Pullan, 2009; Zawacki-Richter, 2009). Designing services that promote development of the student leads to meaningful student learning. However, comparable levels of student success between on-campus and online programs may not be fully realized until equitable access to the full complement of services is made available to all students, regardless of the mode of learning (Fried, 2012; Pullan, 2009; Taylor & Holley, 2009). Although the focus of online support and service development has been on areas delivering "quick wins" (e.g. administrative transactions), online students derive benefit from the full suite of supports, including advising and counselling, whether they are aware of those benefits or not (Nichols, 2010). Nichols' (2010) research suggests "students are sensitive to a lack of support services but not the presence of support services – even where those support services make a demonstrable difference to student outcomes" (p. 106). Nichols also argues that student support services "make a positive and measurable contribution to student retention" (p. 106).

2.3 Online Student Retention

Student retention in traditional, face-to-face programs has been widely studied, but research focused on retention of students studying online is comparatively limited (Boston & Ice, 2011). What is known about retention in online programs is that it is typically lower than traditional face-to-face programs. Some researchers state the rate of attrition in online programs to be anywhere from 10 to 50 percent higher than traditional programs (Aragon & Johnson, 2008; Clay, Rowland & Packard, 2008; Herbert, 2006; Simpson, 2012; Street, 2010). Increased growth in online programs and high attrition rates has raised questions about the quality of online learning programming and instruction (Boston & Ice, 2011). A solid understanding of online and distance education is growing, but is still limited, particularly in the areas of retention, persistence, and satisfaction. Research on areas considered priorities for developing a better understanding of online retention issues include ongoing access to comprehensive student support services (e.g., financial aid, advising, counselling, and tutoring), as well as interaction and communication in learning communities as important topics for exploration regarding their impact on online retention (Heyman, 2010; Zawacki-Richter, 2009).

The complexity of factors associated with retention also varies between online and traditional learning environments. Research on retention in traditional, face-to-face learning environments often points to characteristics such as gender, secondary school performance, and socio-economic status as being of particular influence with regard to student persistence (Herbert, 2006). Retention in online programs has been found to be influenced by factors related to a student's sense of belonging and engagement,

motivation and self-efficacy, course structure and design, support at home and at school, and family and work conflicts (Ali & Leeds; 2009; Boston et al., 2010; Herbert, 2006; Nichols, 2010; Simpson, 2012; Street, 2010). The differentiation between online and tradition learning environments supports the position of researchers who contend that online students ought to be viewed as a unique population in need of new models and theories that more accurately reflect retention and persistence online (Crawley, 2012; Morris & Finnegan, 2008). Traditional retention theories were developed prior to the establishment of online and distance learning. While the fundamental tenants of these theories remain an important foundation for new research, it is worth noting their limitations with respect to changes in post-secondary education due to economic, social, political, technological, and global factors (Melguizo, 2011; Meyer, 2013).

Tinto's (1988) interactionalist model of student departure characterizes student persistence as a three-phase process involving: 1) an individual separating or "disassociating" from one community (e.g., high school, family) in order to join another (i.e., college), 2) transitioning to the new norms and values of the new college community, and 3) integrating into the college community through both social and academic systems. Academic and social integration are emphasized as primary means of establishing connections with faculty and students, as well as commitment to the institution (Braxton, Hirschy & McClendon, 2004). According to Tinto (1988), departure is related to the experience a student has in traversing these phases, where their relative lack or perceived lack of success typically leads to departure. Milem and Berger (1997) draw similarities between Tinto's theory of student departure and Astin's (1984) theory of involvement on the basis of their common focus on student engagement in college

experiences, interaction with academic and social systems, and students' perceptions of those interactions as key factors influencing persistence.

The process of social integration in Tinto's model offers some degree of congruence with factors in online learning that point to sense of belonging as a contributor to persistence among online students. However, Meyer (2013) suggests that Tinto's conceptualization of social integration focuses on primarily on-campus, face-to-face interactions reflective of a traditional, residential experience. In online learning environments, sense of belonging and social interaction is largely cultivated through digital and web-based media. Meyer (2013) also argues that the process of disassociation from one's community to become connected to the college community, described in Tinto's model, may be less valid for online audiences as a result of being largely made up of adult and non-traditional students for whom the support of family and maintaining existing community connections is also important to student success (Holder, 2007). Tinto's model has also been criticised for a lack of supporting empirical evidence. An assessment of the model by institution type revealed limited empirical support for Tinto's theory in two-year colleges, commuter colleges, or liberal arts colleges, and assessment of academic integration in residential colleges returned inconclusive findings (Braxton, Hirschy & McClendon, 2004).

Bean and Metzner's (1985) model of non-traditional undergraduate student attrition, although it was also developed prior to online learning, may offer a more promising model for understanding online student persistence. In this model, non-traditional students are described as non-residential (i.e., not living on campus), older (i.e., 25 years or older), more mature, and self-controlled, more likely to study part-time,

and, as a result, less likely to experience the influence of socialization. By way of comparison, online learners are often characterized as older, adult learners with a higher degree of self-discipline, and little opportunity or desire to visit a campus for face-to-face interactions with peers, instructors, or staff, therefore, socialization is most likely to be cultivated online (Crawley, 2012; Simpson, 2012). Bean and Metzner's model de-emphasizes socialization and elevates academic integration reflecting the commitment of non-traditional students to learning as a means of achieving career and professional goals. This model acknowledges membership in one's existing community (e.g., family, friends, work) as an important source of encouragement and motivation, and it places greater emphasis on the influence of external factors such as finances, and competing priorities (Meyer, 2013). Bean and Metzner's model is consistent with many characteristics of online learning, and online learners. However, current research on online learning experiences suggests that social interaction and developing a sense of belonging to a learning community are important factors in persistence and satisfaction among online students (Boston et al., 2010; Heyman, 2010).

Garrison, Anderson and Archer's (2000) CoI framework posits effective learning occurs online as a result of the interplay of teaching, social, and cognitive presence within a learning community. Meyer (2013) argues the CoI framework provides a model that can enhance understanding of retention and persistence issues in online programs by gaining a better understanding of the approaches that lead to meaningful learning outcomes in online environments. The CoI framework will be addressed in more depth following a discussion of online learning communities.

2.4 Online Learning Communities

The value of community building in online environments to enhance student satisfaction and learning is linked to increased emphasis on collaborative-constructive learning approaches (Akyol & Garrison, 2011a). Akyol and Garrison (2010) argue "constructivist approaches and community are necessary to create and confirm meaning and are essential to achieve critical thinking and self-directed learning" (p. 53). The terms *virtual learning community* and *online learning community* seemed to be used interchangeably in the literature. For the purpose of this discussion the term *online learning community* will be used.

A variety of definitions for online learning communities can be found in the literature (Palloff & Pratt, 2007; Sadera, Robertson, Song, & Midon, 2009). Common defining elements include: a) a group or membership who have a shared sense of purpose, b) who experience a sense of belonging, and c) who interact respectfully with both content and participants in a trust-based environment (Sadera et al., 2009). Palloff and Pratt (2007) distinguish an online *learning* community from an online community (e.g., listserv or online group) on the basis of evident indications of: a) active interaction among participants and with the course content, b) student-to-student collaboration, c) socially constructed meaning reached through discussion, d) sharing of resources, and e) expressions of support and encouragement shared among participants.

Fostering the development of online learning community requires facilitation and encouragement of communication, collaboration, interaction, and participation (Lock, 2007). Enhancements in Web 2.0 technologies (e.g. social media) have been transformative for online education by providing greater capacity for communication,

personalization, collaboration, and the incorporation of user-generated content in the learning process (Dabbagh & Kitsantas, 2012; Scott, Sorokti & Merrell, 2016). The integration of social media as a teaching and learning tool has led to "pedagogical transformations where the community is the curriculum rather than the path to understanding or accessing the curriculum" (Dabbagh & Kitsantas, 2012, p. 4).

Most research on online community focuses on the in-class experience, in which sense of identity and belonging is developed within the class, and engagement is described primarily in terms of interactions between students and instructors. However, cultivating community both inside and outside the online classroom may reduce online learners' sense of isolation and have a positive impact on student motivation (Crawley, 2012; Hartnett, 2016). Boston and Ice (2011) suggest that interactions with administrative staff and offices, as well as other students and faculty may also impact student engagement. Scott et al. (2016) suggest extending online community beyond the boundaries of the learning management system (LMS), which is typically the domain in which online learning is delivered, can enhance the learning experience by connecting informal and formal learning process, and engaging with people and content outside the confines of the 'classroom'.

Community building outside of the classroom can also be an important way to help online students feel connected to their program and their institution. Using Web 2.0 technologies to cultivate community outside the classroom can be accomplished using social media as a platform for advising, and as a means of connecting students based on shared goals or common activities such as career exploration and resource sharing (Booth & Esposito, 2011; Richmond, Rochefort & Hitch, 2011). The CoI framework, discussed

in the section that follows, situates community as a central construct of meaningful online learning experiences.

2.5 Community of Inquiry Framework

The community of inquiry (CoI) framework, developed by Garrison, Anderson and Archer in 2000, responded to advances in technology that introduced new ways of delivering learning opportunities through computer-mediated communication which required new theoretical perspectives. The development of this framework marked a shift from traditional distance education models in which students work independently from each other to a new learning model in which technology enables a community of inquiry (Garrison, Anderson & Archer, 2010). Some researchers have argued that the theoretical foundation of the CoI framework is not sufficiently developed to support the model or it's central purpose, articulated as the presence of indicators pointing to deep and meaningful learning (Rourke & Kanuka, 2009; Jézégou, 2010). Clarification of the framework's central purpose points to its focus on the processes and approaches that lead to worthwhile learning experiences rather than measurement of learning outcomes themselves (Garrison, Cleveland-Innes & Fung, 2010). Despite these criticisms, the CoI framework is arguably one of the leading models guiding online teaching and learning research in higher education (Shea et al., 2010). Central to the CoI model is the view of inquiry as a social activity and its predication on learning philosophies consistent with collaborative constructivism and deep-learning approaches (Garrison, Anderson et al., 2010; Garrison, Cleveland-Innes et al., 2010;). Primarily, this framework was developed to "define, describe and measure the elements of a collaborative and worthwhile educational experience" (Garrison, Anderson et al., 2010, p.6), in which the interaction

among three learning elements, namely cognitive presence, social presence, and teaching presence, is essential (see Figure 2.5.1).

Figure 2.5.1. Community of Inquiry Framework - Elements of an Educational Experience

Figure 2.5.1. From Garrison, D. R., Anderson, T., & Archer, W. (2000). "Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education", *The Internet and Higher Education, 2,* (p. 88). Copyright 2000 by Elsevier Science Inc. Reprinted with permission.

Garrison and Arbaugh (2007) highlight a lack of theoretical frameworks focusing on the complexities of the online learning environment. The CoI framework (Garrison et al., 2000), cited more than 3000 times (Google Scholar, June 2016), is increasingly seen as a valuable tool to develop high-quality online education by understanding, systematically, the dynamics of student engagement and learning in online environments through the interplay of the three presences (Garrison & Arbaugh, 2007; Shea & Bidjerano, 2008). These core constructs are described below in terms of their elemental role in the CoI framework, as well as their associated categories and indicators.

2.5.1 Cognitive presence.

Garrison et al., (2000) describe cognitive presence as the degree to which participants of a learning community are able to construct and confirm meaning through sustained reflection and discourse. Consistent with critical thinking outcomes, the structure of cognitive presence is defined in terms of a practical inquiry model consisting of four phases including the triggering event, exploration, integration, and resolution (Garrison, Anderson et al., 2010; Garrison & Arbaugh, 2007). These phases serve as the categories under which examples of cognitive presence indicators are organized. The triggering event is indicated by the presentation or identification of a problem or dilemma. Exploration involves the use of a variety of information sources and techniques (i.e., discussion, reflection) to explore the problem either independently or collaboratively. Integration involves constructing new meaning based on exploration of the problem and demonstrates higher-level critical thinking. Resolution is also a higher-level thinking activity involving the application of new learning to educational or work settings (Garrison & Arbaugh, 2007).

Cognitive presence is essential to knowledge development and is influenced by teaching and social presence, especially with regard to higher-level thinking categories such as integration and resolution where more advanced teaching activities are required as well as strong social presence indicators (i.e., open communication and group cohesion) (Garrison & Arbaugh, 2007). Akyol and Garrison (2011b) conducted a mixed method study with 27 graduate students to review higher-order learning processes and outcomes supporting cognitive presence in online and blended collaborative learning environments. Their findings showed cognitive presence to be high in both environments particularly the integration category, which was attributed to course design (i.e., teaching presence) that encouraged progression toward higher levels of cognitive presence.

2.5.2 Social presence.

Social presence is defined as "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop interpersonal relationships by way of projecting their individual personalities" (Garrison, 2009, p. 352). Described as a mediating factor between teaching and cognitive presence (Garrison, Cleveland-Innes et al., 2010), the social presence construct features indicator categories including *affective expression* (i.e., forming distinct impressions of others, developing a sense of belonging by getting to know others, and engaging in web-based social interaction); *open communication* (i.e., interacting comfortably with other participants, and in group discussion through online media); and *group cohesion* (i.e., developing a sense of trust among participants, ability to express individual points of view, and developing a sense of collaboration) (Akyol & Garrison, 2011a; Garrison, 2009; Shea & Bidjerano, 2012).

Higher levels of social presence fostered by activities enhancing comfort interacting online and a sense of belonging to a group (i.e., teaching presence) have a strong correlation to cognitive presence (Shea & Bidjerano, 2012). Social presence is the vehicle through which the collaborative-constructivist philosophy that grounds the CoI framework is made evident. The collaborative nature of a community of inquiry elevates the learning process beyond the basic acquisition of information and facilitates knowledge co-creation, critical inquiry, and meaningful learning (e.g. cognitive presence) (Akyol & Garrison, 2011a; Garrison et al., 2000; Garrison & Arbaugh, 2007; Joo, Lim, & Kim, 2011; Shea & Bidjerano, 2012).

2.5.3 Teaching presence.

Garrison et al. (2000) characterize teaching presence as the "binding element in creating a community of inquiry" (p. 96). This contention is supported by Ke's (2010) findings, which also suggest that "teaching presence should be the catalyst that initiates the community development process" (p. 818). The function of teaching presence in the CoI structure is to support cognitive and social process through effective design, facilitation and direction leading to meaningful learning outcomes. Teaching presence is further described in terms of three defining components: 1) *instructional design and organization,* which refers to the planning and design of "structure, process, interaction and evaluation aspects of the online course" (Garrison & Arbaugh, 2007, p. 163); 2) *facilitating discourse,* which refers to the instructor's role in encouraging and enabling interaction that engages participants in the exploration of ideas and cultivates of sense of community among participants; and 3) *direct instruction,* which refers to the instructor's role in sharing subject matter knowledge and providing intellectual leadership

demonstrated, in part, by facilitating reflection and through the provision of timely and meaningful participant feedback (Garrison & Arbaugh, 2007).

Teaching presence is an important determinant of student satisfaction, perceived learning, and sense of community (Garrison & Arbaugh, 2007; Garrison, Anderson et al., 2010; Wang, Chen, & Liang, 2011). Although, Garrison et al. (2000) identify the instructor as the primary agent responsible for cultivating teaching presence, it is also noted that this role could be played by any participant in a community of inquiry. In fact, some researchers argue that teaching presence defined in terms of design and organization, facilitation, and direct instruction, should be broadened to reflect greater variation in the role of the instructor (Morgan, 2011; Wang et al., 2011). Wang et al. (2011) describe the role of the instructor as designer, host, reporter/speaker, summarizer, evaluator, and counsellor. While Morgan (2011) argues that the teaching presence construct defined in relation to the online context is limiting and suggests that the role of the instructor be positioned as a negotiator of interactions within a mediated context. This view is expanded further by Diaz (2013) who presents a perspective of the CoI framework, beyond educational environments, as a tool for guiding knowledge management in the workplace. Diaz suggests that teaching presence in the workplace can be understood as *knowledge production and dissemination*, which identifies the knowledge worker as both teacher and learner based on the expectation that they both contribute to and consume knowledge.

The centrality of teaching presence to the development of a community of inquiry is supported by Ke's (2010) findings, which suggest that teaching presence stimulates community development. Activities that foster collaboration and online interaction

contribute to the development of a sense of community as well as increased social presence (Garrison & Arbaugh, 2007).

The CoI framework has been shown to be a valid model to understand, design, and assess online learning processes leading to meaningful learning (Arbaugh et al., 2008; Shea & Bidjerano, 2009; Vaughan, 2013). Some researchers argue that the CoI model is particularly suited to the support of adult learning in online environments on the basis of its congruence with adult learning principles and theories (Akyol & Garrison, 2010; Ke, 2010; Ke & Xie, 2009). Characteristics of high-quality online learning experiences that reflect modern adult learning theories and are components of significant or deep learning, include: a) interaction and collaboration, b) connecting new knowledge with prior learning, c) reflection, d) self-regulation, and e) sense of community (Ke, 2010; Ke & Xie, 2009). These components are consistent with the collaborative-constructivist philosophies and approaches emphasized in the CoI framework. Akyol and Garrison (2010) contend this makes the CoI process model aptly suited for the creation of "effective adult online learning communities by meaningfully integrated and combining teaching, social and cognitive presences" (p. 64). Ke's (2010) study of adult online learning experiences suggests that the creation of a community of inquiry for adults studying online is primarily the result of generating effective teaching presence that reinforces cognitive and social presence. Further findings in Ke's study point to a positive relationship between a stronger sense of community and "more knowledge-constructive interactions" (Ke, 2010, p. 819).

As enrollments in online education grow, institutions continue to struggle with significantly higher rates of attrition compared to face-to-face learning environments. The complexity associated with online student retention notwithstanding, attrition has been attributed to factors such as low levels of academic preparedness and confidence, feelings of isolation, and poor online course design (Traver, Volchok, Bidjerano, & Shea, 2014). The CoI framework presents a potential model to improve our understanding of online student retention and persistence (Boston, et al., 2010). In a study utilizing the CoI model with more than 709 online university student participants, cognitive presence was found to be a significant predictor of satisfaction, along with teaching and social presence (Joo, Lim, & Kim, 2011). A study of the relationship between indicators of the CoI framework and student persistence, conducted with more than 28,000 student respondents, revealed that 21 of the 34 CoI indicators were statistically significant predictors of retention. Of the 21 items, eight were social presence, nine were cognitive presence, and four were teaching presence (Boston, et al., 2010). Boston et al. suggest "projections of social presence in general and affective expression in particular are important determinants for persistence in online education" (Boston, et al., 2010, p. 12).

Most prominent theories on retention, including Astin's (1984) involvement theory, Tinto's (1988) student departure theory, and Bean and Metzner's (1985) model of non-traditional undergraduate student attrition, were conceptualized prior to the development of online learning (Meyer, 2013). While the modern learning context, shaped by the influence of technology, may strain the validity of these 30-year-old theories, there are comparable principles that seem to fit with the CoI framework. For example, some overlapping characteristics can be found between the structure of Tinto's

student departure theory based on academic and social interaction and the CoI constructs of social and teaching presence (Meyer, 2013). Meyer (2013) argues that the CoI framework could be used to advance, improve, and maximize the strengths of existing retention theories for an online learning environment.

