2015

Perceptions of the Community of Inquiry in an Online RN to BSN Program

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COLLEGE OF EDUCATION

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Beth Ann Townsend

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Walden University
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MSN, Indiana University, 1993

BS, College of St. Francis, 1989

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Basic nursing education is no longer sufficient to meet the escalating demands of today's complex healthcare environment. Recognizing the need for the advanced cognitive skills incurred by these demands, increasing numbers of registered nurses (RNs) have been enrolling in online Bachelor of Science in Nursing (BSN) programs. The problem identified in the RN to BSN degree completion program at a large Midwestern university was the lack of information as to how online teaching and learning strategies were experienced by students. Research has demonstrated that the online community of inquiry (CoI) model facilitates higher order thinking through collaborative learning strategies and the interaction of teaching, social, and cognitive presence. The purpose of this sequential explanatory mixed methods study was to investigate the perceptions of RNs enrolled in the program about a recently completed course utilizing a 34-item CoI survey and semi-structured interviews. The data from 109 completed survey responses were analyzed via descriptive statistics and indicated that student perceptions of social and teaching presence were lower than perceptions of cognitive presence, meaning that the perceived establishment of online relationships and instructor engagement were not as high as were the perceived experiences of higher order thinking. Interviews with 15 purposefully selected students were analyzed for emergent themes and suggested limited online collaboration, which is considered to be fundamental to higher order learning. Based on these findings, a faculty development workshop was designed using the CoI model to encourage collaboration. A potential increase in RN proficiency in higher order thinking fostered by the CoI model will optimize the quality of patient-related decisions, minimize medical errors, and provide the impetus to challenge the status quo in health care.

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Dedication

I first dedicate this work to Our Lord who has given me the grace and strength to persevere in the journey and I thank Him for His help in overcoming the obstacles I encountered. I pray that the outcome of this study will be beneficial to nurse educators and students in ways that are tangible for them and for the greater honor and glory of God.

In loving memory of my late husband George W. Applegate, MD, who made my academic dream come true, and my father, Edward Jindra, who taught me how to think in ways that would never have been possible without his tutelage.

Finally, I acknowledge that, without the love and patience of my husband, the attainment of my doctorate would not have become a reality. Thank you, Terry, for all you have done, all you have sacrificed, and for all the times you lifted my spirits so that I could keep moving forward. You will never know how much gratitude and love fills my heart for your uncomplaining actions and the insightful words of comfort that literally kept me on the path to completion of this degree. You are truly a gift from God and I thank Him every day for sending you to me.

Acknowledgments

To my mother, Marian Jindra, who prayed for me around the clock.

I thank my URR Dr. Beate Baltes and my patient and encouraging committee, Dr. Paul Englesberg and Dr. Edward Garten, whose teaching and learning strategies gave me exactly what I needed when I needed it. I am grateful to Laura Parker, who came to my analytical aid numerous times without complaint. Thank you to my kindred spirits Mary Ellen Slisz, Ellen Jose, Lynn Morris, and Carol Filkins – the friends who stayed the course with me and surrounded me with their love, encouragement, and support.

With endless appreciation and gratitude to the mentors in my life, Sr. Sharon Richardt, D.C., and Mary Fisher, PhD, RN who helped me see what I could not and who selflessly gifted me with their expertise, lessons from lived experience, and their beliefs in life-long learning. Their intellectual brilliance is matched only by their humility and compassion.

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Section 1: The Problem

Introduction

Patient safety and the quality of health care in the United States are continuously subjected to factors that both challenge and facilitate the delivery of care. The benefits afforded by the rapid evolution of technology and advances in medical research have the propensity to be offset by an ongoing shortage of nurses caring for a patient population whose illnesses are increasing in acuity and complexity (Altmann, 2011; Hodges, 2011). To meet the needs incurred by these changing conditions, nursing education must respond in ways that are innovative and timely in order to sustain the advanced proficiencies currently required in all areas of professional nursing practice (Mailloux, 2011).

Online learning is becoming an increasingly popular platform for nurses to develop the skills requisite to function effectively in the current health care environment. The majority of registered nurses (RNs) returning to pursue advanced degrees are married with families, employed full-time, and attracted to the convenience of online programs. The number of RNs enrolled in RN to Bachelor of Science in Nursing (BSN) degree completion programs has been escalating, resulting in the need for ongoing assessment of the fairly recent phenomenon of online nursing education.

Learning strategies based on substantive theoretical frameworks are more successful than those without the structure and guidance provided by such frameworks (Kala, Isaramalai, & Pohthong, 2010). Plante and Asselin (2014) described the association between social presence, the sense of connectedness and caring experienced

by online students, and the development of higher order thinking skills. The community of inquiry (CoI) framework developed by Garrison, Anderson, and Archer (2001) provides a model of holistic online learning conducive to social presence that has been the foundation of computer-mediated studies in disciplines other than nursing for several decades. In the current study, I used the CoI model (Garrison et al., 2001) to explore student perceptions as to how their online learning included evidence of social, cognitive, and teacher presence. I also investigated the practices or experiences that may explain their perceptions and contribute to the elucidation of online learning in both the local and larger contexts.

Definition of the Problem

It is imperative that educators identify and understand the essential elements of online learning and how they can be leveraged to maximize the growth and development of existing programs (Lahti, Hatönen, & Valimaki, 2014). There is a need for RNs to attain advanced proficiency in higher order thinking skills to meet the increasingly complex demands of the health care environment (Gallagher-Lepak, Reilly, & Killion (2009). One of the demands includes the ability to participate effectively in interprofessional practice, a caregiving model in which all members of the health care team communicate collaboratively to ensure the provision of patient safety and high quality care (Cronenwett, et al., 2007). Advanced skills in collaboration require higher order thinking for the practice to be effective in reducing the likelihood of errors and promoting patient safety (Institute of Medicine, 2010). Because basic associate's degree (AD) nursing education is no longer sufficient to prepare nurses to function at higher

levels, increasing numbers of RNs are enrolling in online RN to BSN completion programs in pursuit of advanced degrees that will equip them to practice in alignment with current health care conditions (Altman, 2011).The preponderance of evidence of the successful learning outcomes in online courses in which the CoI constructs were integrated (Archibald, 2010; Kumar, Dawson, Black, Cavanaugh, & Sessums, 2011; Leong, 2011; Stodel, Thompson, & MacDonald, 2006) was the impetus behind the exploration of perceptions in an online nursing education program of the CoI model.

At a large Midwestern state school of nursing, an assessment of perceptions of the degree to which the CoI constructs were present was conducted to contribute to the understanding and enhancement of online nursing education. An investigation of what students believed to be most influential in facilitating the presence of the constructs was obtained by conducting interviews. One of the challenges in the RN to BSN program involves the facilitation of student collaborative interactions as a teaching and learning strategy known to facilitate cognitive development. According to the director of the RN to BSN program involved in this study, the majority of instructors teaching in this online program do not incorporate collaborative problem-solving into the course design (personal communication, May 15, 2014). The need to cultivate connectedness and camaraderie between students was also identified as a challenge by the program director (personal communication, May 15, 2014). Instructor-mediated strategies to compensate for the lack of face-to-face socialization include scheduling synchronous “chat” time with the instructors and students; encouraging students to post an introduction with photographs; and, according to one faculty member, assigning group projects to facilitate

collaboration (personal communication, September 26, 2014). Obtaining an accurate sense of students' perceptions of their ongoing educational experience will increase both student and educators' understanding of online learning.

Rationale

Evidence of the Problem at the Local Level

Faculty from each of the eight campuses across the Midwestern state where this study took place taught in the RN to BSN degree completion program, which was designed for the RNs to receive a BSN through a flexible, asynchronous online curriculum. Courses were delivered in condensed 8-week learning modules to facilitate the ability of students to continue working while taking classes. Students did not need to travel to attend classes because the program used Web-based and video technologies that made distance learning possible. The online curriculum was structured to allow the completion of up to three of the 14 courses each semester, enabling students to graduate in either 12 months (full time) or 18 to 24 months (part time). The effectiveness of online courses is largely dependent upon the facilitation skills of the instructor. Individual educators at the school had varying degrees of proficiency in how and when to provide structure, direction, and clarity (personal communication, September 25, 2014). To promote faculty development, learning resources related to computer-mediated education had been made available to all online educators at the university. In addition, experienced faculty were assigned to mentor novice online instructors to promote the successful transition from traditional classroom to computer-mediated teaching (program director, personal communication, May 15, 2014). The online mentoring process was described as

an area in need of redesign to more specifically identify and meet the individual learning needs of new online faculty (faculty member, personal correspondence, September 26, 2014). The time required to be attentive and accessible for students was articulated as a challenge to the instructors of asynchronous courses in the program.

Evidence of the Problem from the Professional Literature

Nursing education is changing in response to an increasingly complex health care environment further confounded by a shortage of nurses, which Altmann (2011) expected to be critical by 2020. The need for nurses has allowed the AD to continue as the most common route to becoming an RN in the United States and, as of 2008, less than 50% of all RNs held an advanced level BSN degree (U.S. Department of Health and Human Services, Health Resources and Services Administration, 2010). However, basic nursing education is no longer sufficient to meet the demands of a profession whose responsibilities and expectations have escalated due to the complexity of medical and surgical interventions undertaken in hospitals today (Aiken, Clarke, & Sloane, 2002). Numerous studies have substantiated the importance of advanced learning and higher order thinking skills in nurses by demonstrating that higher levels of RN education are associated with better patient outcomes and decreased mortality (Altmann, 2011; Cronenwett et al., 2007; Hodges, 2011). In fact, in 1992, the National League for Nursing (NLN) mandated the inclusion of higher order critical thinking (CT) skill development as a nursing curriculum requirement (Vaughan-Wrobel, O'Sullivan, & Smith, 1992). The Essentials of Baccalaureate Education for Professional Nursing Practice (American Association of Colleges of Nurses, 2008) were based on the recommendations of key

stakeholders and the Institute of Medicine (2001) that identified the components of core knowledge required of all health care professionals. Throughout the document, CT is included as an indispensable element of BSN education and professional nursing practice.

Although the 2010 report on the future of nursing published by the Institute of Medicine (2010) recommended that 80% of RNs be BSN prepared by 2020, only 40% of graduates were BSN prepared in 2011 (McEwen, Pullis, White, & Krawtz, 2013).

Online learning (also referred to as *e-learning*, or *distance education*) has emerged in schools of nursing as a propitious response to these conditions, making education more accessible, available, and convenient for learners (Mancuso-Murphy, 2007). The number of practicing RNs entering online advanced degree programs such as the BSN has been growing, in part because the asynchronous e-learning environment provides the flexibility needed by RNs whose lives include parenting and full-time employment (Mancuso-Murphy, 2007).

Studies of the effectiveness of online learning has focused mostly on professionals working in the field of medicine or health care in general (Lahti, Hatönen, & Valimaki, 2014). Challenges to creating a virtual environment that facilitates meaningful collaborative learning are pervasive in computer-mediated education programs. The development of an online milieu in which social interaction and communication emulate that of conventional classrooms is one of the most daunting aspects of the co-construction of knowledge (Moore & Kearsley, 2012). However, research has demonstrated that online interaction and collaboration are highly conducive to successful computer-mediated learning (Breen, 2013; Du et al., 2013; Garrison,

2005; Vitale, 2010).

Because the quality of learning in the nursing field has a direct impact on patient safety and quality of care, effective, meaningful learning is paramount to the successful, safe practice of caregivers who must attain, develop, and apply CT skills (Cronenwett et al., 2007). To facilitate CT in online nursing education, researchers have suggested that instructors maintain an interactive social environment in which learners are actively engaged in online situations that foster CT (Mayne, & Wu, 2011). The degree to which nursing students perceive teaching and social presence as catalysts to cognitive presence in online learning is unknown. The exploration of perceptions of online learning in this study has offered insight into the extent to which higher order thinking is facilitated through social and teaching presence.

An online pedagogy that fosters trust, belonging, and a sense of community encourages higher order interactions between students. However, because the caring behaviors that educators in traditional classroom settings are able to model are difficult to convey online, instructors employ alternative strategies to build the connection and trust that generates social presence between and among students. The relationship between caring and CT suggests that student perceptions of social presence has a positive impact on CT.

Garrison (2005) and Haythornthwaite (2006) postulated that the goal of quality online education is to create a community of learners who co-construct meaningful knowledge by group interaction. There is not only a dearth of information regarding student perceptions of online RN to BSN education at this particular school of nursing;

there have been few studies regarding assessments of student perceptions of online nursing education in general (Breen, 2013).

Definitions

For the purposes of this study, several terms are defined to clarify the intent of their inclusion and relevance to the context of online learning. The constructs of cooperation and collaboration; cognitive, social and teaching presences; and CT have individual meanings that are congruent with holistic learning.

Cooperation: An activity in which different individuals are responsible for solving a specific portion of a problem, followed by the consensual combination of each individual solution to resolve the problem as a whole (Roschelle & Teasley, 1995).

