

EXPLORING PERCEPTIONS OF LEARNER PRESENCE IN ONLINE
BACCALAUREATE DEGREE COMPLETION STUDENTS

A DISSERTATION

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CHRISTINA C. OLSON, BSN, MSN

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DEDICATION

For my husband Ken Olson, and children, Mark, Kat, and Liz
who never wavered in their faith and support.

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ABSTRACT

CHRISTINA C. OLSON

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Online baccalaureate completion students represent a large and growing population in nursing education today. The purpose of this descriptive exploratory study was to (a) measure Learner Presence in online RN-to-BSN students, (b) identify student characteristics that may relate to Learner Presence, (c) identify program-specific characteristics that may relate to Learner Presence, and (d) determine if, and how, student and program-specific characteristics affect the variable of Learner Presence.

Two instruments were used. The Modified Community of Inquiry Learner Presence Scale (MCLPS) is a 21-item self-report based on the social and cognitive presence constructs of the Community of Inquiry Survey (Arbaugh et al., 2008). The researcher developed the 14 item, RN-to-BSN Student and Program Characteristics Questionnaire, which is based on key characteristics of RN-to-BSN students and program characteristics of online education.

The setting for this study was internet based, and a purposeful convenience sample consisted of 239 online RN-to-BSN students in the United States. Descriptive statistics, confirmatory analysis of the MCLPS, Pearson Product Moment correlations, and Independent *t* tests were conducted. Multiple logistic regression was also used to

answer the research questions. A weak negative correlation ($r = -.192, p < .003$) was found between age and Learner Presence. Additionally, three significant predictors of Learner Presence scores included the course activities used in online courses: (a) papers ($p = .042$), (b) group projects ($p = .008$), and (c) online presentations ($p = .011$) were determined. Group projects were positively associated with higher Learner Presence scores ($t = 2.679$), whereas online presentations ($t = -2.55$) and papers ($t = -2.044$) were negatively associated with lower Learner Presence scores.

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CHAPTER I

INTRODUCTION

The goal of this research is to investigate the experience of online learning from the perspectives of Registered Nurses (RNs) completing a baccalaureate degree, seeking description of *Learner Presence* in online nursing education, and examination of student and program specific influences that impact learning for this group of students. This chapter provides an overview of the problem, rationale for the study, theoretical frameworks and conceptual models to be used, and the research questions. Chapter II will present an in-depth literature review of research focusing on online higher education, online baccalaureate nursing education, and the RN-to-BSN student. Chapter III will describe the procedures for collection and treatment of data. Chapter IV will describe the sample and present the results of the study. In conclusion, Chapter V will summarize the study, review the findings in relation to previous research and theoretical frameworks, discuss conclusions and implications of the study, and present recommendations for future study.

Rapid growth of online learning technologies has improved accessibility of educational offerings and increased demand for online higher education (Allen & Seaman, 2006). As of 2013, online programs of study compromised 32% of the total enrollment in higher education in the United States (Allen & Seaman, 2013). A ten-year survey report tracking online higher education identified that a total of 6.7 million

students take at least one online course, with the biggest gains occurring in number of student populations enrolled in totally, online programs, which rose from 49% to 71% (Allen & Seaman, 2013).

Nursing education has also experienced a rapid expansion in the number of online courses and programs offered (Carlon et al., 2012). According to the most recent American Association of Colleges of Nursing (AACN, 2012) enrollment data, 646 RN-to-Baccalaureate (BSN) and 168 RN-to-Masters Degree programs are now available nationwide, with many programs offered completely online. Researchers have now produced many studies focused on online content, course delivery methods, analysis related to accessibility, and increased consumer use of these educational opportunities. Nevertheless, acceptance of this pedagogy by educators is still beset by continued concerns regarding heightened learner requirements, decreased student persistence, and subsequent higher attrition rates (Allen & Seaman, 2013).

With the expansion of online educational offerings many researchers have focused on what is absent or different from traditional classroom settings, seeking to establish presence as a concept inherent to online education. Online learning environments exist in both private and shared virtual spaces, where communication occurs between learners and teachers and among the learners themselves (Olson & Benham-Hutchins, 2014). Unlike the traditional classroom setting, the online learning environment lacks a tangible physical space, and most interactions are text based (Garrison, Anderson, & Archer, 2010). The nature of this virtual space creates challenges and opportunities for the both the learner and teacher (Ellis & Goodyear,

2013). Additionally, little is known regarding factors that impact learning in the online environment (Carlon et al., 2012; Cobb, 2011; Mayne & Wu, 2011).

Seeking to describe the intangible nature of online learning, Olson and Benham-Hutchins (2014) completed a concept analysis of learner presence (LP) in online nursing education by defining its uses, attributes, antecedents, consequences and empiric referents (Walker & Avant, 2005). This multidimensional concept was described as “the incorporeal perception of the student, perceived as being intimate, relational, social and interactive with others in a virtual learning environment” (Olson & Benham-Hutchins, 2014, Defining Attributes section, para. 1). This concept analysis proposed that the empirical referents of social and cognitive presence can be operationalized to measure LP in online nursing education. LP has been adapted from the constructs of cognitive and social presence first developed in the Community of Inquiry framework for online higher education (Garrison et al., 2010).

In addition to development of concepts, researchers must also consider the historical perspectives that have impacted the steady increases in demand for baccalaureate prepared nurses and as a result caused the expansion and proliferation of RN-to-BSN completion programs. Today, over three million nurses comprise the largest component of the U.S. healthcare workforce in an environment that has seen changes characterized by increased patient acuity levels, an aging patient population, and healthcare reforms that culminate in an increased the demand for nurses (Johnson, Butler, Harootunian, Wilson, & Linan, 2016; Woo, 2016). Despite the increase in patient complexity and subsequent recommendations regarding the need for baccalaureate

nursing education, approximately 60% of RNs in the U.S. workforce today still enter practice with an associate's degree or diploma in nursing (Anabari, 2015).

Nursing research has demonstrated that baccalaureate preparation in nursing is positively associated with improved patient outcomes (Aiken, Cheung, & Olds, 2009; Aiken, Cimiotti, Sloane, Smith, Flynn, & Neff, 2011; Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Kutney-Lee, Sloane, & Aiken, 2013). Continued advances in online educational technologies and offerings have driven expansion and proliferation of online nursing completion programs (AACN, 2015; Mancini, Ashwell, & CIPHER, 2015). Directives by accrediting bodies and healthcare organizations have encouraged diploma and associate degree nurses to seek online baccalaureate nursing education to meet expanded nursing roles in today's challenging healthcare environment and further to prepare them for graduate education (American Nurses Credentialing Center, [ANCC], 2015; Buerhaus, Auerbach, & Staiger, 2016; McEwen, Pullis, White, & Krawtz, 2013).

Thus, registered nurses to baccalaureate prepared nurse (RN-to-BSN) students now represent a substantial and growing population of nursing students learning online, highlighting the need for further research that is population-specific and contextual in its inquiry. This population of students represents a different type of learner compared to the traditional undergraduate baccalaureate students, with specific influences that affect their ability to be successful in completion programs. RN-to-BSN completion students have described the presence of significant barriers to success in completion programs, beginning with enrollment and persisting through graduation (McEwen, White, Pullis, & Krawtz, 2014). These nursing students enter the program with varied educational and

practice experience that impact subsequent learning (Adorno, 2010, Mancini et al., 2015), and they often work and have other responsibilities that influence abilities to succeed within the online learning environment (Anbari, 2015). Further research is needed to determine and discern how LP occurs in online nursing education; to assure positive learning outcomes through valuing interaction, and to utilize communication, collaboration, and knowledge construction that is self-reflective, and that promotes self-efficacy.

Problem of Study

Nursing research has demonstrated the value of baccalaureate nursing education (Aiken et al., 2009; Aiken et al., 2011; Aiken, Clarke, Cheung, Sloane, & Silber, 2003). Subsequently increased accessibility of, and demand for, online programs (Allen & Seaman, 2013) has dramatically expanded the population of online RN-to-BSN completion students (AACN, 2012). Educational research has supported use of online educational technologies as a viable option in higher educational disciplines, but questions remain regarding the best educational practices necessary to enhance the virtual nature of learning in the online environment.

Most RN-to-BSN students are concurrently working in nursing practice as they progress through online RN-to-BSN completion programs. RN-to-BSN students, therefore, represent a diverse educational cohort composed of non-traditional learners, who are influenced by numerous external factors that impact their personal learning experiences. The combined influences of heightened learner requirements in the

online learning environment and challenges posed by external factors specific to the RN-to-BSN student support the need for further inquiry into this substantial and growing cohort.

The nursing profession relies on evidenced-based models to assure quality in nursing practice, and yet these models have not been specifically applied to online nursing education (Cannon & Boswell, 2014). To incorporate best practices specific to online nursing education, research must focus on appropriateness of nursing content to this environment, optimal teaching strategies that ensure successful learning outcomes, and specific attention to the affective domain of learning in online nursing education (Cannon & Boswell, 2014).

This research addresses the perceptions of, and influences on, RN learners as they experience online education to complete a baccalaureate degree. Learner presence has been described as the online learner's ability to be personally recognized and recognize others as they interact to construct knowledge in this virtual learning environment (Olson & Benham-Hutchins, 2014). Antecedents to this concept include student abilities, motivations, and opportunities which influence the student's perceptions of LP (Olson & Benham-Hutchins, 2014). Furthermore, the contextual nature of the online environment is determined by practical and social determinants within the learning community that affect the learner's ability to construct knowledge using text-based communication (Garrison, Anderson, & Archer, 1999; Vygotsky, 1978). Therefore, the aims of this descriptive exploratory study are to (a) measure LP in online RN-to-BSN students, (b) identify those characteristics of students that may relate to LP in the online learning

environment, (c) identify those program-specific characteristics that may relate to LP in the online learning environment, and (d) determine if, and how, the variable of LP is affected by student and program-specific characteristics. Understanding of the contextual influences that impact the experience of learning for online RN-to-BSN students is necessary to begin to determine best evidence based educational practices.

Rationale for Study

In 2013, 40% of BSN graduates completed RN-to-BSN programs (Matthias, 2014). With more than 600 online programs in the United States today, nurses seeking baccalaureate degrees represent a substantial population of students accessing online nursing education (AACN, 2012). Prospective students cite many constraints to their success in RN-to-BSN programs that affect the transition of nurses from enrollment to graduation in these programs. These include conflicting program requirements and varied curricular content that does not always consider the students' past educational and nursing practice experience (Adorno, 2010; McEwen et al., 2013). The value of this research to future RN-to-BSN students is substantiated by drivers, influences, and restraints that affect student success. Further inquiry is needed into the experience of learning online for this population. This research will provide new information, from the student perspective, on the challenges and opportunities faced by online RN-to-BSN students.

Nursing practice research upholds the baccalaureate degree as the best educational method for entry into nursing practice and research findings have documented a positive relationship between increased BSN staffing and improved patient outcomes (Buerhaus et

al., 2016). However, identified concerns over the rapid proliferation of RN-to-BSN programs and questions regarding the lack of common ground between accreditation standards and the expected outcomes of the national accreditation organizations within nursing education, have seriously limited clarification of the curricular components of both associate and baccalaureate programs (Kumm et al., 2014; McEwen et al., 2013). Nevertheless, the diverse population of online RN-to-BSN students will be held to the same standards as those prepared in traditional undergraduate programs. Therefore, the value of this proposed research to nursing practice lies in the goal of assuring that the large and growing numbers of online RN- to-BSN completion students receive an educational experience that enables them as graduates to provide care that also meets quality nursing practice standards.

A contextual inquiry into the online learning environment is essential, because higher education research has indicated that students require different learning environments to attain learning outcomes (Akyol & Garrison, 2011). Concerns regarding student persistence continue, with online attrition rates six to seven times higher than face-to-face traditional programs (Hart, 2012; Patterson & McFadden, 2009; Pratt-Lafevers & McCleary-Jones, 2015; Shaw, Ferguson, & Burrus, 2016; Smallwood, 2015;). The value of the proposed research to nursing education rests in the examination of the meaning of the online learning experience as a basis for further development of evidence-based online nursing education models (Mancuso-Murphy, 2007; McIntyre, McDonald, & Racine, 2013; Olson & Benham-Hutchins, 2014). Nursing research focused on student populations that utilize online delivery methods in their education can

reveal the unique student perspectives that can be used to develop appropriate and balanced educational methods (Canon & Boswell, 2014).

Theoretical Framework

Exploring the perspectives of online RN-to-BSN students compels a constructivist perspective and contextual approach to identify the learning prerequisites that impact successful learning outcomes (Gulati, 2004; Olson & Benham-Hutchins, 2014).

Constructivism represents a philosophical viewpoint concerned with the nature of knowing, and Vygotsky's social formation of the mind (SFM) theory is appropriate in that it regards cognitive/knowledge development or learning as specific to the context of the social world (1978). From this viewpoint, understanding of the experience of learning requires identification of factors that influence the contextual nature of the learning environment. This perspective is both necessary and applicable because the proposed research seeks to explore the essence of a virtual learning experience, where students' perspectives are not easily distinguished and evident. Although not specific to the online classroom, SFM theory can be used to scaffold student perceptions regarding the experience of online learning to determine and interpret the characteristics and processes that reflect the experience. Use of this framework provides the perspective and structure necessary to identify how student and program-specific characteristics enable online RN-to-BSN students to modify personal learning experiences and facilitate contextual learning opportunities that they recognize in this virtual environment.

SFM theory describes the convergence of the social and practical elements in learning, as crucial to cognitive development (Vygotsky, 1978). These elements occur

when communication and practical activity congregate in what Vygotsky modeled as the “zone of proximal development” ([ZPD], 1978, p. 86). For the purposes of the proposed research the ZPD model has been adapted to represent how social and practical components of learning impact the construction of knowledge of higher education students in online learning environments. Figure 1 is an adapted depiction of Vygotsky’s ZPD model. Online learners developed capabilities are depicted in the left sphere and represent the capabilities learners bring to the online environment that influence their potential to learn. The online learning environment or ZPD is represented in the center sphere. This sphere describes how online learners actively modify the learning situation in response to educational stimuli, initiate learning through social processes, and exhibit mental processes associated with recognizing contextual indications in the online learning environment. The sphere on the right represents the online learners’ potential capabilities in terms of attributes that influence the outcomes of constructing knowledge in the online learning environment.

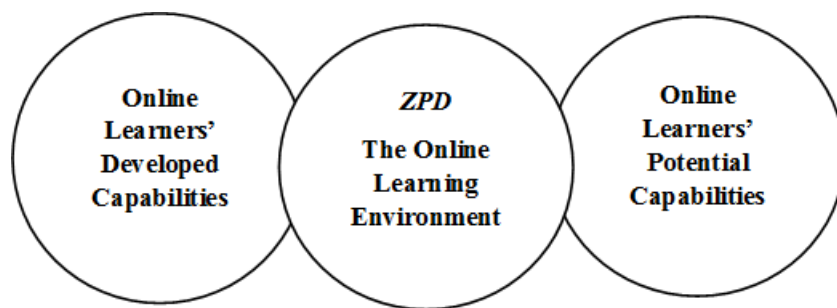


Figure 1. The Online Learning Environment Zone of Proximal Development (adapted from Vygotsky, 1978).

Also, employing a constructivist educational paradigm, Garrison and colleagues (1999) developed the community of inquiry (CoI) model to address the issues that arise in the online learning community where most of the communication is text-based. The CoI model represents an active process that defines, describes, and measures the constructs of cognitive, social, and teaching presence to frame the online learning environment (Garrison et al., 1999). Cognitive presence is conceptualized as “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication (Garrison et al., 1999, p. 89). Social presence is defined as “the ability of participants in the community of inquiry to project their personal characteristics into the community” (Garrison et al., 1999, p. 89). Teaching presence “is composed of two general functions which include design of the educational experience, viewed as the primary responsibility of the teacher and facilitation of the educational experience that may be shared among the teacher and some or all of the other participants in the learning community” (Garrison et al., 1999, pp. 89-90). Teaching presence was later redefined to include design and organization, facilitator discourse, and direct instruction (Anderson, Rourke, Garrison, & Archer, 2001). Subsequently the CoI model was expanded to include critical thinking as a means and process to cognitive presence, reflected in creativity, problem solving, intuition, and insight (Garrison et al., 2001). Figure 2 is a depiction of the CoI model

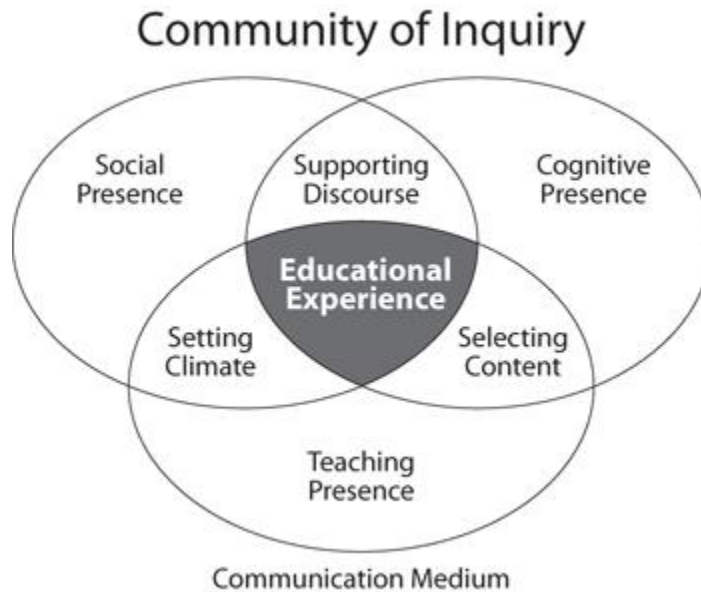


Figure 2. The Community of Inquiry Framework Model. (Garrison et al., 1999).