2.6 Summary

Research into areas of online learning are growing. However, existing literature tends to focus on the exploration and development of the online classroom experience and instructional design with very little attention paid to the role of SAS. The traditional role of SAS centres is supporting the growth and development of students and is grounded in human development and learning theories. Online learning continues to grow and evolve in response to student demand, and as a reflection of technological advancements that allow for greater collaboration and self-direction. The role of SAS in this changing learning landscape demands re-imagination to remain relevant and to meet the needs of post-secondary students regardless of their learning mode. Student supports are seen as a critical component in the design of high quality online learning programs. However, high attrition rates compared to on-campus programming have been met with pointed questions with respect to program quality. Retention in online learning programs continues to be a challenge for institutions, partly due a limited understanding of the complexity of factors influencing persistence.

Greater collaboration between SAS divisions and academic affairs based on a shared responsibility for student learning, is highlighted as vital to the creation of a seamless learning environment where students engage in consistent experiences across all learning platforms. The cultivation of community both in-class and as part of the larger

institution is an important vehicle through which students develop a sense of belonging. Feelings of isolation and anxiety are typically attributed to online experiences where opportunities for connection with others is limited. Taking advantage of Web 2.0 technologies that offer tools to foster connections with others, requires improved understanding of the online experience so the design and assessment of learning activities is effective and meaningful.

The CoI framework is designed to help educators understand and develop approaches leading to worthwhile, meaningful online and blended learning. Although it's inception is based on maximizing computer mediated communication, in particular video conferencing in the context of the classroom experience, the application of the CoI model in other contexts is now being explored (e.g. the workplace). This study applies the CoI model to outside-of-the-classroom experiences by examining the interactions of online students with SAS professionals and programs, and understanding the impact of those experiences in the context of the core elements of the CoI framework (i.e., cognitive, social, and teaching presence). Chapter four details the mixed method research design that guides this study, as well as the specific approaches to data collection and analysis.

Chapter Three – Methodology

This study is designed to better understand to role of student affairs and services (SAS) in cultivating community in online learning environments by using the community of inquiry (CoI) framework to examine the experiences of online learners.

This research will focus on four key questions:

1) What are the experiences of online learners using student support services?

2) What impact do these experiences have on the overall educational experience of online learners?

3) How do online students perceive the nature and value of community in an online learning environment?

4) What impact do student support services have on the development of a community of inquiry?

This study is conducted by a single investigator. As such, a discussion of their professional background and motivations in conducting this research is pertinent to the reader's interpretation of this study. The investigator has spent more than ten years in post-secondary education in a variety of positions within SAS units as well as in academic affairs. At the time of this study, the investigator was employed at the community college in Nova Scotia where the research was conducted. The investigator is primarily motivated by experiences working with students, as well as personal experiences navigating post-secondary education as a student in both on-campus and online learning environments. Being able to recognize factors influencing motivation and persistence by way of personal experience with feelings of isolation and frustration, as well as positive opportunities to engage with peers and faculty online, allows the

investigator draw on insight from the both the perspective of the student and that of a SAS professional in the crafting of this study.

This chapter will discuss the mixed methods research approach used in this study, as well as the process to collect and analyze both quantitative and qualitative data.

3.1 Mixed Methods Research Design

The research objectives of this study are explored using a mixed methods approach in which both quantitative and qualitative data are collected. Mixed methodology is a relatively new research paradigm that first emerged in the early 20th century as an alternative to discrete quantitative or qualitative approaches (Denscome, 2008). Mixed methodology has its philosophical foundation in pragmatism, which emphasizes a holistic view of research by integrating a variety of perspectives to better understand a research problem (Creswell, 2012; Hesse-Biber, 2010; Leech, Dellinger, Bannagan & Tanaka, 2010). Some researchers point to challenges with respect to true data integration and the impact that may have on the interpretation of results as a limitation of this approach. However, others contend that the degree of integration should not overshadow the potential insights that might be gained by having both quantitative and qualitative findings (Bryman, 2007).

The CoI framework underpins this study and guides the examination of online learning experiences from an outside-the-classroom perspective. Since comparable studies using the CoI framework in this context are limited, an embedded or two-phase mixed method approach is used to provide richer data from which a deeper understanding of the learner experience and the impact of SAS on the development of community can be drawn. According to Creswell (2012), “the purpose of embedded design is to collect

quantitative and qualitative data simultaneously or sequentially, but to have one form of data play a supportive role to the other form of data" (p. 544). The embedded approach typically positions quantitative data as the primary source and qualitative data is collected secondarily to support or enhance quantitative findings. For the purpose of this study, the embedded approach was implemented with a focus on quantitative data as the primary source and qualitative data as a secondary source of information (see Figure 3.1.1).

Figure 3.1.1. Mixed Method Embedded Design Model (QUAN→qual)

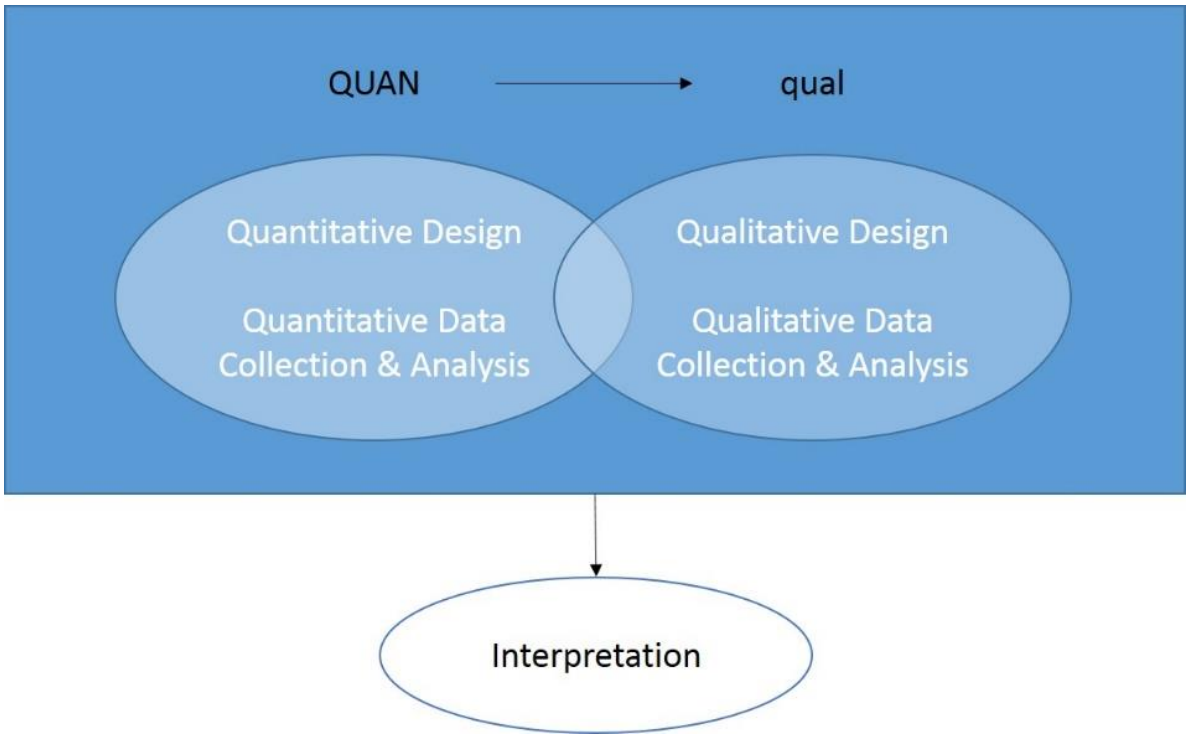


Figure 3.1.1. This depiction of embedded mixed method design used in this study illustrates the prominence of quantitative data compared to qualitative data, the largely sequential manner in which the data sets were collected and analyzed, and the subsequent interpretation of the results. Adapted from Creswell, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (p. 541). Boston, MA: Pearson. Copyright 2012 by Pearson Education, Inc.

3.2 Data Collection

Two sources of data were collected sequentially. Quantitative data was collected first through an online survey followed by individual participant interviews to collect qualitative data. This study targeted students studying exclusively online at a public community college in Nova Scotia, specifically students enrolled in a two-year early childhood education diploma program, a one-year office administration certificate program, and a two-year library information technician diploma program. These programs were selected because the delivery is entirely online, and with the expectation that this would increase the likelihood that students would access services at a distance.

The community college has a total enrolment of approximately 24,000 students in variety of programs in areas such as trades, technology, business, health and human services, as well as access programs designed as pathways to post-secondary education. The community college reported that the largest percentage of the student body in 2010 (35%), was in the age range of 20 to 24 years old. At that time, a further 27 percent of students were between the ages of 25 and 39 years old, 27 percent were under 20 years, and 11 percent of students were over 40 years old (Institutional records, 2013). The program offerings at this community college are primarily delivered in a traditional, on-campus, face-to-face model. Although, several fully online programs are offered in the areas of business and health and human services, in which a student can complete all required courses through online study. A few blended delivery programs, primarily in trades areas, are also offered in which students are required to take a combination of online and on-campus courses (Institutional records, 2016).

With the permission of the community college, participants were recruited electronically through an announcement placed in each of the online course sites using the college's course management tools. Informed consent was ensured by implementing programming that limited access to the survey to only those who had read the information and indicated consent electronically by clicking the consent button.

An incentive, donated by the community college, was also used to help encourage participation. Respondents to the online survey were entered into a draw, with their permission, and after the survey submission expired the draw was conducted and the winner received a digital video camera. Online survey respondents were made aware that their participation was voluntary and would have no negative impact on their studies at the community college. They were also informed that they could withdraw from the study at any point without negative consequences. Those who completed the online survey were asked to indicate their interest in participating in the follow-up qualitative data collection conducted using individual telephone interviews. These participants, chosen at random, were again advised of the voluntary nature of their participation and that they could choose to decline answering specific questions or withdraw their participation entirely at any point without negative consequences.

The ethics committee at Memorial University (ICEHR) and the research ethics board at the public community college in Nova Scotia each conducted independent evaluations of this study ensuring that the safety and well-being of participants were protected.

3.2.1 Quantitative.

Quantitative data was collected using an online survey designed to reflect the three core elements of the CoI framework (i.e., cognitive, social and teaching presence) as well as the service context provided by the student services department at the research site. A total of 372 students were invited to participate in the study of which 67 completed the online survey for a response rate of 18 percent. The survey was adapted from the original 34-item CoI instrument by the investigator to focus on questions determined to be most relevant to experiences with student services. The adapted survey includes ten items related to cognitive presence, six items related to social presence, and eight items related to teaching presence for a total of 24 items. Respondents were asked to rate their level of agreement with statements related to each of the three presences using a five-point Likert scale ranging from strongly disagree to strongly agree. Cronbach's Alpha (α) was used to test for reliability of survey items related to each of the presences where possible results range from 0 to 1. According to this measure of scale reliability, values of 0.7 or higher are considered to be statistically reliable (Field, 2009). In this study, survey items related to cognitive, social, and teaching presences were found to have high reliability, Cronbach's $\alpha = .91, .82$, and .94 respectively.

In order to assess levels of technical competence among participants, in addition to basic demographic information, respondents were asked to rate their level of exposure to online learning environments prior to beginning their program at the community college, and their level comfort with technology before starting their program as well as after having completed some of their program. It was also important to gather information on the degree to which available services were accessed, so respondents were

asked to rate the frequency of their use and awareness of services including general advising, resume and job search advice, course registration and selection, tutoring services, workshops, personal and career counselling, disability resources and supports, library services, institutional website, institutional self-service system, and the institution's online learning website.

3.2.2 Qualitative.

Denscomb (2008) identifies various applications of mixed methods approaches in social research including for the purpose of producing "a more complete picture by combining information from complementary kinds of data or sources" (p. 272). When using multiple data sources, Creswell (2012) highlights the importance of articulating a clear rationale for the collection of secondary data. The embedded mixed methods research approach used in this study positions qualitative data as secondary data source for the purpose of producing a clearer picture of the experience of online learners using student services. The primary, quantitative data was used to evaluate student interactions with support services on the basis of the CoI framework, which consists of intersecting cognitive, social, and teaching presences to form a model of a successful educational experience. As noted in chapter two, the philosophy of the CoI framework is grounded in constructivist, collaborative, and social learning theories where the construct of community features prominently as an important facet of learning (Garrison, Anderson et al., 2010). The secondary, qualitative data was used to provide greater insight into student perceptions of community with regard to its nature, value and impact on the learning experience.

The collection of qualitative data was conducted using semi-structured interviews guided by a pre-defined interview protocol (see Appendix 3). Interview participants were recruited by asking online survey respondents to indicate their interest in participating in individual telephone interviews and then by submitting an electronic consent form. The consent form asked candidates to volunteer their contact information and preferred contact time. Permission to make an audio recording of the interview and to use direct quotations from the interview in future reporting was also collected through the consent form.

Of the 28 respondents who offered to participate in the individual interviews, six participants were chosen randomly to take part in a follow-up telephone interview. Although more interviewees would have been preferable, logistical and scheduling issues precluded more participants from taking part. The investigator conducted each of the six interviews guided by a pre-defined interview protocol. Each interview began by confirming the participant's agreement to be interviewed as well as a description of the purpose of the current study. Participants were informed that this research involved the collection of both quantitative and qualitative data and that the interview would be recorded for the purpose of transcription. Measures to safeguard the confidentiality of the data collected using secure storage methods for all digital and hardcopy recordings were also communicated. Participants were also reminded that their participation was voluntary, that their participation would have no negative impact on their studies, and they were free to withdraw from the interview and the study at any time.

After the introductory information was provided, each participant was asked six questions (see Appendix 3) over a 20 to 30-minute period to gage individual perceptions

of the nature and value of community in the online learning environment, as well as the impact of services and support on overall learning experiences. Participants were also asked to identify which services they found most valuable and to share any recommendations they had for improvements. All interviews were recorded for the purpose of transcription with the knowledge and consent of each participant.

3.3 Data Analysis

The experiences of online learners in relation to their interactions with student services and the impact of those services on the development of a community of inquiry were analyzed using quantitative and qualitative measures. Consistent with the embedded mixed method research design, quantitative analysis was conducted first followed by qualitative analysis. Discussion and interpretation of the results are presented in chapter four.

3.3.1 Quantitative.

Quantitative data collected through the survey instrument were prepared and recoded, assigning numeric values to each response option in preparation for analysis using SPSS, a software package commonly used in social science research (Field, 2009). Tests for normality and central tendency were conducted using mean, standard deviation, skewness, as well as minimum and maximum scores. Quantitative analysis in this study focuses on examining the relationship between key independent variables represented by respondent characteristics and student support services accessed by online learners, and dependent variables represented by each of the three primary presences of the CoI model. Analysis of variance, specifically one-way independent ANOVA, were used to compare these variables and understand the relationships between these variables. Parametric and

non-parametric bivariate analysis (Pearson's correlation coefficient and Spearman's Rho respectively) were used to determine the nature, strength and significance of relationships between the CoI presences and the independent variables.

3.3.2 Qualitative.

Qualitative data were collected primarily through individual interviews and also from three open-ended survey questions. Content analysis, used to explore and code the data, was conducted in two parts. First, the data was analyzed to identify emergent themes using a two-step coding process (i.e., initial coding followed by focused coding). The purpose of using a coding process is to make sense of text-based data by reading through the content, identifying common phrases or sentiments using codes, and grouping sets of similar codes in to a smaller set of themes (Creswell, 2012). In this study, the text was initially examined to identify a broad set of categories, which were then grouped into a smaller number of emergent themes. These themes were attributed to the data to identify patterns in responses collected from both the individual interviews and the open-ended survey questions, which will be discussed in chapter four as part of a narrative incorporating current literature and research.

The second part of qualitative analysis involved applying the CoI coding scheme to transcript data collected through individual interviews. Table 3.3.1 describes the CoI coding scheme including categories and sample indicators related to each of the presences. A similar process as to that described above was used with the difference being the codes were pre-determined by the CoI scheme. As discussed in chapter two, the elements, categories and indicators are derived from relevant higher education literature (Garrison, Cleveland-Innes, Koole & Kappelman, 2006).

Table 3.3.1

Community of Inquiry Coding Scheme

Elements	**Categories**	**Indicators (examples only)**
Cognitive presence	Triggering event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Apply new ideas
Social presence	Affective	Expressing emotions
	Open communication	Risk-free expression
	Group cohesion	Encouraging collaboration
Teaching presence	Design and organization	Setting curriculum and methods
	Facilitating discourse	Sharing personal meaning
	Direct instruction	Focusing discussion

Note. From Garrison, D. R., Cleveland-Innes, M., Koole, M., & Kappelman, J. (2006). Revisiting methodological issues in transcript analysis: Negotiated coding and reliability. *The Internet and Higher Education, 9,* (p. 6). Copyright 2006 by Elsevier Science Inc. Reprinted with permission.

3.4 Summary

This chapter outlined the research methodology used in the current study. A description of embedded mixed method design was provided as well as a breakdown of quantitative and qualitative methods and procedures used to collect and analyze data from participants. Cronbach's Alpha was used to establish statistical reliability for the quantitative data. The CoI coding scheme for analyzing qualitative data was also presented along with the content analysis processes used to identify emergent themes. The next chapter presents the results of data analysis beginning with descriptive results. Bivariate and analysis of variance results are presented thereafter, followed by the results of qualitative analysis.

Chapter Four – Results

This study is designed to examine the experiences of online learners in relation to their interactions with student services and to investigate the impact of those services on the development of a community of inquiry. In this chapter the results of quantitative analysis are presented using primarily one-way independent analysis of variance (ANOVA), as well as bivariate correlation analysis using Pearson's method and Spearman's rho, followed by the results of qualitative content analysis. The results of qualitative analysis using both emergent thematic coding processes and the CoI coding scheme are also presented in this chapter. The reporting of results begins with descriptive statistics for the independent and dependent variables.

4.1 Descriptive Analysis

Table 4.1.1 provides descriptive statistics for the independent variables associated with quantitative data collected using the online survey. The survey respondents are predominately female (79.1%), and between the ages of 19 to 25 years, and 36 years or older (40.3% and 32.8% respectively). Most respondents have prior experience in a college or university setting (61.2%) and 68.7% had no experience in an online learning environment prior to their program at the community college. Before starting their program at the community college, most respondents characterized themselves as moderately to very comfortable with technology (43.3% moderately comfortable; 52.2% very comfortable). At their current stage of program completion, 49.3% indicated they are moderately comfortable with technology and 46.3% indicated they are very comfortable with technology. Just over half of the respondents (52.2%) indicated that they were mid-way through their program, and approximately 30% had just started.

Table 4.1.1

Descriptive Statistics for Quantitative Independent Variables

	Frequency	Percent
Female	53	79.1
Male	12	17.9
Prefer not to identify*	1	1.5
19 to 25 years old	27	40.3
26 to 30 years old	13	19.4
31 to 35 years old	5	7.5
36 years or older	22	32.8
No Prior college/university	24	35.8
Not sure if Prior college/university	2	3
Prior college/university	41	61.2
No Prior experience with online learning	46	68.7
Prior experience with online learning	21	31.3
Moderately comfortable with technology prior to program	29	43.3
Moderately uncomfortable with technology prior to program	3	4.5
Very comfortable with technology prior to program	35	52.2
Almost done program	12	17.9
Just started program	20	29.9
Mid-way through program	35	52.2

Moderately comfortable with technology now	33	49.3
Moderately uncomfortable with technology now	3	4.5
Very comfortable with technology now	31	46.3

Note. *Excluded from results due to lack of variability.