Collaboration: The mutual engagement of group participants in a collective effort to resolve a problem together (Roschelle & Teasley, 1995).

Community of inquiry (CoI): An online learning framework formed by the interaction between three primary elements: social presence (SP), cognitive presence (CP) and teaching presence (TP) The integration of each presence in online courses produces effective, successful learning (Garrison, 2007).

Presence: The manifestation of a construct within an online learning environment identified and defined by indicators consisting of certain key words, phrases, or synonyms (Garrison, 2005).

Cognitive presence: The intellectual environment needed for student knowledge construction and the development and application of higher order thinking; the extent to which participants in an online community are able to construct knowledge and

meaningful learning through sustained interaction (Garrison, 2007; Garrison et al., 2001).

Social presence: The ability of participants to project personal characteristics into an online community in order to present themselves as "real" people to establish purposeful relationships (Garrison et al., 2001).

Teaching presence: The primary responsibilities of the instructor which consist of developing and organizing course design, facilitating discourse, and providing direct instruction when warranted (Garrison et al., 2001).

Critical thinking (CT): In the context of a CoI, CT is referenced as higher order thinking facilitated by collaborative learning. The process of CT consists of four categories including: a triggering event; an exploration for information, knowledge and alternatives to understand the situation; integrating the knowledge and information to gain insights; and resolution of the problem with an application of an idea or hypothesis (Garrison, Cleveland-Innes, & Fung, 2010). The development of CT using the methodologies proscribed by the CoI is a primary objective of the framework. Its meaning and purpose are not antithetical to the process of clinical reasoning in nursing. In fact, the development of CT by integrating the principles and practices inherent in a CoI is directed toward enhancing the problem-solving and decision-making skills requisite to advanced clinical reasoning. Although the necessity of CT skill development is acknowledged, the facilitation of CT in distance education is one of the complexities inherent in computer-mediated teaching and learning.

Research Questions

The purpose of this study was to assess the perceptions of online RN to BSN

students to identify which learning modalities facilitate higher order thinking and to provide the local online educators with evidence-based data regarding best practices in online RN to BSN learning. The CoI model of effective online learning (Garrison et al. 2001) was used to explore student perceptions as to how their online learning includes evidence of social, cognitive, and teacher presence. In addition, I examined student perceptions of social, cognitive, and teaching presence across courses to obtain information regarding interactions and collaboration in individual courses.

With the CoI framework, Garrison et al. (2001) posited that meaningful online learning is a product of the interaction between three presences: cognitive, social, and teaching (to be discussed in greater detail in the review of the literature). The research questions are as follows:

1. What are the perceptions of RN to BSN students about online teaching, social, and cognitive presence?
2. How do student perceptions of teaching, social, and cognitive presence compare across different RN to BSN courses?
3. What practices or experiences may explain the variations of student perceptions across different RN to BSN courses?

Review of the Literature

The study was guided by the conceptual framework known as the CoI model. Developed by Garrison et al. (2001) the premise of the model was based on Lipman's (1991) findings that, because of its propensity to foster reflection, a computerized community can be an optimal context for the facilitation of CT and meaningful learning.

Searches of the literature were conducted using the nursing database CINAHL Plus as well as Ovid, Google Scholar, and ERIC. Key phrases included *online learning, Garrison, community of inquiry, online collaboration, online assessment strategies*, and *evaluation.* The CoI model has been used to guide, explain, and prescribe the posture of e-learning from a collaborative-constructivistic perspective (Garrison, Anderson, & Archer, 2000). According to Garrison et al (2001), the CoI framework elucidates processes and behaviors required to construct knowledge through the cultivation of several forms of "presence" which include three core elements: cognitive presence (CP), social presence (SP), and teaching presence (TP) (Shea & Bidjerano, 2009). Carlon et al. (2012), Redmond and Lock (2006) and Shea and Bidjerano (2010) agreed with the contention of Garrison, et al. (2001) that effective online learning occurs in a community of students and instructors as a function of the interaction between these three constructs.

Studies of online nursing courses have found that characteristics similar to those of the CoI are conducive to e-learning. Gallagher-Lepak et al. (2009) demonstrated that developing a sense of community may be important to the development of learning communities that not only maximize learning potential but also model nursing core values. Cantrell, O'Leary, and Ward (2008) identified three types of interactions as indispensable to online nursing education: *learner-content* interactions, *learner-learner* interactions and *learner-instructor* interactions, which parallel the CoI core concept that meaningful learning occurs through the combination of each of these entities.

The basic premise of the CoI is consistent with Vygotsky's (1962) theory of constructivism in its assumption that, by building their own meaning and understanding

of a course topic, students discover general principles by self-direction (Utley, 2011).

To clarify the relationship between the three constructs and the purpose of the study, social, cognitive, and teaching presence will first be explicated individually followed by a description of their contributions to an ideal learning experience.

In the CoI framework, CP is considered the product of SP and TP as well as a construct that contributes to SP and TP. Garrison (2007) defined CP as "…the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community of inquiry" (p. 65). Garrison (2007) further explained CP by describing it as a cycle of inquiry with four indicators: a triggering event (recognition of a problem); exploration (research and information exchange); integration (insights and understanding); and resolution (application of new ideas). Results of a study conducted by Oldenburg and Hung (2010) indicated the phases of cognitive presence aligned with those described in the progressive stages of problem-solving. They were also congruent with the principles of adult learning used to facilitate the higher order thinking essential to problem-solving in advanced nursing practice (Brookfield, 1987). CP and the construct of learner-content interactions inherent in online nursing education (Cantrell et al., 2008) are also closely related.

SP in a CoI surpasses personal relationships—it refers to the ability of a participant to establish purposeful and trusting relationships as learners realize they are collaborating in service of a common inquiry and purpose (Garrison, 2007). Through SP, students share thoughts and ideas that establish them as "real" persons (Garrison, 2007).

Authentic collaboration is viewed from a constructivist perspective as an ongoing

process that includes mutual engagement where both personal and social transformation occur by the co-construction of knowledge through negotiation, reflective communication, and cooperation (Maor, 2003; Redmond & Lock, 2006; Vygotsky, 1962).

Examples of SP indicators are emotional expression, open communication, and group cohesion (Garrison et al., 2000).The construct of SP is associated with the learner-learner interactions deemed indispensable to online nursing education (Cantrell et al., 2008).

Anderson, Rourke, Garrison, and Archer (2001) defined the third element of the CoI, teaching presence as "the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (p. 5), or as Cantrell et al. (2008) would describe it, the learner-instructor interactions essential to successful online nursing education. They also asserted that for effective online learning to occur, the interaction between the cognitive and social constructs alone is insufficient. Focused, defined parameters to facilitate the attainment of course learning objectives through the experience of meaningful learning falls under the auspices of the instructor.

Three indicators are associated with TP: course design, discourse facilitation, and direct instruction (Anderson et al., 2001). Course design refers to the planning of "the structure, process, interaction and evaluation aspects of the online course" (Anderson et al., 2001, p. 5). Arbaugh and Hwang (2006) described the need for instructors to be explicit in this area because of the absence of social cues in online learning. Discourse

facilitation is the manner in which "students are engaged in interacting about and building upon the information" emerging from the dialogue (Anderson et al., 2001, p. 7). The meaning of direct instruction is related to leadership provided by the instructor through sharing of subject matter knowledge and diagnosing comments for accurate understanding (Arbaugh & Hwang, 2006). Because online nursing instructors are also engaged in these activities, they are familiar constructs to both students and faculty. Although the CoI model has been used extensively to explore online learning efficacy in a variety of educational disciplines, studies of the CoI and nursing education have been scarce.

Ally (2004) argued that because it is the instructional strategy and not the technology that facilitates learning, online instructors must be familiar with the different approaches to learning in order to select appropriate teaching strategies. Garrison et al. (2001) articulated the influence of constructivism, behaviorism, and cognitivism on the development of the CoI model to explicate the underlying rationale for incorporating the three CoI constructs into the framework. Clarifying the relationship between these widely accepted educational pedagogies and the principles of the CoI is important to the credibility of the framework because the foundation for understanding the learning process as well as the development of instructional designs are predicated upon the characteristics of these theories (Yilmaz, 2011). Although educational research has continued to generate new learning theories and conceptual frameworks, online learning is based on educational theories that are rooted in behaviorism, cognitivism, and constructivism (Anderson & Dron, 2011; Conole, Dyke, Oliver, & Seale, 2004;

Evgeniou, & Loizou, 2012). Therefore, a brief discussion of each is warranted to promote further understanding of the CoI framework.

Theoretical Foundations of the CoI Model

Behaviorist pedagogy is based on the premise that learning can be identified through changes in behavior acquired in response to stimuli (Anderson & Dron, 2011). According to Anderson and Dron (2011), the focus is on measuring the behaviors of the individual and not on attitudes or capacities. They asserted that learning is an individual, not a collective process. Conole et al. (2004) agreed and added that when applied to online learning, behaviorism would suggest that learning development represents "little more than transfer of didactic approaches online…linked directly to assessment and feedback" (p. 19). Behaviorism in nursing curriculum design is evidenced by the use of behavioral objectives that quantify student progression in competency development (Harasim, 2012). The concept of learning objectives is based on the work of Bloom (1956) who created a taxonomy organized by complexity to classify educational objectives and articulate a range of behaviors required to be taught and evaluated by instructors (Harasim, 2012). The evaluation of learning objectives is not limited to traditional classroom nursing courses. Online assessments of student progress are also based on the evaluation of learning objectives developed for each course and, in this study, the three components of the CoI were used to appraise both the progression and perceptions of RNs in the BSN degree completion program. Cognitivism emerged from the need to incorporate motivation and attitudes that may or may not be demonstrated through observable behavior (Anderson & Dron, 2011). In fact, Downes (2010) asserted

that cognitivism allows for the descriptions of mental capacity ignored by behaviorism. Evgeniou and Loizou, (2012) concurred and posited that cognitivism directly opposes behaviorism because it is centered on the cognitive processes that lead to learning and understanding. Others described the pedagogical focus of cognitivism as one in which learning occurs by the transmission of information through communication, problem-solving, interactions among learners, and experiential activities (Boitshwarelo, 2011; Conole et al., 2004). This aligns with the construct of CP in the CoI framework. The ability to transition through the phases of cognitivism plays an important role in generating meaningful learning in concert with reflection (problem-solving) and SP (interactions among learners), which can be mediated through TP. Computer mediated learning can be an ideal platform for developing CT because its asynchronous properties allow time for the student reflection conducive to higher order thinking. Garrison et al. (2001) and Kala et al. (2010) identified online learning as a cognitive tool for nursing educators because of its propensity to enhance the delivery of content through student online interactions. This is congruent with the premise of CoI that online learning has the potential to create a community of students as a facilitator of CT.

The focus of constructivism is on the processes through which learners build their own knowledge through interaction with others and the environment (Conole et al., 2004). Constructivism is a theory of learning in which education is characterized by the active construction of knowledge by the learner rather than the acquisition of knowledge (Redmond & Lock, 2006). Constructivists believe meaningful learning is a process in which learners actively engage in dialogue, interaction, and communication (Dewey,

1933; Kolb, 1984; Swan, 2003; Vygotsky, 1962). Vgotsky's (1978) theory of a *zone of proximal development* (ZPD) is based on the notion that group interaction contributes more to the learner's understanding than could be achieved individually. Vgotsky (1978) explained the ZPD as the distance between the learner's current understanding or knowledge base and the learner's potential capability, as measured by what can be accomplished in collaboration with peers or guidance from the instructor. The foundational principles of the ZPD theory are augmented by studies of online learning that have identified collaborative modalities as facilitating factors in the cultivation of self-directed learning (Mayes & Freitas, 2004) and CT skills (Putman, Ford, & Tancock, 2012; Saade et al., 2012;Wang & Chiu, 2011). According to the CoI model, the presence and interaction of its three elements are essential to the formation of meaningful online collaboration. Constructivist learning theory is integrated into the teaching and learning strategies of nursing education, including the development of collaboration skills. This is germane to online learning because, if constructivism recognizes the essential role of collaboration with peers and instructors, and if a goal of baccalaureate nursing education is to cultivate CT in students, the CoI is an ideal construct to assess student perceptions of the elements that suggest the presence of collaborative learning and CT.

Evolution of the CoI Framework

Although the three constructs of the CoI have proven to be stable, the focus of each of the presences has broadened over time (Garrison, Anderson, & Archer, 2010). Garrison et al. (2010) determined that the initial interpretation of CP had elevated it to a higher status in the model than social or teaching presence due to its association with CT

(the goal of higher education). Transcript analyses of studies employing the practical inquiry model (used to operationalize cognitive presence) indicated that students were not progressing to the third and fourth stages of integration and resolution. However, additional research demonstrated that online course designs and teacher expectations were not requiring or encouraging students to progress to the latter phases of CT (Garrison et al., 2010). Researchers found the role of instructional effort in online education may have been underrepresented using the CoI (Shea et al., 2012). The construct of learner presence emerged from a renewed understanding of the complexities involved in the relationship between learners and teaching presence. Shea et al. (2012) purported that learning presence and its indicators of self- and co-regulation would enhance the scope of the CoI framework and recommended future research to broaden the understanding of learning presence within the CoI.