The adapted Online Learning Environment ZPD and CoI models are also consistent with the operationalized definition of LP, which considers the students developed capabilities or what they bring to the environment, to determine the environment's influences on the students' potential undeveloped learning capabilities (Olson & Benham-Hutchins, 2014). Student experiences with online learning have aligned with the principles of constructivist cognitive theories and models such as the Online Learning Environment ZPD and CoI and are consistent with the operationalized definition of LP, which supports exploration of the contextual meaning of the online learning experience and can be used to identify the learning prerequisites that impact successful learning outcomes (Gulati, 2004; Olson & Benham-Hutchins, 2014).

Assumptions

The researcher's assumptions are drawn from the SFM theoretical framework and conceptual analysis of LP in online nursing education. These assumptions determined at the initiation of the research study include:

1. Online learners actively modify a learning situation in response to the educational stimulus.
2. Online learners initiate cognitive processes originating in social processes.
3. Online learners exhibit mental processes associated with recognition of the contextual indications of learning.
4. The constructs of cognitive, social, and teaching presence frame the process of learning in the online environment.
5. The empirical referents of social and cognitive presence can be used to measure LP in online nursing education.

Research Questions

1. To what extent do RN-to-BSN nursing students perceive LP to be evident in online nursing education?
2. How do demographic characteristics influence perceptions of LP in the experience of online learning for RN-to-BSN students?
3. How do student experiences with the online learning environment influence perceptions of LP in the experience of online learning for RN-to-BSN students?
4. How do student reasons for pursuit of a baccalaureate degree influence perceptions of LP in the experience of online learning for RN-to-BSN students?

5. How do program characteristics influence LP in the experience of online learning for RN-to-BSN students?

Key Study Term Definitions, Conceptual and Operational Variables

Definition of key study terms include those listed and defined below.

Online learning: educational content delivered over the Internet and accessed from a computer through a Web browser (Allen & Seaman, 2006).

Online programs: 80% or greater of the content is delivered online (Allen & Seaman, 2006).

RN-to-BSN nursing students: one who has not yet completed a bachelor's degree in nursing but is licensed as a Registered Nurse.

Appendix A identifies and describes the conceptual and operational definitions of student and program study variables.

Limitations

Generalizability of the proposed study may be limited due to the use of purposeful convenience sampling. Although use of this sampling method will aid in obtaining a sample representative of the population of interest, in obtaining a voluntary sample the researcher cannot ensure that the sample will be representative of the population (Creswell, 2013). Additionally, it should be considered that since sample recruitment takes place through use of the internet, these participants may be more representative of those persons more familiar with internet-facilitated communication, which is also a consideration in terms of generalizability.

Chapter Summary

Past nursing education research has conceptualized LP in online nursing education, examined the appropriateness of specific nursing curricula in online education, and revealed factors that increase student communication, collaboration, and critical thinking (Carter & Rukholm, 2008; Culley & Polyakova-Norwood, 2012; Nelson & Blenkin, 2007; Olson & Benham-Hutchins, 2014). A small number of studies have specifically concentrated on the online RN-to-BSN student, focusing on individual variables that influence the online learning process that included social presence, student satisfaction, collaboration opportunities, student isolation, and barriers that hinder ADN nurses from pursuing a BSN degree (Brahe, 2013; Candelaria, 2015; Cobb, 2011; Townsend, 2015).

This study is based on the constructivist cognitive development theory, SFM, employing the conceptual models of the adapted Online Learning Environment ZPD, the CoI framework and the conceptual analysis of LP in online nursing education. This theoretical perspective supports the contextual nature of learning influenced by student capabilities, activity and communication within the environment that impacts the student's ability and potential to learn. Online RN-to-BSN students represent a large and rapidly expanding nursing education population. Research that measures LP and explores the perceptions of RN-to-BSN students' contextual experiences with online learning, describing both student and program influences, is needed. The findings from this study will offer evidence for nurse educators and instructional design staff, to make informed decisions regarding teaching strategies and reveal insights that can best serve

future online RN-to-BSN students in attaining successful learning outcomes. The remaining chapters of this dissertation include a review of the literature, procedures for collection and treatment of data, analysis of data, and the summarized findings of the dissertational study.

CHAPTER II

REVIEW OF THE LITERATURE

This literature review will focus on the research topics pertinent to online Registered Nurse (RN) to Bachelor of Science in Nursing (BSN) completion students. To ensure a comprehensive search of published literature, the articles in this review were identified by conducting online searches from January 2014 through August of 2016, using the databases of CINAHL, ERIC, Google Scholar, ProQuest Nursing, and PubMed. Combinations of the following key terms were used in the searches: online, higher education, learners, baccalaureate nursing education, RN-to-BSN students, and RN-to-BSN completion programs. Additionally, references were identified from the reference lists of retrieved articles. The literature review presented in this chapter summarizes patterns of findings that describe online higher education, the contextual nature of learning in this environment, nursing research into online education, the emergence of RN-to BSN programs as part of baccalaureate nursing education, and research specific to the influential issues that impact the online RN-to-BSN nursing student.

Overview of Online Higher Education

Online academic programs have been offered for over a decade, and accessibility has increased demand for this pedagogy in numerous higher education disciplines (Allen & Seaman, 2013). Online learning has been described as a feasible, convenient substitute for the traditional face-to-face classroom, characterized as a “social process” that has the potential to restructure education and delineate its role in society (Hiltz & Turoff, 2005,

p. 60). A ten-year survey report tracking online higher education identified that over 570,000 students had taken at least one online course, with the biggest gains in enrollment occurring in total-online programs, which rose from 48.9% to 70.6% (Allen & Seaman, 2013). Allen and Seaman noted an evolving decade of online-learning program growth and reported steady increases in online offerings, increased numbers of students taking online courses, and wide-spread acceptance of this pedagogy as a viable alternative by most online educators. Allen and Seaman remarked that many educators also expressed continued concerns regarding heightened learner requirements and higher attrition rates (Allen & Seaman, 2013).

Many higher education students experience online education at some time in college, taking courses that are part of total-online or hybrid programs in various disciplines. Increased availability of online education in universities and colleges across the United States has also been driven by federal policy changes authorizing financial aid for online higher education; however, questions regarding compliance with online quality standards remain (Bruce, 2010). With improved accessibility, increased familiarity, and wider acceptance of the pedagogy, the demand for the online instructional platform is predicted to continue to grow (Sener, 2010). Understanding motivators that influence individual student decisions to take online courses has been the core of survey research data focused on students. Faculty concerns regarding online higher education, as well as educational expert opinions, have also been expressed in the literature.

Student Motivations

The demand for online higher education has been fueled by a variety of student motivations. Online learning provides opportunities to students with geographic, time, or other constraints that serve to make post-secondary education problematic or impractical to pursue (Crawford-Ferre & Weist, 2012). Most of the research on this topic has utilized surveys of the population of online users.

According to Jagers, who conducted semi-structured interviews with 46 community college students to determine the reasons they choose online courses, student choices were based on flexibility and convenience, perceptions that online courses allowed for more efficient use of learning time needed, and perceptions that the online format complemented students' personal learning styles or preferences regarding interpersonal interactions (2014). Jagers determined from participant survey responses that students' decisions to take specific online courses were based on three student perceptions: (a) whether the course content was suited to an online format; (b) whether students viewed the course as "difficult" or "easy" (students were more likely to take easier courses online), and (c) whether the course was interesting and/or important (students were less likely to take online courses they considered to be important or interesting) (2014). This researcher concluded that students chose online formats for courses they perceived as less challenging, uninteresting, or unimportant (Jagers, 2014).

Similarly, in 2014, the Educause Center for Analysis and Research (ECAR) survey included 1.5 million student participants representing 213 institutions and reported findings based on a stratified random sample of 10,000 U.S. respondents (Dahlstrom &

Bichsel, 2014). Student perceptions revealed that although students were generally inclined to use and have favorable attitudes toward online learning technology, three important distinctions were noted. Technology had only a moderate influence on the students' active involvement and connections with their peers and faculty in specific courses. Students reported interest in expanding the use of a few specific technologies. Most students reported using online vehicles and peer advice for technology support, with only a minority reporting positive experiences with institutional help desks services (Dahlstrom & Bichsel, 2014). A crucial finding was that 90% of the students in the survey rated their use of technology as favorable, while describing that they could be more effective learners if they were better skilled at using different types of technologies. Dahlstrom and Bichsel attributed this inconsistency to a lack of student motivation, opportunity, and/or aptitude for the technologies involved in coursework (2014).

Faculty Concerns and Expert Opinions

Expert opinion regarding online higher education has focused on the instructional technologies utilized; however, faculty concerns remain regarding the use of online instructional technology, its effect on teaching, and its impact on learning (Pittman, Kurtzman, & Johnson, 2014). Although faculty have long recognized online education as dependent upon use of a variety of technology tools for learning activities, faculty remain unclear regarding how the online learner uses technology to meet content learning objectives (Abraham, 2013). Ellis and Goodyear proposed that unless educators focus on online learning as a process rather than simply a technology, these educators risk not being able to sustain the innovation and attain the necessary learning outcomes (2013).

Other experts voiced the opinion that as computer-based technology continues to expand, educators need to consider acclimating to the technology itself and initiating new pedagogies to guide technology in the online learning environment, rather than utilizing existing face-to-face traditional classroom strategies (Beetham & Sharpe, 2013; Christensen & Eyring, 2011).

The Contextual Nature of Online Higher Education

Unlike traditional classroom settings, online learning environments exist in both isolated and shared virtual spaces where communication occurs between learners and teachers and among the learners themselves. Because online learning environments lack a tangible physical space (Carlon et al., 2012), communication opportunities necessary to enhance knowledge construction are absent or altered (Garrison et al., 1999). Constructivist learning theory emphasizes and values the context of learning in the online environment and has served as a useful model for research into learning in online environments. Educational research grounded in a constructivist perspective has advanced a transition from replicating face-to-face classroom strategies to creating conditions and pedagogies that optimize the contextual nature of the online classroom.

The Community of Inquiry

Constructivist learning theory is reliant on a contextual perspective of the learning environment and has been used as an appropriate framework to support the examination of the contextual meaning of the online learning experience (Gulati, 2004; Olson & Benham-Hutchins, 2014). Reliant upon a constructivist perspective and specific to the discipline of education, the community of inquiry (CoI) framework was developed

by Garrison, Anderson, and Archer to describe online learning (1999). Garrison and colleagues first characterized online learning as the interaction between cognitive, social, and teaching presences that occurs within text based environments.

Cognitive presence is defined as “the extent to which the participants in any particular configuration of a CoI are able to construct meaning through sustained communication” (Garrison et al., 1999, p. 89). Social presence is defined as “the ability of participants in the CoI to project their personal characteristics into the community, thereby, presenting themselves to the other participants as real people” (Garrison et al., 1999, p. 89). Teaching presence is defined as “being performed by anyone in the CoI environment, but considered the primary responsibility of the teacher, which entails the design and facilitation of the educational experience” (Garrison et al., 1999, pp. 89 - 90). Teaching presence was later redefined as design and organization, facilitator discourse, and direct instruction (Anderson et al., 2001).

Subsequently the CoI framework was expanded to include critical thinking as a means and process to cognitive presence, reflected in creativity, problem solving, intuition, and insight (Garrison et al., 2001). The CoI framework was first applied using qualitative inquiry to discover what students perceived as missing from online learning (Stodel, Thompson, & MacDonald, 2006). Using constant comparative methods to analyze transcript data from in-depth, semi-structured interviews, with 10 graduate education students, these researchers identified five themes that influence online presence: robustness of online dialogue, learner spontaneity and improvisation,

perceiving and being perceived, getting to know each other, and learning to be an online learner (Stodel et al., 2006).

Based on the original work of Garrison and colleagues (1999), Arbaugh and colleagues reported on the development and validation of the 34-item CoI Survey instrument, as a valid, reliable, and efficient measure of the dimensions of cognitive, social, and teaching presence. Initial instrument development was completed using sample of 287 graduate business and education students at four institutions (2008). Reliability of the CoI supported each presence construct with Cronbach's alpha reported as 0.95 for cognitive presence, 0.91 for social presence, and 0.94 for teaching presence. Factor-analysis measures supported validity of the cognitive, social, and teaching presence constructs, in that the three factors accounted for 61.3% variance in the scores. Additionally, the findings from factor loadings also suggested that teaching presence consisted of two factors-one related to course design and organization and the other related to instructor behavior during the course-indicating the need for further research on the CoI instrument (Arbaugh et al., 2008).

In 2010, Shea and Bidjerano sampled over 3000 online higher-education students confirming validity and reliability of the CoI. Cronbach's alpha was found to be 0.95 for social presence and 0.97 for both cognitive and teaching presence and cognitive. Additionally, social and teaching presence determined 69.2% of the variance in scores, and regression analysis revealed that social and teaching presence predicted only slightly more than 25% of cognitive presence, which led the researchers to posit that a fourth construct of learning presence be included in the CoI model. Shea and Bidjerano

described the construct as “a combination of self-efficacy and individual effort that incorporated the effects of individual learner attributes necessary to learning” (2010, p. 1721). Although learning presence was never incorporated into the CoI model, these researchers proposed that future inquiry that examines learner’s motivational and individual difference characteristics is needed to further expand the original CoI model (Shea & Bidjerano, 2010).

Using a naturalistic case study method, Ke (2010) examined online faculty members’ teaching practices and online student’s learning experience ($n = 16$) in 10 online business, education, and nursing courses at a major U.S. Hispanic-serving, research-intensive university. Using the CoI framework, each course was surveyed as an individual community-of-inquiry case. Ke then completed a comparative analysis across the 10 cases to identify shared and unique contextual features that impact successful online learning. Using the Classroom Community Scale ($\alpha = .93$), Learning Satisfaction Survey ($\alpha = .90$), and Study Process Questionnaire ($\alpha = .84$), Ke determined that those students with a stronger sense of community in online learning environments, also conveyed a stronger sense of learning satisfaction, and reported more interactions in which knowledge was constructed. Importantly, this researcher noted the crucial imperative for faculty and course designers to be considerate of special needs of adult students in creating and designing successful online learning environments (Ke, 2010).

Relatedly, Akyol and Garrison used mixed methods research strategies to study the progression and integration of social, cognitive, and teaching presences over time in online and blended courses using a sample of 27 graduate education students (2011).

These researchers combined transcript analysis of asynchronous online discussions, students' responses to a CoI Survey, students' achievement scores, and follow-up interviews with students and the course instructor. From these participant responses, Akyol and Garrison identified the phases of cognitive presence as including a triggering event initially, followed by exploration, integration, and resolution (2011). Akyol and Garrison also used a Spearman rank correlational coefficient to determine a significant correlation between cognitive presence and learning ($r = 0.67, p = 0.007$ in online course; $r = 0.81, p = .001$ in blended course) and between cognitive presence and satisfaction ($r = 0.65, p = 0.009$ in online course; $r = 0.64, p = 0.024$ in blended course), thus demonstrating that the perceived cognitive presence is associated with students' perceived learning and satisfaction in online and blended courses (2011). These findings led the researchers to propose that future research employ quantitative measures seeking correlation between cognitive presence and the quality of learning outcomes using a larger sample (Akyol & Garrison, 2011).

Research employing the constructivist paradigm of the CoI framework and instrument has evolved over a decade to produce findings that have determined and operationalized the elements of social, cognitive, teaching, and learning presence as constructs that frame the online learning environment, which validated the CoI instrument for measurement of the presence constructs (Anderson et al., 2001; Arbaugh et al., 2008; Garrison et al., 2001; Shea & Bidjerano, 2010; Swan et al., 2008). These research findings supported critical thinking as both a means and process to cognitive presence, determined the various themes that influence online presence, identified the

phases of cognitive presence development, and determined that significant relationships among and between the presences correlate with student perceptions of recognized learning and course satisfaction (Akyol & Garrison, 2011; Garrison et al., 2001; Ke, 2010; Stodel et al., 2006).

Social Presence

Given the virtual nature of the online learning environment, many researchers have specifically addressed social presence to reveal what is presumed absent in online settings. Inquiry into this construct emphasized that differences in social presence were dependent upon the purpose and use of the communicational medium in the virtual learning environment. Identified components of social presence influence and affect online learning abilities, and social presence is influenced through collaboration within online learning environments (Kehrwald, 2008; Remesal & Colomina 2013; Sung & Mayer, 2012).

Kehrwald used a theory-generative qualitative approach to examine social presence as experienced by 20 online postgraduate students. This researcher used a collective case-study design to assess online learners' experience-based, heuristic knowledge gained from structured and semi-structured interviews, and asynchronous group discussions over three semesters (2008). Kehrwald described the need to develop a concise, shared characterization of social presence in terms of learners' experiences, the nature of the concept in online environments, and the need to create and sustain social presence in these environments (2008). Findings revealed a relational view of how social presence is mediated and characterized this construct as a crucial necessity in the online

educational environment (Kehrwald, 2008). This study described social presence as “an individual’s ability to demonstrate his/her state of being in a virtual environment and signal his/her availability for interpersonal transactions” (Kehrwald, 2008, p. 94). From this perspective, the establishment, demonstration, and promotion of social presence are determined by the learners’ opportunities, abilities, and motivation (Kehrwald, 2008).