Table 4.1.2 provides statistics on the distribution of scores for this study's dependent variables (i.e., cognitive, social, and teaching presences) including measures of central tendency, variability and shape. Skewness represents the degree to which data are clustered at either the higher or lower end of the scale (Field, 2009). Measures of skewness for teaching presence (0.02) and social presence (0.05) are both negligible. A positive skew is evident for cognitive presence (1.05), but this score remains within acceptable limits given the sample size in this study.

Table 4.1.2

Descriptive Data on Community of Inquiry Presences (N = 66)

	Cognitive presence.	Social presence.	Teaching presence.
Mean	2.58	2.42	2.75
Std. Deviation	0.66	0.63	0.79
Skewness	1.05	0.05	0.02
Minimum	1.50	1.00	1.00
Maximum	5.00	4.17	4.88

Table 4.1.3 shows the results of self-reported usage of student support services by online learners collected through the online survey. Discrete student support services are grouped into four categories: 1) advising; 2) counselling; 3) learning supports; and 4) web-based resources. For the purpose of this study, the *advising* category includes services such as general advising, resume writing and job search support as well as course selection and registration. *Counselling* refers to both career and personal counselling services. *Learning supports* include disability resources and supports, tutoring services, library services, and workshops. Lastly, *web-based resources* are identified as the institution's main website, self-service systems, and the institution's online learning web pages. Responses including "very often", "often", "somewhat often", and "not very often" are combined to provide a cumulative percentage of general usage. Responses including "never" and "did not know about the service" are combined for a cumulative percentage indicating lack of use.

The data displayed in Table 4.1.3 shows web-based resources, including the institutional online learning website (97.1%), self-service (100%), and the institutional main website (98.6%), were the most used services as reported by online learners, followed closely by course registration at 92.5% of respondents. Given the nature of the learning mode, it is not surprising that online resources seem to be a primary source of support for online students. Course registration is a necessary service to access online courses since, at the time of this study, the community college did not offer self-service registration. Therefore, it is, surprising that use of this service was not reported by 100% of respondents. General program advising and library services are the next most used resources reported by 54.5% and 44.8% of respondents respectively.

The least used student support service is disability resources and supports with only 9.1% of respondents having accessed these services. It is important to note that access to disability resources at the community college typically requires formal documentation of a disability. The low reported usage of disability resources and supports may be attributed to a small number of respondents having provided the necessary documentation and may not necessarily be a reflection of the online learning experience. It may also reflect the choice of students not to disclose information related to disabilities for personal reasons. Other rarely used services reported by respondents include tutoring used by 19.6%, of which 10.6% indicated their use to be "not very often"; personal counselling used by 14.9%, of which 11.9% indicated their use to be "not very often"; and workshops used by 16.5%, of which 9.0% indicated their use to be "not very often".

A notable percentage of respondents indicated they had either never used or did not know about student support services. Under *advising*, a high percentage of respondents indicated never having used general program advising (46.3%) or resume writing and job search services (62.1%). *Counselling* services show a high percentage of respondents who have never used these services (70.1% personal counselling, 67.2% career counselling), and 12-15% who did not know about these services. The percentage of respondents indicating never having used *learning supports* ranges from 43.9% (library services), to 83.3% (disability resources and supports).

Table 4.1.3

Use of Student Support Services Reported by Online Learners

	N	Very Often	Often	Some what often	Not very often	Never	Did not know about the service
Advising							
General program advising	67	4.5%	14.9%	9.0%	16.4%	46.3%	9.0%
Resume writing and Job Search	66	3.0%	3.0%	6.1%	12.1%	62.1%	13.6%
Course registration / selection	66	16.7%	28.8%	28.8%	18.2%	6.1%	1.5%
Counselling							
Personal counselling	67	0.0%	0.0%	3.0%	11.9%	70.1%	14.9%
Career counselling	67	0.0%	3.0%	3.0%	14.9%	67.2%	11.9%
Learning Supports							
Disability resources and supports	66	0.0%	0.0%	0.0%	9.1%	83.3%	7.6%
Library services	66	10.6%	4.5%	16.7%	22.7%	43.9%	1.5%
Tutoring	66	3.0%	1.5%	4.5%	10.6%	71.2%	9.1%
Workshops	67	1.5%	1.5%	4.5%	9.0%	70.1%	13.4%
Web-based Resources							
Institutional main website	67	46.3%	26.9%	23.9%	1.5%	1.5%	0.0%
Self-service	67	50.0%	27.3%	18.2%	4.5%	0.0%	0.0%
Institutional online learning website	67	67.2%	19.4%	9.0%	1.5%	1.5%	1.5%

4.2 Bivariate Analysis of Community of Inquiry Presences

Bivariate correlation analysis is used to understand the relationships between the CoI presences (i.e., cognitive, social, and teaching presences). Two-tailed tests using Pearson's correlation coefficient were conducted, identifying the statistical significance of relationships at the $p < .001$ level. Table 4.2.1 shows teaching presence and cognitive presence to have a strong positive correlation ($r = .691$, $p < .001$). Cognitive presence and social presence are also shown to have a strong positive correlation ($r = .688$, $p < .001$). Teaching presence and social presence have a positive, but less strong correlation ($r = .497$, $p < .001$). These results are consistent with current research on CoI presences (Carlon et al., 2012).

Table 4.2.1

Correlations of Dependent Variables

		Cognitive presence.	Social presence.	Teaching presence.
Teaching presence.	Pearson Correlation	.691**	.497**	1.00
	Sig. (2-tailed)	0.00	0.00	
	N	63	62	63
Cognitive presence.	Pearson Correlation	1.00	.688**	.691**
	Sig. (2-tailed)		0.00	0.00
	N	66	65	63
Social presence.	Pearson Correlation	.688**	1.00	.497**
	Sig. (2-tailed)	0.00		0.00
	N	65	66	62

**. Correlation is significant at the 0.01 level (2-tailed).

4.3 Results of Analysis of Variance on Community of Inquiry Presences and Participant Characteristics

The following tables display results of one-way independent ANOVA testing of participant demographic characteristics items against the CoI presences. The Bonferroni correction is applied to limit false positives that may result from multiple comparisons of variables (Weisstein, 2004). Therefore, Tables 4.3.1 through 4.3.7 display significance calculated at the level of $p < .001$. Participant demographic characteristics include gender, age, previous education, prior experience with online learning, level of comfort with technology prior to the current program, current level of comfort with technology, and length of time in current program. The results in Tables 6 indicate a small effect related to cognitive presence and gender (F (1, 62) = 1.473). However, no significant effect between gender and cognitive, social or teaching presence is evident in the results. Tables 4.3.2 through 4.3.5 show similar results indicating the characteristics of age, previous education, prior experience with online learning, comfort level with technology prior to the current program, and time spent in the current program have no significant effect on cognitive, social or teaching presence, and are not related to community of inquiry.

Table 4.3.1

Analysis of Variance Results for Community of Inquiry by Gender (Q01)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Male	12	2.35	0.41	0.511	1.473	0.230
	Female	52	2.57	0.62	0.247		
Social presence							
	Male	12	2.36	0.51	0.013	0.035	0.852
	Female	52	2.39	0.62	0.365		
Teaching presence							
	Male	12	2.59	0.75	0.243	0.382	0.539
	Female	49	2.75	0.81	0.636		

Note: Participants were provided the option to choose “prefer not to identify”. The single instance of this selection was excluded for statistical reasons.

Table 4.3.2

Analysis of Variance Results for Community of Inquiry by Age (Q02)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	19 to 25 years old	27	2.42	0.57	0.694	1.636	0.190
	26 to 30 years old	12	2.92	0.97	0.424		
	31 to 35 years old	5	2.68	0.59			
	36 years or older	22	2.58	0.54			
Social presence							
	19 to 25 years old	27	2.33	0.56	0.606	1.561	0.208
	26 to 30 years old	13	2.67	0.76	0.388		
	31 to 35 years old	5	2.31	0.75			
	36 years or older	21	2.42	0.58			
Teaching presence							
	19 to 25 years old	25	2.50	0.88	1.814	3.175	0.031
	26 to 30 years old	12	3.00	0.64	0.571		
	31 to 35 years old	4	3.23	1.01			
	36 years or older	22	2.74	0.61			

Table 4.3.3

Analysis of Variance Results for Community of Inquiry by Previous Education (Q03)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Yes	40	2.68	0.68	1.224	2.973	0.058
	No	24	2.37	0.58	0.412		
	Not sure	2	3.30	0.42			
Social presence							
	Yes	40	2.50	0.65	0.542	1.377	0.260
	No	24	2.26	0.58	0.394		
	Not sure	2	2.75	0.82			
Teaching presence							
	Yes	38	2.86	0.73	1.772	2.987	0.058
	No	23	2.49	0.84	0.593		
	Not sure	2	3.65	0.53			

Table 4.3.4

Analysis of Variance Results for Community of Inquiry by Prior Online Education Experience (Q04)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Yes	20	2.52	0.54	0.134	0.304	0.583
	No	46	2.61	0.71	0.441		
Social presence							
	Yes	21	2.37	0.53	0.108	0.268	0.607
	No	45	2.45	0.68	0.403		
Teaching presence							
	Yes	18	2.61	0.76	0.472	0.745	0.391
	No	45	2.80	0.81	0.634		

Table 4.3.5

Analysis of Variance Results for Community of Inquiry by Comfort Level with Technology Prior to Current Program (Q05)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Very comfortable	34	2.59	0.66	0.511	1.177	0.315
	Moderately comfortable	29	2.52	0.67	0.434		
	Moderately uncomfortable	3	3.13	0.50			
Social presence							
	Very comfortable	35	2.38	0.63	0.235	0.582	0.562
	Moderately comfortable	28	2.45	0.64	0.404		
	Moderately uncomfortable	3	2.78	0.59			
Teaching presence							
	Very comfortable	34	2.59	0.78	0.963	1.552	0.220
	Moderately comfortable	26	2.91	0.81	0.62		
	Moderately uncomfortable	6	3.13	0.66			

Table 4.3.6

Analysis of Variance Results for Community of Inquiry by Time in Current Program (Q06)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Just started	20	2.72	0.63	0.286	0.648	0.526
	Mid-way through	34	2.55	0.60	0.441		
	Almost done	12	2.46	0.87			
Social presence							
	Just started	20	2.58	0.50	0.367	0.919	0.404
	Mid-way through	34	2.36	0.66	0.399		
	Almost done	12	2.33	0.75			
Teaching presence							
	Just started	20	2.71	0.76	0.031	0.048	0.953
	Mid-way through	32	2.76	0.88	0.651		
	Almost done	11	2.80	0.63			

Table 4.3.7 displays results of comparisons between the CoI presences and self-reported levels of comfort with technology during the current online program of study (Q07). While no significant effect is measured against cognitive or social presences, the results of comparison between teaching presence and Q07 shows some potential significance (F (2, 60) = 7.284, $p < .001$). The nature of this relationship is investigated further using non-parametric bivariate analysis, specifically Spearman's rho (see Table 4.4.1).

Table 4.3.7

Analysis of Variance Results for Community of Inquiry by Current Comfort Level with Technology (Q07)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Very comfortable	30	2.42	0.68	1.468	3.636	0.032
	Moderately comfortable	33	2.65	0.61	0.404		
	Moderately uncomfortable	3	3.40	0.35			
Social presence							
	Very comfortable	31	2.20	0.67	1.652	4.606	0.014
	Moderately comfortable	32	2.58	0.50	0.359		
	Moderately uncomfortable	3	3.00	0.83			
Teaching presence							
	Very comfortable	28	2.57	0.75	3.824	7.284	0.001
	Moderately comfortable	32	2.76	0.71	0.525		
	Moderately uncomfortable	3	4.25	0.54			

4.4 Bivariate Analysis of Community of Inquiry Presences and Comfort with Technology

Non-parametric statistical analysis was used to measure the strength and nature of the relationships between the CoI presences and reported levels of comfort with technology both prior to beginning an online program at the community college (Q05) and at the current state of program completion (Q07). Two -tailed Spearman's correlation coefficient was used to measure the size and significance of the effect at the $p < .01$ and $p < .05$ levels.

Table 4.4.1 indicates low to medium positive correlations exist between Q07 (comfort with technology now), and each of the CoI presences that are statistically significant. Both teaching and social presence are positively correlated with Q07 ($r_s = .259$, $p < .05$; $r_s = .304$, $p < .05$). Social presence is also positively correlated with Q07 ($r_s = .344$, $p < .01$). These results suggest that increasing levels of comfort with technology during an online course of study may positively influence the overall educational experience according to the CoI framework. A positive and significant relationship is also shown between comfort with technology prior to online study and during online study ($r_s = .379$, $p < .01$). Although the effect size is moderate, it stands to reason that comfort with technology prior to online study and during online study would both increase in a positive direction.

Table 4.4.1

Correlations for Community of Inquiry presences and Comfort with Technology

		Cognitive presence.	Social presence.	Teaching presence.	Q07	Q05
Cognitive presence.	Correlation Coefficient	1	.686**	.697**	.304*	0.043
	Sig. (2-tailed)	.	0	0	0.013	0.731
	N	66	65	63	66	66
Social presence.	Correlation Coefficient	.686**	1	.492**	.344**	0.11
	Sig. (2-tailed)	0	.	0	0.005	0.379
	N	65	66	62	66	66
Teaching presence.	Correlation Coefficient	.697**	.492**	1	.259*	0.233
	Sig. (2-tailed)	0	0	.	0.04	0.067
	N	63	62	63	63	63
Q07 Comfort with technology now	Correlation Coefficient	.304*	.344**	.259*	1	.379**
	Sig. (2-tailed)	0.013	0.005	0.04	.	0.002
	N	66	66	63	67	67

Q05 Comfort with technology prior to program	Correlation Coefficient	0.043	0.11	0.233	.379**	1
	Sig. (2-tailed)	0.731	0.379	0.067	0.002	.
	N	66	66	63	67	67

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.5 Results of Analysis of Variance on Community of Inquiry Presences and Student Support Services

One-way independent analysis of variance (ANOVA) was used to measure the effect of student support services (independent variables), on the three CoI presences (dependent variables). The level of significance calculated at $p < .001$ is adjusted using the Bonferroni correction method to account for multiple comparisons. As described in the previous section, discrete student support services are grouped into four categories: 1) advising, 2) counselling, 3) learning supports, and 4) web-based resources. Support services categorized as *advising* are shown in Tables 4.5.1, 4.5.2 and 4.5.3. While some effect is evident in relation to a few of the discrete advising services, this effect is measured to be statistically significant. For example, the effect statistic for teaching and cognitive presence and general program advising is higher than 1 (F (1, 61) = 7.824; F (1, 64) = 6.273), but no significance is measured related that effect. Analysis conducted on all student support services categories including advising, counselling (see Tables 4.5.4 and 4.5.5), learning supports (see Tables 4.5.6, 4.5.7, 4.5.8, and 4.5.9), and web-based resources (see Tables 4.5.10 and 4.5.11), resulted in no significant findings, indicating that support services are not related to CoI presences.

Table 4.5.1

Analysis of Variance Results for Community of Inquiry by General Program Advising (Q08)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	29	2.36	0.47	2.533	6.273	0.015
	Did not use	37	2.76	0.74	0.404		
Social presence							
	Used	30	2.38	0.53	0.092	0.228	0.634
	Did not use	36	2.45	0.71	0.0403		
Teaching presence							
	Used	28	2.45	0.72	4.449	7.824	0.007
	Did not use	35	2.98	0.78	0.569		

Table 4.5.2

Analysis of Variance Results for Community of Inquiry by Resume Writing and Job Search (Q09)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	16	2.26	0.53	2.353	5.731	0.020
	Did not use	49	2.70	0.67	0.411		
Social presence							
	Used	16	2.24	0.58	0.776	1.960	0.166
	Did not use	49	2.49	0.64	0.396		
Teaching presence							
	Used	16	2.62	0.80	0.440	0.693	0.408
	Did not use	46	2.81	0.80	0.636		

Table 4.5.3

Analysis of Variance Results for Community of Inquiry by Course Registration / Selection (Q10)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	60	2.54	0.64	0.894	2.078	0.020
	Did not use	5	2.98	0.82	0.430		
Social presence							
	Used	60	2.39	0.62	0.146	0.387	0.166
	Did not use	5	2.57	0.49	0.377		
Teaching presence							
	Used	57	2.71	0.72	0.020	0.036	0.408
	Did not use	5	2.78	1.18	0.575		

Table 4.5.4

Analysis of Variance Results for Community of Inquiry by Personal Counselling (Q13)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	10	2.33	0.59	0.756	1.753	0.190
	Did not use	56	2.63	0.67	0.431		
Social presence							
	Used	10	2.30	0.64	0.182	0.453	0.503
	Did not use	56	2.45	0.63	0.402		
Teaching presence							
	Used	10	2.40	0.78	1.440	2.329	0.132
	Did not use	53	2.81	0.79	0.618		

Table 4.5.5

Analysis of Variance Results for Community of Inquiry by Career Counselling (Q14)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	14	2.36	0.54	0.853	1.983	0.164
	Did not use	52	2.64	0.68	0.430		
Social presence							
	Used	14	2.26	0.63	0.468	1.178	0.282
	Did not use	52	2.47	0.63	0.397		
Teaching presence							
	Used	14	2.59	0.81	0.454	0.715	0.401
	Did not use	19	2.79	0.79	0.634		

Table 4.5.6

Analysis of Variance Results for Community of Inquiry by Disability Resources and Supports (Q13)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	6	2.40	0.68	0.233	0.523	0.472
	Did not use	59	2.61	0.67	0.445		
Social presence							
	Used	6	2.53	0.54	0.062	0.153	0.697
	Did not use	59	2.42	0.65	0.407		
Teaching presence							
	Used	6	2.79	0.66	0.012	0.018	0.895
	Did not use	56	2.75	0.82	0.652		

Table 4.5.7

Analysis of Variance Results for Community of Inquiry by Tutoring (Q11)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	13	2.42	0.66	0.347	0.842	0.362
	Did not use	52	2.60	0.64	0.412		
Social presence							
	Used	13	2.41	0.67	0.007	0.017	0.897
	Did not use	52	2.44	0.63	0.408		
Teaching presence							
	Used	13	2.65	1.15	0.105	0.165	0.686
	Did not use	49	2.76	0.68	0.638		

Table 4.5.8

Analysis of Variance Results for Community of Inquiry by Library Services (Q16)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	36	2.48	0.58	0.661	1.524	0.222
	Did not use	29	2.69	0.75	0.434		
Social presence							
	Used	35	2.30	0.49	1.003	2.627	0.110
	Did not use	30	2.54	0.74	0.382		
Teaching presence							
	Used	35	2.75	0.79	0.001	0.002	0.964
	Did not use	27	2.74	0.83	0.652		

Table 4.5.9

Analysis of Variance Results for Community of Inquiry by Workshops (Q12)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	11	2.22	0.48	1.673	4.012	0.049
	Did not use	55	2.65	0.67	0.417		
Social presence							
	Used	11	2.24	0.70	0.436	1.097	0.299
	Did not use	55	2.46	0.62	0.398		
Teaching presence							
	Used	10	2.49	0.69	0.807	1.284	0.262
	Did not use	53	2.80	0.81	0.628		

Table 4.5.10

Analysis of Variance Results for Community of Inquiry by Institutional Main Website (Q17)

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	65	2.59	0.66	0.082	0.184	0.669
	Did not use	1	2.30	0.00	0.442		
Social presence							
	Used	65	2.43	0.63	0.183	0.455	0.502
	Did not use	1	2.00	0.00	0.402		
Teaching presence							
	Used	62	2.75	0.80	0.015	0.024	0.877
	Did not use	1	2.63	0.00	0.641		

Table 4.5.11

Analysis of Variance Results for Community of Inquiry by Institutional Online Learning Website (Q19*)*

		N	Mean	SD	MS	*F*	*p*
Cognitive presence							
	Used	64	2.60	0.66	0.587	1.351	0.249
	Did not use	2	2.05	0.07	0.434		
Social presence							
	Used	64	2.43	0.64	0.240	0.598	0.442
	Did not use	2	2.08	0.12	0.401		
Teaching presence							
	Used	61	2.78	0.78	2.057	3.384	0.071
	Did not use	2	1.75	0.71	0.608		

4.6 Qualitative Analysis of Online Survey Responses

Participants in the online survey were asked to: 1) describe the support received from SAS, 2) identify the services they found to be most helpful, and 3) offer recommendations to improve the experience for online students. Fifty-eight of 67 total participants responded to the first question, with the largest percentage of those respondents (52%) indicating that their experience was 'good'. They characterized the support received as helpful, whether provided by a person or acquired using institutional websites. Respondents also reported that they felt able to access support when they needed it and responses to inquiries were timely.