Studies have also examined the use of the CoI framework in the context of faculty development. Vaughan (2010) modified the CoI model to create the Inquiry Through Blended Learning program, which was designed to enhance faculty proficiency in the four phases of the PI model. Vaughan asserted that when the framework is applied to faculty development, the phases of CP become an inquiry into teaching effectiveness by aligning specific educational strategies with each phase to cultivate faculty proficiency in designing student-centered blended learning courses and programming.

Barriers to Online Learning Effectiveness

Challenges or barriers to learning in online classrooms are similar to those encountered in traditional classrooms. However, the challenges promulgated by distance-

learning environments are largely related to the fairly recent acceptance and implementation of computerized education by instructors who are often unfamiliar with online teaching and learning techniques. The majority of online courses have been modeled on traditional forms of instruction and their underlying principles rather than capitalizing on the unique possibilities afforded by computer-based learning environments (Johnson & Aragon, 2003).

A variety of obstacles to sustaining a successful online learning experience have been identified including students' feeling of isolation, disconnection, distraction, and low levels of personal attention (Rovai, 2002a). The lack of nonverbal communication, inadequate technical mastery, and technical problems were also found to contribute to student frustration (Ali, Hodson-Carlton, & Ryan, 2004). Leong's (2011) study of SP and cognitive absorption reinforced the notion that online learning designs must include factors that foster a sense of sustained community to keep learners engaged, a ubiquitous challenge perpetuated by the asynchronous nature of computer-mediated education. St. Jacques (2013) believed the biggest challenge in online learning is the facilitation of meaningful learning through scaffolding of learning activities. She asserted that most of the challenges that hinder successful e-learning could be addressed by effective course design and facilitation.

Catalysts to Online Learning Success

The most important determinants of satisfaction in online learning were identified as instructor variables (such as communication, feedback, preparation, teaching methods, and encouragement); technical issues; and interactivities (Bolliger & Martindale, 2004).

Motivation was found to be essential to the achievement of online learning (Evgeniou & Loizou, 2012). Gormley (2013) agreed and discovered that, because online programs place more responsibility on learners and require higher levels of intrinsic motivation than traditional learning formats, self-regulation must be cultivated to sustain motivation. A number of investigators have recommended implementing the attention, relevance, confidence, satisfaction (ARCS) model as a catalyst to motivation (Evgeniou & Louizou, 2012; Gormley, Colella, &Shell, 2012) The ARCS model (Keller, 1987) is based on a problem-solving approach to instructional design that contends that all four elements must be included in the course design for online learners to develop and sustain motivation. The ARCS model emphasizes the need for teaching strategies that promote student-to-student interactions, encourage student-to-instructor interaction, and incorporate Vygotsky's (1978) ZPD theory to promulgate constructivist learning. Teaching behaviors aimed toward the development of motivation included modeling, feedback, questioning, and instructing (Gormley et al., 2012). Hodges (2011) asserted that a constructivist learning environment empowers students with control over their own learning through the experience of discovery and unknowing, two dynamics that occur with great frequency in nursing practice. Hodges also contended that constructivist pedagogy fosters inquiry and CT to solve unstructured problems and develop the predisposition for ongoing exploration of complex adaptive systems and professional resilience.

Online Learning Frameworks and Taxonomies

The integration of nursing theory and conceptual frameworks in nursing practice

and education has been instrumental in promoting the current recognition of nursing as a profession. Theories and conceptual frameworks continue to function as determinants of the basis of nursing practice, and guide nursing roles, goals, interventions and research in order to respond effectively to current trends in health care and its commensurate challenges (Im & Ju Chang, 2012). According to Effken (2003), health care professionals agreed that science advances more efficiently when theoretical frameworks are used to strengthen objectivity and, without theory as a guide, researchers tend to focus on specific problems rather than underlying causative factors. However, the literature includes scholarly works by both advocates and opponents of online learning theories. For example, Johnson and Aragon (2003) supported the assumption that learning is a complex phenomenon that cannot be explained with a single theory. They believed instructional principles derived from a variety of learning theories, such as those addressing motivation, cognitive overload, and individual differences, provide greater guidance to research. Wilson and Myers (2000) concurred, arguing that too strict adherence to any specific theory can skew perceptions in ways that do not align with the reality of practical application through open-minded innovation. Engagement is cultivated through the use of active learning techniques that encourage the use of higher order thinking skills, such as collaborative problem-solving (Duderstadt, Atkins, & Houweling, 2002). Hodges (2011) concurred and explained the importance of the development of problem-solving skills in nurses. She asserted that a constructivist learning environment empowers students with control over their own learning through the experience of discovery and unknowing, two dynamics that that occur with great

frequency in nursing practice. Hodges also contends that constructivist pedagogy fosters inquiry and the higher order thinking needed to solve unstructured problems that have more than one correct resolution and develop the proclivity for ongoing exploration of complex adaptive systems and professional resilience.

Taxonomies, Online Learning and Student Interaction

In their exploration of the online interactions of undergraduate nursing students, Booth, Andrusyszyn, and Iwasiw (2011) utilized Bento and Schuster's Taxonomy of Participation in Online Courses (Bento & Schuster, 2003) to guide their study of student perceptions of participation and interactivity. The developers of the taxonomy, Bento and Schuster (2003), postulated that interactions in online learning involved information sharing, interpretation, evaluation, and constructive criticism. They identified the characteristics of four dispositions of learner participations as missing in action; witness learners; social participants; and active learners. The interactions that may occur are illustrated by a matrix that ranks "interpersonal interaction" levels and "interactions with content" levels as either high or low. The use of the taxonomy revealed correlations between the extent of student participation, course content, and interaction which substantiated the contention of the researchers that online participation is a complex construct that should be measured with a multidimensional tool. Although the use of Bento and Schuster's theory offered a framework to investigate online participation, it failed to address the role of the instructor relative to participation.

A taxonomy based on student behaviors and attitudes or "stances" was created to explore their impact on online discussion and the promotion of collaboration and

cognitive engagement (Putnam et al., 2012). Results suggested that an understanding of individual student stances can assist the instructor to align facilitation techniques with student predispositions. In fact, the credibility of this premise was reinforced by the results of an investigation of student emotional factors in online learning. The interdependence of learning and affective experiences of nursing students enrolled in online courses was investigated by qualitative study Findings identified three themes: aloneness, anonymity, and nonverbal communication, in addition to unknowns that were described by the learners in both positive and negative terms. Compensatory teaching and learning interventions for each theme were recommended, such as developing collaborative projects and peer review to help students find commonalities that circumvent the sense of aloneness, incorporating telephone contacts to reduce feelings of anonymity, and encouraging students to post their pictures, use emoticons, first names, and personal greetings to build and sustain the sense of community essential to meaningful online learning. Reilly et al. (2012) also recommended that instructors model attitudes and values consistent with eradicating aloneness, anonymity and the challenges related to the lack of nonverbal communication.

Traditional Learning Theory and Online Education

The traditional principles and theories of adult education continue to inform best practices in undergraduate online learning and teaching. The notion that the effective application of traditional theory to aspects of online education has validity is substantiated by a number of studies. When design-based scaffolding was employed to study online collaboration it was discovered that frequent instructor feedback on

collaborative events is particularly beneficial to online discourse (Zumbach, Schonemann, & Reimann, 2005). This approach is based on the perspective that the developmental progression from individual, independent learning to interdependent collaborative learning can be facilitated through design-based scaffolding (defining the way collaboration will be conducted before the course begins), a strategy in which high levels of direction and guidance are provided in the initial stage of e-learning. Scaffolding served as a catalyst to the formation of the student who engaged in the progression. The receptivity to collaborative behavior was increased by the appropriately directive behavior of the instructor.

Janzen's quantum perspective of learning theory was selected as the foundation for a study of Photovoice (an artistic pedagogical technology, or "ATP") and student perspectives of interaction in online learning (Edwards, Perry, Janzen, & Menzies, 2012). The quantum perspective of learning refers to the "education of the whole person" and posits that all learning is holistic in nature (Hare, 2006, p. 301). Because it recognizes all dimensions of human learning, it is considered by some to be a bridging perspective between all contemporary learning theories (Janzen, Perry, & Edwards, 2011). According to Janzen et al. (2011), online learning must occur in multiple dimensions to satisfy holism and reaching the learner in one dimension (i.e. social or cognitive) is insufficient if the learning is to be accessed for life. Congruent with the quantum perspective of learning as an arts- based creative learning strategy, Photovoice involves the use of selected images and several corresponding reflection questions. Findings demonstrated that Photovoice had a positive influence on learner interactions, sense of community,

self-awareness and relationships with peers and instructors. From the perspective of quantum learning, it could be said that human formation is an ongoing phenomenon in which individuals are constantly influencing and being influenced by current situations, interactions with others, events occurring in the wider world, self-perception, and spirituality (Muto & van Kaam, 1991). The quantum perspective theorizes that learning is ubiquitous, cannot be compartmentalized, and should be multidimensionally constructed, suggesting that the whole person must be taken into consideration when designing curriculum, lesson plans, and teaching and learning strategies. Palmer (2003) agreed. He asserted that education should evoke personal meaning and espouse a "pedagogy of the soul" philosophy. Palmer (2003) also advocated the use of open, honest questioning to help students think deeply. He recommended the incorporation of "third things" in teaching and learning such as the use of stories, art and music to engage even the most introverted learners and emphasized the impact of relational trust on group discussion and student retention.

Wenger's social learning theory was used by Mackey and Evans (2011) to explore the potential of emerging technologies to enhance professional learning through networking. According to Wenger (2010), the online interactions of a professional discipline involve communities of practice that can be viewed as social learning systems. Research conducted to elucidate an understanding of online education has identified similarities in the factors affecting learning across various disciplines.

Motivation is considered one of the most critical factors affecting learning regardless of the platform (Lim, 2004). Because the lack of motivation is also known to

be related to high attrition rates of online learners, Chen and Jang (2010) used Deci and Ryan's (1985) self-determination theory (SDT) to examine motivation and online learning. Espousing constructs similar to those of the quantum perspective, SDT is holistically predicated on several core tenets: humans have the universal needs of autonomy, competency and relatedness; humans have the ability to choose their actions and behaviors; the dynamics of human need, motivation, and well-being can be explicated within a social context; and is categorized as intrinsic, extrinsic or amotivation. Others have investigated motivation from a different perspective. Gormley et al. (2012) explored the role of motivation in e-learning using Keller's theory of motivation (Keller 1987) to investigate engagement in online nursing education. Known as the ARCS model, an acronym for attention, relevance, confidence and satisfaction, the framework has been recognized as a conduit to increased motivation by using instructional materials that incorporate each of the four concepts required to motivate learners.

In nursing education, it is essential to incorporate online teaching and learning strategies designed to develop the knowledge, skills and attitudes requisite to interprofessional practice because the stakes of nursing education are so high (Smith, Passmore, & Faught, 2009). Proficiency in group problem-solving and collaboration are fundamental to the professional practice of safe, high quality nursing care and it is vitally important that online education programs facilitate learner proficiency in these areas (Breen, 2013).

Self-regulation, a condition requisite to the success of online nursing programs,

involves self-generated thoughts, feelings and actions directed toward personal goal attainment (Huang, Huang, Wang, Liu, & Sandness, 2012). According to Zimmerman (1986) self-regulated learning (SRL) theory is comprised of three phases: forethought (goal setting and strategic planning), performance (acting on the plans), and self-reflection (reflecting on the process). The SRL process is well-suited for self-managed learning in computer-mediated education. Gormley et al. (2012) agreed but added that online self -regulation required greater levels of intrinsic motivation than the conventional classroom.

Educational strategies that are conceptually based on the "Seven Principles for Good practice in Undergraduate Education" (Chickering & Gamson, 1999) are known to facilitate high levels of student engagement. The principles include student-faculty contact, cooperation, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning (Kuh, 2001). According to Kuh (2001), engagement is the best predictor of successful college learning. However, although they recognized the inherent properties of the principles as sound educational variables, Chen, Lambert, and Guidry (2010) asserted that in online learning, the principles alone will not suffice as predictors of student success and that a combination of factors such as instructor participation and peer interaction are also needed.

Collaborative Online Learning

The ability to solve problems in collaboration with others is fundamental to the provision of safe, high quality nursing care. Effective, collaborative participation in online problem solving calls for the use of higher order thinking skills, an essential

component in educational preparation for practicing in a team-based health care environment (Brindley, Walti, & Blaschke, 2009). Collaborative learning in the traditional classroom has been explored extensively and outcomes have substantiated the positive correlation between collaborative learning strategies, such as problem-based learn (PBL), team-based learning (TBL) and the development of CT skills (Alkhasawneh, et al., 2008; DeGraff & Kolmos, 2003; Hmelo-Silver, 2004; Pate & Miller, 2011; Rogal & Snider, 2008).