Sung and Mayer sought to better understand the role of social presence in online education in seeking to describe the degree to which a learner feels personally connected in the online learning experience (2012). These researchers sampled over 600 students at two universities using the Online Social Presence Questionnaire (OSPQ) in two online English and education courses. Sung and Mayer described five components of the construct, which included: “social respect, social sharing, open-mind, social identity and intimacy” (2012, p. 1738). The OSPQ is a 19-item instrument developed by the researchers, based on a literature review of the affective factors or indicators of social presence, which has validated internal consistency ($\alpha = .863$). Respectively, the components of social presence included the learner’s ability to: “receive timely responses, share information and beliefs, express agreement and receive positive feedback, be called by ones’ name, and share personal experiences” (Sung & Mayer, 2012, p. 1743).

Using a qualitative, case-study method, Remesal and Colomina (2013) studied social presence in small collaborative online groups in which 16 students (4 students per group) completed computer supported writing activities in an undergraduate online education course. During the process of completing the assignment, the students used

online forums to communicate to their peer group members regarding tasks and processes needed. Using qualitative content analysis, the online group forum data were analyzed for themes and subthemes, resulting in the researchers' re-conceptualization of social presence as a multi-dimensional concept. These researchers importantly expanded the definition of social presence to include interactively constructed collaboration among online learners, who establish shared personal learning outcomes within the context of promotion of a learning community. As a result of this new conceptualization of the construct, Remesal and Colomina importantly distinguished recognition of social presence as fundamental to enhancing the learning process in virtual online environments and in maintaining positive relationships that augment learner and group efficacies (2013).

Research findings support the proposition that social presence is essential to learning in the online environment, specified the construct as one that varies according to the rationale and various communication technologies employed (Kehrwald, 2008), and identified collaboration components that distinguish the relational perspective of the online learning environment (Sung & Mayer, 2012). Researchers have also identified the components that enhance social presence of individual learners, characterized as knowledge construction by those online learners who share learning outcomes to foster their learning process within the context of a virtual community (Remesal & Colomina, 2013).

Online Learner Requirements

A moderate amount of research has focused on the learner requirements specific to the online learning environment in terms of assessment strategies: (a) student self-reflection (Akyol & Garrison, 2011), (b) essential online community building efforts (Pratt-LaFevers & McCleary-Jones, 2011), and (c) effective communication methods designed for the online environment (Hurst, 2015). These factors influence students' persistence and represent important considerations given the higher attrition rates in online learning programs (Hart, 2012).

Student reflection was identified as an online learner requirement by Aykol and Garrison (2011), who used mixed methods research strategies that included qualitative transcript analysis of interviews to assess online learning processes and outcomes in a sample of graduate education students in online ($n = 15$) and blended ($n = 12$) courses. Students were asked about their sense of individual personal presence in the course and how each course presence influenced their learning and satisfaction. These transcript analyses were used to identify emerging themes. Qualitative content analysis of these transcripts spanning 9 weeks of student discussions in each course was conducted to explore students' levels of cognitive presence. Findings suggested that achievement of cognitive presence in the online learning environment involved student self-reflection within the process of knowledge construction. Aykol and Garrison also used the CoI instrument to quantitatively measure student perceptions of cognitive, social, and teaching presence and to explore student-perceived learning and satisfaction (as reported earlier in this chapter).

To identify strategies to reduce feelings of isolation experienced by doctor of nursing practice (DNP) students ($n=18$) in online courses, Pratt-LaFevers and McCleary-Jones (2015) conceptualized essential student community building efforts. The researchers surveyed students in an Applied Technology in Health-Care course, developed to inform how providers use technology to promote health and self-management in health-care settings. The final project for the course was a collaborative student assignment to be completed in three stages which included: (a) writing a healthcare proposal, (b) developing a multimedia presentation of the proposal for review by a healthcare agency management team and (c) participating in a synchronous meeting with the management team, their peers and faculty for follow-up question/answer discussion. Qualitative student feedback supported the usefulness of the project to future advanced practice and student survey responses revealed that 53 % felt the online course was better than the traditional classroom environment; 89 % felt that the teaching methods facilitated student learning; 95 % indicated that projects enabled them to apply course concepts to professional practice; and all agreed that the course was academically challenging. However, nursing faculty commented on student difficulties with mastering online communication technologies, negotiating student schedules for synchronous activities, and voiced concern regarding students who preferred to remain anonymous in their communication online. The authors emphasized the importance of establishment of peer acquaintances through communications and collaboration as essential to online environments and real world nursing practice, noting that the degree of student

engagement, influences the effectiveness of online learning (Pratt-LaFevers & McCleary-Jones, 2015).

Hart (2012) conducted an integrated review of 20 peer-reviewed studies to examine factors that influence student persistence in online coursework and to summarize the identification and synthesis of factors related to student persistence in an online course. Factors that influence student persistence included satisfaction with learning online; a sense of belonging to an online community; motivation, peer, and family support; time management skills; and increased communication with faculty. Reversely, factors associated with decreased persistence that may cause the student to be more likely to withdraw from a course included preference for an auditory learning style, less educational experience, difficulty in accessing resources, decreased student engagement, non-academic issues, lack of computer accessibility, and poor communication skills. Ironically, advanced computer skills (another factor associated with decreased student persistence) were associated with increased withdrawal rates which was presumed to be the result of students' overestimation of computer skills, underestimation of online course skills and/ or a statistical inconsistency associated with small sample size. The articles included in the review supported the premise that unless persistence factors were evident in adequate capacity, the student would be more likely to withdraw from the online course (Hart, 2012).

Research has demonstrated that online learning impacts the student in that learner self-reflection is required (Akyol & Garrison, 2011). Understanding of the essential student community building efforts, such as comfort with online technologies

employed and the process of collaboration that occurs is necessary to successful outcomes in online learning environments (Pratt-LaFevers & McCleary-Jones, 2015). It is important to consider these requirements because of faculty concerns regarding students' persistence and attrition in online learning programs and the effect on students' in terms of unsuccessful outcomes, and loss of time and money (Hart, 2012).

This portion of the literature review presented an overview of the evolution of online higher education in the United States, specifying student motivations and faculty concerns regarding this pedagogy. This review described how understanding of the learning process in online environments has evolved through research using the constructivist CoI model, demonstrating the need to focus on online education (which delineates the constructs of teaching, cognitive, social and learning presences) to determine interactions, influences, and outcomes within online educational environments (Akyol & Garrison, 2011; Anderson et al., 2001; Garrison et al., 2001; Ke, 2010; Shea & Bidjerano, 2010; Stodel et al., 2006; Swan et al., 2008). Specifically, social presence has been revealed as an essential construct that establishes the virtual community of learners and supports the students' learning process in the online environment (Kehrwald, 2008; Remesal & Colomina, 2013; Sung & Mayer, 2012).

Online learner requirements have been identified as working in collaborative groups; the need for self-reflection; attention to online community building; and use of appropriate online communication methods to positively affect the learning experience, student persistence, and address attrition rates (Akyol & Garrison, 2011; Hurst, 2015; Pratt-LaFevers & McCleary-Jones, 2015). This literature review revealed the influences

on online education, prevalence and availability of online higher education offerings, and the potential for continued expansion of online programs. The portion of the review justified the continued need for research that moves beyond implementation of computer-based technologies alone to incorporate continued inquiry into LP to fully describe the experience of learning online.

Online Nursing Education

Overview

Online nursing education has been described as a convergence of nursing, education, and technology, characterized by a connection with others in a virtual world (Kaiser, 2003). Nursing education research has examined the online learning environment in promoting realism in clinical nursing situations (Nelson & Blenkin, 2007); enhancing a reflective critical thinking process (Carter & Rukholm, 2008); synchronous role play (Culley & Polyakova-Norwood, 2012); determining the relationship between cognitive, social and teaching presence and attainment of learning outcomes and course grades (Baysingar & Woiwode, 2015); describing instructor communication techniques related to student interactions in the online learning environments (Hurst, 2015); examining virtual collaboration in the online setting (Breen, 2013); and student perceptions of community in the online environment (Sitzman, 2016). Nursing research findings and conclusions supported the proposition that there is need to assess the appropriateness of the online format for nursing curricular content (McIntyre et al., 2013). Importantly and specific to the population of online graduate nursing and health studies students, lack of persistence has been identified as the factor that most

commonly leads to the failure of students to complete an online or hybrid educational program (Perry, Bowman, Care, Edwards, & Park, 2008).

Nelson and Blenkin (2007) described implementation of student role play using a web-based simulation program, where eight students played the roles of staff members, residents, and a family member in a simulated online nursing home. This role play was specifically designed to focus on therapeutic communication, nursing presence, and address patient advocacy and diversity. The students evaluated the project favorably noting that the simulation was realistic, enabled them to meet course learning objectives, and that the online technology and resources were helpful.

Culley and Polyakova-Norwood used a qualitative design to describe a 4-month period of an online university learning experience among 19 working graduate/doctoral nursing students in a health assessment course (2012). Using content analysis to analyze data from asynchronous discussion board postings the researchers concluded that online courses provide opportunities for critical thinking, teacher-student interaction, and writing specific to the nursing discipline that fostered the nurses' thinking and writing skills (Culley & Polyakova-Norwood, 2012). However, these researchers also reported that students in the study reported difficulties with mastering new communication technologies, negotiating individual student schedules to arrange for synchronous online course activities, and many preferred to remain anonymous in their online communications. Some students were reluctant to engage in synchronous role play. Importantly, Culley and Polyakova-Norwood commented that further research must

examine the efficacy of the online pedagogical strategies, communication technologies, and online teaching strategies (2012).

Research in nursing education has also utilized the CoI framework to examine students' perceptions of teaching, social, and cognitive presence, seeking a relationship between the constructs and educational outcomes. Baysingar and Woiwode employed survey research in a sample of 106 traditional undergraduate nursing students in fully/blended online nursing informatics courses (2015). These researchers used Pearson product moment correlation coefficients to describe the relationship between the composite CoI presence scores and final course grades, which were found to be statistically significant at $p < .001$ level. The findings of this study indicated that high composite levels of presence ($r = .903, p = .000$) were associated with higher final course grade ($r = .231, p < .05$); therefore, demonstrating the importance of consideration of the CoI online presence constructs (reported in this study as cognitive presence $\alpha = 0.98$, social presence $\alpha = 0.94$, teaching presence $\alpha = 0.99$), and indicating the appropriateness of the CoI instrument for use in future nursing education research that examines educational outcomes (Baysingar & Woiwode, 2015).

Hurst (2015) conducted a retrospective study of online asynchronous educational communications of faculty and students in a DNP program to examine instructor communication techniques related to student interactions in the online learning environments using a sample that included 7 faculty and 28 students. The author of this dissertational research noted the proliferation of online nursing education courses and the lack of persistence among many students in their online coursework as the justification

for the inquiry. Analysis of transcripts indicated a positive correlation between length of instructors' messages and length of students' messages ($r = .86, p < .05$), and further determined that length of instructor messages was associated with longer student messages, accounting for 74% of the variance in the length of student messages. However, this researcher concluded that although faculty communications prompt student communications, faculty need to develop and increase student peer communication opportunities to attain successful outcomes of the online communication exchanges (Hurst, 2015).

Breen conducted a concept analysis of virtual collaboration in online education (VCOE) by reviewing literature from 1988 to 2012 to gain an understanding of the current meaning of VCOE (2013). Using 59 articles that included review papers, theoretical studies, research papers, expert opinion, and educational innovations from nursing, and other disciplines this researcher sought to define the concept, highlighting the need to do so prior to conducting research into the use of collaboration within online environments (Breen, 2013). Collaboration was described using the terms of, "collaborative and cooperative learning, group work, interaction, and teamwork" (Breen, 2013, p. 7). Breen identified two general consequences to VCOE as critical thinking and learning to work with others, as students engage in a collaborative thinking and the learning process. Breen operationalized VCOE as an: "interdependent and democratic online group process grounded in constructivist pedagogy in which students debate and reflect on shared knowledge to construct new understanding of relevant information," which requires the attributes of "sharing, conflict resolution, reflection and co-

construction of knowledge” (2013, p. 13). This conceptual analysis has characterized VCOE as a concept that is variable and abstract and, most importantly identified, the need for further research that distinguishes the progressive phases of VCOE within specific disciplines that employ online learning experiences (Breen, 2013).

Student perceptions and satisfaction with online education have also been a focus of nursing education inquiry. Using a qualitative research design informed by hermeneutic inquiry, McIntyre, MacDonald, and Racine conducted interviews (phone or face-to-face), focus groups, and used reflexive journaling to describe the perceptions of the influence of peer dynamics on their online learning experience in a sample of 30 graduates of two online undergraduate and graduate nursing programs (2013). McIntyre and colleagues described the topics that emerged from the repetitive process of hermeneutic data analysis as (a) time-management skills over the duration of their online studies, which included expressed concern and conflict regarding the apparently limitless opportunities for online participation time; (b) the demands of online participation, which was expressed as different needs for contact with peers at various times in their courses and programs, (c) experiences of conflict that arose because of different individual expectations of participation and individual differences in beliefs and values; and (d) the use of online technologies and development of individual online writing skills necessary to the online environment. Importantly, as a result of the study, these researchers proposed that online programs be structured so that students move through courses together as a cohort to facilitate and build the learning community, online courses maintain a structured pace within courses to allow for realistic online learner

participation, and faculty recognize the challenges that exist because online students represent learners working across various time zones (McIntyre et al., 2013).

Specific to this focus, Sitzman employed a qualitative synthesis of six research studies to explore the processes of conveying and maintaining caring in online nursing education. For each study, the author read and re-read the content to determine themes and consistencies in caring online communication (2016). This researcher's qualitative synthesis revealed the affective learning themes of aloneness, anonymity, nonverbal communication, trepidations, and unknowns. Sitzman proposed that these identified themes affect student perceptions of a sense of the caring and community in the online environment (2016).

Social Presence

As in the higher educational research previously detailed, nursing education research also specified social presence as a central construct of online education (Cobb, 2011; Mayne & Wu, 2011). Describing social presence as the degree to which participants in online educational settings feel affectively connected with each other, Cobb surveyed 128 online RN-to-BSN students, (in one program, during one semester), on social presence, student satisfaction with online coursework, and perceived attainment of learning outcomes (2011).

Cobb used the Social Presence scale, (14-item Likert scale) and the Satisfaction Scale, (10-item Likert scale) respectively reporting Cronbach's alphas of 0.87 and 0.85 for social presence and student satisfaction in determination of reliability (2011). Cobb also used multivariate regression analysis to predict the percentage of satisfaction and

perceived learning explained by social presence. All composite variables and identified factors predicted a significant amount of variance in total student satisfaction and perceived learning ($p < 0.001$). Social presence predicted a higher amount of variation in overall satisfaction ($r_s = 0.44$) than in perceived learning ($r_s = 0.36$); while overall comfort with online communication predicted the highest amount of variation in overall student satisfaction ($r_s = 0.50$) and perceived learning ($r_s = 0.42$). Cobb noted that future research should examine social presence in terms of online pedagogies used and the relationship of demographic characteristics of learners to the online course experience, including gender, ethnicity, and prior online course experience. Perhaps most importantly, Cobb noted that the quality and satisfaction with the use of asynchronous, text-based, discussion formats, may be less important than student/faculty relationships fostered through social presence within the online learning community (2011).

Employing a two-group, comparative research design, Mayne and Wu quantitatively determined that application of social presence techniques in a nursing graduate research course ($n = 26$) had significant and positive effects on students' perceptions of social presence and group interactions (2011). The social presence techniques utilized included personalization of student/faculty interactions, course navigation aids, and the creation of a virtual safety net, by way of allowing ungraded submissions for instructor feedback prior to the assignment due dates. Even though this pilot study had a small sample size, it did support the premise that use of social presence techniques by the instructor in online education determined higher social presence scores in the intervention versus the control group (Intervention 16/16; Control 4/10), as well as

increased desire to continue learning in an online format (Intervention 14/16; Control 4/10). Importantly, this research was specifically directed at addressing crucial online faculty concerns regarding the scarcity of interaction cues within the online learning environment that may affect students' success in the online learning environment.

Nursing educational research has characterized social presence as crucial to understanding how students connect and communicate in online settings. Specifically, several studies provided evidence that a positive relationship exists between social presence and students' success, satisfaction, and desire to continue learning online (Cobb, 2011; Mayne & Wu, 2011).

Online Learner Presence

Based on a review of online educational research literature, with the aim of developing an operational definition of learner presence (LP) in online nursing education, Olson and Benham-Hutchins (2014) completed a concept analysis of LP utilizing the Walker and Avant method (2005). Antecedents to LP in online nursing education included student ability, opportunity, and motivation. Consequences included robustness of online dialogue, the perception of getting to know and be known by others, and collaboration and maintenance of the online community. LP in online nursing education was defined as "the incorporeal perception of the student, sensed as being intimate, relational, social and interactive with others in a virtual learning environment" (Olson & Benham-Hutchins, 2014). This multidimensional concept was found to be dependent on students' shared abilities, opportunities, and motivation. Olson and Benham-Hutchins

noted that the attributes of LP in online nursing education could be measured using the empirical referents of social and cognitive presence (2014).

This portion of the review has revealed research specific to online nursing education. The review examined the online learning environment in terms of how it is utilized in the discipline and what questions remain regarding the online nursing student learner (Carter & Rukholm, 2008; Culley & Polyakova-Norwood, 2012; Nelson & Blenkin, 2007). Studies focused on specific nursing student perceptions, issues and satisfaction with online education, communication specific to this environment, and persistence in online coursework (Baysingar & Woiwode, 2015; Breen, 2013; Hurst, 2015; McIntyre et al., 2013; Sitzman, 2016). Nursing education research has employed the CoI framework to measure social presence in online learning environments and to determine the relationship of the construct to heightened learner satisfaction, knowledge construction, instructional methods used, and attainment of learning outcomes (Cobb, 2011; Mayne & Wu, 2011). Additionally, this portion of the analysis characterized the antecedents, consequences, and attributes of LP; and conceptually and operationally defined LP in online nursing education, facilitating measurement of learner presence (Olson & Benham-Hutchins, 2014).