The next largest group of respondents (29%) were categorized as having had limited or 'no experience' using SAS resources. The majority of these respondents reported either having received limited support or not having accessed SAS professionals or programs at all. These responses could be interpreted as the student choosing not to access services as illustrated in this response, "I have never used online student service", or they could be interpreted as a characterization of lack of outreach from student services as illustrated in this response, "I don't believe I have received any support from student services". Of the respondents, 19% shared experiences that were categorized as 'poor' based on reported experiences including general dissatisfaction with services, unfriendly interactions, and being re-directed to others (i.e., "the run-around"). Some respondents reported that while they hadn't actively sought out SAS resources, they felt they had received limited proactive support from SAS offices. One participant stated, "I don't find I've had much support from Student Services, but I also haven't gone looking for any support". Another articulated their experience by saying "I've never received support

from student services ever". It could be interpreted from this statement that there is some expectation that student services could be more proactive in reaching out to offer support rather than primarily responding in reaction to requests for support.

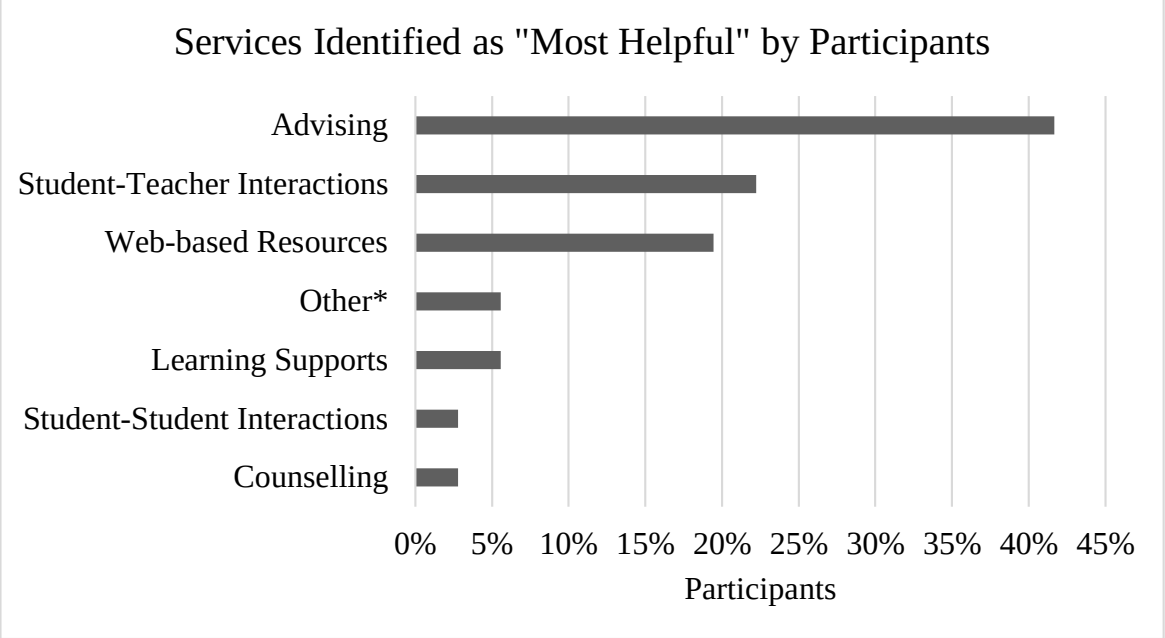
Respondents were also asked to identify services they found to be most helpful. Fifty-eight percent of the total number of online survey respondents offered feedback on this question. The responses are categorized using the same groupings describing support service usage (see Table 4.1.3), specifically *advising, counselling, learning supports*, and *web-based resources*. As illustrated in Figure 4.6.1, most participants (42%) found advising services to be most helpful. For the purpose of this study, the *advising* category includes services such as general advising, resume writing and job search support as well as course selection and registration. Of these discrete services, course selection and registration was identified most often by respondents compared to the other services in this category.

The next largest proportion of respondents (22%) identified their interactions with faculty to be a helpful resource. Identified as *student-teacher interactions*, this category represents responses that include reference to opportunities for discussion with teachers, the accessibility of teachers and the timeliness of feedback from teachers. This is consistent with research that points to the strength of student-faculty relationship as an important influencing factor in student retention and persistence (Boston & Ice, 2011; Herbert, 2006; Heyman 2010).

Web-based services round out the top three services identified by respondents as most helpful (19%). *Web-based resources* include the main institutional website, self-service and learning tools, and the institutions online learning website. Self-service, email

and online discussion were among the most common responses regarding web-based services. Student-student interactions, characterized as the opportunity to connect with peers, and counselling both garnered 3% of the responses.

Figure 4.6.1. Services Identified as "Most Helpful" by Respondents (N=36)



Note. *Refers to transferrable skill development and referrals to government and/or agency services (e.g., provincial employment programs).

The third open-ended question asked respondents to share their recommendations for improvements to services for online students. Figure 4.6.2 shows five main themes that emerged from analysis of the responses including: 1) instruction and course design, 2) communication, 3) flexible access, 4) community, and 5) customer service. *Instruction and course design* and *communication* were the two most prominent themes each garnering 33% of the responses. Responses grouped under instruction and course design focused on the need for more timely feedback from instructors as well as more variety in content delivery (e.g., video versus text) and more opportunity for self-paced study. Improvement with respect to timely feedback was reported most often. One respondent described their experience trying to get help from their instructor and having to wait several days for a response:

> Had she sent me a brief note telling me what she was doing and asking me to wait, I would have done so with no problem whatsoever. As it was, I felt ignored and frustrated because I did not hear from her. Teachers should not suppose that students know how they are organizing their time, because we don't.

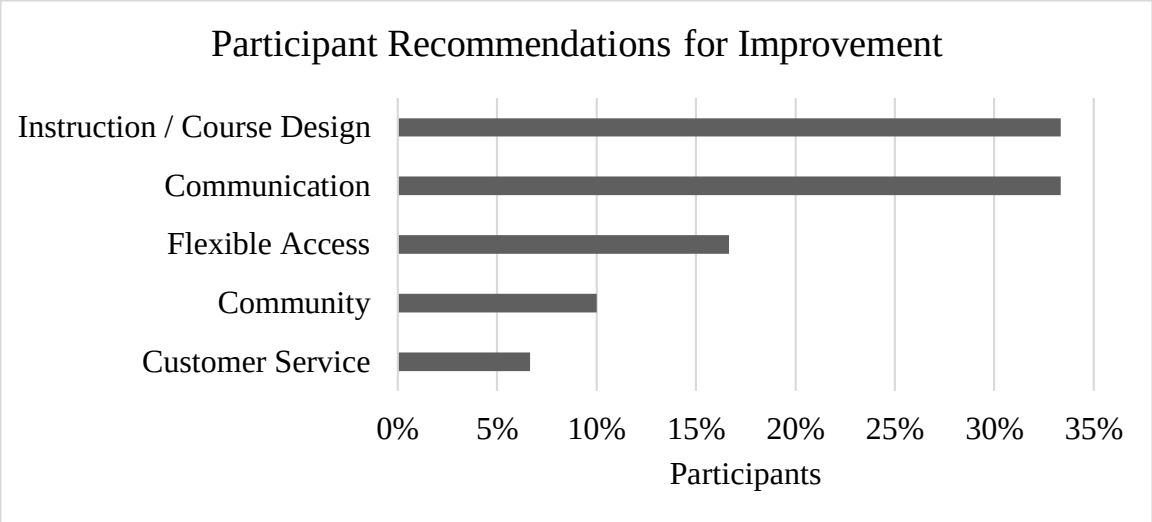
This response illustrates the impact timely feedback, or the lack there of, can have on the overall experience of online learners. In this case the student's experience was that of frustration and a sense they were being ignored by not receiving a timely response from their instructor. It could be argued that experiences like this one, specifically the reference to feeling ignored, contribute to a sense of isolation, which is noted in the literature as a factor influencing persistence (Crawley, 2012; Kim et al., 2005).

Responses themed under *communication* report the need for greater clarity in instructions and more information prior to the start of courses to help clarify expectations,

learning goals and identify key contacts. Respondents also recommended more proactive outreach throughout their course by way of a series of periodic check-ins using modern video conference tools (e.g., Skype) to create the experience of face-to-face contact with a real person.

Flexible access is the next most prominent theme. Seventeen percent of respondents reported recommendations for longer service hours, access to support via online chat and improved access to remote desktop services. *Community* is another important theme identified through the data analysis process, with 10% of respondents reporting recommendations such as "helping online students feel like they are a part of the college" and providing online learners with "a way to connect and hang out with other online learners." Lastly, 7% of respondents identified *customer service* as an area for improvement specifically with respect to "friendliness".

Figure 4.6.2. Participant Recommendations for Improvement (N=30)



Note. Excludes records where respondents indicated that they had no recommendations (n=15).

Figure 4.6.3 provides a view of the recommendations from the perspective of the CoI framework. Responses were categorized using the example indicators provided by the CoI coding scheme (see Table 3.3.1). After attributing CoI indicators and the associated presence to the responses, the results show that 80% the recommendations have primarily to do with improvements in teaching presence specifically in the areas of *design and organization* and *direct instruction.* Recommendations categorized as *design and organization* (40%), illustrate participants' experiences regarding communication of and access to important information about their program including key program goals and requirements, dates and deadlines, and clear instruction to guide participation in learning events and activities. One participant's response offered recommendations representative of several other participants highlighting the need for key foundational information to be shared earlier with online students including, "how things would happen, what you need to do, what you can do, who to contact if needed". Another respondent expressed frustration in the lack of proactive outreach from student services recommending that online students be contacted at the beginning at their program to ensure "they know all that they NEED to know".

Responses categorized as *direct instruction* under teaching presence represent those having to do with receiving meaningful and timely feedback, and the degree to which they felt supported by a student services representative to focus on issues relevant to their learning. These responses make up the other 40% of recommendations grouped under teaching presence. They reference both instructors and SAS representatives, and the recommendations focus primarily on receiving meaningful and timely feedback, and making support available beyond regular working hours (e.g., 8am to 4pm). Respondents

wanted quicker responses from instructors to questions posted in the online learning environment or via email. One respondent described an experience waiting days for a response from an instructor and as a result was left "feeling confused and discouraged". Regarding student support services, participants also reported experiences during off-cycle periods (i.e., summer terms) in which they had difficulty finding knowledgeable support and described being "sent in circles for weeks when trying to switch from full-time in-class…to part-time online [courses]". Many of these responses tend to reflect interactions with faculty more than interactions with SAS professionals. In this study, SAS professionals are attributed a 'teaching' role, and, based on these responses, it is reasonable to expect that comparable experiences with SAS professionals are likely to present a distraction from a student's primary focus on learning.

Facilitation represents 10% of the recommendations. This category is also grouped under teaching presence and refers to interactions with SAS professionals that encourage reflective thought on the part of the student regarding the learning experience, setting key educational and career goals, and exploring new ways to make sense of their experiences and achieve their goals. The recommendations received with regard to *facilitation* included helping online students to feel more like they are part of the college community and having virtual access to workshops and learning opportunities delivered on campuses.

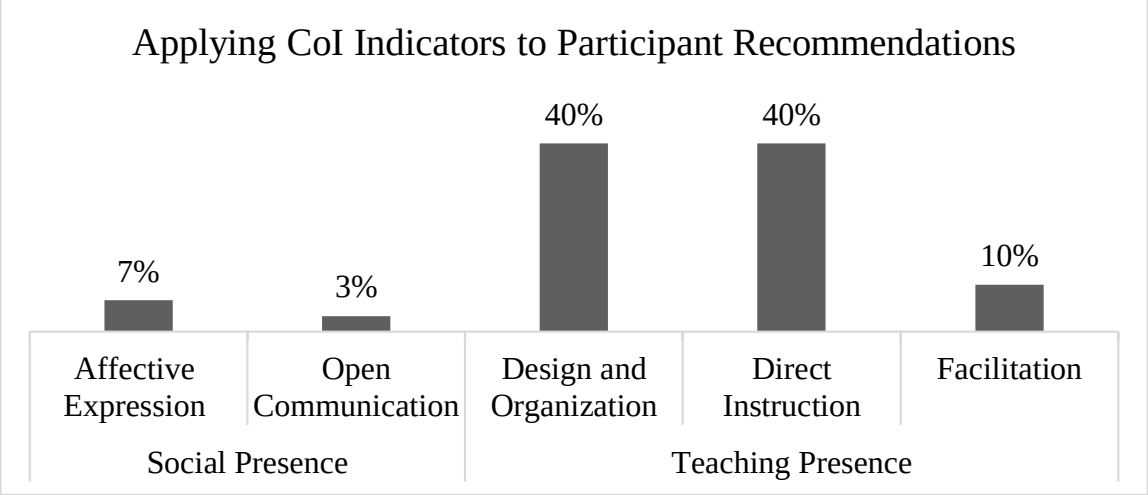
The categories of *affective expression* and *open communication* under social presence are represented in the recommendations collected from participants at a rate of 7% and 3% respectively, and are shown in Figure 4.6.3 as the two lowest indicator categories. Responses coded as *affective expression* represent recommendations referring

to sense of belonging in the course, sense of connection to others in their program, and the web-based social interactions. The responses highlight student-student interaction both for the purpose of participating directly in learning activities and in more social activities, to be of value to the respondents and could impact the degree to which students feel "part of an institution".

Open communication had the lowest representation in the recommendations. This category refers to the level the comfort expressed in participating in discussion, sharing information, and interacting with others online. From a SAS perspective, this is interpreted as discussion, information sharing, and interaction with advisors and other SAS personnel in addition to other students in an online environment. The participant suggested that the demeanor of SAS personnel could be improved. The word "[a]rrogant" was used to describe the demeanour of a support person which might suggest an encounter in which the student felt belittled in some way. Whether this is an accurate account of the encounter with support personnel or not is less important than the student's perception of their experience. It illustrates the importance of clear communication and awareness of the potential for miscommunication in an environment that is primarily without key non-verbal communication cues.

No recommendations were received that could be grouped under *cognitive presence*.

Figure 4.6.3. Applying Community of Inquiry (CoI) Indicators to Participant Recommendations (N=30)



Note. Excludes records where respondents indicated that they had no recommendations (n=15).

After the online survey closed, six participants were invited to participate in individual telephone interviews conducted using six guiding questions. The results from analysis of these interviews are described in the next section.

4.7 Qualitative Analysis of Individual Interviews

The next sections are broken into two phases of analysis, the first phase focused on the identification of emergent themes from the individual interview transcripts. A two-part coding processes identified initial thematic categories evident from analysis of the transcripts, which were then refined to a more focused list of themes. The second phase of analysis applies the CoI coding scheme where content from the interview transcripts was categorized by the cognitive, social and teaching presences and by their associated indicators.

4.7.1 Phase one: Identifying emergent themes.

Individual telephone interviews were conducted using a set of guiding questions (see Appendix 3). Each interview participant was asked to describe the meaning and value of being part of a learning community online. They were also asked to describe their experience interacting with SAS professionals and programs, and the impact that had on their overall learning experience at the community college. Finally, participants were asked to identify the services they found most valuable and offer any recommendations regarding services for online students. Digital recordings of each interview were transcribed by the investigator for the first phase of content analysis, which focused on identifying emergent themes. Participants were asked to give their perspective on what it means to feel like they are part of a learning community and what

value being part of a learning community has on their experience. Responses highlight a number of factors that may influence experiences engaging in a learning community, as well as the perceived valued of community as an element of learning.

Connections with people, specifically instructors and other students was identified by participants as an essential element of feeling part of a learning community. Interviewee number one characterized the value of community for online learners by saying "even though we're not there everyday...we're doing it online, it's much more important for us to be able to be in contact so you can feel you are part of the school...the system and the learning process". Participants compared their concept of community based on in-person experiences with their online learning experience. On-campus, face-to-face experiences were described as eliciting excitement about the future and providing opportunities to connect with peers and faculty. By comparison, participants described the online learning experience at the community college as cultivating a limited sense of belonging and contributed to feelings of isolating for some. Interviewee number four remarked, "I don't really think there is a strong connection. I don't really feel a big connection to the college. I don't really feel a sense of this-is-my-school". The importance of being able to connect with people also extended to the experiences participants had with SAS staff. Participants expressed frustration that online support is not available at more convenient times, poor communication of important information (e.g., changes to testing locations), as well as encountering staff who were unable to provide the help required. These experiences could contribute to social and academic disengagement for some. For others, feeling a connection to a community as part of the

learning experience was deemed not important when considered amid other competing priorities (e.g., work and family obligations).

Issues pertaining to *motivation* were also discussed by participants in relation to their sense of feeling part of a learning community. Hartnett (2016) contends that motivation is "a crucial factor for success in online learning environments" (p. 6), and that community can help foster individual motivation to learn. Hartnett describes motivation as a complex construct influenced by a variety of intrinsic and/or extrinsic factors including feelings of isolation, frustrations with technology, and competing priorities. Some respondents connected their feelings of being part of a community with their capacity to develop competence in the online learning mode over time in the online learning environment. Interviewee number four expressed a sense of accomplishment at being able to use the learning technology, "I'm 43 so it's been a long time since I've been in school, [this] is kind of a big step. I feel good about…getting out of my comfort zone. I feel a kind of sense of accomplishment". Participants also identified experiences that had a negative impact on motivation including feeling frustrated by not being able to access timely and accurate information, and by being re-directed to other sources (i.e., the "run around"). Interestingly, some seemed to hold themselves at least partially responsible for their own frustration, as described by interviewee number six, "it's been frustrating, it's been difficult…I don't know if some of the problems are mine because I've been out of the school system for so long…there's a learning curve I'm not used to". Low levels of confidence using technology, overly complicated processes, inaccessible staff and resources are all key triggers influencing motivation to learn as identified by the participants. Hartnett (2016) argues that motivation can influence persistence in online

courses. Interviewee six stated, “it would have been a better experience to actually go to the class”. This remark is a pointed illustration of Hartnett’s position on retention in online courses.