There is an important distinction between the meaning of interaction and collaborative learning (Wang & Chiu, 2011). Interaction involves communication between individuals that may or may not result in knowledge exchange. The type and level of interaction is dependent upon factors such as teaching and learning strategies, course design, student maturity and course content. Collaborative learning emphasizes interactive social processes that, when engaged in problem-solving, learners build knowledge through discussion, negotiation, and information sharing. Studies of online collaboration abound in the literature but the vast majority have been conducted by disciplines outside of the nursing profession. Nursing educators tend to transfer the content of classroom didactic lectures to online courses rather than employing constructivism theory and PBL to transform computer- mediated course using collaborative pedagogy (Vitale, 2010). Vitale (2010) contends that online interaction is essential to the viability of online learning communities and that the instructor is responsible for developing student engagement strategies to facilitate online collaboration. She advocated the use of higher order inquiry to stimulate CT and

to sustain and deepen the collaborative process.

A variety of teaching and learning strategies to encourage collaborative discourse have been identified by researchers, including the technique of scaffolding (Zumbach et al., 2005). Scaffolding is used by educators to provide temporary assistance to students to facilitate their ability to complete tasks and develop understandings that they would not be able to accomplish without support (Hammond & Gibbons, 2001). Based on Vgotsky's ZPD theory of constructivism (1978), effective scaffolding is a teaching method that shifts the amount of support needed by students to meet their learning needs. In successful scaffolding, instructor support is decreased as knowledge, skills and abilities are attained, and continually assessed and analyzed so that scaffolding can be readjusted to align with changing student needs. Computer technology has the potential to support new forms of collaborative inquiry. It has been discovered that online scaffolding and collaborative inquiry-based problem-solving, with teacher-enhanced scaffolding contributed to CT skill development (Raes, Schellen, DeWever, & Vanderhoven, 2012).

Researchers have also discovered that learning is most effective when students are given opportunities to express their thoughts, challenge others' perspectives and work together to resolve problems (Johnson & Johnson, 1989; Springer, Stanne, & Donovan, 1999). Despite the fact that development of skills in CT, problem-solving, co-construction of knowledge, and teamwork are known benefits of collaborative learning, students frequently resist active participation in online group assignments (Chiong & Jovanovic, 2012). Investigations of learner perceptions of distance learning have

identified several conditions that preclude collaboration, citing students' perceived lack of control over their assigned grade; concerns regarding the need to compensate for the suboptimal work of other members; and barriers to convenience and flexibility resulting from the amount of time required for consistent, substantive participation (Brindley et al., 2009; Piezon & Feree, 2008; Wright & Lawson, 2005). Ellis (2001) studied the differences between student-centered asynchronous online communication versus face-to-face collaboration. Students identified the two greatest disadvantages of online forums as the inability to read body language and the lack of conversational features due to extended time lapses between responses. The primary advantages, however, were noted as the convenience factor and greater equity for quieter students, enabling them to participate more frequently than in a classroom environment.

Effective collaborative problem-solving is contingent upon the consistent participation of group members. Poor peer interaction is a well-known obstacle to successful collaboration and instructors typically apply some form of inquiry to facilitate discussion (Breen, 2013). In fact, inquiry-based learning (IBL) is an approach that is known to foster active engagement in online learning. Instructor-mediated questioning can be incorporated as a scaffolding method in which teachers lead the inquiry but eventually transition from a more directive role to one of support and encouragement, allowing students to take the lead (Weerasinghe, Ramberg, & Hewagamage, 2012). Weerasinghe et al. (2012) studied student interactions and whether inquiry-based collaborative problem solving would take place with or without instructor presence. They found that both teacher presence and a sense of connectedness created by social

interaction between students were needed for effective online learning. Although they concurred with the belief of Weerasinghe et al. (2012) that inquiry is vital to meaningful learning, Darabi, Arrastia, Nelson, Cornille, and Liang (2011) also supported the contention that inquiry alone is unlikely to stimulate higher order thinking and learning, nor does the technique necessarily advance the student through the phases of CT: triggering events, exploration, integration, and resolution (Garrison, 2007).

The CoI Model and Research Application

Over the last decade, hundreds of qualitative research studies have been conducted using the CoI model to explore each of its constructs individually. In response to the dearth of empirical studies and the absence of research that simultaneously examined all three components of the model, Arbaugh et al. (2008) designed a 34 item survey instrument, the validity of which has been substantiated by numerous studies to measure learner perceptions of teaching, cognitive, and social presence (Arbaugh et al., 2008; Shea & Bidjerano, 2009). Reports of studies that have examined the construct of TP as the variable of interest are more prevalent in the literature than studies focused on the social and cognitive constructs individually. Several are identified in this discussion to exemplify the teaching and learning philosophies that generated researcher interest. The central role of TP to establishing and sustaining an online learning environment was reinforced by the results of a study by Garrison et al. (2010). The perceptions of students enrolled in two programs (Master's Degree in Interdisciplinary Study and a Master's Degree in Education) were examined. Findings demonstrated that students perceived the three presences as interconnected entities and that TP directly influenced the perception

of social and cognitive presence.

Educational researchers supported the notion that the CoI framework offered a more contextualized, broader view of online teaching. Although Morgan (2011) concurred with those who support the CoI as an effective indicator of the presence of meaningful learning, she also contends the TP construct is limited in its explication of the underlying factors that may be influencing study results. In her investigation of online teaching, she utilized the sociocultural framework of activity theory to explore international e-learning. Because the results demonstrated that TP was more a product of course design and structure than whether online educators assumed a teacher-or learner-centered role, Morgan (2011) recommended that future studies focus on the contextual components of TP. She advocated the use of qualitative studies to expand the understanding of TP beyond those identified through CoI research.

The original TP categories and their related indicators developed by Anderson et al. (2001) were the topic of several studies. Because instructional design and organization, the facilitation of productive discourse, and direct instruction are typically studied to measure the extent of instructor presence in online learning, Shea, Vickers, and Hayes (2010) believed the TP indicators of a CoI fell short in identifying and assessing online collaborative tasks outside of threaded discussions. Results of their study demonstrated that the effort associated with assessment is significantly reduced when only threaded discussions are analyzed. Shea et al. (2010) concurred with Morgan (2011) that the CoI framework warrants expansion and suggested including the constructs of self-regulated learning, the role of feedback, and assessment in data analysis to

augment studies conducted on threaded discourse.

Self-regulated learning involves the active monitoring of the metacognitive, motivational, and behavioral aspects of learning (Hadwin & Oshige, 2011). Metacognition is defined as the self-awareness of personal cognitive processes and skills employed to plan, monitor, and regulate learning strategies (Puzziferro, 2008). Garrison and Akyol (2013) argued that metacognition is socially situated and constructed rather than an individual phenomenon as described in early studies (Puzziferro, 2008). Interestingly, Garrison and Akyol (2013) agreed with Shea and others who suggested that the variable of self-regulation should be explored to enhance the CoI framework by conducting a study to investigate the constructs of metacognition and self-regulated learning. Based on the elements of the CoI, they designed a 26 item Practical Inquiry (PI) instrument to measure self-regulated learning and metacognition. From the results of the research, Garrison and Akyol (2013) concluded that there is a need to adopt a metacognitive construct that reflects the self- and co-regulation dimension of the CoI framework.

CoI Studies of Individual Constructs

The proliferation of online learning has been the impetus behind an escalating interest in the efficacy of the online platform for teaching and learning. The frequency of applying the CoI is increasing as researchers become cognizant of its potential to serve as a substantive, comprehensive framework for the study of online learning. In their exploration of CP, McLoughlin and Mynard (2009) investigated online discussion forums as tools to promote higher order thinking. The purpose of the study was to examine

whether discussion forums appear to facilitate higher order thinking processes by conducting a content analysis of student postings using the CoI phases as indicators. Results demonstrated that the majority of postings were categorized as exploration or integration and that the initial question posed by the instructor had an impact on the nature of the posting.

In a study of over 2000 online learners, it was revealed that participants who experienced a sense of belonging (SP) during the course were also more likely to report higher levels of CP (Shea & Bidjerano, 2009). Students perceived the use of online reflective inquiry to be highly conducive to CT in another study of Web-based courses and reflective pedagogies (Guthrie & McCracken, 2010). Inculcating the elements of the CoI framework was considered to be conducive to the use of reflective pedagogies and active, inquiry-based learning process to develop students' ability to practice collaborative problem solving (Guthrie & McCracken, 2010). The impact of emerging technology on SP was investigated in an innovative study of students using the synchronous software known as Centra, which allows students to see and hear each other, enabling real-time collaboration. Instructors participated in every session (TP) and course content was used to facilitate CT and reflection (CP). (Tucker, 2012). To measure student perception of SP and the use of Centra, Tucker (2012) incorporated seven items from the CoI instrument into the pre-established Centra survey. Results demonstrated that Centra had a positive effect on teaching, social, and cognitive presence through the synchronous method of visual and auditory connection between students and instructors.

The relationship between different technological Learning Management Systems

(LMS) and the CoI was examined by Rubin, Fernandes, & Avgerinou (2013). They discovered that the LMS had a significant effect on satisfaction with an online course and, depending on student and instructor satisfaction and technological ability, an LMS could influence perceptions of the CoI presences. When used in conjunction with teaching and learning modalities that facilitate collaborative inquiry, the appropriate educational technology becomes a major catalyst to experiential learning (Guthrie & McCracken, 2010). The importance of TP in effective online learning has been substantiated by a number of studies. In one investigation, student perceptions of the relationship between TP and successful online learning were studied (Kupczynski, Ice, Wiesenmayer, & McCluskey, 2010). The sample consisted of students enrolled in two different programs: an associate certification programs in one university and a College of Human Resources and Education in another. Findings suggested that perception of TP varied by learner level. The authors stressed the importance of providing quality teacher feedback aligned with each education level by starting with additional direct feedback at the associate level and transitioning to appropriate facilitation of discourse as learners progress through the program. Examining TP from a similar perspective, Skramstad, Schlosser, and Orellana (2012) used the Teaching Presence Survey (framed by the CoI model) to survey 59 graduate students clustered into seven online groups. Findings demonstrated a significant relationship between the immediacy of instructor feedback and perceptions of TP.

CoI Studies of the Combined Presences

Because the CoI framework is founded on the premise that effective online

learning is a product of the interaction of all three presences, studies have been designed to include all of the constructs. For example, researchers used the CoI framework to study the impact of discussion protocols on cognitive, social, and teaching presence and found that the online protocol not only fostered a more even distribution of each presence but also facilitated greater levels of shared cognition and reduced instructor workload (Zydney, deNoyelles, & Seo, 2012).

Differences in perceptions of cognitive, social, and teaching presence of over 1500 students in seven disciplines were examined by Arbaugh, Bangert, and Cleveland-Innes (2010). Using the CoI instrument, subject matter effects in online learning were measured. Findings indicated that students in soft, applied disciplines (such as health care, education, and business) rated the CoI dimensions higher than those in pure disciplines (engineering and mathematics). Results also indicated that the highest levels of learner discourse are associated with activities that promote and sustain both social and teaching presence. The social, cognitive and teaching presence indicators and their descriptive categories were used to evaluate the design courses of architecture, fine art, music and industrial design to generate implications for practice parameters (Barber, 2011). For example, one of the indicators of CP, "exploration" is characterized by "a search for information, knowledge, and alternatives that might help to make sense of the situation or problem" (Garrison et al., 2000, p. 98).The specificity of the indicators and categories facilitated the development of an appraisal format to measure the performance of design students. Denotations as to course delivery method were included in the assessment format, which was found to be applicable to the assessment of student

performance in both online and face-to-face courses (Barber, 2011). The CoI instrument has also been used in tandem with pre-established instruments to measure student perception of CoI constructs (Kupszynski et al., 2010; Tucker, 2012), as the foundation of a performance assessment tool (Barber, 2011) and to facilitate the process of developmental education (Burgess & Caverly, 2010). Further explicating online teaching, a study of exemplary teachers revealed that students experienced the most effective online learning when teachers challenged them to think critically, provided affirmation through positive feedback, recognized their potential and influenced them by their content expertise and online presence (Perry & Edwards, 2014). Teaching behaviors such as these suggest a need for educators to go beyond the basics of instruction. Nursing instructor competencies for successful online teaching include community building, attitude toward e-learning, teaching and learning strategies, and technological proficiency (Gormley, 2013).