Baccalaureate Nursing Education

To fully understand the population of interest for this study, that is RN-to- BSN students, it is important to detail the historical perspectives and research that have led to increased demand for this degree, and the emergence and expansion of RN-to-BSN completion programs. Additionally, consideration of RN-to-BSN curricula/programs and

influences that impact students enrolled in RN-to-BSN completion programs is also warranted to begin inquiry into the population of online RN-to-BSN students.

Historical Perspectives

Deliberation regarding baccalaureate nursing education as the educational requirement standard for entry into nursing practice has ensued for over six decades. The American Nurses' Association (ANA) position statement first described designation of higher educational standards as essential to nursing practice preparation (1965). This position spurred debate well into the 21st century, and although many nurse researchers have called for baccalaureate level educational entry for nurses entering practice, uniformity has not yet been achieved (Benner, Sutphen, Leonard, & Day, 2009; Duffy et al., 2014; McEwen et al., 2013; Nelson, 2002; Perfetto, 2015; Woo, 2016).

Nursing leaders believed that the future of nursing depended on moving nursing education into higher education, and they began these efforts by phasing out hospital-based diploma programs (Haase, 1990). Although it was intended that these programs would merge with either baccalaureate or associate degree programs, physicians, hospital administrators, diploma nurse educators, and graduates opposed this move (Haase, 1990). The drive to abolish the hospital-based diploma programs coincided with remarkable growth of associate degree nursing (ADN) programs, which then led to the decline of diploma programs (Haase, 1990). Decline of the diploma apprenticeship model, provided ADN programs the opportunity to expand. Concurrent influences that included a nursing shortage, increased federal financial assistance to nursing education, and growing social concerns about equal access to health-care and education, provided the stimulation for

this movement (Haase, 1990). Although, a uniform standard for entry into nursing practice has as yet not been established, Patricia Benner, called for radical transformation of the profession, summoning nursing education, rather than government agencies and healthcare economics, to determine and demand high-quality nursing education requirements and standards (Benner et al., 2009).

Improved Patient Outcomes and Hiring Incentives

Nursing practice research has demonstrated a relationship between increased baccalaureate prepared nurse staffing and better patient outcomes (Aiken et al., 2011; Aiken et al., 2003; Aiken et al., 2008). This initiative began with a cross-sectional analyses of outcomes data for 232,342 general, orthopedic, and vascular surgery patients, which examined administrative and survey data on nursing educational composition, staffing, and other characteristics (Aiken et al., 2003). These researchers used the outcome measures of risk-adjusted patient mortality and failure to rescue within 30 days of admission associated with nurse educational preparation levels (ADN, Diploma, BSN). They found that a 10% increase in the number of BSN-prepared staff nurses was associated with a 5% decrease in both the likelihood of patients dying within 30 days of admission and the odds of failure to rescue occurrences.

Expanding on this research, Aiken and colleagues analyzed combined hospital characteristics, patient outcomes, and surveys of nurses involved in direct care using an inclusive sampling design to strengthen generalizability of the results (2008). Nurses reported more positive job experiences with fewer worries about the quality of patient care provided. Patients had significantly lower risks of death and failure to rescue in

hospitals with better care environments, which led the researchers to conclude that elements in healthcare care environments are enhanced by a combination of nurse staffing and education to achieve quality care outcomes (Aiken et al., 2008).

Seeking to determine how nurse staffing, nurse education, and work environment affect patient outcomes, Aiken, and colleagues later sampled patient outcomes of 665 hospitals in four large states using hospital discharge abstracts, for 1,262,120 general, orthopedic, and vascular surgery patients. In addition, the researchers accessed a random sample of 39,038 hospital staff nurses and American Hospital Association data (Aiken et al., 2011). The positive effect of increased percentages of BSN nurse staffing was consistent in that 10% more staffing with BSN nurses decreased the odds of poor patient outcomes by 4%, regardless of their work environment.

In response to the decade of research that supported the relationship between baccalaureate prepared nurses and improved patient outcomes, the Institute of Medicine (IOM) proposed increasing the percentage of BSNs in clinical settings, from 50% to 80% by 2020, to improve quality of care for patients (IOM, 2010). Consequently, healthcare institutions seeking the prestigious Magnet[®] designation, (American Nurses Credentialing Center, [ANCC], 2015), responded by increasing hiring preferences for baccalaureate prepared nurses (Buerhaus et al., 2016).

Comprised of over three million nurses, the crucial role of nursing practice represents the largest workforce in healthcare in the United States today (Woo, 2016). Additionally, even though the rate of job growth in nursing is much higher than for most other occupations, creation of new jobs in combination with large numbers of retirements

from an aging nurse workforce is expected to produce a substantial nurse shortage in the next decade (Aiken et al., 2009). Predicted shortage estimates vary from 300,000 to more than a million by 2020 to 2025 (Buerhaus et al., 2016). The U.S. healthcare environment has undergone many developments that include increasing patient acuity levels, an aging patient population, and healthcare reforms, which have furthered the demand for nurses in the healthcare workforce (Johnson et al., 2016). However, although recommendations from prominent healthcare and nursing organizations continue to propose the baccalaureate degree for entry into nursing practice, approximately 60% of RNs in the United States enter practice with associate degrees (Anbari, 2015).

Emergence of RN-to-BSN Programs

The rise and precipitous growth in the number of RN-to-BSN completion programs can likely be credited to the aforementioned historical perspectives and nursing research. Nursing completion programs were created to provide transition from associate degree and diploma preparation to the BSN degree (AACN, 2012; Hooper, McEwen, & Mancini, 2013; IOM, 2010; Kumm et al., 2014; Pittman et al., 2014). RN-to-BSN programs offer a transitional baccalaureate level education for nurses with associate or diploma degrees. While much has been written regarding the necessity of this transition, Anbari describes the “seamless transition from associate degree nurse to baccalaureate-prepared nurse”, as ill-defined in the literature (2015, p. 1).

RN-to-BSN Curricula

Researchers polled 210 directors of RN-to-BSN programs, representing diverse regions of the United States and found agreement that the programs most commonly reported courses included leadership and management (92%); community/public health (90%); research (89%); and health assessment (79%) (McEwen et al., 2014). This curricular content demonstrates that RN-to-BSN programs are less focused on skills acquisition and more concentrated on providing content concentrated on professional role socialization to address the BSN differentiated essential competencies.

This emphasis on professionalism in RN-to-BSN completion programs was detailed in an interview dialogue between Lee and Fawcett (2013), who discussed the influence of the metaparadigm of nursing on professional identity development among RN-to-BSN students. These researchers emphasized that although many students entering completion programs have a strong sense of clinical competence, coming from diverse nursing practice-based experiences; they often enroll without a clear understanding of nursing as a profession and what it means to be a member of a professional discipline (Lee & Fawcett, 2013). This opinion highlights the crucial faculty challenge of designing learning activities that connect students' previous clinical practice experiences with the more abstract knowledge necessary to enable them to transition to a professional nursing identity (Lee & Fawcett, 2013).

Similarly, Matthias (2014) emphasized the importance of fostering professionalism among RN-to-BSN students in detailing a professional identity project developed to provide RN-to-BSN students with an opportunity to reflect on and creatively express

their professional transformation to a BSN RN using multimedia. The project was included in the students' first nursing course and focused on the principles of nursing practice, such as evidence-based practice, communication, leadership, ethics, quality and safety, economics, and policy. The project was purposefully placed in the first course to serve as a foundation for student learning, with the caveat to encourage necessary expansion, rather than a replacement, of the students' professional nursing identity (Matthias, 2014).

The RN-to-BSN Student

Research has supported the increased demand for completion programs that transition nurses to the baccalaureate role, focusing on the professional role in nursing practice. The majority of nurses entering nursing practice in the United States today are prepared at the associate degree level, and the impetus to transition into the baccalaureate role is now strongly supported by nursing organizations, education and healthcare institutions. Proliferation of RN-to-BSN programs has created increased opportunities for these students to obtain a baccalaureate degree. However, this transition has been influenced by student, program and healthcare environmental factors that also present challenges for these completion students.

Student influences. Nurses enrolled in RN-to-BSN completion programs are non-traditional students with inherent individual influences that may affect their ability to be successful in the online learning environment. RN-to-BSN students enter completion programs with varied educational experience (diploma or associate degrees) and varied levels of nursing practice experience. Schwartz and Leibold surveyed 81 RN-to-BSN

students in two programs and found that family and job constraints, lack of increase in salary upon completion, and financial considerations, were cited as barriers to successful completion in the programs (2014). Additionally, prospective students also cite many constraints to their success in RN-to-BSN programs; and transition of nurses from enrollment to graduation is perceived to be muddled by variants and inconsistencies in both program requisites and curricular content (Adorno, 2010). While motivation and job satisfaction have been found to be, significant indicators regarding intent to return to school, they can be limited by both perceived discouragement of one's employer and perceived time constraints (Romp et al., 2014).

The inclination of RNs to increase their education will be a crucial factor in productively increasing the percentage of bachelor's and advanced degree nurses (IOM, 2010). Although much has been documented regarding the transition of nurses from associate degree and diploma preparation to the BSN degree (AACN, 2012; Hooper et al., 2013; IOM, 2010; Kumm et al., 2014; Mancini et al., 2015; Pittman et al., 2014), how transition occurs for the RN-to-BSN student has also been confounded by other influences.

Program influences. Academia's failure to distinguish students' previous nursing coursework and nursing experience represents a disturbing program influence (Duffy et al., 2014; Megginson, 2008; Schwartz & Leibold, 2014). Nursing completion students are affected by multiple program specific factors that include lack of articulation agreements that affect enrollment and progression (Pittman et al., 2014); varied and inconsistent program requirements and curricula (Anbari, 2015); lack of specified

standards for accreditation of completion programs (Kumm et al., 2014; McEwen et al., 2013; Robertson, Canary, Orr, Herberg, & Rutledge, 2010). Hooper and colleagues posited that program inconsistencies and variances have resulted because RN-to-BSN programs remain unregulated by state boards of nursing (Hooper et al., 2013). Negative program influences on RN-to-BSN completion students have been well documented.

Healthcare environmental influences. Although, the increased numbers of nurses attending completion programs can likely be attributed to increased hiring demands for the BSN nurse, the healthcare environment is not necessarily supportive of nurses returning to school (McEwen et al., 2013). There still exists a lack differentiation between ADN and BSNs prepared nurses' practice roles in the healthcare environment (Duffy et al., 2014; Orsolini-Hain, 2012). This lack of educational preparation distinction in the workplace (Megginson, 2008; Orsolini-Hain, 2012) is supported by no different treatment, recognition and earning power for ADNs at work (Altmann, 2012; U.S. Bureau of Labor Statistics, 2015). Nurses' perceptions of discouragement by their employers may also limit motivation to advance their education (Romp et al., 2014). To meet the increasing demands of a better-educated nursing workforce and support nurses wishing to complete a baccalaureate education, a shift in perspectives of healthcare employees and employers needs to occur (Orsolini-Hain, 2012).

This portion of the literature review has presented historical perspectives on the evolution of standard requirements for entry into nursing practice. These changes created the impetus for increased development of associate degree nursing programs, and both associate and baccalaureate undergraduate education remain as options for entry into

nursing practice today (Anabari, 2015; Johnson et al., 2016; Woo, 2016). More than a decade of nursing research that supported the positive relationship between baccalaureate prepared nurses and improved patient outcomes has led healthcare organizations to demand and support increased hiring options for BSNs (AACN, 2015; Aiken et al., 2011; Aiken et al., 2003; Aiken et al., 2009; IOM, 2010). These influences provided the stimulus for expansion and proliferation of RN-to-BSN completion programs, where curricular content is mainly delivered using online educational technologies, in an effort to increase access for working nurses (Hooper et al., 2013; IOM, 2010; Kumm et al., 2014; Pittman et al., 2014).

Numerous studies reviewed in this segment have substantiated the issues and influences that present challenges for RN-to-BSN students, concerns regarding RN-to-BSN completion programs' curriculum and requirements, and healthcare environmental influences that represent barriers to success for the RN-to-BSN nursing student (Adorno, 2010; Altmann, 2012; Anbari, 2015; Duffy et al., 2014; Hooper et al., 2013; Kumm et al., 2014; Lee & Fawcett, 2013; Matthias, 2014; McEwen et al., 2014; Megginson, 2008; Orsolini-Hain, 2012; Pittman et al., 2014; Robertson et al., 2010; Romp et al., 2014; Schwartz & Leibold, 2014). This review has described this expanding population of learners in terms of the issues, influences, and difficulties they may encounter, and revealed the need to consider these population specific findings.

The Online RN-to-BSN Student

To better understand online RN-to-BSN students, it is important to consider how expansion of online educational offerings and opportunities have specifically affected this population. Although research into online nursing education has focused on online communication, virtual collaboration, and student perceptions, motivation, and satisfaction with the online learning environment, a gap in the literature exists specific to the largest population of online nursing students, the RN-to-BSN student.

A few studies have specifically investigated the population of online RN-to-BSN nursing students. Anbari developed a conceptual RN-to-BSN Transition model, which provided significant information regarding the steps of this transition process; the social support necessary for the student to be successful; and the ongoing challenges and opportunities that completion students encounter in the process (2015). However, in Anabari's model access to online instruction was characterized as an assistance or catalyst in the transition process towards successful completion of the RN-to-BSN program and not fully described in terms of the specific aspects of technologies utilized and challenges encountered by students specific to the online learning environment (2015).

Similarly, Perfetto conducted a meta-synthesis of qualitative data and developed a model of RN-to-BSN student themes on their educational experience which identified concerns and experience within this population (2015). The themes included these perceptions: "Though this is part of my plan, it may create feelings that I may not be ready for; Please value what I bring and help me get ready; It has to fit with my life; I am

growing professionally and beginning to look at my work differently; I don't want to do this alone; I need help to get there and I am ready to assume responsibility for this challenging, life altering journey" (2015, p. 38). However, this research also did not take into consideration learning specified to the online environment.

Candelaria (2015) used ethnographic case study methods to explore the reasons that hindered graduates of an ADN program in South Texas from pursuing the Bachelor of Science in Nursing (BSN) degree. This researcher collected data from 27 participants (using individual interviews and focus groups) to identify barriers that hindered the graduates from pursuing the BSN degree. These barriers included time; finances; family responsibilities; life events; and out of state, online RN-to-BSN programs. These findings are consistent with others that have demonstrated the RN-to-BSN students often work while enrolled in programs, thus adding to factors that may potentially impact the students' success in online programs (Cannon & Boswell, 2014; Nash, 2012).

Employing a qualitative case study method Brahe (2013) explored the problem of perceived student isolation in online education. This researcher interviewed nine fully online RN- to-BSN students from various geographical locations, in different phases of their online completion program, and analyzed the data using starter codes based on the communities of practice theoretical framework. Analysis of the data revealed seven themes were associated with how the online students utilize informal communities. Brahe's themes included collaboration, knowledge and information sharing; encouragement and support; shared experiences; empathy, trust, and unique contributions. An important finding in this study was that students who reported forming

informal communities also reported increased levels of learning, motivation, and course satisfaction (Brahe, 2013).

Van Schyndel used the CoI model and instrument to measure teaching, social and cognitive presence (2015). Findings from this descriptive correlational research supported the CoI model, measured the three presence subscales, and determined significant positive relationships ($p < .01$) between teaching and cognitive presence ($r = .79$), cognitive and social presence ($r = .64$), teaching and social presence ($r = .52$), and satisfaction and the teaching presence ($r = .77$; Van Schyndel, 2015). Additionally, this study examined course satisfaction in an online undergraduate nursing course to determine correlation between the three presences, and student demographic, academic, and technology variables (Van Schyndel, 2015). There was limited correlation between student demographic and academic variables and the three presences, which may have been influenced by the limited sample selection of students ($n = 76$, from one institution). However, Van Schyndel did confirm that use of specific learning technologies that influenced students' perceptions of each presence. This researcher suggested the need for further studies that employ the CoI model and instrument with more diverse samples, to examine co-variables such as academic variables, and instructional technologies utilized (2015).

This portion of the literature review has described a concept analysis, qualitative literature review and three studies specific to the population of online undergraduate nursing students. The findings of these studies described barriers that impeded ADN students from transitioning to BSN education (Candeleria, 2013) and outlined a model that

describes the influences on RN-to-BSN students' progression and success in pursuing a baccalaureate degree (Anbari, 2015). The findings identified themes of the experience of being an online RN-to-BSN student (Perfetto, 2015) and revealed that students who formed informal online communities increased their levels of learning, motivation, and course satisfaction (Brahe, 2013). One study specific to the RN-to-BSN student experiences with online learning indicated that further studies, with expanded more diverse samples, are needed to examine the influences of student demographic, academic, and technology variables (Van Schyndel, 2015). These findings represent a small number of studies which substantiate the need for further research on the population of online RN-to-BSN completion students to better understand their learning experiences, and begin the process of determining evidence-based, population-specific, teaching strategies that can assist online completion nursing students.

Chapter Summary

Although the demand for online higher education has expanded due to increased accessibility and student demands, concerns regarding student persistence and increased attrition rates in the online environment continue (Allen & Seaman, 2013; Perry et al., 2008; Shaw et al., 2016). Online educational research has been framed in a constructivist perspective that emphasizes the need for contextual inquiry of social and cognitive presence, deemed as constructs essential to describing and understanding of the learning process in the online environment (Arbaugh et al., 2008; Garrison et al., 2010; Shea & Bidjerano, 2010; Swan, Shen & Starr, 2006; Swan et al., 2008). Higher education research has also identified the heightened online learner requirements that include

collaboration, motivation, self-reflection, and self-efficacy, thus substantiating the need for further inquiry into discipline-specific populations using online higher education, to determine specific learner needs that improve the students' ability to communicate and interact with faculty and peers in the online classroom (Akyol & Garrison, 2011; Hurst, 2015; Pratt-LaFevers & McCleary-Jones, 2015).