Participants were also asked to describe their experiences receiving support from SAS offices. Examples of supports provided by the interviewer included general program and course selection advice, resume and job search advice, and personal or career counselling. *Access* and *awareness* of the services and opportunities available to students studying online were prominent themes. Specifically, participant responses illustrate limited to no awareness of services, as articulated by Interviewee number three, “I wasn’t aware that we had [access to services]. It wasn’t explained to me that I had an academic advisor”. Respondents who were aware of services, identified inconvenient office hours, lack of time and the implications of travelling to a campus (e.g., costs, scheduling time off work, scheduling childcare) as barriers to access or participation in services and supports. Interviewee number two shared their interest in participating in outside-the-classroom learning opportunities but was unable to attend, “being an hour away just doesn’t fit with my budget or my schedule”. One respondent drew a connection between lack of access to effective, knowledgeable and timely support and feelings of isolation by saying:

> They weren't available when I was home because they're basically 9-5 or 6-7. Lots of times they say "you have to talk to your instructor" but if your instructor is not getting back to you in a timely manner then you're on your own. (Interviewee number three)

In addition to access and awareness of services, motivation emerged again as a strong theme in relation to its impact on participation in outside-the-classroom activities and individual drive to seek out support. Respondents shared positive experiences with SAS personnel articulating key encounters that provided valued guidance. Interviewee number two highlighted a particular encounter with an advisor, "who helped me through and explained what the course weight was and [what to expect]". However, there were also those who did not access outside-classroom learning opportunities (e.g., workshops, academic or career advice) attributing their lack of participation to no perceived need for the services offered. Interviewee number four identified no immediate need to use services other than technical support and interviewee number six felt they had "no time to really stop and think what the next steps are going to be". Goal setting is a core component of advising services and the overall SAS curriculum, but in this case competing priorities are a factor affecting motivation to learn and engage.

When asked what SAS resources they valued most, participants responded by highlighting those that they had encountered directly and those they wished they encountered in the course of their studies. Specifically, participants identified resources that contributed to a *sense of inclusion* to be valuable by providing opportunities to get to know others and to be known by others, which aligns with the value placed on connecting with people as an important way of feeling part of a learning community pointed out earlier in this section. Online discussion tools and text-based communication offered some students, who might ordinarily shy away from contributing to group discussion, the opportunity to speak out, ask questions and responded thoughtfully to others, therefore, engaging more fully in the learning experience.

SAS resources that acknowledged the variety of influencing circumstances and demonstrated *flexibility* were also important both in terms of acknowledging external priorities (e.g., work, family) in the design and delivery of services, as well as respecting varying levels of comfort with technology. Interviewee number five shared that, in using technology as an aspect of online learning, they were initially, "a little intimidated that I might do something wrong, but as the course went on I found… I got more comfortable with it". Having the support and encouragement from faculty and staff who are sensitive to the variation in comfort with technology was identified as a valuable resource.

While participants valued the flexibility that studying online provides, one participant shared their view that "online learning is probably not for everybody" (Interviewee number three). However, early *orientation* to the expectations of studying online, the academic expectations of their program and the support services available, was identified as another way in which students could be better prepared for, what was for many of the respondents, a return to learning after a long absence into an unfamiliar learning environment.

Lastly, participants were asked to share how the support they had received contributed to their overall experience at the community college and any recommendations they had regarding services for online students. Respondents highlighted their interactions with faculty as a key factor in building and facilitating a sense of community. The opportunity to get know individuals was highlighted by respondents as an important part of community building. In particular, interacting with others via email or electronic discussion boards contributed to feeling part of a team, as described by interviewee number one,

> You get to know each other that way too and we get to go on the white boards a lot and you get see pictures of each other, it's not face-to-face but a least you get to see what each person looks like...it makes you feel like you are a part of something.

SAS professionals and programs were not seen key contributors to the development of community. Limited interactions of respondents with SAS professionals and programs may contribute to the perception that they play a negligible role in cultivating community, as illustrated in the remark from interviewee number one, "I do see there is lots offered there, but it's just I don't access the majority of it".

Respondents described their experience, specifically at the beginning of a course, as being unorganized and lacking upfront information on expectations, responsibilities, services and important contacts. Interviewee number three stated,

> I would like to know at the start of the program what exactly is offered and to whom do I speak. If you're not sure what's out there, then it's hard to know what options that are available to you.

While most respondents expressed neutral feelings about their experience (i.e., neither good nor bad), two interviewees expressed frustration resulting from "bad experiences" accessing supports that gave their overall experience a "negative vibe". Based on these experiences, both respondents indicated that they may consider leaving the online program for face-to-face delivery options or for a different institution altogether.

The recommendations offered included: 1) providing easy access to accurate information when and where it is needed (especially at the beginning of a course or program), 2) more real-time interactions to improve the sense of connectedness with

people and the institution, and 3) better use of modern technology to make the online learning experience reflect more of the perceived benefits of a face-to-face experience (i.e., video-enabled, synchronous opportunities).

Five overarching themes were identified in the analysis of interviewee responses that shed light on the student experience online and their perception of community in an online learning environment. The five themes are: 1) *connections with people* and a sense of inclusion, were seen to be at the heart of a community of learning; 2) *motivation* was identified as having both a positive and negative influence such as, experiencing a sense of accomplishment in learning to use new technologies or frustration with overly complex administrative procedures, respectively; 3) *access to* and *awareness of* available services and supports were described as limited and highlighted incongruence between the delivery of services and the needs of students studying online; 4) *flexibility* provided by studying online was valued highly as a means of participating in ongoing learning that would otherwise be challenging to engage in, given individual life circumstances; and 5) *orientation* that provides key information, expectations, available services, and contacts was viewed as a vital part of feeling connected to the institution and building confidence, especially for those returning to school after a long period away, and for whom studying online may be unfamiliar and daunting.

The next phase of content analysis considers the interview data through the lens of the CoI framework by applying the CoI coding scheme and a three-point experience rating (i.e., negative, neutral, positive).

4.7.2 Phase two: Content analysis using the Community of Inquiry coding scheme.

The results shown in Table 4.7.1 are consistent with the themes identified in the previous section. Teaching presence, defined as "the design, facilitation and direction of cognitive and social processes to support learning" (Swan & Ice, 2010, p. 1), has the highest number of attributed responses (62%) with 38% of those responses associated with a negative experience rating. This experience rating is further broken down by indicator category showing that the majority of dissatisfaction (24%) is attributed to *design and organization*. As mentioned in chapter two, design and organization is characterized as access to important information including key program goals and requirements, dates and deadlines, and opportunity to participate in learning activities.

Most expressions of dissatisfaction in this category related to issues of access to information and outside-of-class learning opportunities. Access to information surfaced as a challenge, particularly at the beginning of a course or program. Responses from interviewees suggest that information was not only difficult to access online, as described by interviewee number six, "I had to have my instructor walk me through the homepage to find information…it was frustrating for the first couple of weeks", but through the course of the interview, they learned that there were services and supports available to them (e.g., academic and career advising) that they did not know about, and therefore, did not know to ask about. The negative experience in acquiring information was also influenced by a perceived (or actual) lack of communication among key institutional departments including online learning, testing services, the library, and the bookstore. As a result, contacting the institution through any one of these offices for information would often result in multiple referrals or misinformation.

Outside-of-the-classroom learning activities (e.g., workshops) were described as worthwhile but not accessible due to the reliance on face-to-face delivery, the scheduling and financial implications of travelling to the campus (e.g. child care, transportation, arranging time away from work), and the time of day they are offered which make these learning opportunities impractical for online students. Interviewee number one identified competing priorities as another factor influencing their ability to participate in "outside class" activities by saying, "I work, leave early come home late…there's just not time, I don't have time. I just do what I have to do on my course and that's it". In addition to these barriers, respondents also stated that the online learning environment was preferable to face-to-face interactions and they were not prepared to entertain in-person activities, "I'm comfortable with online but it would be another step for me to move that into getting into the people part and interconnecting more" (interviewee number four).

Direct instruction and *facilitation* indicators together represent the remaining 14% of negative experience ratings under teaching presence. Direct instruction refers to a focus on relevant issues, and provision of timely and effective feedback. Responses illustrated frustration with long wait-times for feedback on inquiries and overly complicated processes. Facilitation refers to actions taken by the instructor or facilitator that help students engage in discussion, explore new concepts, and develop a sense of community. The experiences shared by respondents highlight difficulty interacting with others online, a strong sense and expectation of isolation, and a desire for more one-on-one attention. The expectation of isolation expressed here conflicts with the concept of community as an element of effective online learning and suggests a potential deficiency in teaching presence as well as social presence.

Social presence represents a participant's ability to identify and connect with the community, communicate and share in group discussion, and "develop inter-personal relationships by way of participants projecting their individual personalities" (Vaughan, 2013). In Table 4.7.1, social presence is the CoI element with the next highest attribution of responses with 22% overall, and the largest percent of those (15%) were associated with a positive experience. Social presence breaks down into three indicator categories, namely affective expression, group cohesion, and open communication. Of these indicators, *open communication* was attributed most often to comments highlighting the use of technology in facilitating sharing and discussion that led to a sense of connection with others. Open communication relates to the level of comfort expressed by students to participate in discussion and interact with others through online mediums. Respondents also reported increasing levels of confidence using technology over time which also elevated levels of comfort to interact with others and ask for help when needed. *Affective expression* and *group cohesion* together represent 8% of positive experience responses. Respectively, they reflect the development of sense of belonging by getting to know others as well as the development of trust and a sense of collaboration as a group. Respondents pointed to opportunities to connect with others who share similar goals as an essential part of helping them feel part of a community. Getting to know others was identified as an important way to build trust among the group based on common understandings and shared experiences.

Cognitive presence is reflected in 16% of the responses with the majority (11%) expressing a positive experience. Cognitive presence represents the degree to which students are able to make meaning from experiences as a process of critical thinking

(Garrison et al., 2000). Of the four associated indictors (i.e., exploration, triggering event, integration, and resolution), the *triggering event* category was linked to a majority (8%) of the positive experience responses specifically related to motivation and increased levels of interest or curiosity. Respondents reported feeling motivated as a result of a reduction in stress because of the "at your own pace" experience in the online learning environment. Also contributing to motivation was the sense of accomplishment at having taken the step to engage in a formal learning experience after a significant period away, and to develop of a new set of skills using technology. *Exploration* (i.e., using a variety of sources to explore problems and appreciating different perspectives) and *resolution* (i.e., developing solutions to problems and applying new knowledge) indicators represent 2% of the positive experience ratings. Interviewee number three remarked that the learning experience allowed "you to hear other people's opinions. They bring up different ideas that may cause you to think more…in a different direction". This comment clearly demonstrates the attribute of exploration regarding the appreciation of varied perspectives. As an illustration of resolution, interviewee number one connects skills learned through the online learning experience, particularly related to the use of technology for communication and collaboration, to skills that will be applied in their working environment. There were no responses attributed to the *integration* indicator.

Table 4.7.1

Qualitative Analysis of Individual Interviews Using the Community of Inquiry Coding Scheme

CoI Elements / Categories	Experience Rating (%)			Grand Total
	Negative	Neutral	Positive	(%)
Cognitive	4	1	11	16
Exploration	-	-	1	1
Triggering Event	4	1	8	14
Resolution	-	-	1	1
Social	4	3	15	22
Affective Expression	1	1	4	7
Group Cohesion	3	1	4	8
Open communication	-	-	7	7
Teaching	38	14	11	62
Design and Organization	24	5	1	31
Direct instruction	7	7	4	18
Facilitation	7	1	5	14
Grand Total	46	18	36	100

4.8 Summary

This chapter reported both quantitative and qualitative results consistent with the mixed method research approach. Analysis of variance (ANOVA) and bivariate correlation analysis were used to examine the relationship between the CoI presences and respondent characteristics revealing a statistically significant relationship between teaching and social presence, and comfort with technology developed during online study. This result suggests that increasing levels of comfort with technology throughout the study period may positively influence the educational experience according to the CoI framework. No other relationships of significance where discovered through quantitative analysis.

Qualitative content analysis was conducted in two phases. The first phase identified emergent themes based on responses collected both through the online survey and through individual interviews with select survey respondents. The second phase applied the CoI coding scheme to interview transcript data as well as an experience rating to examine interview responses through the lens of the CoI framework. Phase one results from the survey data showed the top three most helpful services to be advising, student-teacher interactions, and web-based resources. Respondents recommended improvements to SAS resources for online students primarily associated with teaching presence and, specifically, to design and organization, and direct instruction indicators. The recommended improvements were grouped into the following areas: instruction/course design, communication, flexible access, community, and customer service.

The individual interviews explored the student experience and perceptions of community in an online learning environment. Five overarching themes were identified:

1) connections with people are at the heart of online community, 2) positive and negative motivating factors influence learning and persistence accordingly, 3) easy access to and awareness of services and supports is an important way to feel connected to the institution and focus on learning, 4) flexibility is about showing respect for the life circumstances of online students, and 5) an effective orientation is a critical opportunity to clarify expectations, share information, and demystify online learning.

Phase two results showed experiences attributed to both social and cognitive presences were mostly positive, while negative experiences were predominantly attributed to teaching presence. Chapter five will discuss these findings in more detail and in relation to relevant literature. The strengths and limitations of this study will be discussed, as well as the implications for practice and future research.

Chapter Five – Findings, Implications and Recommendations

5.1 Findings

The purpose of this study was to examine the out-of-class experiences of online students, specifically their use of student affairs and services (SAS), in order to better understand the impact of those interactions on their overall educational experience, and their perceptions of community in an online learning environment. Guided by the CoI framework, this study also considers the role SAS plays in cultivating an online learning community. The findings below are a reflection of the mixed method approach used in this study, which generated both quantitative and qualitative data, allowing for greater depth in the exploration of participant perceptions regarding community and the overall educational experience online.

Participants in this study were asked to respond to an online survey and a smaller group of participants were asked to engage in an individual interview. Respondents were predominantly female, of which approximately one third are considered adult learners (i.e., 36 years and older) and an additional one third are considered to be of traditional age (i.e., 19 to 25 years old). Theses demographic characteristics are reflective of the overall demographics of the community college. More than half of the participants have some prior experience in post-secondary study, but no prior experience in online learning environments. Almost all of the participants felt comfortable (i.e., moderate to very comfortable) with technology prior to starting the program and during the course of their online study at the community college.

Experiences of online learners using student support services.

The results of this study found that, while most respondents (52%) reported having a positive experience making use of SAS resources at the community college, one-third (29%) reported having limited to no contact with SAS professionals during the course of their studies. Some participants suggested that responsibility for accessing SAS resources rested with the individual student, while others placed responsibility with the SAS division, indicating some level of expectation among students for pro-active outreach from staff at the community college. The role of students as active participants in learning, is supported by Shea and Bidjerano (2012) who argue that online learner self-regulation, termed *learner presence*, is an important mediating factor in the CoI framework. Direct, meaningful, and timely outreach to online students is also identified by researchers as an important way to impact retention in online programs, and reduce feelings of isolation by engaging students early in the learning process (Crawley, 2012; Nash, 2005; Morris & Finnegan, 2008; Nichols, 2010; Simpson, 2012).

Web-based services at the community college consist mainly of general program information, important dates and deadlines, access points for learning management systems, transactional services (e.g., submit forms, pay fees), and access to course schedules and grades. Quantitative findings show that respondents overwhelmingly accessed web-based services more than any other single SAS resource. This finding is consistent with the contentions of researchers and studies pointing to institutional websites as essential resources for all students to have easy access to important information, and to make critical community connections (Crawley, 2012; Hornak et al., 2010; Jones & Meyer, 2012; Kleemann, 2005; Shea 2005; Strange & Banning, 2015).

Although, the qualitative results indicated that advising services were ranked highest as a "most helpful" service, the specific advising service mentioned most often was course selection and registration. Self-service course registration was not available at the time of this study, which necessitated assistance to enroll in courses. Therefore, it is not surprising that this service was noted most often as a helpful service. Student-teacher interactions were also ranked among the most helpful, which is more a reflection of the in-class experience than their experiences with SAS professionals and programs.

With the exception of web-based resources and course registration services, the percentage of respondents reporting having never or rarely accessed SAS resources ranged from approximately 63%to 92%. While the quantitative survey used in this study did not investigate the factors leading to these reports, qualitative analysis of individual interviews revealed that respondents found student support services to be inaccessible either because of inconvenient service delivery hours or because of the expense incurred for travel and child care as a result of the service only being available in-person. These findings are consistent with those reported by CCCSE (2010), which also found many students reported rarely or never having accessed SAS resources such as advising, academic skills labs, and financial assistance as a result of not knowing how to access services, inconvenience, or a feeling of stigmatization for accessing services.

In addition to inconvenient services hours and locations, and a general lack of awareness of the services available, some participants in this study articulated reasons for not making use of support services on the basis of a lack of perceived value, and no time to do anything else outside of work and classes. Similar reports were collected by Aragon and Johnson (2008), Nash (2005), and Taylor and Holley (2009), who found that time

constraints and motivation impacted participation and were indicators for non-completion. Two interview participants in the current study identified both time constraints and motivation as contributing factors to not taking advantage of SAS resources. These same two participants also expressed their intent to reconsider online study by changing the learning environment to a face-to-face interaction, which might involve transferring to another institution, or by withdrawing from study all together. Although the responses of two participants are by no means a finding generalizable to a broader cohort, they are consistent with the findings from previously mentioned research and, warrant being pointed out.

Impact on the overall educational experience of online learners.

Quantitative results showed no statistically significant relationships between SAS and the CoI presences (cognitive, social and teaching). However, a positive correlation between comfort with technology during study and both teaching and social presence suggests that increasing level of comfort with technology may have an overall positive effective on educational experience. Holder (2007) points to computer proficiency as an important characteristic of persistence among online learners. Lee (2010) points to research findings that suggest student satisfaction in online learning is influenced by a student's familiarity with technology.

Qualitative findings point to five factors impacting the overall experience of online learners in this study, including: 1) connections with people, 2) motivation, 3) access to information, 4) flexibility, and 5) orientation. Isolation was an expectation for some participants, and a feeling reinforced by experiences with staff and faculty that left participants feeling frustrated and discouraged. Conversely, connections with people was

identified as an important way to share experiences, learn from others, and cultivate personal identity, creating a sense of connection and belonging in the course and to the college. Holder (2007) reported findings that suggest online students with supportive networks and stronger sense that they are not along in the learning process were more likely to persist in their studies. Nichols (2010) and Simpson (2012) both highlight personal contact as a positive influence on motivation and retention among online learners. Ke (2010) found that adult students enrolled in WebCT-based online course at major research university in the United States with more established virtual relationships and a stronger sense of community tended to have higher levels of learning satisfaction and demonstrated higher levels of knowledge-constructive interactions, illustrating a connection between social and cognitive presence.