The CoI conceptual framework is applicable to a variety of online learning situations and disciplines. Although the framework has been commonly employed to evaluate individual courses, the CoI has been used to design a cohort-based EdD program through the intentional incorporation of experiences and activities specifically developed to ensure TP and facilitate cognitive and social presence (Kumar et al., 2011). It was determined that expansion of the CoI instrument is necessary when used at the program level to encompass both asynchronous and synchronous interactions, the diversity of multiple faculty program planners and a wider variety of learning objectives. Research related to online nursing programs and the CoI are scarce. One of the exceptions is a

study conducted by Carlon et al. (2012) to validate the CoI instrument with a population of students in nursing, physical therapy and health care administration (HCA).The study also explored similarities and differences in the CoI model among the selected health care disciplines and found that HCA students had less agreement with the three presences than the nursing students. Carlon et al. (2012) indicated that the findings were aligned with previous research in which students enrolled in applied (such as nursing) or pure disciplines (engineering) differed in their perceptions of the CoI. Researchers also designed an instrument to explore the problem-solving experience of RN to BSN students enrolled in an online problem-based learning (PBL) program. The four phases of higher order thinking and problem-solving developed by Garrison et al. (2001) were used to guide a case study conducted by Oldenburg and Hung (2010). Problem recognition, information gathering, construction of meaning, and problem resolution were category assignments utilized to perform the data analysis of online discussions. Results indicated that the majority of student comments fell into the information gathering phase, leading the researchers to recommend increased teacher participation to elicit higher order thinking and problem-solving.

Online Learning Assessment Tools

The NLN mandate and the research-substantiated need to incorporate collaboration and CT competency in nursing education warrants a review of instruments designed to measure the efficacy of online modalities that purport to facilitate the attainment of these skill sets. In fact, assessments of whether the online learning goals and objectives have been met should be conducted consistently in any educational

discipline (Chickering & Ehrmann, 1996). A number of tools have been developed to guide the appraisal process. The CoI instrument emerged from the need to transition from descriptive studies to an inferential approach to investigating online communities of inquiry (Arbaugh et al., 2008). The 34-item CoI framework survey instrument was designed to expand the body of knowledge related to online and blended learning as well as to explore the structure of each of the presences and their interrelationships (Arbaugh et al., 2008). The survey is comprised of questions designed to elicit student perceptions regarding the cognitive, teaching, and social elements of an online course and incorporates a 5-level Likert-like measurement scale. The CoI instrument was used in a 2007 study of 287 students enrolled in graduate courses in business or education, the results of which supported the use of the instrument as a valid measure of the presences.

Puzziferro (2008) used the Motivated Strategies for Learning Questionnaire (MSLQ) to measure learning strategies and the Online Technologies Self-Efficacy Scale (OTSES) to measure online learning self-efficacy. The OTSES is comprised of 29 items grouped into four subscales: Internet Competencies, Synchronous Interaction, Asynchronous Interaction I and Asynchronous Interaction II. The Cronbach's alpha coefficient was .95 for the entire 29-item instrument. Puzziferro (2008) described the components of each of the two sections of the MSLQ instrument. The 31 item motivation section assess goals, values, and beliefs about a particular course, learning skills, and test anxiety. The cognitive learning strategies section measure students' use of different metacognitive and cognitive strategies as well as student management of learning resources, with a Cronbach's alpha above .70.

To assess reflective and collaborative learning, Taylor and Maor (2000) designed the Constructivist On-Line Learning Environment Survey (COLLES). The tool is structured to measure student perceptions of six constructs relative to online learning: professional relevance; reflective thinking; interactivity; cognitive demand; affective support; and interpretation of meaning. Information regarding the validity and reliability of the instrument were not addressed. Collaboration and problem solving were studied by measuring learner progression through six stages of collaborative problem solving using an instrument developed from the online learning unit "Solving Problems in Collaborative Environments" (SPICE) (Murphy, 2003). Founded on the SPICE collaboration model, the instrument includes progressive stages with corresponding indicators of collaborative learning. The initial stages consist of lower levels of interaction, involving SP and the articulation of individual perspectives. Subsequent stages range from reflecting the perspectives of other to producing shared artifacts and are considered to reflect more advanced levels of collaboration.

Collaborative problem solving and reflective learning are embedded in the constructs of cognition and metacognition. Although difficult to assess, measurement of these variables are essential to a comprehensive understanding of student online learning. CT is defined in a variety of ways and a commonly accepted operational definition remains elusive. This conundrum contributes to the complexity of measuring CT in online learning and findings that may be applicable to practice. The theoretical underpinnings of four CT models were used to design a tool to analyze CT in online asynchronous discussions (Murphy, 2004). Murphy (2004) first compared and

synthesized the phases of CT described by Brookfield (1987), Bullen (1998) Garrison et al. (2001) and Norris and Ennis (1989). She asserted that the instrument will eventually provide guidance for online educators in the selection of interventions, teaching, and learning strategies to facilitate CT in online learning and suggested future empirical testing of the instrument to further validate the constructs.

Nursing Perceptions of Online Learning

To align nursing education with curricular trends, instructors include technology in their teaching and learning strategies. The development and implementation of online learning courses in nursing education has become commonplace. Online learning is an ideal alternative to the classroom venue for RNs returning to higher education in pursuit of a BSN because the majority of this student population are immersed in full-time employment, families, and various other responsibilities. However, many instructors have not acquired or are resistant to acquiring the skills requisite to effective online teaching (Talcott, O'Donnell, & Burns, 2013). Researchers are beginning to examine the concerns that many nursing faculty are experiencing such as a lack of understanding of how to build and sustain a CoI (Vitale, 2010). It is not uncommon for instructors to experience internal conflicts related to the perceived disconnect between teaching in the "sterile" environment of computer-based learning and the values of caring and compassion inherent in the profession (Paulus et al., 2010). The absence of body language, tone of voice, and eye contact used as communication cues in classroom teaching can also be a source of frustration (Mayne & Wu, 2011). Studies of pedagogically sound, theoretically-based online teaching and learning in nursing education are scarce and those that have

been published are generally comparative in content. An accounting of student perceptions is lacking in studies of online learning modalities even in the few reports that compare conditions inherent in all levels of online nursing education (associate/baccalaureate/masters).

There is also a dearth of information on nursing student participation in e-learning and, according to Booth et al. (2011), conducting an appraisal of students' perception of e-learning is the first step in developing a pedagogically sound, learner-centered online curriculum. The Bento and Schuster (2003) Students' Self-perceptions of Online Participation Instrument (SSPOPI) was used to obtain information on learner-perceived interaction in three domains: interpersonal, content, and interface (Booth et al. 2011). The interpersonal items of the instrument were designed to elicit information regarding whether students assisted each other, requested feedback from peers and instructors, and demonstrated evidence of CT. Results of the study indicated that, although most students perceived themselves as active online participants, this finding could be attributed to student recognition of the characteristics of active involvement and not necessarily a result of their actual level of participation. It was concluded that online participation is a multidimensional construct that requires a multifaceted measurement instrument to obtain greater precision in the results of student self-reports.

The complexities inherent in collaborative teaching and learning in nursing education have been discussed and the difficulty in measuring and studying online collaboration in part, was ascribed to a lack of a shared definition (Gardner, 2005). A variety of characteristics used by various nurse authors were used to describe

collaboration including: sharing of planning, decision making, problem solving, working together cooperatively, communicating and assuming responsibility. Adding to Gardner's (2005) extrapolation of the concept, Breen (2013) pointed out that collaboration in nursing practice has been referenced as both an outcome and a process. Despite the lack of a clearly defined construct, she was able to identify four salient aspects of online collaboration as: sharing, conflict resolution, reflection, and co-construction of knowledge.

Clarity and a commonly accepted definition, categories and indicators are associated with valid, reliable, and measurable constructs. A salient feature of the CoI is its precision in explicating the three presences and their corresponding indicators, rendering the CoI framework survey a viable, and in numerous studies, a preferred online educational research instrument.

Although research has demonstrated that effective online learning is a product of the interaction between teaching, cognitive and social presence, the perceptions of nursing students regarding the extent to which these constructs are present in their online learning experience has not been studied.

Implications

Anecdotal data collected from personal communication with local online instructors in a large Midwestern RN to BSN program suggested that the student experience of collaborative problem-solving is minimal or nonexistent due to its omission from course design. This suggests that faculty may be unaware of the importance of collaboration in online learning. One of the basic tenets of nursing science is the

commitment to collecting evidence-based data to substantiate the need for interventions, a principle congruent with the need to explore the perceptions of online learners. Theoretical frameworks also provide the structure, guidance and validation needed to facilitate the enactment of data-driven change in the nursing profession. The CoI instrument and one-on-one semi-structured interviews were used to investigate the perceptions of a CoI in the online RN to BSN learning experience. Results of the study contributed data for use in the design of a faculty development workshop to promulgate the integration of evidence-based online strategies that enhance and improve online learning. Increasing numbers of nurses are returning to higher education in pursuit of advanced degrees required to meet the inherent challenges of a health care environment permeated by increasing complexity and rapid advances in technology. Due to the proliferation of online RN to BSN programs and the dearth of evidence-based research on the efficacy of online nursing education, a comprehensive elucidation of computer-mediated teaching and learning has become a priority.

A variety of instruments have been designed to measure the effectiveness of specific aspects of online learning, ranging from self-efficacy to collaborative problem-solving. Because nursing is a profession that espouses a holistic approach to health and healing, online assessments designed to measure the holistic nature of nursing education are more likely to provide data relevant to the profession. The cognitive, social, and teaching presences of the CoI model can simultaneously serve as a method of assessment and a foundation for online educational innovations regardless of discipline. Research has demonstrated the efficacy of the model in enhancing the quality of online teaching and

learning while expanding the knowledge base of online educators. Conducting studies of student perceptions is a research process deemed appropriate to explore learning effectiveness and higher order thinking.

Summary

Research has demonstrated the importance of interprofessional collaboration and CT in a health care environment that continues to increase in cognitive and technological complexity. Online learning is becoming the most popular venue for RNs who are pursuing advanced degrees that facilitate the development of CT and collaborative practice skills. An integration of the CoI constructs into online learning in disciplines outside of nursing has demonstrated the efficacy of the interaction of TP, SP, and CP in the cultivation of higher order skills through collaborative learning. Research-based evidence that substantiates the implication that CoI-centered teaching and learning produces meaningful, successful online learning situates the CoI framework as a potential model for optimizing online nursing education. This study was designed to explore the current perceptions of RNs of the extent to which the constructs of a CoI were present in their online learning experience and to examine the alignment of CoI constructs with current online teaching and learning strategies.

Section 2 will describe in detail the mixed methods design employed in the study, including the sequential approach and a justification for the setting and sample of nursing students enrolled in the online RN to BSN program. The quantitative and qualitative sequencing of the method will be addressed, followed by an explanation of the measures taken to ensure confidentiality and the procedures used in data analysis. Section 2 will

conclude with an explication of the dissemination plan for the findings, including the incorporation of tables and figures.

Section 2: The Methodology

Introduction

Following an examination of a variety of potential design typologies, it was determined that a mixed methods explanatory sequential design would be most appropriate for the study. In explanatory sequential designs, quantitative data are collected before obtaining the qualitative data that are used to explicate and refine the quantitative results (Creswell, 2012). A seven-step process for selecting an appropriate mixed methods design was used to determine the type of design that would best fit the requirements of the research questions (Teddlie & Tashakkori, 2009). The first step was to determine whether a mixed methods or a monomethod was appropriate and, in this case, because both quantitative and qualitative data were required to answer the research questions, a mixed methods approach to the design and analysis was deemed appropriate (Teddlie & Tashakkori, 2009). An exploration of several mixed methods typologies articulated by Morse (2003) was then conducted (Step 2), taking into consideration that, although none of the existing designs may be a perfect fit, it would be prudent to choose the best available option (Step 3). Steps 4, 5, and 6 (which involved an examination of the criteria that identified the important components of various typologies) revealed that the study would be quantitatively oriented with qualitative data collection and analysis conducted sequentially. (Step 7 would have been used to guide me as the researcher in the creation of a new mixed methods design if none of the existing designs were considered appropriate).

Three research questions guided the study:

1. What are the perceptions of RN to BSN students about online teaching, social and cognitive presence?
2. How do student perceptions of teaching, social, and cognitive presence compare across different RN to BSN courses?
3. What practices or experiences may explain the variations of student perceptions across different RN to BSN courses?

The CoI survey was used to examine the first two research questions. Following the completion of quantitative data collection and analysis, selected students were interviewed to explore the practices and experiences that may explain variations in student perceptions across different RN to BSN courses as articulated in Research Question 3. In addition, each course syllabus was reviewed for evidence to support, refute, or enhance the overall findings through triangulation of the data.

Setting and Sample

A large, Midwestern state university school of nursing served as the setting for the study of the RN to BSN program. The quantitative sample was comprised of 602 students enrolled in the program, which was offered by each of the eight campuses affiliated with the university. According to Teddlie and Tashakkori (2009), two of the most frequently used techniques in social and behavioral science studies are probability and purposive sampling. In this mixed methods investigation, quantitative data were obtained using probability sampling followed by the collection of qualitative data from a stratified purposive sample.