Online nursing education has described attainment of learner outcomes and student satisfaction, identifying the need for specific instructional design elements and teaching strategies that enhance communication and collaboration as being necessary to the process of learning in a virtual classroom (Culley & Polyakova-Norwood, 2012; Hurst, 2015; McIntyre et al., 2013; Sitzman, 2016). Studies have also emphasized the importance of fostering relationships necessary to positive learning experiences, specifically seeking to describe the nature of social presence of the learner in online nursing education (Cobb, 2012; Mayne & Wu, 2011). Learner presence in online nursing education has been described in terms of its antecedents, attributes, and consequences that can now be measured to determine how influences such as demographics and student and program characteristics impact the experience of online learning in nursing education (Olson & Benham-Hutchins, 2014).

Research has demonstrated positive correlations between nursing care delivered by BSNs and improved patient outcomes that spurred increased demands for, and hiring incentives of BSN's, which in turn propelled the emergence and rapid proliferation of RN-to-BSN completion programs (AACN, 2015; Aiken et al., 2011; Aiken et al., 2003; Aiken et al., 2008; IOM, 2010). However, the majority of nurses today still enter practice

with an associate degree and incentives, along with accessibility and convenience of the online format, have increased the numbers of working nurses returning to school seeking to complete an online BSN degree (Anbari, 2015).

Research presented has revealed issues and influences on the RN-to-BSN learner that present as barriers to impede the success of this non-traditional online nursing student (Adorno, 2010; Altmann, 2012; Duffy et al., 2014; Hooper et al., 2013; Kumm et al., 2014; Lee & Fawcett, 2013; Mancini et al., 2015; Matthias, 2013; McEwen et al., 2014; Megginson, 2008; Orsolini-Hain, 2012; Robertson et al., 2010; Romp et al., 2014; Pittman et al., 2014; Schwartz & Leibold, 2014). Although online RN-to-BSN students represent a significant and growing population in nursing education, only three studies specifically focused on the online RN-to-BSN student. Two qualitative studies examined reasons that hinder nurses from pursuing an RN-to-BSN degree and isolation in online learning environments, which were limited in terms of generalizability of findings due to small samples and recruitment of participants from one institution (Brahe, 2013; Candeleria, 2015). One correlational study's findings demonstrated the importance of measuring cognitive, social, and teaching presence in online nursing students (Van Schnydel, 2015). However, none of these studies investigated the influences and utilization of technologies and teaching strategies currently used by RN-to-BSN students in the online completion programs. Numerous studies cited in this review have suggested further research needs to address specific, diverse populations of online learners in higher education to gain a better understanding of learner adaptation and development necessary

in online education (Baysingar & Woiwode, 2015; Breen, 2013; Canon & Boswell, 2014; Hurst, 2015; Van Schnydel, 2015).

Demand for and increasing use of online education in the population of RN-to-BSN students is expected to grow. Use of this alternate method of course delivery demands knowledge of unique student and program characteristics that influence this population of learners. This review has revealed a gap in the literature specific to the RN-to-BSN student population in terms of their unique learning experience in the online environment and justified the need to describe this student population's distinctive experience with online learning. While this review of the literature has consistently described that online education requires specific attention to the interaction between students and faculty, the contextual nature of the online learning environment is different for the participants involved and online educators can no longer rely on face-to-face pedagogies. Online nursing coursework, curricula, and programs, have been described as "the digital revolution of 21st-century nursing education" and the challenge lies "in determining how the digital revolution and e-learning can best contribute to successful nursing education outcomes" (McIntyre et al., 2013, p. 50). It is this researcher's hope that this study can lay the groundwork for further inquiry that seeks to establish evidence-based teaching strategies. This aspiration may assist the largest and expanding population of RN-to-BSN completion students in successfully meeting learning outcomes, and acquiring the nursing knowledge, necessary to their future provision of quality nursing practice. Chapter III will present the procedure for collection and treatment of research data. This chapter will include a description of: the research

setting; population and sample; protection of human subject participants; instruments used, data collection process, and treatment of data.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This chapter summarizes the methodology used in the research. The methodology of the study is quantitative and both descriptive and exploratory in nature. The descriptive methodology seeks to measure the perceptions of Learner Presence (LP) in online RN-to-BSN students. The exploratory methodology seeks to quantitatively describe participants' student and program-specific characteristics and measure these covariate effects on perceptions of LP in online RN-to-BSN students. This chapter includes a description of the study design, variables, setting, population, protection of human subjects, instruments used, data collection procedures, and treatment of data.

Study Design and Variables

This study utilized a descriptive exploratory design to answer research questions that focused on nursing students' perception of learner presence (LP) in the online learning environment. The target population is RN-to-BSN completion students enrolled in online baccalaureate-completion programs located in the United States. The Modified CoI Learner Presence Survey (MCLPS) tool was used to measure student perceptions of LP which was adapted from the Community of Inquiry (CoI) survey developed by Arbaugh and colleagues (2008). Additionally, the RN-to-BSN Student and Program Characteristics Questionnaire (RBSPCQ), an online questionnaire created by the researcher, was used to obtain demographic information. This questionnaire was based on key characteristics of RN-to-BSN students (Anbari, 2015), and characteristics of their

online education program, (online learning platform, learning tools, and learning activities), and on the learner effectiveness component of the Five Pillars of Online Education (Moore, 2005).

Associations between the participants' personal perceptions of LP and participant characteristics including demographic variables, reasons to pursue BSN education, and previous online course experience were assessed. In addition, associations between participants' perceptions of LP and program characteristics were measured.

Study Variables

The variable of LP is conceptually defined as “the incorporeal perception of the student, perceived as being intimate, relational, social and interactive with others in a virtual learning environment” (Olson & Benham-Hutchins, 2014). LP is operationalized through the empirical referents of social and cognitive presence (Olson & Benham-Hutchins, 2014). The student and program independent variables are conceptually defined and operationalized in Appendix A.

Setting

This study is internet based. The setting from which the sample was obtained was derived from online public media sites that participants accessed via the internet on computers. Throughout recruitment and data collection public media sites utilized included a posting on Facebook and a Weebly webpage, and postings on other nursing organization websites to direct respondents to study information and the online Psychdata survey site.

The use of internet-based social media for recruitment and conducting online survey research has been viewed as a beneficial option for academic research (Wright, 2005). Some of the advantages of this setting include the ability of the Internet to provide access to groups and individuals who might be difficult to contact and the concurrent enhanced ability to quickly reach large numbers of individuals who share the focus population characteristics, even when spread across geographical areas (Wright, 2005). However, difficulties in obtaining permission and access to electronic mailing lists and self-selection bias have been recognized as potential disadvantages of research using internet-based recruitment methods (Ho, 2014). Nonetheless, it has been noted that current technological platforms and tools are more user-friendly, widely available, and powerful than in the past, and modern online survey platforms offer the added benefit of decreased expense for the researcher, quick and convenient response times, and subsequent rapid compilation of survey statistics (Ho, 2014). Additionally, researchers can foster positive relationships between researchers and participants in the study community of interest by posting research findings on webpages, so participants can possibly benefit by reviewing the results and determine possible personal implications of the conclusions (Wright, 2005).

Information describing the study focus, participant enrollment, time commitment, potential risks, and contact information for further participants' questions regarding the study can be found in the recruitment flyer in Appendix B. Recruitment flyers were also shared with faculty at institutions offering RN-to-BSN online completion programs in the United States. Additionally, study information regarding consent to participate in

internet research was also posted on the social networking sites that participants accessed and read if they were interested (see Appendix C).

Population and Sample

The population from which the sample is drawn represents Registered Nurses pursuing a baccalaureate-completion degree in online nursing programs located in the United States. The purposeful convenience sample consisted of RN-to-BSN nursing students currently enrolled in, or graduated (within 6 months) from, an online completion program. Purposeful convenience sampling represents nonprobability sampling method and is appropriate when the researcher wishes to select participants based on the idea that these participants will be most informative regarding the research focus (Polit & Beck, 2012). Participants met these enrollment inclusion requirements: (a) enrollment or graduation (within 6 months) from an online RN-to-BSN program in the United States and (b) access to the Internet.

A priori power analysis was conducted using G*Power version 3.1.9.2 to determine the minimum sample size required. The level of power is designated at .80 and the significance level at .05, with a small-to-moderate effect sizes ($f^2 = .10$; Faul, Erdfelder, Lang, & Buchner, 2007). Based on the analysis, a minimum of 134 participants were required to ensure adequate power for multiple linear regression analyses with five predictor variables.

Although use of purposeful convenience sampling will aid in obtaining a sample representative of the population of interest, obtaining a sample of volunteer participants may not be representative of the total population as volunteers may have inherently

different characteristics compared to the average RN-to-BSN online student (Creswell, 2013). In this study volunteers may have been more likely to communicate through the internet and represent a sample that differs from the target population. Hence, generalizability of the proposed study may be limited.

Protection of Human Subjects

Approval for the study was requested from Texas Woman's University Institutional Review Board (IRB) and received (see Appendix D). An exempt process was requested, as there was little anticipated risk of harm to a student participant who voluntarily completed the online, anonymous, instruments using a secure survey service. Confidentiality was maintained throughout the research process for all study participants. The researcher used a password-protected computer for access to study data to ensure that the individual participant remained anonymous and was identified only as a numbered participant. PsychData (2016) was used for data collection. PsychData utilizes protected web-based online surveys to ensure security during transmission, promote safety, and guarantee control of stored data. PsychData employs unique respondent identification numbers, which allows for a record of respondent participation disconnected from the respondent's identity. The first page of the survey contained the IRB-approved consent for online research (Appendix C), which included a statement that clicking on the "next" navigation button indicates agreement to participate. Participants could voluntarily decide not to answer questions and could withdraw from the study at any time.

Instruments

The Modified Community of Inquiry Learner Presence Survey

Reliant upon a constructivist perspective and specific to the discipline of education, the community of inquiry (CoI) framework was developed to describe online learning and characterized online learning as the interaction between cognitive, social and teaching presences that occurs within text based environments (Garrison et al., 1999). Arbaugh and colleagues developed and tested the 34-item CoI survey instrument for measuring cognitive, social, and teaching presence. (2008). Research using the CoI instrument was analyzed using exploratory factor analysis, which established construct validity by replicating a three-factor solution that accounted for 61.3% of the common variance (Arbaugh et al., 2008). Reliability of the CoI Survey was confirmed by a Cronbach's alpha (α), which supported internal consistency reliability; $\alpha = .95$ for *Cognitive Presence* subscale, $\alpha = .91$ for *Social Presence* subscale, and $\alpha = .93$ for the combined *Social* and *Cognitive Presence* dimensions of the CoI Inventory instrument (Arbaugh et al., 2008).

The CoI framework and instrument have evolved over a decade to produce findings that have determined and operationalized the elements of social, cognitive, teaching, and learning presence as constructs that frame the online learning environment (Arbaugh et al., 2008; Garrison et al., 2001, Garrison et al., 2010). Additionally, the CoI instrument has been validated for the measurement of the cognitive, social, and teaching presence constructs (Arbaugh et al., 2008; Garrison et al., 2001; Garrison et al., 2010; Shea & Bidjerano, 2010; Swan et al., 2008).

In this study, the variable of LP was measured using the sum/composite score of the social and cognitive presence items of the CoI instrument (Arbaugh et al., 2008). The composite score of these two presence subscales were identified as the empirical referents of LP by Olson and Benham-Hutchins (2014). Permission was obtained to modify the original instrument for this study. The MCLPS is a 21-item self-report measure of LP (represented by the social and cognitive presence constructs of the CoI survey). Respondents were asked to reflect on statements regarding the cognitive and social aspects of learning in the online environment to indicate the degree to which they agree or disagree with 21 descriptions on a rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The MCLPS yields a composite summed score ranging from 21-105, with higher scores indicating greater perceptions of LP (Appendix F).

The RN-to-BSN Student and Program Characteristics Questionnaire

Student and program demographics were collected using the 14-item, RBSPCQ, developed by the researcher (Appendix G). Items were designed to reflect the premise that this sample should include the key characteristics of RN-to-BSN students (based on previous research) and program characteristics of online education (based on the learner effectiveness components of online education) (Polit & Beck, 2012). Demographic variables included gender, age, first language spoken, employment status, area of nursing practice, initial entry into nursing practice degree, and nursing-practice experience. Additional questions included: reasons for degree pursuit, and use of online learning platform, tools, and course activities.

Data Collection

Data collection utilized online public social network sites that participants accessed via the Internet on computers. Participants were made aware of research participation through a Facebook page and or a Weebly website that described the proposed study, provided a link to the questionnaires, and presented the opportunity for participants to share the information with others who wished to participate in the study. Additionally, participants were made aware of the proposed study by nursing program faculty/contacts who were emailed recruitment flyers (see Appendix B) to post on course or student sites. Participants willing to enroll in the study completed the two combined questionnaires online.

Treatment of Data

Online survey data was downloaded into the statistical software SPSS 24.0 (SPSS, 2014, vs 24, Chicago, IL). Descriptive statistics were used to analyze demographic variables and program sample characteristics. Data analysis assessed associations among the following factors: (a) the participants' personal perceptions of LP, (b) participant characteristics including demographic variables, and (c) program characteristics. The variable of LP was measured using the sum/composite score of the social and cognitive presence items of the Community of Inquiry Survey. The composite score of these two presence subscales represent the empirical referents of LP (Olson & Benham-Hutchins, 2014). Inferential statistics used to answer the research questions included Pearson's r and an independent samples t -test. Pearson's r is an appropriate inferential statistic for determining the magnitude of relationship between two variables

measured on at least an interval scale (Polit & Beck, 2012). Independent samples *t*-test is an appropriate inferential statistic to determine bivariate correlation between the independent variable and variables measured on an ordinal and or nominal scale (Polit & Beck, 2012). Other statistical tests included multiple linear regression. Multiple linear regression is a statistical procedure that estimates the effects of two or more independent variables on a dependent variable (Polit & Beck, 2012). Table 1, below, provides the five research questions with proposed statistical analysis for each question.

Table 1

Research Questions and Statistical Analysis

Research Questions	Statistical Analysis
#1: <i>To what extent do RN-to-BSN nursing students perceive learner presence to be evident in online nursing education?</i>	Statistical analyses will use the composite sum of the Modified CoI instrument items to calculate mean, standard deviation, minimum to maximum range, to determine to what extent RN-to-BSN students perceive LP. Additionally, graphical representation of the learner presence data will use box plots for skewedness and outliers, and histograms to evaluate the normality of the data.
#2: <i>How do demographic characteristics influence perceptions of learner presence in the experience of online learning for RN-to-BSN students?</i>	Statistical analysis will use Pearson's r to determine bivariate correlation between LP and the continuous student-characteristic variables of age and nursing practice experience. Independent samples t -test will be used to determine bivariate correlation between LP and categorical student characteristics of gender, first language spoken, employment status, and initial nursing degree obtained.
#3: <i>How do students' experiences with the online learning environment influence perceptions of learner presence for RN-to-BSN students?</i>	Statistical analysis will use Pearson's r to determine bivariate correlation between LP and the continuous student characteristic of online course experience.

#4: How do reasons for pursuit of a baccalaureate degree influence perceptions of learner presence in the experience of online learning for RN-to-BSN students?

Statistical analysis will include use of an independent samples *t*-test to determine bivariate correlation between LP and categorical student reason/s for pursuit of a baccalaureate degree.

#5: How do program characteristics influence learner presence in the experience of online learning for RN-to-BSN students?

Statistical analysis will utilize a multiple linear regression model to determine correlation of program characteristics (which include online learning tools, communication methods, and course activities) to LP.

CHAPTER IV

ANALYSIS OF DATA

This chapter presents the results of the study, *Exploring Perceptions of Learner Presence in Online Baccalaureate Completion Students*. The purpose of this study was to explore these participants' perceptions of learner presence (LP) and to describe student and program specific influences on this outcome variable. This chapter presents a description of the sample, including student and program characteristics, the findings specific to each of the five research questions posed, and a summary of the analysis of data.

Descriptive Statistics

Sample

A purposeful convenience sample was obtained from RN-to-BSN students currently enrolled in, or graduated within 1 year from, an online baccalaureate completion program in the United States. Participants were limited to volunteer subjects who accessed an online Facebook posting or Weebly website that described the study, and then decided to complete an online survey. Three hundred and sixty-one participants accessed the online survey during the 5-week timeframe in March to April of 2017. Methodology for the cleaning of data included using only those surveys that met the inclusion criteria and obtaining percentages of missing variable data with retention of those participants who completed at least 90% of the survey responses. Additionally, a variance of responses to the Likert item data was determined, from which variance

response rates of 0.09 and below were deleted. This resulted in a sample of 239 participants who met all inclusion criteria, had 90% of the survey responses, and had sufficient response variance to the Likert items.

Student Characteristics

The median age of the sample was 42 years, with a range of 22 to 68 years of age (SD = 10.69). The majority, 90% of the respondents, was female, and 10% were male. The sample represented nursing students currently attending (96.2%), or graduated within 1 year (3.3%), from an online baccalaureate-degree completion program. The majority of students in this sample indicated that they were enrolled in, or graduated from a public institution (68.5%) versus a private institution (31.4%).

Most of the respondents identified their race as Caucasian ($n = 175$, 73.2%), followed by African American (11.7 %), Mixed Race (3.8%), Asian (3.8%), Native Hawaiian /Pacific Islander (.8%), American Indian/Alaskan (.8%), and those participants who preferred not to identify their race (1.7%). Additionally, 90% of the participants identified their ethnicity as Non-Hispanic ($n = 215$).