Some participants expressed increased motivation resulting from a sense of accomplishment from building new skills using technology to engage in course activity. Wighting, Liu, and Rovai (2008) found stronger intrinsic motivation among online learners compared to traditional students at three urban universities in the United States where half of the courses studied were online and the other half were face-to-face delivery. For others, motivation was negatively impacted by overly complex administrative processes leading to frustration and distraction from learning goals. Boston and Ice (2011) highlight the potential impact of the way in which institutions engage students through interactions with faculty, staff, and administrative offices on student motivation and engagement, suggesting that student engagement in online environments may be more important than engagement levels in traditional learning environments. Lee (2010) found that student perceptions of service quality is a key

predictor of online learning acceptance and student satisfaction in a study examining the differences between Korean and American online students. Sense of community and motivation to learn among online students are important variables affecting online learning (Wighting et al., 2008). Cultivating these factors may decrease attrition and improve individual drive to pursue lifelong learning (Hartnett, 2016; Kim & Frick, 2011).

Participants characterized the flexibility afforded through online study as an acknowledgement of the life and work circumstances that impact their participation in learning opportunities. Participants appreciated the flexibility of some staff and faculty to be available outside non-traditional working hours. Some participants stated that they were willing to continue to studying online despite its incongruence with their learning preferences because of the flexibility it offers compared to traditional face-to-face classes. Research shows that flexibility as a key factor influencing participation in post-secondary education for student who may otherwise be impeded by commitments or constraints (Shah, Goode, West & Clark, 2014).

Access to information, learning resources, and development opportunities is another area of frustration expressed by participants in this study. Some participants described their experience studying online at the community college as largely unorganized and confusing. This characterization is consistent with research examining online resources available to distance learners (Taylor, 2008; Jones, Meyer, 2012). Palloff and Pratt (2003) argue that online access to information and resources can reduce feelings of isolation. Participants in this study, clearly expressed feelings of isolation at that lack of access to information and, further stated that the lateness of information that is received puts them at a disadvantage, and heightens fear and uncertainty, especially

among those new the online learning environment. It is not surprising that early access to key information by way of an orientation for online students was identified as having an important impact on overall experience. Motteram and Forrester (2005) had similar findings in their study of induction programs for distance learners which identified a number of online student needs including access to appropriate information, clear expectations in terms of performance and procedure, having a sense of identity as a student, and feeling a sense of belonging to the institution. These findings were also supported by Morris and Finnegan (2008) whose research included recommendations such as a comprehensive orientation for online students as a means of reducing confusion about course layout and expectations.

Students' perceptions of community in an online learning environment.

While some participants saw the value of being part of a learning community as secondary to other commitments and priorities (i.e., work and family), others perceived participation in a learning community as an important facet of the online learning experience, and essential to feeling part of the school, the educational system, and the learning process. This finding is supported by Huett, Moller, Harvey and Engstrom (2007) who contend that online collaboration through learning communities increases engagement in the learning process. Hartnett (2016) also supports this argument, articulating the importance of online communities to motivation, and suggesting that the development of supportive networks fosters motivation to learn, commitment to shared goals, co-construction of knowledge, and is related to perceived cognitive learning. Some participants highlighted the efforts of specific faculty that contributed to a stronger sense of community within an individual course. However, the overall online learning

experience described by participants depicts a limited sense of belonging to the college, and no sense that "this is my school". Student support and student connection to the institution were found to be among the top three priority concerns among experts in online education, who suggested adequate, ongoing institutional support (i.e., financial aid, academic, counselling, tutoring) and the development of students' sense of academic and social connections to a school are key factors influencing attrition-persistence outcomes (Heyman, 2010).

Feelings of isolation were reported by participants when access to effective, knowledgeable, and timely support from faculty and staff was limited. Crawley (2012) highlights research supporting both the significant role of instructors in overcoming students' sense of isolation, as well as the role support services play in helping students "overcome a sense of isolation, lack of direction, and low motivation" (p. 156). Boston and Ice (2011) also concluded that, in addition to the impact of interactions with faculty on student engagement, interactions with staff may also impact levels of engagement, especially in online environments. Some participants connected increasing levels of competence with technology with an increased sense of belonging. Online discussion tools were highlighted as an important means of connecting with others. Participants reported low levels of comfort with technology as a barrier to full participation in the learning community. This barrier is further amplified when timely effective support is not easily accessible. This finding supports quantitative results in this study that show a positive correlation between comfort with technology and both teaching and social presence. Chen et al. (2010) assert that participation in online courses contributes to increasing levels of information literacy among online students, and further argue that

online students must receive the same quality of education and support in order to take advantage of social and informal interactions with faculty and other students. Garrison, Cleveland-Innes, et al. (2010) posit that the CoI framework positions social presence as a mediating variable between teaching presence and cognitive presence. They also contend that teaching presence is a significant determinant of student satisfaction, perceived learning, and sense of community. Based on these arguments, the findings in this study can be interpreted to suggest that higher levels of comfort with technology may lead to higher levels of student satisfaction and sense of community. Conversely, barriers to developing comfort with technology may have a negative impact on student satisfaction and sense of community.

Impact of student support services on the development of a community of inquiry.

Although quantitative results in this study offer no statistically significant relationships between SAS and community of inquiry, qualitative results evaluating the impact of SAS based on the CoI framework reveal teaching presence and social presence as important influencing factors on the development of a community of inquiry. The majority of responses attributed to teaching presence had a negative experience rating related primarily to the indicators *design and organization* and *direct instruction*. Limited access to timely and accurate information, inconvenient service hours, multiple referrals, long wait-times, overly complicated processes, and a lack of awareness of available supports (i.e., academic and career advising) all serve to confirm expectations of isolation expressed by some participants, and impair the establishment of positive connections to the learning community. Palloff and Pratt (2003) validate these findings

arguing that online students feel more connected to the institution and less isolated when they have access to critical information and SAS resources. While the findings in this study show deficiencies in the contribution of SAS to teaching presence, a reasonable assumption can be made that, if deficiencies were addressed, SAS activities related to teaching presence may have a positive effect on the development of a community of inquiry. Taylor and Holley (2009) suggest that online students perceive a close association between SAS and academic affairs. In the absence of traditional classroom structures, Taylor and Holley argue that faculty and SAS professionals need to work collaboratively to help online students manage competing roles and responsibilities in their personal, professional, and student lives.

Positive experience ratings were attributed to a majority of responses characterized as social presence, particularly in the area of *open communication,* which reflects a student's comfort to participate in discussion and interact with others through online mediums. Participants reported greater ease interacting with others and seeking help when needed as levels of comfort with technology increased over time. Getting to know others, especially through discussion tools, was seen as an important way to build trust and establish community based on shared experiences and commons goals. These responses reflect social presence indicators *affective expression* and *group cohesion*. Akyol and Garrison (2008) support these findings and point to evidence that use of online discussion boards increases group cohesion compared to traditional or email communication. While these responses in the current study are likely a reflection of the in-class experience, community building and social engagement are important aspects of the SAS curriculum (Crawley, 2012; Fried, 2012). Providing similar opportunities for

online students to get to know others and share experiences as a larger college community is likely to influence sense of belonging and impact student persistence. Scott et al. (2016) argue that Web 2.0 technologies have evolved to make social expression in online discussion easier and more personal, reflecting social presence categories including *affective expression, group cohesion,* and *open communication*. In exploring informal learning outside-the-classroom, Scott et al. found that integration of Web 2.0 technologies such as blogs, social media, and personal learning environments promotes collaborative learning through community building, and contributes to the development of self-identity, as well as improved learning and cognition.

5.2 Strengths and Limitations

Student service and support is identified as an important indicator of quality across existing models for evaluating the quality of online learning programs (Shelton, 2011). Often student support is defined as technical or administrative support (e.g., course registration, fee payment). Current literature examining student learning and development focuses primarily on the in-class student experience, and the influence of the faculty-student relationship. Although, the role SAS in cultivating student engagement, as well as academic and personal development has been validated in research of traditional learning experiences (Astin, 1984; Fried, 2012; Pascarella & Terenzini, 2005; Tinto, 1988), few studies were found that examined the role of SAS from a student learning and development perspective in online environments. As one of the few studies to examine the role of SAS in online learning, and potentially the only study to do so guided by the CoI framework, this study offers new insight into the online student experience that both validates what is known and presents a new perspective on the role

of SAS in online learning environments that could help craft a more comprehensive approach to evaluating and understanding the online student experiences, in which the definition of student learning encompasses the participation of both SAS and academic affairs. Fried (2012) contends that SAS and academic affairs must work together to help students make meaningful connections among learning, life and work. Watson (2008) argues that the 21st century student experience must be cultivated collaboratively between SAS and academic affairs in order to compete successfully for students who "value experience above anything else" (p. 13). Frost et al. (2010) point to collaborative academic and student affairs partnerships as key means of enhancing student learning. Each of these arguments highlight important factors influencing retention and persistence, namely motivation, sense of belonging, and meaningful learning. Retention in online programs is an issue of great concern (Boston & Ice, 2011; Herbert, 2006; Heyman, 2010; Ice et al., 2011; Nichols, 2010; Street, 2010). This study lays the groundwork for an inclusive model to understand SAS and academic affairs approaches that impact online learning experiences and their influence on persistence and retention.

While this study was designed and conducted with care and diligence, limitations arise from the generalizability of the findings, as the response rate for the online survey was 18%. Although the number of respondents is large enough to be considered viable, the degree to which findings can be generalized is limited by the response rate.

The questionnaire designed to measure the cognitive, social, and teaching presences as part of the CoI framework, was adapted from the original CoI instrument to focus the questions on the role of SAS in order to evaluate its impact on Community of Inquiry. Although the CoI framework has been used in numerous studies of online

classroom environments and the instructor-student relationship, this study focuses on the interactions of students with SAS professionals and the outside-the-classroom experience. Since there are no other known instances where the survey instrument has been adapted for the purpose of studying SAS practice in online learning contexts, the opportunities to use previous studies to guide these adaptations was limited.

A number of respondents indicated limited awareness or use of student services, leaving their primary point of reference to be their in-classroom, faculty-student experience. In interpreting the data collected through the survey, it is possible that responses may be based on in-classroom, faculty-student interactions, despite instructions to respond based on interactions with SAS professionals and programs. Future research using the CoI framework to examine the SAS practice would benefit from further adaption and clarification of the measurement instruments. Clarification could be accomplished by conducting an inventory of the types of SAS-student interactions and mapping them to the CoI survey items and presence indicators. This type of process would serve to translate the inside-the-classroom experience to an out-side the classroom perspective. The literature examining the SAS practice in online learning environments is itself limited, leaving little opportunity to balance the interpretation of results from this study against current research in the interpretation of findings.

Validation limitations regarding qualitative findings are also acknowledged. Qualitative data analysis in the current study was conducted exclusively by the investigator, the results of which may incorporate a level of bias emanating from the particular points of view held by the evaluator. A negotiated approach to content analysis is one method by which greater rigour can be ensured in the coding process and in the

exposition of themes. This process involves multiple evaluators examining, coding and identifying themes in the data, and then negotiating any variation in outcomes to arrive at a common set of emergent themes (Garrison et al., 2006). Future research would benefit from this kind of approach to qualitative analysis.

5.3 Implications and Recommendations

Implications from the findings of this study suggest that SAS and interactions beyond the classroom influence the online learning experience. The results of this study demonstrate the influence of SAS on student perceptions of teaching presence and social presence, suggesting that SAS does contribute to the development of a community of inquiry. Although the influence on teaching presence was largely negative, highlighting deficiencies in communication, it is a fair assumption that, if those deficiencies were addressed, the influence on teaching presence could be more positive. This is an assumption worth testing in future research. It is also clear from this study that the flexibility of online study, that allow students to manage multiple competing priorities and responsibilities, is also an expectation of online supports and services. Student perceptions of service quality impact student engagement and satisfaction that, in turn, influence persistence and retention in online study (Lee, 2010). Services for online students in this study were reported to be largely inaccessible and inconvenient. Web-based resources were shown to be the predominant source of information and support used by study participants. However, SAS beyond the administrative core (e.g., academic advising, career and personal counselling, learning activities and workshops) is geared primarily to on-campus audiences at the community college in this study. This may be the reason why many online students in this study reported not being aware that these

services were available to them. Awareness of services and online access to supports is fundamental and must be developed at the community college, an implication supported by findings from the CCCSSE (2010).

The recommendations offered by participants in this study mostly reflect teaching presence, where 80 percent of the responses were attributed to *design and organization* and *direct instruction* categories, and 10 percent to *facilitation*. Social presence reflects 10 percent of responses, seven percent attributed to *affective expression,* and three percent to *open communication*. Participants are looking for easy and timely access to important program information and expectations, opportunities to participate in outside the classroom activities that reflect online student needs in content and delivery, and more opportunities to interact and connect with peers and instructors. These findings are broadly supported in the literature and point to a number of clear strategies to improve the quality of online learning experiences. The provision of easily accessed, accurate, and timely information speaks to teaching presence and is fundamental to quality online learning experiences (Crawley, 2012; Palloff & Pratt, 2007; Shea, 2005). Jones and Meyers (2012) argue that improving access to SAS online may result in better student retention.

This study suggests that higher levels of comfort with technology may have a positive impact on the online learning experience. Competent use of technology is foundational to online learning. Kuong (2015) points out that adult learners may have less experience in online environments and need additional support in using technology. Prompt and knowledgeable technical support is a critical component of quality online

education programs and is also shown to have an impact on student satisfaction (Lee, 2010).

Pro-active, meaningful, and ongoing outreach with online students is another important element of teaching presence that contributes to levels of engagement, motivation, satisfaction, and sense of belonging with the institution and program of study (Clay et al., 2008; Simpson, 2012). Increased online access to student learning and development services and resources enable students studying online to have access the same level of service and learning opportunities as those studying on-campus. Chen et al. (2010) argue that inequity in access to learning and development resources, and support services could create the unintended ghettoization of online students from their on-campus peers. Therefore, it is critical that adequate academic, developmental, and technical support are made available to online students and that they are actively made aware of these resources.

The provision of a comprehensive online orientation introduces online students to a new learning environment and lays out program and participation expectations that may help to reduce anxiety and confusion (Morris & Finnegan, 2008; Motteram & Forrester, 2005). It is also an important opportunity to establish peer connections and begin to build a sense of belonging to the institution early in the process. Sense of community in class, as well as sense of community at the school level were both found to be among the factors associated with student satisfaction in online business programs (Kim et al., 2005).

Crawley (2012) points to studies suggesting a sense of isolation can manifest in environments where interaction among students and with instructors is limited due to

perceptions of the learning space as solely where instructional materials are shared. Increased opportunities for online students to interact outside the classroom promotes engagement in learning, community building, and expands the reach of SAS (Strange & Banning, 2015). Scott et al. (2016) studied informal online learning spaces as communities outside the classroom and their role in fostering practical inquiry and reflection outside formal class environments. Informal learning spaces include Web 2.0 technologies, such as social tools and platforms (e.g. blogging and Facebook, respectively), that provide increased capability for user-generated contented, social communication and collaboration, as well as information sharing. Scott et al. found that "students, faculty and alumni are using the informal learning spaces to discuss how to apply their learning to their professional roles, putting theory into practice" (p. 86).

Scott et al. (2016) found evidence of higher levels of cognitive presence in informal learning communities where students demonstrated indicators of integration by connecting ideas and concepts from one class to another through discussion with peers outside of the formal class environment. Although findings for cognitive presence were limited in the current study, participants indicated limited awareness and use of services such as developmental advising and career counselling that would more likely align with the categories of cognitive presence (i.e., *triggering event, exploration, integration,* and *resolution*). It is also important to note that these services were available from the community college primarily by in-person campus-visit, which has been shown to be a barrier for some online learners. Using this study as baseline, future research at this community college could investigate the impact of making more developmental advising

and counselling services available online on cognitive presence in a community of inquiry.

5.4 Future Research

In addition to the core elements of the CoI framework (i.e., cognitive, social, and teaching presence), some researchers argue that a fourth construct (i.e., learning presence) should be added to the CoI model that reflects the role of learner self-regulation and specifically, the characteristics related to self-efficacy and effort regulation (Hayes, Smith, & Shea, 2015, Shea & Bidjerano, 2010; 2012). *Self-regulated learning* is described by Shea & Bidjerano (2012) as recurrent processes and activities including goal setting, planning, taking action based on plans, monitoring, self-reflection, and self-assessment. As a construct with cognitive, affective, motivational, and behavioural elements, self-regulated learning also involves the development of self-knowledge, motivation, and awareness and use of learning strategies that optimize performance. Hayes et al. (2015) expanded the components of learning presence further to include both *co-regulation* (i.e., when one learner provides support to another), and *shared regulation* (i.e., learners' collective intents toward accomplishing common goals). Taken together, the characteristics of learning presence are congruent with the efforts of SAS professionals in supporting student development (Torres, 2011).

Further research of the CoI model incorporating learning presence could provide clearer evidence of the impact of SAS on student learning in online and blended environments, and offer effective strategies to explore deeper, more meaningful collaboration with academic services. The inclusion of learning presence in studies using the CoI framework present a more comprehensive model to examine the *whole student*

and the influence of collaborative efforts of SAS and academic affairs on student retention in online learning.

5.5 Conclusion

The influence of technology will continue to be a powerful force shaping both working and learning expectations. Post-secondary institutions are expected to prepare students to participate in a world rapidly evolving to meet new social, political, economic, and industry demands. Post-secondary learning opportunities are becoming less tethered to the traditional institution. Fundamental changes to credentialing and validating formal and informal learning (e.g., micro-credentialing, online competency-based education, massive open online courses (MOOCs)) are disruptive elements in post-secondary education compelling transformative change and driving traditional institutions to re-imagine their business model in this new learning context (Siemens & Tittenberger, 2009; Weise & Christensen, 2014). Díaz (2013) put forward a concept of the CoI framework as both a model for online learning and online working. This conceptualization of CoI, based on the premise that the processes of teaching and learning share common features with the processes of today's knowledge worker, suggests that by using the CoI model to guide the development of successful learning experiences, students are also engaging in activities and skills development consistent with modern knowledge-based industries and workplaces.

More students participate in post-secondary studies on a part-time basis to accommodate other responsibilities (e.g. work, family) making access to SAS online and outside traditional business hour a necessity. Younger learners (e.g. Millennials) are choosing online study as it reflects a preference for more digital engagement and suits

their expectations for more technology-enhanced experiences (Pullan, 2009). Online learning opportunities and access to comprehensive services are the expectation of all students. Lawton et al. (2013) project that blended learning will be the dominate learning mode by 2020, which may reflect a response to the value students place on sense of community and the perception that purely online programs lack sufficient human interaction.