The quantitative component of the study met the criteria for probability sampling

because it was characterized by a large number of units selected to be representative of a larger sized population (Teddlie & Tashakkori, 2009). The CoI survey was electronically distributed to all individuals in the program (see Appendix F).

Sample

The online RN to BSN program was a consortium comprised of students enrolled in each of the university's eight campuses across the state of Indiana. RNs 24were permitted to enroll in a maximum of three classes per semester with the option to complete the 12 required courses in either 12 months (full-time) or 18 to 24 months (part-time). The range of ages, length of time in professional practice, areas of specialty, and job titles were highly diverse among the nurses in the program. Permission to access the student sample had been granted by the university's Institutional Review Board (IRB; see Appendix B). E-mail addresses obtained from the school of nursing research department had been submitted by students as secondary contact options at the time of enrollment. The criteria for inclusion in the follow-up interview process was designed to maximize variety among participant characteristics identified through the analysis of the quantitative data. Distinctive variations that emerged from the survey results and examination of the syllabus for each course determined the selection of several courses of interest. Fifteen students from the desired sample were invited to participate in one-on-one semi-structured interviews. The interviewees were composed of one to three students from each of the courses of interest.

A request for demographic information was added to the CoI survey asking whether the participant was enrolled as a full- or part-time student, their age range, and

the number of courses completed in the program to date. Students were invited, should they be interested in participating in a follow-up interview, to provide contact information. Students who had completed more than one course during the study timeframe were invited to participate in an interview based on each course. When I contacted them to schedule the interviews, students were given the option of selecting a face-to-face or telephone interview. All 15 students opted to be interviewed by phone.

Protection of Participant Rights

Prior to initiating the study, consent to proceed was obtained from the Walden University IRB (approval # 01-23-15-0343265) and the research site's IRB to ensure the protection of participant rights. To safeguard the participants' rights to respect, beneficence, and justice (Creswell, 2012), an application was submitted to each IRB delineating the comprehensive, specific elements of the research process. The level of risk that participants were likely to experience was acknowledged as less than minimal (no known risk) and the study population was not considered to be of high risk (Creswell, 2012). To avoid the possible perception of coercion (I am a faculty member at the university), the e-mail addresses used to distribute the survey were external to the university communication system. Both universities approved the application and the study was granted exempt status by the research site (see Appendix B). In the event of a psychological state that necessitated referral, the involved student would be referred to a counselor in the researcher site's department of academic affairs. All information was kept anonymous: consent was given by clicking a link to the online survey embedded in the invitation e-mail. (Surveys could be completed in a location of the participants'

choosing to provide privacy.) Participants were informed that quantitative study findings would only be reported in the aggregate with no reference to the individuals involved in the study. Interviewees were informed that pseudonyms would be used with any quotations included in the report of findings. A short summary of the study results will be provided electronically to all students (regardless of whether they participated in the study) and instructors. Completed surveys are retained in my password-protected computer hard drive and on a flash-drive, which is kept in a locked, fire-proofed box in my home that I alone can access. Data will be stored for 5 years.

Two informed consent forms outlining the participants' rights were based on the template provided by Walden University (see Appendices E and G). All students were advised of their freedom to withdraw from the study at any time and were notified that participation was completely voluntary. Students were assured that participation in the study would not have any impact on their grades. The quantitative consent form described the potential risks and benefits to the participant as those encountered in daily life, such as fatigue or becoming upset. Benefits were discussed in relationship to future online education efficacy, thereby enhancing the ability of RNs to engage in advanced education that facilitates patient safety and quality of care. The qualitative consent form that included my assurance of confidentiality by, was accessed online by interviewees who, after reading the form, responded to me with an agreement to consent to the interview. A nondisclosure form signed by employees of the professional audio-recording and transcription service used in the collection and analysis of qualitative data was provided by the service (see Appendix H). Both consent forms included the Walden

University representative contact information for participants desiring a conversation about their rights as a participant.

Data Collection Strategies

Quantitative Component

The CoI framework is based on the premise that meaningful online learning is generated by the interaction of CP, SP, and TP (Arbaugh et al., 2008). Based upon the CoI framework, Arbaugh et al. (2008) designed a CoI survey comprised of 34 items related to each of the three constructs (see Appendix F). The presence of meaningful learning through the constructs has been shown to be reliably measured using the CoI questionnaire (Kumar et al., 2011).

The instrument was designed to study the contextual dynamics of the three presences over time (Akyol & Garrison, 2008). Researchers have generally used the survey to explore the relationships between and among the presences in the context of an additional learning construct of interest such as learning outcomes (Akyol & Garrison, 2011); subject matter effects (Arbaugh et al., 2010); online student critiques (Barber, 2011); and discussion protocols (Zydney et al., 2012). Operational definitions of the presences had previously been articulated (Section 1) in the form of "categories" with associated "indicators" that were adapted for relevance to the investigation being conducted (Akyol & Garrison, 2014).

In this study, the instrument was used to gather baseline information from students regarding their overall perceptions of the degree to which the three presences are manifested in their online learning. Permission to use the instrument was obtained from

the author (see Appendix J). The tool was also used to determine whether variations in student perceptions existed across different courses. Information has emerged from analysis of the survey responses that will augment the ability of online instructors to meet the challenges of online learning. The data will facilitate a greater understanding of students' perceptions of the presences and, in so doing, contribute to the efficacy of online teaching and learning strategies. Variations in responses across courses and a perusal of the syllabi permitted by the IRB at the research site (see Appendix K) also shed light on the aspects of courses in which SP, TP, and CP are perceived to be present.

Surveys were loaded onto Survey Monkey and then disseminated electronically to all students enrolled in the program who gave consent to complete the survey by clicking on an embedded link that opened the informed consent (see Appendix E). Instructions were included with each of the surveys. It was also necessary for students to provide the course number of the class to which the responses referred because the CoI survey was designed to obtain data related to student perceptions of a single course. If students had completed more than one course during the module, students had the option of either choosing one particular course as a reference or to complete multiple surveys, each of which would have corresponded to a single course.

The categories associated with SP include affective expression, open communication, and group cohesion, and the corresponding indicators identified might include emotional expressions, appreciative comments, or personal (but appropriate) disclosures. Nine of the instrument items are directed toward measuring SP perceptions. Thirteen items on the CoI are designed to elicit perceptions of TP. Design and

organization, direct instruction, and the facilitation of discourse have been identified as the categories used to operationalize teaching presence. Course design refers to the planning of the structure, process, interaction, and evaluation aspects of the online course (Anderson et al., 2001). The meaning of direct instruction is related to leadership provided by the instructor through sharing their subject matter knowledge and diagnosing comments for accurate understanding (Arbaugh & Hwang, 2006). Discourse facilitation is the manner in which students are engaged in interacting about and building upon the information generated during the dialogue (Anderson et al., 2001). Garrison (2007) explicated CP by describing it as a cycle of inquiry with four categories: a triggering event; exploration; integration; and resolution. Twelve of the 34 items on the CoI instrument were included to measure CP.

A recruitment letter (see Appendix C) and the first round of surveys were electronically distributed to 602 students during the eighth and final week of Spring Session I. Two weeks after the distribution, a reminder recruitment letter was e-mailed to all students (see Appendix D). Of the 132 returned surveys, 25 were categorized by Survey Monkey as incomplete (blank), resulting in a total of 107 complete responses. The total number of completed responses was reduced to 85 because 22 of the 107 students failed to identify the course number. Course number identification was essential to the comparison of variables across courses to answer Research Question 2 related to ways in which student perceptions of teaching, social, and cognitive presence compare across different RN to BSN courses. The initial survey included an open-ended statement asking students to provide the course number in the space provided. Because of the

minimal number of responses to the initial survey, a request for a change in procedure was submitted to the Walden University IRB, who granted approval to add a listing to the survey of all possible courses as precise choice options. During the final week of Spring Session II, the modified surveys were distributed to the same student population enrolled in Session I but who were now enrolled in a different selection of courses. I then added the 24 completed surveys obtained from the second distribution manually to the original collection of responses resulting in a final $N = 109$, which was a response rate of 18%, which is common and even good in social science research.

Reliability and Validity

The CoI questionnaire items are measured on a 5-point Likert-type scale (see Appendix F). Arbaugh et al. (2008) tested the instrument among 287 students enrolled in graduate level business and education courses at four institutions. Study findings indicated that the use of the CoI instrument was a valid measure of teaching, social, and cognitive presence. Diaz, Swan, Ice, and Kupcyznski (2010) conducted a validation study of the CoI survey that revealed a Cronbach's alpha of 0.96 for TP; 0.92 for SP; and 0.95 for CP items. Arbaugh et al. (2008) also validated the CoI instrument and reported Cronbach's alpha for internal consistency as 0.94 for TP; 0.91 for SP; and 0.95 for CP.

Qualitative Component

Phone interviews are appropriate when participants in a study are geographically dispersed and unable to come to a central location for an interview (Creswell, 2012), as was the case in this situation. Potential interviewees were asked at the end of the CoI survey whether they would agree to participate in a follow-up interview with me. If the

participant indicated agreement and submitted the requested contact information, purposeful sampling from among them was based on data obtained from the CoI survey to further elucidate the findings. An informed consent was e-mailed to interviewees to read and respond with their consent to be interviewed (see Appendix G). Participants were encouraged to save a copy of the consent forms. A $25.00 Walmart gift card was mailed to an address offered by each interview participant.

A semi-structured interview protocol based on the work of Asmussen and Creswell (1995) was used to collect and organize qualitative data (see Appendix I). Six interview questions were designed to elicit information that explicated the participants' survey responses based on the indicators of the three constructs of social, teaching, and cognitive presence and to answer the third research question regarding variations in survey responses. Coding categories and indicators described by Akyol and Garrison (2014) were used to guide the development of the questions regarding the presences in addition to serving as operational definitions of SP, CP, and TP. Fifteen students were interviewed for 20 to 30 minutes. Conversations were audio-recorded by a professional service to facilitate the accuracy of transcribed interviews. In order to activate the recorder, the entry of a dial-in number was followed by entering a PIN and the contact number provided by the participant.

Quantitative Analysis and Findings

Data were exported from Survey Monkey to MSExcel and organized by age range, course, full-time or part-time enrollment status, individual response, and each of the three CoI constructs: TP (Survey Items 1-13), SP (Items 14-22) and CP (Items 23-34).

Because the focus of the study was to explore student perceptions of an online CoI rather than to investigate the relationship between variables, the request for demographic data from respondents was limited to enrollment status, age, and number of courses completed to date. The data obtained from 22 students regarding the number of completed courses were inaccurate, preventing the generation of a reliable report. In addition to numerical responses, examples of nebulous replies included "a lot", "0 other than electives", "just starting", and "8 or more classes." Student enrollment status and age are displayed in Table 1.

Table 1

Comparison by Student Age Range and Enrollment Status

	Enrollment Status		
Age Range	Full-time	Part-time	Total
25-35	17	14	31
36-49	19	28	47
50+	8	21	29

Note. $N = 109$. Two students did not respond to age range.

Respondents in all three of the age categories indicated lower perceptions of SP than of TP or CP.

Table 2

Perceptions of CoI Constructs by Student Age

		TP Q1-13 (13 items)			SP Q14-22 (9 items)			CP Q23-34 (11 items)		
Age	*n*	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
25-35	31	75.2%	16.8%	8.0%	76.7%	12.9%	10.4%	81.7%	14.0%	4.3%
36-49	47	83.1%	12.8%	4.1%	74.0%	19.1%	6.9%	84.2%	11.7%	4.1%
50+	29	76.4%	15.6%	8.0%	70.9%	21.1%	8.0%	77.0%	16.9%	6.1%
Blank	2	84.6%	11.6%	3.8%	83.3%	0.0%	16.7%	79.2%	0.0%	20.8%
Total	109	79.8%	14.2%	5.9%	76.2%	13.2%	10.5%	80.5%	10.6%	8.8%

Note. Responses of strongly agree and agree were combined for the agree category. Responses of disagree and strongly disagree were combined for the disagree category. Percentages were determined by the total number of responses in a category ÷ *n* x number of items.

Table 3

Perceptions of CoI Constructs by Enrollment Status

		TP Q1-13 (13 items)			SP Q14-22 (9 items)			CP Q23-34 (11 items)		
Status	*n*	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
FT	44	81.6%	14.2%	4.2%	78.5%	18.7%	2.8%	85.0%	12.9%	2.1%
PT	65	77.4%	15.6%	7.0%	71.1%	16.8%	12.1%	79.5%	15.1%	5.4%

Note. FT = Full time; PT = Part time. Responses of strongly agree and agree were combined for the agree category. Responses of disagree and strongly disagree were combined for the disagree category. Percentages were determined by the total number of responses in a category ÷ *n* x number of items.

As displayed in Table 3, the perception levels of each construct by enrollment status were unremarkable. The greatest discrepancy between part-time and full-time students were seen in the perceptions of SP.