The majority of respondents had nursing practice experience of 1 to 10 years (41.4%), followed by 11 to 20 years (19.2%), less than 1 years' experience (16.7%), 21 to 30 years (14.2%), 31 to 40 years (5.4%), and greater than 40 years (2.1%). Students' current employment status as a registered nurse included 78.2% who were working full-time ($n = 187$), 10.5% who were working part-time, and 3.5% who indicated that they were currently looking for a position. The remainder of the sample chose "other" as their employment status (7.8%). These included students who identified themselves as

fulltime students, not working, working occasionally, employed in contractual work, or those serving in the military. Additional participant demographic information included identification of English as the participants' first language (Yes/No), their current state of residence, and the first nursing degree they obtained.

Participants were also asked to identify their reasons for pursuing an RN-to-BSN completion degree. The majority identified that the primary reason for pursuit of a baccalaureate completion degree (BSN) was personal goals (86.2%). Respondents could choose as many reasons as they wished from the following options: requirements by the employer, career advancement, to attend graduate school, to obtain a new position which requires a BSN and other. The "other" responses (74.1%) included actual categories given in the previous item, but also specified a rich variety of "other" motivations. These reasons included the following entries: to pursue management positions, re-entry into the workplace, to prepare myself for positions in other states that require a BSN, requirement of Magnet-accredited institutions, to enter an accelerated BSN program, to acquire nursing positions later in life that require less physical activity, to become a nurse educator, employer-paid tuition reimbursement, self-actualization, and the parental promise of a gift (car) for degree completion. An overview of the motivations given by online RN-to-BSN students to pursue a completion degree is provided in Table 2.

Table 2

Participants Reasons for Pursuit of a BSN Degree

Group	Frequency	Percents
Personal Goal	206	86.2
Career Advancement	186	77.8
To Pursue Graduate Education	125	52.3
Employer Requirement	81	33.9
Acquire a New Position	70	29.3
Other	177	74.1
<i>n</i> = 239		

Student participants were also asked how many non-nursing and nursing online courses they had taken to determine their online course experience. Participants identified that they had taken 1 to 50 non-nursing online courses, with a median of 3 non-nursing online courses, ($SD = 23.27$) and 1 to 61 nursing online courses ($SD = 18.65$), with a median of 4 nursing online courses.

Program Characteristics

The majority of online students/graduates identified Blackboard as the learning platform used in their online RN-to-BSN program (47.3%), followed by D2L (15.1%), Canvas (14.5%), BrightSpot (1.7%), Moodle (1.3%), Sakai (1.3%), or Acatar (0.4%). A substantial number of students chose “other” (17.2%), which included those participants who specified an actual online-learning platform: AppreNet (.02%) or Bisk (.07%). Those participants that choose “other” (17.2%, $n = 41$) also included participants who indicated they were unable to answer the question ($n = 13$), and those whose write-in

answer was a course content delivery method rather than an online learning platform ($n = 8$). Table 3 provides an overview of the learning platforms selected by the participants.

Table 3

Learning Platforms Used

Group	Frequency	Percents
Blackboard	113	47.3
Desire to Learn	36	15.1
Canvas	34	14.2
Brightspot	4	1.7
Moodel	3	1.3
Sakai	3	1.3
Acatar	1	0.4
Other	41	17.2
$n = 235$		

Online content delivery methods. Only 34% of the participants indicated that real time/ class meeting content delivery methods were used in their online program. In identifying how course content was delivered, students chose the following modes of delivery: Collaborate (13.8%), Adobe Connect (12.1), WebEx (6.7%), Zoom (4.6%), and Big Blue Button (0.8%). Interestingly, a majority of participants (54.8%) indicated that none of these application choices were used. Participants also chose “other applications,” where their write-in responses included: Go to Meeting (0.4%), Citrix (0.4%), and Skype (0.4%). Additionally, write-in answers indicated students were unsure of real-time course content delivery methods (3.4%). Table 4 summarizes the frequencies of real

time/class meeting content delivery methods used by online student participants in their respective programs.

Table 4

Real Time/Class Meeting Content Delivery Methods Used

Group	Frequency	Percents
Collaborate	33	13.8
Adobe Connect	29	12.1
WebEx	16	6.7
Zoom	11	4.6
Big Blue Button	2	0.8
Other	11	4.6
None	131	54.8
<i>n</i> = 235		

Student participants were also asked to choose all pre-recorded applications used in their program. The majority of respondents chose either YouTube (46.4%) or narrated PowerPoint (46%) as the pre-recorded application used in their online courses. Additional applications identified included several pre-recorded options: Video (25.5%), PodCasts (12.1%), Vimeo (4.2%), and Tegrity (2.1%). Write in “other” responses included: ScreenCast-O-Matic (1.2%) Videos (.08%), Collaborate (0.8%), iSpring (0.4%), Kaltura (0.4%), and Panopto (0.4%). Interestingly, 9 respondents (3.6%) indicated that no pre-recorded applications were used, 3 respondents marked this item not applicable (1.2%), and 2 respondents indicated that they were unsure how to answer this item (0.8%).

When asked to indicate other applications used to deliver online course content, students choose PowerPoint (81.2%), WordDocs (74.5%), Modules (69.5%), SoftChalk (1.3%), Prezi (1.3%), and Other (6.3%). Additional “other” write-in applications included several options: Internet (0.4%), Screen PDFs (0.4%), PLE (0.8%), Voice Thread (0.8), AppreNet (0.4%), Blackboard Announcements (0.4%), Live Collaborate (0.4%), Reference Links (2.3%), and Attached References (0.4%). Table 5 summarizes the frequencies of pre-recorded content and additional delivery methods used by online students in their respective programs.

Table 5

Pre-Recorded Content Delivery Methods Used

Group	Frequency	Percents
<u>Pre-Recorded Lecture Applications</u>		
YouTube	111	46.4
Narrated PowerPoint	110	46
Video	61	25.5
Podcasts	29	12.1
Vimeo	10	4.2
Tegrity	5	2.1
Other	26	10.9
<u>Additional Course Content Delivery</u>		
<u>Methods</u>		
PowerPoint	194	81.2
WordDocs	178	74.5
Modules	166	69.5
SoftChalk	3	1.3
Prezi	3	1.3
Other	15	6.3

n = 239

Online communication methods. In indicating how students communicated with their peers, a majority of participants choose Discussion Boards (92.9%). Other communication tools chosen included several options: Email (63.2%), Texts (21.8%), Wikis (10.5%), Phone (9.2%), Video Conferencing (7.5%), Instant Messaging (4.6%), Meeting in Person (4.6%), and Blogs (4.5%). Those students who chose “other” (5%) included these options: Google Docs (1.2%), Discussion Boards (1.2%), Facebook (0.8%), Collaborate (0.4%), Email (0.4%), and Adobe Connect (0.4%).

Email (99.2%) was the primary option chosen by the participants as the method used to communicate with their faculty. Other communication methods used included these modalities: Phone (21.8%), Video Conferencing (13.4%), Texts (9.6%), Meet in Person (3.8%), and Instant Messaging (2.1%). “Other” write-in options described message/discussion board assignment submission links that are commonly available within learning platforms. One respondent identified Face-to-Face orientation with faculty. Of note, no respondents choose Twitter as a form of communication used with either peers or faculty. Table 6 describes the frequencies of communication tools used by online students and faculty.

Table 6

Communication Tools Used

Group	Frequency	Percents
With Peers		
Discussion Boards	222	92.9
Email	151	63.2
Texts	52	21.8
Wikis	25	10.5
Phone	22	9.2
Video Conferencing	18	7.5
Blogs	11	4.5
Instant Messaging	11	4.6
Meeting in Person	11	4.6
Other	12	5
With Faculty		
Email	237	99.2
Phone	52	21.8
Video conferencing	32	13.4
Texts	23	9.6
Meet in Person	9	3.8
Instant Messaging	5	2.1
Other	22	9.2

n=239

Online course activities. In describing the online course activities used in their coursework, student choices included these options: Papers, (97.1%), Quizzes/Exams (73.6%), Online Presentations (56.5%), Group Projects (52.9%), Video Demonstration of a Skill (29.3%), and Self-Audio Recording (28.9%). In addition to these suggestions, participants were given the opportunity to describe “other” activities (12.6%). These responses included other online course activities: Discussion Boards; PowerPoint Presentations; Virtual Assignments such as Shadow Health, Geri-Patient, and use of avatars; Screencasts; Surveys; Community/Workplace Presentations; Collaborate Q & A,

Written Paper Assignments; and End-of-Course Reflections. Table 7 describes the frequencies of online course activities identified by the participants.

Table 7

Online Course Activities Used

Group	Frequency	Percents
<u>Suggested Activities</u>		
Papers	232	97.1
Quizzes/Exams	176	73.6
Online Presentations	135	56.5
Group Projects	124	51.9
Self-Video Skills Demonstration	70	29.3
Self-Audio Recording	69	28.9
<u>Other Course Activities</u>		
PowerPoint Presentations	7	2.8
Discussion Boards	6	2.4
Virtual Assignments	4	1.6
Screen Casts	1	0.4
Community/Work Projects	1	0.4
Wikis	1	0.4
Twitter	1	0.4
Surveys	1	0.4
Collaborate Q & A's	1	0.4
Written Papers	1	0.4
End of Course Reflections	1	0.4

n = 239

Data Analysis of Research Questions

The intent of this study was to evaluate the relationships and associations between RN-to-BSN students' perceptions of LP and the relationship of the independent variables of student and program characteristics on these perceptions. The methodology used to answer the research questions included a variety of descriptive and inferential statistics,

previously described in Chapter III (Table 1, p.80). This study addressed the five research questions.

Research Question One

To what extent do RN-to-BSN students perceive LP to be evident in online nursing education?

Twenty-one items from the original Community of Inquiry Survey (CoI) instrument were used to measure LP. The Modified Community of Inquiry Learner Presence Survey (MCLPS) scale is composed of 21 items that make up Cognitive Presence subscale (12 items) and Social Presence subscale (9 items). This Likert scale was recoded reversely, using a Likert scale response rating from 5 as *strongly agree* to 1 as *strongly disagree* to signify if the participant perceived that the item was manifested in their online courses and to determine a composite score of LP. Thus, a higher score indicated a stronger indicator of LP. The LP possible score ranges were from 0 to 105.

Descriptive data analysis of the MCLPS Survey instrument items included calculating a total composite score of LP portion of the MCLPS (21 items), which used two subscales, Social Presence (9 items) and Cognitive Presence (12 items). Measures of central tendency included the means, composite scores, standard deviations, and the minimum to maximum ranges for the LP scale. Cronbach's alpha was calculated for the 21 LP portions of the MCLPS, and for the Social Presence (9 items), and Cognitive Presence (12 items) to determine a reliability coefficient for each subscale. These scales

were combined to determine the concept of LP, and Cronbach's alpha was calculated to determine the internal consistency of the 21-item LP scale.

The LP portion of the MCLPS composite scores ranged from 23 to 79, out of a possible of 0 to 105, with a mean of 44.77 (*SD* 11.12) indicating student/graduate perceptions of LP in their online learning experience. Cronbach's alpha coefficient for the LP portion of the COI Survey for these 21 items was 0.91, indicating excellent internal consistency and reliability (DeVellis, 2012) (Table 11, p. 102). The Social Presence subscale composite scores minimum to maximum ranged from 7 to 23, out of a possible 0 to 45, with a mean of 20.57 (*SD* 6.01), indicating student/graduate perceptions of Social Presence in their online learning experience. Cronbach's alpha coefficient for the Social Presence subscale (9 items) was 0.87, indicating excellent consistency and reliability (DeVellis, 2012) (Table 11, p.100).

The Cognitive Presence subscale (12 items) composite scores ranged from 12 to 48, out of a possible 0 to 60, with a mean of 24.2 (*SD* 6.73) indicating student/graduate perceptions of Cognitive Presence in their online learning experience. Cronbach's alpha coefficient perceptions of agreement for the Cognitive Presence subscale (12 items) was 0.90, (Table, 8), indicating excellent consistency and reliability (DeVellis, 2012).

Table 8

Presence Scales, Mean, Standard Deviation, Min./Max., Scale Range and Cronbach's Alpha

Composite Score	M	SD	Min.	Max.	Scale Range	α
Learner Presence	44.77	11.12	23	79	56	0.91
Social Presence	20.57	6.01	7	23	36	0.87
Cognitive Presence	24.20	6.73	12	48	36	0.90

n = 239

Box-plots of Learner, Social, and Cognitive Presence were used to visually appraise skewedness of the distribution and to detect unusual outliers in the data set. Two respondents had composite scores for LP much higher than the mean indicating they strongly agreed with all 21 items. Four respondents had composite scores for Social Presence that were much higher than the mean indicating they strongly agreed with all 9 items. Nine respondents had composite scores for Cognitive Presence that were much higher than the mean indicating they strongly agreed with all 12 items.

Normality of the data for the LP scale was assessed through visual examination of a histogram, looking at the distribution of the composite scores. The histogram for LP was slightly negatively skewed indicating a slight tendency towards higher scores of LP. The histogram for LP affirmed the previously reported mean of 44.77 (*SD* 11.12) and a range of 23 to 79.

Normality of the data for the social presence scale was assessed through visual examination of a histogram, looking at the distribution of the presence composite score.

The histogram for Social Presence subscale was slightly negatively skewed indicating that participants were slightly more likely to indicate higher scores from neutral to strong agreement of social presence in their online program were perceived. The histogram for Social Presence confirmed the mean of 20.57 (*SD* 6.01) and a range of 7 to 23.

Normality of the data for the Cognitive Presence subscale was assessed through visual examination of a histogram, looking at the distribution of the presence composite score. The histogram for Cognitive Presence, was slightly negatively skewed indicating participants had a slight tendency to report higher scores ranging from “neutral” to “strong agreement” of the Cognitive Presence subscale in their online program. The histogram for Social Presence subscale conformed a mean of 24.20 (*SD* 6.73) and a range of 12 to 48, indicating student/graduate perceptions of cognitive presence in their online learning experience.

Research Question Two

How do demographic characteristics influence perceptions of learner presence in the experience of online learning for RN-to-BSN students?

Demographic co-variables related to online student participants in this study included age, and nursing practice experience. The Pearson correlation coefficient was used to analyze associations among age and students’ perceptions of LP (Table 9). Age was found to have a statistically significant negative association with LP. Relationships between years of nursing practice experience and the composite score of LP were also analyzed. Years of nursing practice experience was not found to have a statistically significant relationship with LP.

Table 9

Correlation Between Age, Nursing Practice Experience, and Learner Presence

	<i>Pearson's r</i>	<i>p</i> value
Learner Presence & Age	-.192**	.003
Learner Presence & Practice Experience	-.071	.277

n = 237

**correlation is significant at the 0.01 level (two-tailed)

An independent samples *t*-test was conducted to compare the LP scores in males and females, in English or “Other” first languages spoken, and in Diploma or ADN as the first degree obtained. There was a significant difference in the scores for males ($M = 40.54$, $SD = 11.13$; $t(237) = -1.97$, $p = .049$, two-tailed) and females ($M = 45.24$, $SD = 11.04$; $t(237) = -1.97$, $p = 0.49$, two-tailed), indicating that on average females had higher LP scores. These findings should be considered with the acknowledgement that the percentage of males in the study was significantly lower than females. There was not a significant difference in the scores for English ($M = 44.91$, $SD = 11.33$; $t(237) = .579$, $p = .156$, two-tailed) and “Other” first language spoken ($M = 43.58$, $SD = 9.36$; $t(237) = .579$, $p = .156$, two-tailed). There was also not a significant difference in the scores for initial Diploma degree ($M = 43.03$, $SD = 9.98$; $t(235) = -1.01$, $p = .285$, two-tailed) and initial Associates degree ($M = 45.10$, $SD = 11.31$; $t(235) = -1.01$, $p = .285$, two-tailed).

Research Question Three

How do students' experiences with the online learning environment influence perceptions of learner presence for RN-to-BSN students?

Demographic co-variates related to students in this study included the number of online non-nursing and nursing courses taken by participants. The Pearson correlation coefficient was used to analyze associations among the number of online courses taken and students' perceptions of LP (Table 10). Relationships between the numbers of online courses taken and the composite score of LP were also analyzed. Neither variable was found to have a statistically significant relationship with LP.

Table 10

Correlation of Number of Online Courses Taken and Learner Presence

	<i>Pearson's r</i>	<i>p value</i>
Learner Presence & Online-Non-Nursing-Courses Taken	.086	.881
Learner Presence & Online Nursing Courses Taken	.040	.540

n = 239

Research Question Four

How do student reasons for pursuing a baccalaureate degree influence perceptions of learner presence in the experience of online learning for RN-to-BSN students?

An independent samples *t*-test was conducted to compare the LP scores to reasons for pursuing a BSN degree that included these factors: personal goals, career advancement, pursuing graduate education, employment requirements, finding a new position, and "other" (see Table 11). No significant differences in motivations for pursuing a BSN degree and LP scores were found.

Table 11

Comparison of Learner Presence Scores to Reasons for Pursuit of a BSN Degree

Variable		<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Personal Goals	Yes	206	44.25	10.91			
	No	32	48.09	12.18	-1.82	236	.07
Employer Requirement	Yes	81	44.88	12.34			
	No	157	44.73	10.50	.102	236	.12
Career Advancement	Yes	186	44.40	10.90			
	No	51	46.31	11.80	-1.09	235	.42
Attend Graduate School	Yes	125	44.56	11.59			
	No	113	44.98	10.67	-.29	236	.25
Acquire New Position	Yes	70	44.47	12.07			
	No	169	44.89	10.73	-.27	237	.17

n = 239

Note: Sample sizes for yes and no responses differed based on the frequency of participant response.