SAS has a meaningful role to play in cultivating student learning in online environments. Watson (2008) stated, "to find out what we should do, we need to concentrate on what we wish to create. Transforming the student support offering in our universities is a creative activity requiring imagination and risk-taking" (p. 9). Greater collaboration between SAS and academic affairs is needed to create seamless learning experiences that integrate SAS programming into academic curriculum making it accessible "just in time" for online and blended students (CCCSE, 2010). Innovation focused on leveraging Web 2.0 technologies to improve student engagement and enhance sense of community and belonging is critical for online students who may be more susceptible to the lack of connection, but also for all students who experience or take advantage of few traditional social and academic integration opportunities. The potential for the CoI framework to be used as a model to study the role of both SAS and academic affairs in online and blended learning environments, is a worthwhile exploration that could lead to greater unity between these divisions under a commonly shared definition of teaching and learning.

References

Advisory Committee for Online Learning. (2001*). The e-learning e-volution in colleges and universities: A pan-Canadian challenge.* Ottawa, ON: Industry Canada. Retrieved October 12, 2011 from http://www.cmec.ca/Publications/Lists/Publications/Attachments/19/evolution.en.pdf

Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time in an online course: Understanding the profession and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks, 12*(3-4), 3-22.

Akyol, Z., & Garrison, D. R. (2010). Community of inquiry in adult online learning: collaborative-constructivist approaches. In T. Kidd, & J. Keengwe (Eds.) *Adult learning in the digital age: Perspectives on online technologies and outcomes* (pp. 52-66). Hershey, PA: IGI Global. doi:10.4018/978-1-60566-828-4.ch006

Akyol, Z., & Garrison, D. R. (2011a). Learning and satisfaction in online communities of inquiry. In S. Eom, & J. Arbaugh (Eds.) *Student satisfaction and learning outcomes in e-learning: An introduction to empirical research* (pp. 23-35). Hershey, PA: IGI Global. doi:10.4018/978-1-60960-615-2.ch002

Akyol, Z., & Garrison, D. R. (2011b). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and process for deep approaches to learning. *British Journal of Educational Technology, 42*(2), 233-250. doi: 10.0000/J.1467-8535.2009.01029.x

Ali, R., & Leeds, E. M. (2009). The impact of face-to-face orientation on online retention: a pilot study. *Online Journal of Distance Learning Administration, 12*(4). Retrieved from http://www.westga.edu/~distance/ojdla/winter124/ali124.html

American College Personnel Association, & National Association of Student Personnel Administrators, Task Force on the Future of Student Affairs. (2010). *Envisioning the future of student affairs.* Retrieved January 17, 2012 from http://www.naspa.org/consolidation/TF_final_narr.pdf

Appleby, D. C. (2008). Advising as teaching and learning. In V. N. Gordon, W. R. Habley, & T. J. Grites, (Eds.), *Academic advising: A comprehensive handbook* (2nd ed., pp. 85-102). San Francisco, CA: Jossey-Bass.

Aragon, S. R., & Johnson, E. S. (2008). Factors influencing completion and noncompletion of community college online courses. *The American Journal of Distance Education, 22*(2008), 146-158. Doi: 10.1080/08923640802239962.

Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education, 11*(2008), 133-136.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of college student personnel, 25*(4), 297-308.

Astin, A. W. (1993). *What matters in college? Four critical years revisited.* San Francisco, CA: Jossey-Bass.

Ausiello, K., & Wells, B. (1997). Information technology and student affairs: Planning for the twenty-first century. *New Directions for Student Services,* 78, 71-81.

Banta, T. W., & Kuh, G. D. (1998). A missing link in assessment. *Change, 30*(2), 40-47.

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of non-traditional undergraduate student attrition. *Review of Educational Research, 55*(4), 485-540.

Booth, M., & Esposito, A. (2011). Mentoring 2.0 – High tech/high touch approaches to foster student support and development in higher education. In L. Wankel, & C. Wankel (Eds.), *Higher education administration with social media: Including applications in student affairs, enrollment management, alumni relations, and career centers - Cutting-edge technologies in higher education* (Vol. 2, pp. 85-103). Bingley, UK: Emerald Group Publishing, Ltd.

Boston, W., Diaz, S. R., Gibson, A. M., Ice, P., Richardson, J., & Swan, K. (2010). An exploration of the relationship between indicators of the community of inquiry framework and retention in online programs. *Journal of Asynchronous Learning Networks, 14*(1), 3-19.

Boston, W. E., & Ice, P. (2011). Assessing retention in online learning: An administrative perspective. *Online Journal of Distance Learning Administration, 14*(2), 1-17.

Brady, S. M. (1999). Students at the center of education: A collaborative effort. *Liberal Education, 85*(1), 14-16, 18-21.

Braxton, J. M. (2009). Understanding the development of the whole person. *Journal of College Student Development, 50*(6), 573-575.

Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). Tinto's interactionalist theory. In A. J. Kezar (Ed.), *ASHE-ERIC Higher education report: Vol. 30(3). Understanding and reducing college student departure* (pp. 7-20). San Francisco, CA: Jossey-Bass

Brooks, D. C. (2015). *IPAS evaluation and assessment guide*. Louisville, CO: EDUCAUSE Center for Analysis and Research (ECAR). Retrieved from http://www.educause.edu/ecar.

Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research, 1*(1), 8-22.

Burns, E. C. (2011). The adult learner: A change agent in post-secondary education. *Online Journal of Distance Learning Administration, 14*(2), 1-21.

Cabrera, A. F., Nora, A., & Casteñeda, M. B., (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *The Journal of Higher Education, 64*(2), 123-139.

Canadian Council on Learning. (2009a). *Post-secondary education in Canada: Meeting our needs?* Ottawa, ON: Author. Retrieved on September 12, 2011 from http://www.ccl-cca.ca/pdfs/PSE/2009/PSE2008_English.pdf

Canadian Council on Learning. (2009b). *Up to par: The challenge of demonstrating quality in Canadian post-secondary education - Challenges in Canadian post-secondary education.* Ottawa, ON: Author. Retrieved on September 12, 2011 from http://www.ccl-cca.ca/pdfs/PSE/2009/PSEChallengesInPost-SecondaryEducationNOV2009_EN.pdf

Carlon, S., Bennett-Woods, D., Berg, B., Clayewell, L., LeDuc, K., Marcisz, M., … Zenoni, L. (2012). The community of inquiry instrument: Validation and results in online health care disciplines. *Computers and Education, 59*(2), 215-221. doi:10.1016/j.compedu.2012.01.004

Cawthon, T. W., Boyd, K. D., & Seagraves, R., Jr. (2012, March). *Is student affairs relevant for the 21st century*? Paper presented at a convention of the American College Personnel Association (ACPA), Louisville, KY. Retrieved from http://convention.myacpa.org/louisville2012/documents/program/2012_senior_scholar_is_student_affairs_relevant_for_the_21st_century.pdf

Center for Community College Student Engagement. (2010). *The heart of student success: Teaching, learning, and college completion (2010 CCCSE Findings).* Austin, TX: The University of Texas at Austin, Community College Leadership Program.

Chen, P.-S. D., Lambert, A. D., & Guidry, K, R. (2010) Engaging online learners: The impact of web-based learning technology on college student engagement. *Computers and Education, 54*(2010), 1222-1232.

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco, CA: Jossey-Bass.

Chyung, S. Y. (2001). Systematic and systemic approaches to reducing attrition rates in online higher education. *The American Journal of Distance Education, 15*(3), 36-49.

Clay, M. N., Rowland, S., & Packard, A. (2008). Improving undergraduate online retention through gated advisement and redundant communication. *Journal of College Student Retention, 10*(1), 93-102. doi: 10.2190/CS.10.1.g

Coleman, J. K., Little, S. D., & Lester, A. (2006). Connecting services to students: New technology and implications for student affairs. *College Student Affairs Journal, 25*(2), 220-227.

Conover, A. (2008). *A case study of the development and impact of online student services within community colleges.* (Unpublished doctoral dissertation). University of Arizona, Tucson, AZ.

Contact North. (2012). *Online learning in Canada: At a tipping point. A cross-country check-up 2012*. Thunder Bay, ON: Author. Retrieved on July 15, 2012 from http://www.contactnorth.ca/sites/default/files/contactNorth/files/pdf/publications/online_learning_in_canada_at_a_tipping_point_-_a_cross_country_check_up_2012_-_july_18_2012_final.pdf

Cooper, V., Lichtenstein, S., & Smith, R. (2011). Key challenges for delivering web-based IT support services: The provider perspective. In A. Scupola (Ed.), *Developing technologies in e-services, self-services, and mobile communication: New concepts* (pp. 30-50). Hershey, PA: IGI Global. doi:10.4018/978-1-60960-607-7.ch003

Corich, S., Kinshuk, & Jeffrey, L. M. (2007). The use of discussion forums in learning communities. In R. Luppicini (Ed.), *Online learning communities* (pp. 87-108). Charlotte, N.C.: Information Age Publishing, Inc.

Council for the Advancement of Standards in Higher Education. (2014). *CAS General standards*. Fort Collins, CO: Author. Retrieved from http://standards.cas.edu/getpdf.cfm?PDF=E868395C-F784-2293-129ED7842334B22A

Council for the Advancement of Standards in Higher Education. (2016). Standards [Website]. Retrieved from http://www.cas.edu/standards

Crawley, A. (2012). *Supporting online students: A guide to planning, implementing, and evaluating services.* San Francisco, CA: Jossey-Bass.

Crawley, A., & Fetzner, M. (2013). Providing service innovations to students inside and outside of the online classroom: Focusing on student success. *Journal of Asynchronous Learning Networks, 17*(1), 7-12.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Boston, MA: Pearson Education, Inc.

Crookston, B. (1972). A developmental view of academic advising as teaching. *National Academic Advising Association Journal, 14*(2), 5-9.

Curry, N. S. (2010). Virtual counseling for students enrolled in online educational programs. *Educational Considerations, 37*(2), 22-26.

Dabbagh, N., & Kitsantas, A. (2012). Personal learning environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *Internet and Higher Education, 15*(2012), 3-8.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of Mixed Methods Research, 2*(3), 270-283.

Díaz, S. R. (2013). Expanding the CoI: Finding the hidden wholeness in online learning and online working. In Z. Akyol, & D. Garrison (Eds.) *Educational Communities of Inquiry: Theoretical Framework, Research and Practice* (pp. 429-445). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-2110-7.ch021

Dungy, G. J. (2003). Organization and functions of student affairs. In S. R. Komives & D. B. Woodard, Jr. & Associates (Eds.), *Student services: A handbook for the profession* (4th ed.). San Francisco, CA: Jossey-Bass.

Ellis, S. (2010). Introduction to strategic planning in student affairs: A model for process and elements of a plan. *New Directions for Student Services,* 132, 5-19. doi: 10.1002/ss

Emeagwali, N. (2011). Millennials: Leading the charge for change. *Techniques: Connecting Education And Careers, 86*(5), 22-26.

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London, UK: SAGE Publications Ltd.

Fried, J. (2003). Ethical standards and principles. In S. R. Komives & D. B. Woodard, Jr. & Associates (Eds.), *Student services: A handbook for the profession* (4th ed.). San Francisco, CA: Jossey-Bass.

Fried, J. (2007). Higher education's new playbook: Learning reconsidered. *About Campus, 12*(1), 2-7.

Fried, J. (2012). *Transformative learning through engagement: Student affairs practice as experiential pedagogy*. Sterling, VA: Stylus Publishing.

Frost, R. A., Strom, S. L, Downey, J., Schultz, D. D., & Holland, T. A. (2010). Enhancing student learning with academic and student affairs collaboration. *The Community College Enterprise, 16*(1), 37-51.

Garrison, D. R. (2009). Communities of inquiry in online learning. In P. Rogers, G. Berg, J. Boettcher, C. Howard, L. Justice, & K. Schenk (Eds.) *Encyclopedia of distance learning* (2nd ed., pp. 352-355). Hershey, PA: IGI Global. doi:10.4018/978-1-60566-198-8.ch052

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *Internet and Higher Education, 13*(1-2), 5-9.

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education, 10*(3), 157-172.

Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education, 13*(2), 31-36.

Garrison, D. R., Cleveland-Innes, M., Koole, M., & Kappelman, J. (2006). Revisiting methodological issues in transcript analysis: Negotiated coding and reliability. *Internet and Higher Education, 9,* 1-8.

Garrison, D. R., Cleveland-Innes, M., & Vaughan, N. (n.d.). CoI survey. Retrieved from https://coi.athabascau.ca/coi-model/coi-survey/

Garrison, D. R., & Kanuka, H. (2008). Changing distance education and changing organizational issues. In W. J. Bramble & S. Panda (Eds.), *Economics of distance and online learning: Theory, practice, and research* (pp. 13-25). New York, NY: Routledge.

Hardy Cox, D., & Strange, C. (2010). *Achieving student success: Effective student services in Canadian higher education.* Montreal, QB: McGill-Queen's University Press.

Hall, M. (2011). A predictive validity study of the revised Mcvay Readiness for Online Learning Questionnaire. *Online Journal of Distance Learning Administration, 14*(3), 1-14. Retrieved July 17, 2012 from http://www.westga.edu/~distance/ojdla/winter134/heyman134.html

Hartnett, M. (2016). *Motivation in online education.* Singapore: Springer. doi: 10.1007/978-981-10-0700-2

Hayes, S., Smith, S. U., & Shea, P. (2015). Expanding learning presence to account for the direction of regulative intent: Self-, co- and shared regulation in online learning. *Online Learning, 19*(3), 15-33

Helfgot, S. R. (2005). Core values and major issues in student affairs practice: What really matters? *New Directions for Community Colleges,* 131, 5-18.

Hesse-Biber, S. N. (2010). *Mixed methods research: Merging theory with practice.* New York, NY: Guilford Press. Retrieved from www.ebrary.com.

Heyman, E. (2010). Overcoming student retention issues in higher education online programs. *Online Journal of Distance Learning Administration, 13*(4), 1-12. Retrieved September 24, 2012 from http://www.westga.edu/~distance/ojdla/winter134/heyman134.html

Herbert, M. (2006). Staying the course: A student in online student satisfaction and retention. *Online Journal of Distance Learning Administration, 9*(4), 1-11. Retrieved September 24, 2012 from http://www.westga.edu/~distance/ojdla/winter94/herbert94.html

Hirner, L., & Kochtaek, T. (2012). Quality indicators of online programs. *Community College Journal of Research and Practice, 36*(2), 122-130. doi: 10.1080/10668920802628645.

Holder, B. (2007). An investigation of hope, academics, environment, and motivation as predictors of persistence in higher education online programs. *Internet and Higher Education, 10*(2007), 245-260.

Hornak, A. M., Akweks, K., & Jeffs, M. (2010). Online student services at the community college. *New Directions for Community Colleges, 150*(8), 79-87. doi: 10.1002/cc

Huett, J. B., Moller, L. A., Harvey, D., & Engstrom, M. E. (2007). Examining the use of learning communities to increase motivation. In R. Luppinci (Ed.), *Online learning communities* (pp. 189-203). Charlotte, NC: Information Age Publishing, Inc.

Hurt, R. L. (2007). Advising as teaching: Establishing outcomes, developing tools, and assessing student learning. *NACADA Journal, 27*(2), 36-40.

Ice, P., Gibson, A. M., Boston, W., & Becher, D. (2011). An exploration of differences between community of inquiry indicators in low and high disenrollment online courses. *Journal of Asynchronous Learning Networks, 15*(2), 44-69.

Jézégou, A. (2010). Community of inquiry in e-learning: Concerning the Garrison and Anderson model. *Journal of Distance Education 24*(3), 47-52.

Johnson, L., Adams, S., & Cummins, M. (2012). *The NMC horizon report: 2012 Higher education edition.* Austin, TX: The New Media Consortium. Retrieved on October 7, 2012 from http://www.nmc.org/pdf/2012-horizon-report-HE.pdf

Jones, S. J., & Meyer, K. A. (2012). The "virtual face" of distance learning at public colleges and universities: What do websites reveal about administrative student support services? *Online Journal of Distance Learning Administration, 15*(5), 1-12. Retrieved from http://www.westga.edu/~distance/ojdla/winter154/jones_meyer154.html

Joo, Y. J., Lim, K. Y., & Kim, E. K. (2011). Online university students' satisfaction and persistence: Examining perceived level of presence, usefulness and ease of use as predictors in a structural model. *Computers & Education, 57*(2011), 1654-1664.

Kanuka, H., & Kelland, J. (2008). Has e-learning delivered on its promises? Expert opinion on the impact of e-learning in higher education. *Canadian Journal of Higher Education, 38*(1), 45-65.

Ke, F. (2010). Examining online teaching, cognitive, and social presence for adult students. *Computers and Education, 2010*(55), 808-820. doi: 10.1016/j.compedu.2010.03.013

Ke, F., & Xie, K. (2009). Toward deep learning for adults in online courses. *Internet and Higher Education, 12*(2009), 136-145.

Kenner, C., & Weinerman, J. (2011). Adult learning theory: Application to non-traditional college students. *Journal of College Reading and Learning, 41*(2), 87-96.

Kezar, A. (2003). Enhancing innovative partnerships: Creating a change model for academic and student affairs collaboration. *Innovative Higher Education, 28*(2), 137-156.

Kim, K.-J., & Frick, T. W. (2011). Changes in student motivation during online learning. *Journal of Educational Computing Research, 44*(1), 1-23.

Kim, K.-J., Liu, S., & Bonk, C. J. (2005). Online MBA students' perceptions of online learning: Benefits, challenges, and suggestions. *Internet and Higher Education, 8*(2005), 335-344.

Kleemann, G. L. (2005). Weaving silos—a leadership challenge: A cross-functional team approach to supporting web-based student services. *New Directions for Student Services, 2005*(112), 89-101.

Kleinglass, N. (2005). Who is driving the changing landscape in student affairs? *New Directions for Student Services,* 112, 25-38.

Kuong, H. C. (2015). Enhancing online learning experience: From learners' perspective. *Procedia – Social and Behavioral Sciences, 191*(2015), 1002-1005.

LaPadula, M. (2003). A comprehensive look at online student support services for distance learners. *American Journal of Distance Education, 17*(2), 119-128.

Lawton, W., Ahmed, M., Agnulo, T., Axel-Berg, A., Burrows, A., & Katsomitros, A. (2013). *Horizon scanning: What will higher education look like in 2020?* (Research Series No. 12). London, England: The UK Higher Education International Unit. Retrieved from http://www.ifhe.ac.uk/en/research-resources/publications/index.cfm/OT-Ext-02

Lee, J.-W. (2010). Online support service quality, online learning acceptance, and student satisfaction. *The Internet and Higher Education, 13*(4), 277-283. http://dx.doi.org/10.1016/j.iheduc.2010.08.002

Lee, S. W.-Y., & Tsai, C.-C. (2011). Students' perceptions of collaboration, self-regulated learning, and information seeking in the context of Internet-based learning and traditional learning. *Computers in Human Behavior, 27*(2011), 905-914.

Leech, N. L., Dellinger, A. B., Brannagan, K. B., & Tanaka, H. (2010). Evaluating mixed research studies: A mixed methods approach. Journal of Mixed Methods Research, 4(1), 17-31. Doi: 10.1177/1558689809345262

Levy, M. A., & Polnariev, B. A. (Eds.). (2016). *Academic and student affairs in collaboration: Creating a culture of student success.* New York, NY: Routledge.