The increasing levels of patient acuity and the complexities of health care require greater proficiency in higher order thinking and the ability to collaborate with other team

members. Given these issues, and the ramifications of allowing care providers to practice at lower levels of higher order thinking and problem-solving abilities, attention to student perceptions of CP in the study was particularly warranted.

When the data were disaggregated by course, number of respondents per course, and perceptions of each of the three constructs, differences were used to identify courses in which percentages were notably higher to select courses of interest. Eight of the 14 courses met this criterion and were purposively selected and identified as "courses of interest". The selection of students to represent each course of interest was determined by whether they met the eligibility criteria. Each potential interviewee must have submitted contact information, identified the course of interest upon which responses were based, and whose responses to survey were primarily on the higher or lower end of the levels of perception.

A total of 24 students agreed to participate in follow-up interviews. To initiate the process of qualitative data collection and analysis, interviews were scheduled with the 15 students who met the eligibility criteria from a total of 24 volunteers.

Table 4

Perceptions of CoI Constructs by Course and Number of Respondents per Course

		TP Q1-13 (13 items)			SP Q14-22 (9 items)			CP Q23-34 (11 items)		
Course	*n*	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
B344*	6	73.6%	25.3%	1.1%	74.6%	22.2%	3.2%	90.5%	8.3%	1.2%
B403	2	100.0%	0.0%	0.0%	100%	0.0%	0.0%	100.0%	0.0%	0.0%
B404	5	81.5%	12.3%	6.2%	80.0%	13.3%	6.7%	91.7%	6.7%	1.7%
H355*	16	72.6%	20.2%	7.2%	56.9%	27.1%	16.0%	64.1%	25.5%	10.4%
H365	2	73.1%	11.5%	15.4%	66.7%	16.7%	16.7%	83.3%	4.2%	12.5%
P345*	2	65.4%	11.5%	23.1%	77.8%	11.1%	11.1%	75.9%	25.0%	0.0%
R470	1	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%
S474*	9	69.2%	17.1%	13.7%	74.1%	11.1%	14.8%	74.1%	17.6%	8.3%
S475*	7	86.8%	12.1%	1.1%	60.3%	33.3%	6.3%	85.7%	14.3%	0.0%
S487*	7	85.7%	5.5%	8.8%	88.9%	6.3%	4.8%	92.9%	6.0%	1.2%
B304*	17	62.85%	25.45%	11.65	64.2%	27.5%	8.25%	71.9%	24.4%	3.7%
K301	2	84.6%	11.5%	3.8%	83.3%	16.7%	0.0%	83.3%	8.3%	8.3%
B331*	8	78.6%	21.4%	0.0%	83.9%	5.6%	10.5%	89.8%	3.7%	6.50%
K434	1	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	83.3%	16.7%	0.0%
Blank	22	85.7%	12.2%	2.1%	79.3%	14.1%	6.6%	85.2%	14.0%	0.8%
Total	109	79.1%	15.0%	5.9%	74.1%	17.5%	8.4%	81.7%	14.2%	4.1%

Note. * denotes courses of interest selected for further study through interviews. Responses of strongly agree and agree were combined for the agree category. Responses of disagree and strongly disagree were combined for the disagree category. Percentages were determined by the total number of responses in a category ÷ *n* x number of items.

Qualitative Analysis and Findings

One-on-one telephone interviews were conducted to expand the depth of understanding beyond the survey data. To ensure the accuracy of recounting and transcribing the interviews, a professional audiotaping/transcribing service was engaged. A total of 15 eligible students were contacted by phone to schedule a 20-30 minute

interview. Students were asked whether they preferred to be interviewed face-to- face or by telephone and, most likely due to the lack of physical proximity between students and myself all students opted to be interviewed by phone. Informed consent documents were e-mailed to each participant (see Appendix G) who responded by indicating it had been read and granting permission to be interviewed. A matrix was developed to expedite the organization and analysis of qualitative data that included the date and time of the interview, respondent name, phone number, e-mail address, whether informed consent had been granted via e-mail, course number, age range and enrollment status.

The audio-recording process was activated immediately prior to calling a student by dialing the contact number of the professional service, entering a personal identification number (PIN) assigned by the service followed by dialing the contact number of the student. Students were reminded as the conversation began, that the call was being recorded before the interview questions were posed (see Appendix H). After the interviews, telephone conversations were transcribed by the service and e-mailed to me for downloading and printing. I then mailed a Walmart gift card to each interviewee with a note of appreciation for participating in the follow-up interviews.

The coding and review of transcripts for thematic content were guided by the third research question regarding which practices or experiences might explain the variations of student perceptions across different RN to BSN courses. I designed a matrix as a worksheet to organize and explicate the qualitative component of the study, which occurred in several phases. First, I identified emergent themes by examining and coding text segments from each interview. Recurring comments made by students were

associated with the categories of learning style preferences (LSP), absence of online collaboration, work/life responsibilities, and off-line collaboration. While exploring the transcripts, awareness of the possibility of bias toward identifying text segments that align solely with a priori codes led to my conscious effort to remain objective in my assessment of the interviewee responses and explanations. I then configured a second matrix to align student quotations with corresponding codes and themes derived from transcripts, including the a priori themes of TP, SP, and CP. Ultimately, the matrix was expanded to five columns that included: 1) the course name and number; interviewee pseudonym, age range, and enrollment status; whether interviewee survey responses indicated primarily agreement or disagreement with the CoI constructs; 2) an emergent and or a priori theme; 3) the corresponding quotation; 4) abbreviated course syllabus information; and 5) higher or lower perceptions of TP, SP, and CP related to the course. The teaching and learning strategies listed in each syllabi were reviewed and characterized as generally representative of direct instruction, facilitation or designated as inconclusive. An interpretive summary from scrutiny of the content of columns 1 - 4 completed the matrix and a series of tables displayed a synthesized summary of findings generated by the analysis of the first two matrices.

Table 5

2015 RN to BSN Program All Spring Course Offerings by Title, Number, and Category

Course Number	Title	Category	Spring Session
B331	Transition to Baccalaureate Nursing Practice	Req	I
B304	Health Policy	Req	I
B404	Informatics	Req	I
S474	Applied Health Care Ethics	Req	I
P345	Pharmacology for Professional Nursing Practice	El	I
K301	Complementary Health	El	I
S475	Multisystem Approach to the Health of the Community	Req	II
H365	Nursing Research	Req	II
H355	Data Analysis	Req	II
S487	Nursing Management: RNBSN	Req	II
R470	Clinical Baccalaureate Nursing Capstone	Req	II
K434	Global Health Issues in Nursing	El	II
B344	Comprehensive Nursing Health Assessment	El	II
B403	Gerontological Nursing	El	II

Note. Category: Req = Required, El = Elective. Spring Session Number 1 = 1/12/15-3/7/15. Spring Session Number II = 3/9/15-5/9/15.

Table 5 displays curricular information on each course including identification by title and corresponding number, whether it had been designated as required or offered as an elective, and which of the two sessions comprising the spring semester the course had been taken. Connections, if any, would be analyzed using the levels of perception and course designations. The sequence of courses was determined by the students with the exception B331 (Clinical Baccalaureate Nursing Capstone) to be the concluding course. Each of the core (Transition to Baccalaureate Nursing Practice) required to be taken first and R470 and elective courses offered during Spring Sessions I and II were organized as either “Req” (required) or “El” (elective).

Table 6

Student Interviewee Pseudonyms, Course, and Demographic Details

Pseudonym	Course	Age Range	Enrollment Status
Darla	S474	36-49	FT
Doreen	S474	25-35	PT
Janet	S487	50+	PT
Jennifer	S487	25-35	FT
Donna	P345	25-35	PT
Ann	P345	25-35	FT
Betty	B331	25-35	FT
Patty	B344	50+	PT
Kelly	B344	50+	PT
Vanessa	H355	36-49	FT
Carol	H355	36-49	PT
Cathy	H355	36-49	PT
Barb	S475	36-49	FT
Katie	B304	36-49	FT
Nina	B304	36-49	FT

Note. FT = Full time PT = Part time

The interviewees were assigned pseudonyms and identified by course, age range, and enrollment status (see Table 6).

Applied Health Care Ethics (S474) is a course designed to explore the nurse's role in ethical clinical practice, academic work and health policy with a particular focus on the nurse advocacy role. Strategies for resolution of ethical dilemmas are incorporated into the content. In this course, perceptions of TP and CP were lower than the average scores

of all survey respondents. The interview responses seemed to indicate although some basic indicators of TP were present, the course may have placed greater emphasis on the provision and dissemination of information than instructor facilitation of group dialogue, which could account for the below average perceptions of CP. Darla's comments support the notion. "I participated less….where I could tell the other student really was not putting any effort into what they wrote" and Doreen who shared "the ethics class was made up of very little…we did a case study...and I read other (students') case studies." Doreen was referring to her perception that she did not consider completing her own and reading the case studies of others to be a helpful learning method.

The disparity between Darla's positive perception of the instructor's knowledge level and presence and Doreen's negative remarks could be due to the difference in the expectations of the course and the instructor. Darla commented "the instructor is there and aware of what's going on and instructing and educating as you go" while Doreen asserted "I can't believe I can get a bachelor's degree in nursing by getting on and making just silly responses to people and doing small assignments here and there. There should be a lot more to it than that." Perceptions of SP in S474 were congruent with the overall student response.

Expressions of SP proponents such as Darla could be representative of a LSP that benefits from group work as well as off-line collaboration. Darla's highest perception levels spoke to the absence of online collaboration and the presence of division of tasks among group members, a common practice according to the interviewees from courses other than S474. "There was the project at the end.…I mean we participated as a group,

but you weren't doing anything with the other people. You came as your own person and then you just took part in the group activity."

Teaching strategies listed in the course syllabus offered limited insight into the discrepancies between average TP and CP responses and S474 TP and CP responses. Note: Doreen had never taken RN boards nor had she worked as an RN. She had enrolled in the online RN to BSN program because she thought it would provide what she needed to transition from graduating from nursing school to nursing practice. Her responses could be construed as biased but may nonetheless reflect meaningful perceptions of the course itself.

Janet and Jennifer were interviewed about their perceptions of the Nursing Management (S487) course which primarily focused on the development of nursing management skills including networking, group facilitation, conflict management and collaboration. The percentages of students who agreed that each of the constructs were present in S487 were higher than those of students overall. Several of the interview responses clearly described TP indicators, one of which was a comment made by Janet who said "she was very knowledgeable, presented herself very well. She was very well spoken. Her instructions were easily understood….you could really know what she wanted….it was her style that made all the difference." Janet also described the interrelationship between TP and CP. "(The)…course content triggered me to go dig deeper into the internet and research different things about that topic….it just made you really question….it kept me motivated to look at different resources and things." Janet's remarks reflected her perceptions that the combination of the instructor's actions and

behaviors aligned with each of the TP categories. Direct instruction was provided by the manner in which the instructor clearly explained assignments and communicated her content expertise. The course design and organization was apparently focused on cultivating higher order thinking through a selection of content that facilitated student motivation. Janet's positive comments suggested that she is intrinsically motivated by both the content and the facilitation style used by the instructor to mediate the course content. Her self-directed LSP was augmented by a teaching style that encouraged Janet to delve more deeply into the meaning of her learning.

During the interview, Janet insightfully articulated the interrelationship between TP, SP, and CP as well as the impact of collaboration on the experience of each and expressed her thoughts in this way:

> (When we got online) we got people's perceptions and I think it causes you to think about how they view things about the same topic…one person looks at it totally different because of their life experience or work experience than you do. It brought different ideas…

Her words gave credence to one of the most important underlying principles of a CoI: the opportunity to experience meaningful learning through shared perspectives and collaboration. That students participated in online discussion forums using higher order could have been a product of a TP that engaged students through critical inquiry. Effective SP creates connections between peers that increases the likelihood of student satisfaction as expressed by Janet: "That last project really tied the entire course together….it spoke to me personally. That made me feel like I was part of this

experience. It made me feel like I was included…." These comments also exemplified the influence of course design, assignments, and SP on students' perception of successful learning and sense of inclusion.

Janet echoed the sentiments of other RN program participants regarding her appreciation of instructor awareness and consideration of the challenges created by work/life responsibilities. "This course had a relevant amount of in-depth reading and stuff for us. Really facilitated my adult learning experience, 'cause I do have so much going on." The bond created through work/life responsibilities in common seemed to facilitate group cohesion in every course of interest. Janet offered an example of how the online educator recognized a potential problem common in adult learners who are balancing competing priorities in their lives.

Open communication and group cohesion (hallmarks of SP) are fostered through mutual awareness and recognition of each other's contributions. Jennifer may not have experienced the SP posited by the CoI as a conduit to collaborative learning as evidenced by the following comments:

> I was glad I did not have to do a forum. I feel like the forum…we talk in them but we don't have a face to put with the person all the time. We just reply how we feel at the moment, it's not like a real conversation, I think like they expect it to be.