Research Question Five

How do program characteristics influence learner presence in the experience of online learning for RN-to-BSN students?

The overall model predicting LP from program characteristics included: the use of pre-recorded video for lectures, blogging for communication with peers, phone calls for communication with faculty, and use of course activities that included papers, group

projects, and online presentations. The course activity predictor variables were significant $F(6, 232) = 4.92, p = .000$, and accounted for .09% of the variance. There were three significant predictors: (a) papers, (b) group projects, and (c) online presentations. The variable of group projects was positively associated with higher LP scores, whereas online presentations and papers were negatively associated with lower LP scores, as detailed in Table 12.

Table 12

Summary of Multiple Regression Analysis Predicting Learner Presence

	Unstandardized		Standardized		95% CI		
Predictor	β	SE	β	t	p	UL	LL
<u>Pre-Recorded Delivery Method</u>							
Video	-2.625	4.104	-.103	-1.65	.100	.17	6.29
<u>Communication with Peers</u>							
Blogs	-5.894	3.381	-.111	-1.743	.083	.67	14.09
<u>Communication with Faculty</u>							
Phone	-2.084	1.752	-.077	-1.910	.235	.83	7.63
<u>Course Activities</u>							
Papers	-8.373	4.097	-.127	-2.044	.042*	2.07	18.71
Group Projects	3.803	1.410	.171	2.697	.008**	-5.81	-.18
Online Presentations	-3.715	1.456	-.166	-2.551	.011*	1.18	6.82

*correlation is significant at the 0.05 level (two-tailed)

**correlation is significant at the 0.01 level (two-tailed)

Note. $F(6, 232) = 4.92, p = .000, R^2 = .336$, adjusted $R^2 = .090$.

Chapter Summary

Findings in this chapter indicated that perceptions of LP were higher than the separate perceptions reported on the Social Presence and Cognitive Presence subscales. A weak positive correlation ($r=.192$, $p < .003$) was found between age and LP. However, no significant differences were found between LP score and nursing practice experience, first language spoken, and initial nursing degree obtained. Additionally, there was no correlation found between either the number of online courses or online nursing courses previously taken and LP. No significant differences in reasons for pursuing a BSN degree and LP scores were found.

Three significant predictors of LP scores included the course activities used in online courses (a) papers ($p = .042$), (b) group projects ($p = .008$), and (c) online presentations ($p = .011$). Group projects were positively associated with higher LP scores ($t = 2.679$), whereas online presentations ($t = -2.55$) and papers ($t = -2.044$) were negatively associated with lower Learner Presence scores.

CHAPTER V

DISCUSSION OF FINDINGS

The purpose of this study was to reveal perceptions of Learner Presence (LP) in online baccalaureate completion (RN-to-BSN) students. Five research questions addressed the extent to which online BSN completion students perceived LP and these questions sought to explore relationships between student perceptions of this concept, and student and program characteristics. An overview of the study, discussion of findings, study conclusions, and implications for nursing education are presented. This chapter concludes with recommendations for further research.

Overview of Study

A descriptive exploratory study was used to guide the research. The independent student variables included participant demographics, experience with online coursework, and reasons for pursuing a BSN completion degree. The independent program covariates included online course delivery and communication methods and course activities assigned in the participants' program. The theoretical framework for this research was directed by the constructivist principles of Vygotsky's social formation of the mind theory ([SFM], 1978) and the conceptual analysis of online learner presence (Olson & Benham-Hutchins, 2014), which draws upon social and cognitive presence constructs of the community of inquiry framework (Garrison et al., 1999).

A convenience sample of 239 students, or recent graduates, who met the inclusion criteria of being currently enrolled in, or graduated within a year from, an online RN-to-BSN program in the United States participated in the study. The use of social media

snowball sampling allowed volunteer participants to access a researcher-developed online website or Facebook post which described the study, and shared the link to the Psych Data survey. The online Psych Data survey was accessible during the 5-week timeframe from March to April of 2017, when data were collected. Confidentiality was maintained throughout the research process for all study participants. The researcher used a password-protected computer for study data access and use of Psych Data ensured that each participant was identified only as a numbered participant, disconnected from the respondent's identity.

The survey used for this research combined the 15-item RN-to-BSN Student and Program Characteristics Questionnaire (RBSPCQ; see Appendix G), which assessed student and program characteristics and the 21-item Modified Community of Inquiry Learner Presence Survey (MCLPS), which determined participants' perception of LP in their online nursing education (see Appendix F). The RBSPCQ items reflected key characteristics of RN-to-BSN student and program characteristics of online education based on the literature review presented in Chapter 3. The MCLPS utilized a sum/composite score of the social and cognitive presence items of the CoI Survey (Arbaugh et al., 2008). Permission was obtained to modify the original instrument for this study into a 21-item self-report measure of Learner Presence. The MCLPS yields a composite summed score ranging from 21-105, with higher scores indicating greater perceptions of LP, based on the empirical referents of LP (Olson & Benham-Hutchins, 2014).

Descriptive statistics provided a detailed portrayal of the sample, in terms of student and program characteristics. These statistics included composite scores,

frequencies, means, variability measures of standard deviation and percentages for the variables examined. Inferential statistics used to answer the research questions included Pearson's *r* correlational coefficient tests and independent samples *t*-test to measure magnitude of relationship between LP, and ordinal and nominal student and program characteristic covariates. Multiple Linear Regression was conducted to verify the associations or relationships between LP, and those explanatory program characteristic covariates, which were found significant for LP in the participants' experience of online learning. Each of these covariates were entered a regression model for LP, to identify if they were a fit for the regression model.

Significant findings that were discovered using these statistical analyses included:

(a) age had a statistically significant negative association with LP and (b) females had higher LP scores. Additionally, a multiple linear regression model was used to estimate the effects of two or more independent variables on LP scores. Findings indicated three significant predictors of LP identified as: (a) online course activities, (b) papers, and (c) online student-created presentations. Of these three predictors, group projects were positively correlated to LP whereas, online student created presentations and papers were negatively associated with LP scores.

Research Question One Findings

Research Question 1 asked to what extent do RN-to-BSN students perceive learner presence to be evident in online nursing education? LP scores indicated varied levels of student/graduate perceptions of LP in their online RN-to-BSN learning experience. LP scores ranged from 23 to 79 (possible range = 21 to 105) with a sample

mean of 45(*SD* 11.12). Cronbach's alpha coefficient measurement for the LP was 0.91, indicating excellent internal consistency and reliability (DeVellis, 2012).

In examining the extent to which RN-to-BSN students perceived LP as evident in their online programs, the findings support the researcher's assumptions, which were drawn from the SFM (Vygotsky, 1978) and the conceptual analysis of LP in online nursing education, which supported exploration of the contextual meaning of the online learning experience (Olson & Benham-Hutchins, 2014). Additionally, research findings demonstrated that the empirical referents of social and cognitive presence can be used to measure LP, using a portion of the COI Survey (21 items), composed of the two Social and Cognitive Presence subscales (Garrison et al., 1999). Findings in this research study revealed participants' perceptions of LP and these results support a constructivist educational perspective, of the contextual nature of the online learning environment.

Research Question Two Findings

Research Question 2 asked how demographic characteristics influence perceptions of LP in the experience of online learning for RN-to-BSN students? The demographic independent covariates for this question included gender, age, first language spoken, type of initial nursing degree obtained and reasons for pursuing a BSN degree. The demographic student characteristics of this sample are described below and contrasted with the current literature.

This data supports the need to identify individual student characteristics in terms of what students bring to the environment, which impacts and influences the online learning community. Vygotsky, a constructivist cognitive theorist, emphasized that

characteristics the individual learner brings to the learning environment influence the learning process (1978). Garrison and colleagues (1999) first described the online learning as dependent upon the concept social presence (a sub-concept of LP), which is characterized as the ability of online learners to make themselves known to others by projecting their personal characteristics into the environment. The conceptual analysis of LP in online nursing education revealed the contextual meaning of the learning experience and emphasized that identification of learning prerequisites such as student abilities, motivation, and opportunities may impact successful learning outcomes (Olson & Benham-Hutchins, 2014). The consistency in findings is congruent with the researcher's assumptions based on these theoretical frameworks as described in the review of the literature (Garrison et al., 1999; Olson & Benham-Hutchins, 2014; Vygotsky, 1978).

Demographic Student Characteristics

In general, demographic characteristics of student-graduate participants who comprised this research sample were uniform with the larger RN-to-BSN student population. The majority (90%) of participants were female. This finding is consistent with undergraduate nursing programs reporting 85% nationally (NLN, 2014). However, male nurses made up 10% of this sample and recent data from the National Council of State Boards of Nursing (Budden, Moulton, Harper, Brunell, & Smiley, 2016) indicated that 14.1% of the nurses licensed between 2013 and 2015, were male. In terms of gender, this sample slightly underrepresented male participants. The largest two age groups in this generationally diverse sample consisted of 82 participants (34.4%) whose ages

ranged from 31 to 36 (17.2%) and 41 to 48 (17.2%). These findings are consistent with recent research describing the age of online RN-to-BSN population (Mancini et al., 2015).

The study sample was composed of a majority of Caucasian participants however, other participants included: African American, Mixed Race, Asian, Native Hawaiian /Pacific Islander, and American Indian/Alaskan ethnicities. The study sample ethnicity demographics are consistent with recent studies of this student population (Mancini et al., 2015). Participants in this sample represented all 8 geographical regions of the United States, residing in 36 different states/territories. Previous research on this population included samples that were limited to a specific group of students within individual courses, in one school, or schools located in one region of the country. Researchers who focused on RN-to-BSN education did not assess the variable regarding the first language spoken, and additionally it has been noted that in general few online programs report the characteristics of these students (Allen & Seaman, 2010). However, it is commonly accepted in the literature that first language spoken is an important learner characteristic with implications for teachers in terms of pedagogies, online course delivery methods, and activities used (Cobb, 2011; Gazza & Hunker, 2014). In this research sample, almost 10% of participants reported that English was not their first language spoken. The student characteristics demographics of the sample were representative of the population with the exception slightly fewer male participants.

In considering demographics specific to nursing education and practice, most participants received an associate's degree as their initial entry into practice degree. This

is consistent with trends that still indicate that most nurses educated in the United States complete associate degree programs (Budden, Moulton, Harper, Brunell & Smiley 2016). Most of the sample participants were employed full time in nursing, which is consistent with the literature regarding RN-to-BSN student demographics, as most of these students maintain fulltime employment throughout their education (Anbari, 2015; Mancini et al., 2015). The majority of participants in this study had been practicing nursing for less than 10 years. In general, the participant demographics specific to nursing education and practice were representative of those reported in the literature. Of note, 10% of these participants did not speak English as their first language, which is a new finding about this student group.

Although no previous research has measured LP, numerous studies used the CoI Survey to measure the subscales of social and cognitive presence that make up the LP scale (Akyol & Garrison; 2011; Arbaugh et al., 2008; Baysingar & Woiwode, 2015; Cobb, 2011; Ke, 2010; Mayne & Wu, 2011; Shea & Bidjerano, 2010; Swan et al., 2008; Van Schyndel, 2015). In this study females had higher LP scores than males, although it should also be noted that females represented 90%, or the majority of the sample, consistent with the gender demographics of RN-to-BSN students in the United States. Even so, males were underrepresented in this sample. Of interest and in contrast, one study in the review of the literature findings revealed that males reported higher perceptions of social presence (Carlon et al., 2012), a subscale of the LP scale.

These research findings indicated that the RN-to-BSN student's age was found to have a statistically significant negative association with LP, which has not been

investigated previously. However, previous research included Carlon and colleagues (2012) who found no effect by age on any of the social or cognitive presence subscales. Numerous studies in the review of the literature have described the use of online technologies as an influence on online learning dynamics (Culley & Polyakova-Norwood, 2012; Hurst, 2015; McIntyre et al., 2013; Sitzman, 2016), which may support this finding, in that younger RN-to-BSN students might also have been exposed to these technologies at an earlier age, and had more knowledge of, and experience with, online technologies.

Additional covariates found not to have associations with LP scores included, first language spoken by participants, initial nursing degree obtained, and the number of online courses participants had previously taken. Van Schnydel cited weak correlation between student demographic covariates and the student perceptions of the concepts of social and cognitive presence (2015). Cobb who reported a correlation between perceived learning and social presence in online RN-to-BSN students, emphasized the importance of social presence, and also noted no correlation between demographic factors and the subscale concept (2011). Years of nursing practice experience, and reasons for pursuing a BSN degree, were also not found to have a statistically significant relationship with LP scores. The influence of these student characteristic covariates had not been studied in previous research literature however, previous researchers have posited the need to investigate them (Anbari, 2015; Mancini et al., 2015).

Numerous studies revealed that influences on the RN-to-BSN learner may impede the success of nontraditional online nursing student, thus justifying the need

to explore these covariates (Adorno, 2010; Altman, 2012; Duffy et al., 2014; Hooper et al., 2013; Kumm et al., 2014; Lee & Fawcett, 2013; Matthias, 2014; McEwen et al., 2014; Megginson, 2008; Orsolini-Hain, 2012; Pittman et al., 2014; Robertson et al., 2010; Romp et al., 2014; Schwartz & Leibold, 2014). More specifically, previous research has indicated that failure to distinguish students' previous nursing education and experience, are influences that may affect this population of students, thus justifying this need to assess this data in this population (Duffy et al., 2014; Megginson, 2008, Schwartz & Leibold, 2014).

Research Question Three Findings

Research Question 3 asked how do students' experiences with the online learning environment influence perceptions of LP for RN-to-BSN students? The independent covariates related to students in this study included the number of online non-nursing and nursing courses taken by participants. Neither variable was found to influence LP scores. However, previous research has demonstrated that factors associated with decreased persistence in online education included computer skills proficiency and online coursework experience (Dahlstrom & Bichsel, 2014, Hart, 2012).

Research Question Four Findings

Research Question 4 examined how RN-to-BSN student reasons for pursuit of a baccalaureate degree, influence perceptions of LP in the experience of online learning? The independent covariates related to participants' reasons for pursuing a BSN degree included: personal goals, career advancement, pursuing graduate education, employment requirements, finding a new position, and "other." The majority of participants identified

personal goals as the reason for pursuing the completion degree however, no significant differences were found for the stated reasons for pursuing a BSN degree and LP scores.

Although, these student characteristic covariates were not studied in previous research literature, numerous studies revealed influences on the RN-to-BSN learner that could impede the success of non-traditional online nursing student, thus justifying the need to explore these covariates (Kumm et al., 2014; Lee & Fawcett, 2013; Matthias, 2013; McEwen et al., 2014; Orsolini-Hain, 2012; Pittman et al., 2014; Romp et al., 2014; Schwartz & Leibold, 2014). Additionally, a qualitative systematic review of RN-to-BSN transition noted that student motivations for returning to school was important information for faculty teaching in nursing completion programs (Anbari, 2015). In congruence with this proposition, pursuing an understanding of why students chose to pursue online RN-to-BSN program was important to this researcher. Reports of increased hiring demands for the BSN nurse by hospital employers (McEwen et al., 2013) might indicate students felt forced to complete the degree to keep their positions, or remain competitive in the healthcare marketplace. This could be a significant reason for these nurses to seek a baccalaureate completion degree. Employer requirements represent an external force affecting students' motivation to pursue additional education. Personal goals to achieve a baccalaureate degree, however, represent internal motivation.

Research Question Five Findings

The final research question in this study asked, "How do program characteristics influence LP in the experience of online learning for RN-to-BSN students?" The program characteristics independent covariates for this question included: learning

platform used, online course delivery methods and communication methods, and course activities assigned. The program characteristics of participants in this study are described below and contrasted with the current literature.

Program Characteristics

Program characteristics revealed that most participants in the sample identified Blackboard as the learning platform used in their online RN-to-BSN program, and interestingly a majority of participants (54.8%) also indicated that no synchronous, real time/class meeting/class delivery methods were used in their program. In describing the pre-recorded applications used in their programs, the majority of respondents chose either YouTube or narrated PowerPoint. In describing other applications used to deliver course content, most participants choose PowerPoint, Word Docs, and Platform Modules. Although no literature to date has addressed these program specifics for this population, researchers had cited the need to describe the specific technologies employed in online education (Baysingar & Woiwode, 2015; Hurst, 2015; Van Schnydel, 2015).

Online communication with peers and faculty, robustness of online dialogue, the perception of getting to know and be known by others, impacts collaboration and maintenance of the online community in nursing education (Olson & Benham-Hutchins, 2014). Communication in online education has been described as necessary to the process of learning in the virtual environment and previous research has cited the need to further explore this aspect (Cobb, 2011; Culley & Polyakova-Norwood, 2012; Mayne & Wu, 2011). In this study, in describing communication with peers, most participants chose discussion boards and email for communication with faculty. No participants

choose Twitter as a form of communication used with either peers or faculty. These findings are an important consideration for faculty designing online course communication methods.

In describing course activities employed in the online RN-to-BSN programs, the majority of participant responses included papers, quizzes/exams, online student-created presentations, and group projects. This type of data has been cited in the literature as important to obtain to ascertain what types of course activities/assignments are associated with positive learning outcomes (Breen, 2013; Cason & Boswell, 2014). Three significant predictors of LP were found: (a) papers, (b) group projects, and (c) online student presentations. Of note, no other independent variables in this study were predictive of LP.