Lock, J. V. (2007). Laying the groundwork for the development of learning communities. In R. Luppicini (Ed.), *Online Learning Communities: A volume in perspectives in instructional technology and distance education* (pp. 129-149). Charlotte, NC: Information Age Publishing.

Ludeman, R. B., Osfield, K. J., Hidalgo, E. I., Oste, D., & Wang, H. S. (2009). *Student affairs and services in higher education: Global foundations, issues and best*

practices. Paris, France: United Nations Educational, Scientific and Cultural Organization (UNESCO).

Ludewig, A., & Vogt, K. (2010). Virtual learning communities in higher education: Opportunities and challenges. In A. Ragusa (Ed.), *Interaction in Communication Technologies and Virtual Learning Environments: Human Factors* (pp. 285-299). Hershey, PA: ICI Global. Doi: 10.4018/978-1-60566-874-1.ch018

Ludwig-Harman, S., & Dunlap, J. C. (2003). Learner support services for online students: Scaffolding for success. *International Review of Research in Open and Distance Learning, 4*(1), 1-15.

Marklein, M. B. (2013, May 30). Universities bolster MOOCs for online learning. *USA Today*. Retrieved June 2, 2013 from http://www.usatoday.com/story/news/nation/2013/05/30/universities-coursera-moocs-online-learning/2371421/

McEwen, M. K. (2003). The nature and uses of theory. In S. R. Komives & D. B. Woodard, Jr. & Associates (Eds.), *Student services: A handbook for the profession* (4th ed.). San Francisco, CA: Jossey-Bass.

McKeown, L., & Underhill, C. (2007). Learning online: Factors associated with the use of the internet for educational purposes. *Education Matters: Insights on Education, Learning and Training in Canada, 4*(4). Retrieved January, 16, 2012 from http://www.statcan.gc.ca/pub/81-004-x/2007004/10375-eng.htm

Melguizo, T. (2011). A review of the theories developed to describe the process of college persistence and attainment. In J. C. Smart, & M. B. Paulsen (Eds.), *Higher*

Education: Handbook of Theory and Research (Vol. 26, pp. 395-424). London, UK: Springer.

Merisotis, J. P., & Phipps, R. A. (2000). *Quality on the line: Benchmarks for success in internet-based distance education.* Washington, DC: Institute for Higher Education Policy. Retrieved on January 9, 2013 from http://www.ihep.org/Publications/publications-detail.cfm?id=69

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide* (3rd ed.). San Francisco, CA: Jossey-Bass.

Meyer, K. (2013). The case for the Community of Inquiry (CoI) influencing student retention. In Z. Akyol & D. R. Garrison (Eds.), *Educational Communities of Inquiry: Theoretical Framework, Research, and Practice* (pp. 317-333). Hershey, PA: IGI Global.

Meyer, K. A., & Jones, S. (2011). Information found and not found: What university websites tell students. *Online Journal of Distance Learning Administration, 14*(3). Retrieved from http://www.westga.edu/~distance/ojdla/fall143/meyer_jones143.html

Milem, J. F., & Berger, J. B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development, 38*(4), 387-400.

Moneta, L. (1997). The integration of technology with the management of student services. *New Directions for Student Services, 1997*(78), 5-16. doi: 10.1002/ss.7801

Morgan, T. (2011). Online classroom or community-in-the-making? Instructor conceptualizations and teaching presence in international online contexts. *International Journal of E-Learning and Distance Education, 25*(1). Retrieved from http://www.ijede.ca/index.php/jde/article/view/721/1269

Morris, L, V., & Finnegan, C. L. (2008). Best practices in predicting and encouraging student persistence and achievement online. *Journal of College Student Retention, 10*(1), 55-64.

Motteram, G., & Forrester, G. (2005). Becoming an online distance learner: What can be learned from students' experiences of induction to distance programmes? *Distance Education, 26*(3), 281-298.

Nash, R. D. (2005). Course completion rates among distance learners: Identifying possible methods to improve retention. *Online Journal of Distance Learning Administration, 8*(4), 1-21.

Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. *Distance Education, 31*(1), 93-113. doi: 10.1080/01587911003725048

Núñez, E. M. (2012). Leadership and context: The central role of student affairs at a public liberal arts university. In J. Fried and Associates, *Transformative learning through engagement: Student affairs practice as experiential pedagogy* (pp.119-127). Sterling, VA: Stylus Publishing, LLC.

Nuss, E. M., (2003). The development of student affairs. In S. R. Komives & D. B. Woodard, Jr. & Associates (Eds.), *Student services: A handbook for the profession* (4th ed.). San Francisco, CA: Jossey-Bass.

Ormond, S. (2012). *Supporting students for success in online and distance education* (3rd ed.). New York, NY: Routledge.

Ouzts, K. (2006). Sense of community in online courses. *The Quarterly Review of Distance Education, 7*(3), 285-296.

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco, CA: Jossey-Bass.

Palloff, R. M., & Pratt, K. (2007). Online learning communities in perspective. In R. Luppicini (Ed.), *Online Learning Communities: A volume in perspectives in instructional technology and distance education* (pp. 3-15). Charlotte, NC: Information Age Publishing.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students* (Vol. 2). San Francisco, CA: Jossey-Bass.

Pullan, M. C. (2009). Student support services for millennial undergraduates. *Journal of Educational Technology Systems, 38*(2), 235-251. doi: 10.2190/ET.38.2.k

Richmond, N., Rochefort, B., & Hitch, L. (2011). Using social networking sites during the career management process. In L. Wankel, & C. Wankel (Eds.), *Higher education administration with social media: Including applications in student affairs, enrollment management, alumni relations, and career centers - Cutting-edge technologies in higher education* (Vol. 2, pp. 147-164). Bingley, UK: Emerald Group Publishing, Ltd.

Rourke, L., & Kanuka, H. (2009). Learning in communities of inquiry: A review of the literature. *Journal of Distance Education, 23*(1), 19-48.

Ryan, C. C. (1992). Advising as teaching. *NACADA Journal, 12*(1), 1-5.

Sadera, W. A., Robertson, J., Song, L., & Midon, M. N. (2009). The role of community in online learning success. *MERLOT Journal of Online Learning and Teaching, 5*(2), 277-284.

Sandeen, A. (2004). Educating the whole student: The growing academic importance of student affairs. *Change, 36*(3), 28-34.

Sandeen, A. (2011). Does student affairs have an enduring mission? *Journal of College and Character, 12*(4), 1-8.

Schwier, R. A. (2007). A typology of catalysts, emphases, and elements of virtual learning communities. In R. Luppicini (Ed.), *Online learning communities.* Charlotte, NC: Information Age Publishing, Inc.

Scott, K. S., Sorokti, K. H., & Merrell, J. D. (2016). Learning "beyond the classroom" within an enterprise social network system. *Internet and Higher Education, 29*(2016), 75-90.

Seifert, T., Arnold, C., Burrow, J., & Brown, A. (2011). Supporting student success: The role of student services within Ontario's postsecondary institutions. *Toronto: Higher Education Quality Council of Ontario*.

Shah, M., Goode, E., West, S., & Clark, H. (2014). Widening student participation in higher education through online enabling education. *Widening Participation and Lifelong Learning, 16*(3), 36-57.

Shea, P. A. (2005). Serving students online: Enhancing their learning experience. *New Directions for Student Services, 2005*(112), 15-24.

Shea, P., & Bidjerano, T. (2008). Measures of quality in online education: An investigation of the Community of Inquiry model and the net generation. *Journal of Educational Computing Research, 39*(4), 339-361.

Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers & Education, 52*(2009), 543-553.

Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of communities of inquiry in online and blended learning environments. *Computers & Education, 55*(2010), 1721-1731.

Shea, P., & Bidjerano, T. (2012). Learning presence as a moderator in the community of inquiry model. *Computers & Education, 59*(2012), 316-326.

Shea, P., Hayes, S., Vickers, J., Gozza-Cohen, M., Uzuner, S., Mehta, R., Valchova, A., & Rangan, R. (2010). A re-examination of the community of inquiry framework: Social network and content analysis. *Internet and Higher Education, 13*(2010), 10-21. doi: 10.1016/j.iheduc.2009.11.002

Shelton, K. (2011). A review of paradigms for evaluating the quality of online education programs. *Online Journal of Distance Learning Administration, 4*(1), 1-14.

Shepell-fgi. (2013). The digital age: How people are accessing EFAP Services. Retrieved from http://www.shepellfgi.com/EN-CA/AboutUs/News/Research Report/pdf/The Digital Age - How Users Access EFAP Services.pdf

Siemens, G., & Tittenberger, P. (2009). *Handbook of emerging technologies for learning.* Winnipeg, MB: University of Manitoba.

Simpson, O. (2003). *Student retention in online, open and distance learning*. London, UK: Kogan Page Ltd.

Simpson, O. (2012). *Supporting students for success in online and distance education* (3rd ed.). New York, NY: Routledge.

Smith, R. O. (2008). Adult learning and the emotional self in virtual online contexts. *New Directions for Adult and Continuing Education, 2008*(120), 35-43. doi: 10.1002/ace.314

Strange, C. C., & Banning, J. H. (2015). *Design for learning: Creating campus environments for student success* (2nd ed.). San Francisco, CA: Jossey-Bass.

Street, H. (2010). Factors influencing a learner's decision to drop out or persist in higher education distance learning. *Online Journal of Distance Learning Administration, 13*(4). Retrieved from https://www.westga.edu/~distance/ojdla/winter134/street134.html

Swan, K., & Ice, P. (2010). The community of inquiry framework ten years later: introduction to the special issue. *Internet and Higher Education, 13*(1-2), 1-4.

Taylor, B., & Holley, K. (2009). Providing academic and support services to students enrolled in online degree programs. *The College Student Affairs Journal, 28*(1), 81-102.

Taylor, S. H. (2008). What's past is prologue: The evolving paradigms of student affairs. *Planning for Higher Education, 37*(1), 23-31.

Tinto, V. (1988). Stages of student departure: reflections on the longitudinal character of student leaving. *The Journal of Higher Education, 59*(4), 438-455.

Torres, V. (2011). Using student development theories to explain student outcomes. In J. C. Smart, & M. B. Paulsen (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. 26, pp. 425-448). London, UK: Springer.

Traver, A. E., Volchok, E., Bidjerano, T., & Shea, P. (2014). Correlating community college students' perception of community of inquiry presences with their completion of blended courses. *Internet and Higher Education, 20*(2014), 1-9.

van Barneveld, A., Arnold, K. E., & Campbell, J. P. (2012). Analytics in higher education: Establishing a common language. *EDUCAUSE learning initiative, 1*, 1-11.

Vaughan, N. (2013). Community of Inquiry framework, digital technologies, and student assessment in higher education. In Z. Akyol & D. R. Garrison (Eds.), *Educational Communities of Inquiry: Theoretical Framework, Research, and Practice* (pp. 334-348). Hershey, PA: IGI Global.

Wang, Y. M., Chen, D. T., & Liang, R. Y. H. (2011). Overcoming the Dilemma of Teacher Presence in Student-Centered Online Discussions. *Journal of Educational Multimedia and Hypermedia*, 20(4), 425.

Watson, L. (2008). It's not about us; it's about them. In M. Weaver (Ed.), *Transformative learning support models in higher education* (pp. 3-18). London, UK: Facet Publishing.

Weise, M. R., & Christensen, C. M. (2014). *Hire education: Mastery, modularization, and the workforce revolution.* Retrieved from http://www.christenseninstitute.org/publications/hire/

Weisstein, E. W. (2004). *Bonferroni correction*. Retrieved from http://mathworld.wolfram.com/BonferroniCorrection.html

Wiggers, R., Arnold, C. (2011). *Defining, measuring and achieving "student success" in Ontario colleges and universities*. Toronto, ON: Higher Education Quality Council of Ontario.

Wighting, M. J., Liu, J., & Rovai, A. P. (2008). Distinguishing sense of community and motivation characteristics between online and traditional college students. *The Quarterly Review of Distance Education, 9*(3), 285-295.

Woods, M. L. (2008). A case study of student satisfaction: Comparing the traditional delivery and online delivery of student services in an urban community college. *Dissertation Abstracts International: Section B. Humanities and Social Sciences, 69*(9-A), 3430.

Zawacki-Richter, O. (2009). Research areas in distance education: A delphi study. *The International Review of Research in Open and Distance Learning, 10*(1), 1-10.

Appendices

Appendix 1

Electronic Survey Announcement

(Provided to target student group using online course management tools)

EXAMINING THE EXPERIENCES OF ONLINE COMMUNITY COLLEGE LEARNERS ENGAGING STUDENT SERVICES

My name is Stacey Burgess. I am an employee of the [redacted] with more than ten years of experience as a student service professional and I am also a graduate student in Memorial University of Newfoundland's Master of Education program. For my Master's thesis, I am conducting research on the experiences of online learners under the supervision of Dr. Dale Kirby.

As colleges and universities deliver more and more educational content online, it is important to learn as much as we can about how to support online learning and learners. This study will provide important insight into online learning in the community college system in Nova Scotia including the role of student services in building a sense of community among online learners and how services can be improved to better meet the needs of today's online student.

You are invited to participate in this study and to share your experiences learning online. Your valuable input will add new knowledge to the study of online learning and offer insight into how to better meet the needs of today's online student.

If you complete the online survey, you can enter to win a Digital HD Video Camera donated by [redacted]!

Your participation in this study is voluntary and you do not have to answer any questions you prefer not to answer. Participation in this research will have no anticipated negative effect on your student status, including but not limited to grades. Your participation puts you at absolutely no risk and you are free to decline to participate or withdraw entirely at any time without consequence.

If you choose to take part in this study you are asked to complete an online survey and you may also be asked to take part in a telephone interview. Both the survey and the interview will take approximately 15-20 minutes each.

Please review the **Informed Consent Form** in its entirety and complete the electronic consent form to access the online survey. You will have from **October 15, 2012 to October 26, 2012** to complete the survey.

If you have any questions or have any difficulty accessing the survey you may contact me at [redacted] or by email at sjf015@mun.ca.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's

ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

The proposal for this research has also been reviewed by the [redacted] Research Ethics Board and found to be in compliance with ethical guidelines governing research involving human subjects as articulated in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans as well as [redacted] policy.

Thank you for your valuable participation.

Sincerely,

Stacey Burgess

Investigator

Appendix 2

Survey Questions and Pre-coded Responses

Demographics and Characteristics	
What best describes you?	1= male 2= female 3= neither
With what age range do you identify?	1= 19 to 25 years old 2= 26 to 30 years old 3= 31 to 35 years old 4= 36 years or older
Before you began your current program, had you participated in College or University study?	1= Yes 2= No 3= Not sure
Before you began your current program, had you participated in online study?	1= Yes 2= No 3= Not sure
Before you began your current program, how comfortable were you with technology?	1= Very Comfortable 2= Moderately Comfortable 3= Moderately Uncomfortable 4= Not comfortable

How far through your current program are you?	1= Just started 2= Mid-way through 3= Almost done 4= Not sure
At this point in your program, how comfortable are you with online learning technology?	1= Very Comfortable 2= Moderately Comfortable 3= Moderately Uncomfortable 4= Not comfortable
Sources of information and support	
Which of the follow supports in Student Services have you used in your current program?	
General Program Advising (e.g., time management, study skills, dealing with challenging situations)	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource

Resume Writing and Job Search Advice	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Course registration/selection	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Tutoring services	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource

Workshops	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Personal counselling	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Career counselling	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource

Disability resources & supports	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Library services	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Institutional Website	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource

Self-Service	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Institutional Online Learning Website	1= Very often 2= Often 3= Somewhat often 4= Not very often 5= Never 6= I did not know about this resource
Teaching (T), Social (S) & Cognitive (C) Presence	
Based on your experiences with the student support services above, please respond to the follow:	
(T)Student Services clearly communicated important program goals.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(T) Student Services helped me to reflect on my learning and clarify my thinking.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(T) Student Services encouraged me to explore new ways of thinking about my learning.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(T) Student Services helped me to set goals related to my education and career interests.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(T) My contact with Student Services helped me develop a sense of community as an online learner.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(T) Student Services responded to my inquiries in a timely fashion.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(T) Important due dates/time frames were clearly communicated to me.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(T) Student Services helped me identify relevant learning opportunities matching my educational and career goals.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) I feel motivated to explore relevant learning opportunities.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(C) Exploring challenging issues and questions has increased my interest in this learning experience.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) I can apply the knowledge created through my contact with Student Services in a variety of educational and work related situations.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) I have developed solutions to educational problems that I can apply in the work world.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) I utilized a variety of information sources to explore problems related to my educational experiences and career interests.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(C) Learning activities (e.g., workshops) helped me construct explanations/ solutions to questions raised by my experiences.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) Brainstorming and finding relevant information helped me resolve educational and career planning questions.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) Reflection and discussion on my experiences has helped me make sense of my experiences.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(C) Combining new information with my previous experiences has helped me answer questions related to my educational and career goals.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(C) Online discussions are valuable in helping me appreciate different perspectives.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(S) I feel comfortable conversing through the online medium.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(S) Online discussions facilitated by Student Services help me to develop a sense of collaboration.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(S) Online or web-based communication is an excellent medium for social interaction.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree

(S) Getting to know other online learners has helped me develop a sense of belonging in my program.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(S) Online opportunities for outside-of-class discussion has helped me to form distinct impressions of some other online learners.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
(S) I feel that my point of view is acknowledged in online discussions.	1= Strongly agree 2= Agree 3= Neither agree nor disagree 4= Disagree 5= Strongly disagree
Open-ended Questions	
Please respond the following questions as honestly and with as much detail as you feel comfortable:	
How would you describe the support you have received from Student Services in your online program?	
What support services did you find most helpful in your current program?	
What recommendations would you offer that could improve support services for online students?	

Appendix 3

Individual Interview Protocol

Project: Examining the Experiences of Online Community College Learners Engaging Student Services

Time of Interview:

Date:

Interviewer: Stacey Burgess, Investigator

Interviewee:

Position of Interviewee: Online Student

Script:

Thank you for agreeing to participate in this portion of the study.

The purpose of this study is to examine the experiences of online community college students accessing student services like academic advising, career and personal counselling, and course registration. This study will provide important insight into online learning in the community college system in Nova Scotia including the role of student services in building a sense of community among online learners and how services can be improved to better meet the needs of today's online students.

I am collecting data from both an online survey and telephone interviews. You have been contacted because you are an online student with [redacted] and you completed the online

survey. The information you provide today will be collected using a digital voice recorder and held in a secure location only accessible to me for transcription and analysis in order to keep your information confidential. The interview will take between 20 and 30 minutes.

Your participation in this study is voluntary and you do not have to answer any questions you prefer not to answer. Participation in this research will have no anticipated negative effect on your student status, including but not limited to grades. Your participation puts you at absolutely no risk and you are free to decline to participate or withdraw entirely at any time without consequence.

Questions:

1. What does it mean to you to feel part of a learning community?
2. How important is it to you to feel part of the [redacted] online learning community?
3. Please describe your experience receiving support from Student Services (e.g., general program advice, resume and job search advice, course selection, personal or career counselling).
4. How did the support you received contribute to your overall experience with [redacted]?
5. What support services did you find most valuable?
6. What are your recommendations regarding Student Services for online students?