Group projects were positively associated with LP scores. Group projects are produced in collaboration with others. Relying on the framework of Vygotsky's SFTM theory and conceptual analysis of LP, this significant finding is consistent with the assumptions proposed by these frameworks. That is, online learners initiate cognitive development through social processes and online learners actively modify the learning situation in response to educational stimuli, within the context of the virtual online learning environment (Vygotsky, 1978; Garrison et al., 1999). This depiction of online learning is also consistent with the identified student opportunities as antecedents to LP in online nursing education (Olson & Benham-Hutchins, 2014). Course assignments represent opportunities for the online student that may influence how and to what extent learning occurs.

In this study, online student-created presentations and papers were negatively associated with lower LP scores. These assignments are completed individually by the online students and therefore fewer opportunities for developing social presence may be present. The CoI framework describes how cognitive, social, and teaching presence interact to contextually frame, and influence the process of learning in the online environment (Garrison et al., 2010). Additionally, the multidimensional concept of LP is considered as dependent upon students' shared abilities, opportunities, and motivation, which impact the student's ability and potential to learn (Olson & Benham-Hutchins, 2014). Course assignments such as individually student-created presentations and papers offer fewer opportunities for students to collaborate, and share their abilities as they complete these assignments.

These findings are consistent with the literature that documented faculty concerns regarding how the online learner uses technology to meet content learning objectives (Abraham, 2013) and the need to focus on online learning as a process rather than simply a technology (Ellis & Goodyear, 2013). Educators have identified the need to consider acclimating to the technology itself through initiating new pedagogies to guide technology in the online learning environment (Beetham & Sharpe, 2013; Christensen & Eyring, 2011).

Study Limitations and Strengths

The strengths of the study include rich description of student and program characteristics of participants enrolled in, or graduated from, RN-to-BSN programs across the United States. In addition to typical demographic research data, this study

identified previously unknown information that included: first language spoken, nursing practice experience and reasons for pursuing an online RN-to-BSN degree. In terms of program characteristics of online RN-to-BSN programs in the United States this is the first study to specifically describe content delivery methods, peer and faculty communication methods, and online course assignments used by participants in these online completion programs.

Social media sampling has been shown to be useful for recruitment and conducting online survey research, and has been viewed as a beneficial in terms of access to populations that may be difficult to contact because they are spread across large geographical areas (Wright, 2005). This study supports the use of this sampling method as a viable option for collecting large amounts of data from participants representing a variety of programs across the United States in a relatively short amount of time. Nonetheless, convenience sampling limits generalizability of the findings, in that the sample was obtained from volunteer participants who might not adequately represent the population. Additionally, since recruitment of the sample utilized social media snowball sampling, bias may be present because these participants might also represent those more technically proficient students rather than those students who spent less time on the internet.

This study validated use of the 21-item MCLPS, and determined varied participant levels of LP, in their online nursing education. Specific to LP, this study has identified that age is negatively associated with LP scores and female participants had higher LP scores. However, an additional limitation to this study was that the number of

male students was underrepresented in this study's sample, which may have skewed the results.

This study established three significant predictors of LP. These predictors included the three course activities identified as group projects, papers, and student presentations. Group projects were positively correlated with LP and papers and student created-presentations were negatively correlated with LP. This information is important to nurse educators designing future course activities for online nursing education courses.

Equally important, this study identified factors that did not influence the variable of LP, including nursing practice experience, English as a second language, initial nursing degree acquired, previous online course experience, and reasons to pursue a BSN degree. In addition, program characteristics such as the type of learning platforms used, course delivery, and communication methods employed, were not shown to influence LP scores.

Study Conclusions

In conclusion, the study utilized the MCLPS to ascertain online RN-to-BSN students and graduates' perceptions of LP and the RBSPCQ to assess relationships between this concept and student and program characteristics. Both instruments performed reliably and confirmed associations between LP and age, gender and type of online course assignments used. The results of this study are promising for online nursing faculty seeking to increase LP in their RN-to-BSN students to enhance the experience of learning in the online environment for this population. Knowledge from this research can be utilized to help faculty in the design and implementation of their

online courses. Descriptive data may enhance faculty's understanding of this population of students and the need to be mindful of the extent to which course activities impact the students' abilities to be successful in their completion education. This might improve retention of these non-traditional students' and efforts to complete their degree, as well as enhancing the quality of online nursing education.

In response to increased demands for BSN prepared nurses there are currently more than 400 online completion program programs in the United States (AACN, 2012) and yet, concerns regarding student persistence and increased attrition rates in the online environment continue (Allen & Seaman, 2013; Shaw et al., 2016). RN-to-BSN completion students represent a substantially large and rapidly expanding nursing education population. The literature has identified the heightened online learner requirements, and the need for further inquiry into discipline specific populations, to determine specific learner needs that improve the students' ability to communicate and interact with faculty and peers in the online classroom (Hurst, 2015; Pratt-LaFevers & McCleary-Jones, 2015).

The results of this study have confirmed the importance of measuring LP in this population, and provided data that may be used to structure and design course activities, that encourage collaborative learning in the virtual online nursing education environment. These findings demonstrate the need for nurse educators to continually assure that online students are receiving quality online instruction, appropriate to meeting their educational objectives.

Recommendations for Further Study

Importantly, this study confirmed the MCLPS and RBSPCQ for use in this population as reliable data collection tools that may be used in the future. This research revealed that 10% of the students/graduates in the sample did not speak English as their first language and future studies might investigate the concept of LP in this specific population. Additionally, it would be interesting to investigate whether heightened LP can be correlated to greater learner satisfaction with coursework in online RN-to-BSN completion programs.

Specific to nursing practice, future research might also address graduates of online RN-to-BSN programs to see whether heightened LP influences graduate nurse's ability to practice in various healthcare settings. Similarly, future studies might address how LP measures influence students' ability to be successful in graduate nursing programs.

This study examined precursors as influences on student perceptions of LP and future studies need to address outcomes of heightened LP. Recommendations for future nursing education studies would include using the MCLPS to compare student perceptions, prior to, and following, specific teaching strategies, used in undergraduate online nursing education. Also, future research might employ a mixed methods design, adding new qualitative data to enhance the quantitative findings of this study. This type of research may be helpful in identifying and describing what specific course assignments students identify as valuable to achieving their educational objectives within the online learning environment. Triangulation of data has been proposed by many nurse

researchers, when utilized to confirm and complete information on specific populations (Begley, 1996).

In terms of recruitment for future nursing education research, the use of social media sampling has been validated in this study, as a method for recruiting large and diverse samples that can also be employed in future nursing educational research studies. Recently, it has been noted in the literature that response rates to academic surveys are decreasing and this recruitment method may provide future doctoral students with opportunities to reach their sample size in a timely and cost-effective manner, while maintaining rigorous research standards (Dusek, Yurova, & Ruppel, 2015).

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Appendix A

Student and Program Independent Variables Table

Variable	Description of Variable	Operationalized Variable
<i>Student demographic/ characteristics</i>	These include the variables of gender; age first language spoken; employment status; primary area of nursing practice; initial entry into nursing practice degree; nursing practice experience and current area of nursing practice (Patten, 2012).	These nominal variables were operationalized as follows: Gender is male or female. First language spoken is English or other. Employment status is full-time, part-time, or not working. Initial entry into RN nursing practice degree is identified as either diploma or ADN degree. Nursing practice experience is described in months or years of nursing experience.
<i>Students' experience with the online learning environment</i>	These include variables indicating the number of higher education online courses students have completed to date (Patten, 2012).	These are continuous variables operationalized as the number of online non-nursing and nursing, higher education courses completed.
<i>RN-to-BSN students' reasons for pursuit of a baccalaureate degree</i>	These include the variable options of personal goals, employer driven, qualification for different nursing positions, prerequisite to application to graduate programs, and / or other.	These are nominal variables operationalized as all options that apply. Additionally, if other is chosen the participants may write in a reason/s for pursuing a baccalaureate degree not included in the options.
<i>Program characteristics</i>	These include the variables of: online learning platforms, online instructional tools, online communication methods, and online learning activities used in the respondents' RN-to-BSN program (Patten, 2012).	Online learning platforms are nominal variables operationalized as follows. Online learning platforms options include: Blackboard, Canvas, Moodle, Sakai, Akatar, or Other. Online instructional tools are nominal variables operationalized as the following options: Discussion Boards, Collaborate Sessions, Email, WIKI's, Instant Messaging, Podcasts, PowerPoint, Vimeo, Tegrity Lecture Capture, SoftChalk, Blogs, and/or other. Online communication methods used will be indicated by the participant answering yes or no responses program to these options: Email, Texts, Wikis, Phone, Video Conferencing, Instant Messaging, Meeting in Person and Other for which the participant will identify the communication tool used in their program. Online learning activities are nominal variables operationalized as individually written assignments, collaborative group work activities, quizzes and/or exams and other.

Appendix B
Recruitment Flyer

Participation Request: Doctoral Research Study



Exploring Perceptions of Learner Presence in Baccalaureate Completion Students

You are invited to participate in a research study. I am a doctoral student at Texas Woman's University in Denton, TX. My interest is in your experiences as an online RN-to-BSN student, and to better understand how Baccalaureate completion students learn in the online environment.

To participate you must be currently attending, or have graduated in the past year, from an online RN-to-BSN program in the United States.

The brief online survey takes approximately 10 minutes to complete. Participation in this study is completely voluntary and you may choose to withdraw at any time without consequence.

For more information: <http://rntobsnstudy.weebly.com> Or go directly to the survey link:

<https://www.psychdata.com/s.asp?SID=175938>

Please feel free to contact the primary investigator

Christina Olson MSN, RN COlson1@twu.edu.

Also, please share the study information and the survey link with other online RN-to-BSN students.

Thank You!

This study has been reviewed by Texas Woman's University Denton Institutional Review Board and designated as study #19389. If you have any questions about your rights or are dissatisfied at any time with any part of the study, you can contact anonymously if you wish, the Institutional Review Board by phone at (940) 898-3378 or email at irb@twu.edu

Appendix C

Consent to Participate in Internet Research

Consent to Participate in Internet Research

Identification of Instigator and Purpose of Study

You are invited to participate in a research study entitled “*Learner Presence – Exploring Perceptions of Online Baccalaureate Degree Completion Students*”. This study is being conducted by Christina Olson in the School of Nursing at Texas Woman’s University at Denton, 210-393-1778, Colson1@twu.edu.

The purpose of this research study is to describe and explore the experience of online learning from the perspectives of Registered Nurses (RNs) completing a baccalaureate degree (BSN). Your participation in this study will contribute to a better understanding of how students learn in the online setting and factors that influence the learning experience. You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old to participate.

If you agree to participate:

- The online survey will take approximately 30 minutes or less of your time.
- You will provide information regarding your online learning experience.
- You will not be compensated.

Risks/Benefits/Confidentiality of Data

There are no known risks. There will be no costs for participating nor will you benefit from participating. Your name and email address will not be kept during the data collection phase. The primary researcher and an assistant will have access to the data during data collection.

Participation or Withdrawal

Your participation in the study is voluntary. You may decline to answer any question and you have the right to withdraw from participation in the study at any time. If you do not want to participate either simply stop participating or close the browser window.

Contacts

If you have any questions about the study, contact the researcher Christina Olson at (210) 393 1778 or send an email to COlson1@twu.edu. This study has been reviewed by Texas Woman’s University Denton Institutional Review Board and the study number is 19389.

Questions about your rights as a research participant.

If you have any questions about your rights or are dissatisfied at any time with any part of this study, you can contact, anonymously if you wish, the Institutional Review board by phone at (940) 898-3378 or e-mail at irb@twu.edu.

If you agree to participate, click on the button below to indicate your consent.

Thank you,

Please print a copy of this document for your records.

Appendix D

Texas Woman's University Institutional Review Board (IRB) Approval



Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378
email: IRB@twu.edu
<http://www.twu.edu/irb.html>

DATE: December 8, 2016

TO: Ms. Christina Olson
Nursing

FROM: Institutional Review Board (IRB) - Denton

Re: *Exemption for Exploring Perceptions of Learner Presence in Online Baccalaureate Degree Completion Students (Protocol #: 19389)*

The above referenced study has been reviewed by the TWU IRB (operating under FWA00000178) and was determined to be exempt from further review.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. Because a signed consent form is not required for exempt studies, the filing of signatures of participants with the TWU IRB is not necessary.

Although your protocol has been exempted from further IRB review and your protocol file has been closed, any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

cc. Dr. Anita Hufft, Nursing
Dr. Peggy Mancuso, Nursing
Graduate School

Appendix E

Permission to Use CoI Survey Email

Hi Christina,
Please feel free to use our Col instrument. I wish you the best of luck with your study. Best regards, Ben
--

J. B. (Ben) Arbaugh, Ph.D.
Founding Member, Society of Business and Management Education Researchers (SBMER)
Associate Editor, *Decision Sciences Journal of Innovative Education*
Department Chair, Management and Human Resources
John McNaughton Rosebush Professor
College of Business
University of Wisconsin Oshkosh
800 Algoma Blvd.
Oshkosh, WI 54901
[\(920\) 424-7189](tel:9204247189)
[\(920\) 203-2647](tel:9202032647)
email: arbaugh@uwosh.edu
Skype: ben.arbaugh

Appendix F

Modified CoI Learner Presence Survey

Likert Type Scale

1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*, NA = *not applicable*

Item Statement	1	2	3	4	5	NA
1. Problems posed increased my interest in course issues						
2. Course activities piqued my curiosity						
3. I felt motivated to explore content related questions						
4. I utilized a variety of information sources to explore problems posed in this course						
5. Brainstorming and finding relevant information helped me resolve content related questions						
6. Online discussions were valuable in helping me appreciate different perspectives						
7. Combining new information helped me answer questions raised in course activities						
8. Learning activities helped me construct explanations/solutions						
9. Reflection on course content and discussions helped me understand fundamental concepts in this class						
10. I can describe ways to test and apply the knowledge created in this course						
11. I have developed solutions to course problems that can be applied in practice						
12. I can apply the knowledge created in this course to my work or other non-class related activities						
13. Getting to know other course participants gave me a sense of belonging in the course						
14. I was able to form distinct impressions of some course participants						
15. Online or web-based communication is an excellent medium for social interaction						
16. I felt comfortable conversing through the online medium						

Appendix F continued

Item Statement	1	2	3	4	5	NA
17. I felt comfortable participating in the course discussions						
18. I felt comfortable interacting with other course participants						
19. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust						
20. I felt that my point of view was acknowledged by other course participants						
21. Online discussions help me to develop a sense of collaboration						

Permission received for use in Appendix E. (Arbaugh et al., 2008)

Appendix G

The RN-to-BSN Student and Program Characteristics Questionnaire

Student/Program Characteristic Variables are bolded

Gender ☐ male ☐ female

Ethnicity

☐ American Indian/Alaskan Asian ☐ Asian ☐ Black/African American ☐ Caucasian/White

☐ Mixed Race ☐ Native American/Pacific Islander ☐ Other (those not listed) ☐ Prefer not

to answer ☐ Other (Please Specify) _____

Are you Hispanic or Latino? ☐ Yes ☐ No ☐ Prefer not to answer

Age ____ (number of years)

First language spoken ____ English ____ Other

What **state** do you live in? (Drop down menu choices include listing of all US states, territories and the District of Columbia)

Employment status ____ part-time ____ full-time ____ looking for a position in nursing

____ other (Please specify here) _____

Initial entry into nursing practice degree ____ Diploma ____ ADN degree

Nursing practice experience ____ months ____ years

Please specify your **reason for pursuing a BSN degree**:

☐ Personal goal ☐ Employer driven ☐ To qualify for different nursing position/s

☐ To attend a graduate program ☐ other (Please specify here) _____

Are you **currently enrolled** in an RN-to-BSN program or have you already **graduated**?

☐ currently enrolled ☐ graduated

Indicate what **type of RN-to-BSN institution** you attend/attended?

☐ Public ☐ Private

Did you participate in any **real-time online lectures** or class meetings?

☐ Yes ☐ No

Appendix G – continued

Indicate the **number of non-nursing higher education online courses** completed ____

Indicate the **number of nursing higher education online courses** completed: ____

Identify the **online learning platform used** in your RN-to-BSN program:

☐ Blackboard ☐ Canvas ☐ Moodle ☐ Sakai ☐ Desire to Learn (D2L) ☐ Bright Spot
☐ Other (please specify here) _____

Were any of these **applications used for real time lectures or class meetings?** (Select all that apply).

☐ Collaborate ☐ Adobe Connect ☐ Big Blue button ☐ Zoom ☐ Webex ☐ None
☐ Other (please specify here) _____

Were any of these **used for delivering pre-recorded lectures?** (Select as many that apply)

☐ Narrated PowerPoint ☐ Tegrity ☐ Vimeo ☐ Video ☐ YouTube ☐ Podcasts
☐ Other (please specify here) _____

How do you **communicate and collaborate with your fellow students?** (Select as many as apply)

☐ Text ☐ Twitter ☐ Email ☐ Phone ☐ Video Conferencing ☐ Instant Messaging
☐ Meet in Person ☐ Discussion Boards ☐ Wikis ☐ Blogs
☐ Other (please specify here) _____

How do you **communicate and collaborate with your faculty?** (Select as many as apply)

☐ Text ☐ Twitter ☐ Email ☐ Phone ☐ Video Conferencing ☐ Instant Messaging
☐ Meet in Person ☐ Discussion Boards ☐ Wikis ☐ Blogs
☐ Other (please specify here) _____

In what **additional ways was course content delivered?** (Select all that apply)

☐ PowerPoint ☐ Prezi ☐ SoftChalk ☐ Modules ☐ Word of PDF documents
☐ Other (please specify here) _____

Please select the **online learning activities used in your coursework?** (Select as many as apply)

☐ Papers ☐ Group Projects ☐ Quizzes/Exams ☐ Online Presentations
☐ Video of yourself Demonstrating a Skill ☐ Audio Recording of Yourself
☐ Other (please specify here) _____