Janet expressed a distinctly different opinion that suggested an appreciation for learning from multiple perspectives, stating:

> Forum posts had to do with the educational material…but they also had to do with your opinions…and your experiences…the students that are younger. I think I benefit from hearing from someone who is not so experienced and I think they benefit from my comments because I've got a lot of experience.

The disparity in their perspectives could be attributed to the difference in their ages. Janet was in the 50+ age range and Jennifer was within the 25-36 year range. It could also be due to LSP and/or personality predispositions. The array of student perceptions of sense of community in the online classroom can be based on a variety of factors, not all of which necessarily interfere with learning. Janet's comments suggested that an RN to BSN degree completion program offers an opportunity for instructors to engage students in discourse from age-related perspectives and levels of nursing experience.

It is noteworthy that student perceptions of CP in S487 were especially high at 92.9%. The high perceptions of both TP and SP suggest that they influenced the CP score in fairly equal measure.

Pharmacology for Professional Nursing Practice (P345) is a course that focused on basic principles of pharmacology and the major drug categories in addition to the clinical application of drug therapy through the nursing process. Of the three CoI constructs, responses to TP accounted for one of the widest gaps between all student scores and P345 student scores. Ann offered a possible explanation for the low TP scores in her course.

> There was no discussion with our instructor in depth of who was right, is there a right or wrong? It's not like there is a right or wrong, really but to have had that

> discussion and depth, it just literally was 'what do you think?' That's the end of it and you got your points. I always got 100s. I really actually wanted to learn something a little bit more than what I had done. (feedback limited to)…. "great job" does not help me learn.

Phrases such as "in depth" and "discussion and depth" are characteristic of CT and in noting their absence, Ann seemed to have recognized that the instructor was not satisfying the TP role. In a CoI, it is more than the presence of all three constructs that facilitates effective online learning. The interaction and interrelationship between them serves as the foundation of successful e-learning. It could be that, in this course, high perceptions of SP would account for the higher perceptions of CP. The perception that SP served as a catalyst to CP is interesting in that in P345 and other courses, when perceptions of TP were low percentages of SP and CP perceptions were higher and closer.

Commentary from several interviewees did, however, express appreciation for other elements of the course design and instructor presence. According to Donna:

> The (instructor) e-mails were always prompt getting back regarding anything…I thought the feedback was good (and the course) was well organized. I enjoyed that you have a schedule. With someone who has kids and is working, it was easy to do, to complete the course.

When describing SP, Donna implied that participation in online discussions were motivated by the need to comply with the course requirement rather than the design of assignments or instructional strategies.

> As it is an online class, I don't know that people are wanting to have long discussions. They would comment on certain things. I would read through things and comment but it wasn't like a back and forth a lot. Someone put something up and then you made comments on it. Now if you're required to comment, you're going to comment.

Donna went on to mention the impact of work/life responsibilities on her inability to participate in discourse at a level beyond the basic requirements. The propensity of external obligations to deter collaborative online learning is of concern in any program designed to teach nursing students to think and make decisions with advanced cognition.

One of the causative factors of the absence of collaboration was explained by Ann:

> I think the idea of group projects online is very difficult because what you end up doing is just splitting the project in half so you still do your own work and then you just make it mesh together. "You do this much and I'll do this much of the PowerPoint." You know what I mean?

She was actually describing the process of "cooperation" in which students working in groups divide the tasks to transmit knowledge to each member as opposed to "collaboration" where group members are invested in every part of the project and collectively generate knowledge. The low perceptions of TP in this course could also be a product of the degree of cooperative work occurring. The role of the instructor in collaborative learning is likely more directive than facilitative in courses designed for

transmission versus generation of knowledge. Online course deliveries of this nature can still be successful within the context of their purpose and stated learning outcomes. Students with a LSP for independent study and learning would find cooperative learning to be effective and satisfying.

Ann explained the characteristics of two additional LSPs to be considered as follows:

> She (the teacher) did her Adobe for anyone to watch and that was a huge difference for a lot of people who are visual learners….you just taught yourself out of a book and I'm actually good at that so I did fine….I pretty much do my own thing anyway….I was friends with a lot of the students. The Adobe sessions really helped them.

The learning activities in the course syllabus supported the lack of perceived TP in a standard nursing pharmacology course: quizzes, forum introduction and participation, medication education project and instructor presentation are all indicative of course expectations that emphasize individual learning. There is general agreement that online collaboration is less important in courses that are designed to facilitate learning primarily through direct instruction, as in this and several other nursing education courses. Ann's comment: "Pharm was my least interactive, most cut-and-dry (course)" most likely summarized the opinions of most course participants. Although perceptions of TP were low, CP perceptions were similar to CP perceptions overall, suggesting that SP did influence CP.

Transition to Baccalaureate Nursing Practice (B331) is a course designed to promote communication and inter/intra professional collaboration, as well as issues

related to professionalism, autonomy and accountability. Betty was the only survey respondent enrolled in the course who agreed to be interviewed.

Survey results demonstrated that while CP agreement was high, TP and SP scores were moderate. Interestingly, the majority of the survey responses submitted by Betty ranged from SA to A but her comments during the interview suggested areas of discrepancy between her written and oral responses. For example, a personality assessment was one of the strategies employed by the instructor to facilitate SP and the student expressed her view of this technique. "(The personality test was)…kind of personal and I don't think that people that I don't know should be commenting on my personality when they've never met me." When asked to characterize her interactions with the instructor and other students, she responded:

> Trying to carry on conversations with people, it's kind of hard when you don't know what they look like. You don't see them on a weekly basis. It's kind of easy to say "Well, they replied to it. I replied to mine. I'm done with that."

Betty was describing one of the most difficult challenges to effective online teaching and learning. Her remarks speak to the importance of the role of the instructor in creating an experience of community to compensate for the absence of nonverbal and visual cues through facilitation of online interaction. The tenets of the CoI have been instrumental in promoting the recognition that online learning community development is key to, not only learning but to compensate for the lack of face-to-face issues imposed by computerized education.

Betty shared her views on CT and her perception of TP when responding to an assigned reading on a patient-care provider interaction scenario. Students were asked to assess the efficacy of two different approaches taken by the provider. Her perspective on the essence of CT suggested that the innovative aspect of an online posting takes precedence over substantive commentary in the awarding of points. However, this also indicated that the development of CT can be cultivated by assignments that stimulate higher order thinking in addition to the direct participation of the instructor. In order to elicit further information regarding assignments or other motivators, Betty was asked if there were underlying factors that influenced her high or low participation and responded:

> If I was really interested in that scenario that particular week, that would make me want to get on there and do it….if I was really not interested in it and I didn't like the scenario, I might wait and post. I'd look and see what other people put first.

It has been established that receptivity to diverse perspectives promotes higher order thinking and enriches the online learning experience by having students reflect on points of view other than their own. Betty seemed to know this intuitively and was not responding to the prompting of an instructor in her decision to participate. Instructor facilitation of discourse could have served as a bridge between student initial reflections and the actual posting of substantive contributions through encouragement provided by TP. On the other hand, Betty's reaction to online discourse may not be representative of the majority of students enrolled in a course that was designed to promulgate collaborative learning.

The discrepancy between Betty's interview and survey responses may have either

been a product of her concern about giving the instructor a negative "evaluation" or as a positive response to the invitation to share her thoughts and feelings about the course as an interview participant. She expressed that she enjoyed the course overall.

The course description and syllabus notations were congruent with teaching strategies conducive to collaborative learning. Expectations of participation in online group presentations and chats, posting an introduction, and group problem-solving were listed as learning strategies. The fact that the perception of TP was perceived to be moderate while perceptions of SP and CP were high might be due to the ability of the instructor to practice appropriate scaffolding. Students could have interpreted a lesser degree of direct instruction as indicative of moderate TP even as the teaching techniques of the instructor may have demonstrated a shift from teacher-focused to student-centered learning that enriched SP and CP.

The Comprehensive Health Assessment (B344) survey responses were embellished by the remarks made by Patty and Kelly. This course focuses on the prevention and early detection of disease and teaches students the skills of interviewing, inspecting and observing patients across the life span. Survey data reported low perceptions of TP and SP while perceptions of CP were higher than average at 90.5%.

Several segments of the interviews were associated with the emergent themes of LSP and off-line collaboration in addition to the a priori codes. One of Kelly's comments suggested a preference for independent, self-directed learning: "I will tell you, I feel like I have a deadline and I meet those deadlines. When they say 'Your assignment's due

Tuesday at 11:59,' my assignment's been in there way before." Kelly then explained her need for frequent and timely feedback:

> …sometimes I feel my confidence level is less because I didn't get a lot of feedback, I didn't get a lot of reassurance that I was on the right track…There were minimal interactions with the instructor online actually, there were a few messages and a few comments, but it was limited…I think it's a negative because I'm an older student and I'm used to the traditional face to face. This is different and felt I was just out there on my own…it was just really I fumbled out there on my own. Sometimes about grading, I had to request, 'could I get my grades from my last paper, from my last thing, whatever it was' because then I knew I could learn from my mistakes on that paper or assignment.

As an older student who had been absent from the academic environment for a number of years, Kelly was confronted with the need to transition from the familiarity of traditional classroom learning to a virtual environment in which face-to-face interactions are absent. One of the basic tenets of the CoI is that meaningful learning is a result of the interactions between TP, SP, and CP. Kelly's remarks exemplified the impact of TP and SP on learning. Feeling "out there" on her own was an impediment of sorts to her ability to self-regulate her learning in a way that facilitated her CT. Giving feedback is a product of the course design indicator of TP while encouraging interaction between students is associated with the facilitation of discourse indicator. One of the goals of SP is to foster peer-to-peer learning as "real" persons and reducing the perceived risk of "putting myself out there Similar to the traditional classroom, when connections between students are

facilitated by the instructor and others, the propensity for open communication and sharing of diverse perspectives is increased and learning is maximized.

In a CoI, the role of facilitator is not reserved solely for the instructor. It includes learner-to-learner interaction with shared student facilitation. Kelly's discussions with peers may have compensated for the minimal levels of interaction with the instructor. Kelly described a purpose of interacting with colleagues during off-line collaboration. "When I didn't understand something…I would ask another student, because in our cohort, a lot of us from my employment are going (back to get our BSN)." Kelly happened to belong to a cohort of RN to BSN students residing and working in close proximity to each other. The instructors from their campus required an initial face-to-face meeting to establish relationships which may not have been a practice unique to their site but was not occurring consistently within the program.

Self-disclosure on the part of instructors and students is conducive to online group cohesion and SP as was demonstrated in this course. Patty elaborated:

> I really appreciated (the instructor) going over what her nursing history was and how she went from a brand new nurse to teaching so much, and it was encouraging. It was encouraging listening to the other students and what their aspirations were.

The characteristics of SP in online learning may also be interpreted as "caring" behaviors by RN students because SP behaviors often emulate the sense of trust, belonging, and community that encourages higher order communication between students. The ability of instructors to role model caring behaviors is complicated by the absence of nonverbal

communication. Patty referred to the positive impact of instructor encouragement several times during the interview and stressed its importance to her engagement and motivation.

The relationship between SP and CP in B344 was alluded to by Patty who commented:

> I get quite a bit out of hearing what other people, their perspectives on different issues are online. I like that part of it. I've always liked the forum on my onlineclasses. In that general discussion part, if somebody is having trouble with something they'll put a post up and people really do respond to help somebody out if they run into a problem with something. I don't know, I like that.

Patty's experience with online forums indicates that she comprehends the value of interaction that includes not only learning with and from others, but the caring behaviors she associates with SP. She interpreted the encouraging self-disclosure comments of her instructor to be a caring behavior.

Perceptions of CP were agreed upon by most B344 students, however, the interviews failed to substantiate these. The teaching strategies listed in the syllabus were not substantive enough to suggest the degree of impact of teaching and learning strategies on CP, TP, or SP.

Three students who met the eligibility criteria were selected to elucidate the Data Analysis (H355) course (Vanessa, Carol, and Cathy) which is designed to explore quantitative and qualitative methods, interpretation of data, and the basic analytical principles needed in professional health-care practice.

In Data Analysis, perceptions of all three constructs were low, with TP rated the

highest. Perceptions of SP and CP in this course were notably lower than those of all other courses. It should be taken into consideration that the structure and content of H355 perpetuated individual rather than collaborative learning. The Pharmacology course, which also had the characteristics of direct teacher instruction and seemed similar in design to H355 likewise reported low perception levels across all three constructs.

Cathy offered a possible reason for the low perceptions of CP in H355 as well as her own general disagreement with the existence of TP when she explained:

> It was difficult…the concept was so hard to understand and it felt like maybe the instructor didn't understand it well enough to explain it to us.…I felt like I walked in there with a fog and I left with a fog. It was just beyond my brain…I thought "I'm too old to learn this." I felt the quizzes were really hard to figure out where they were coming from (and).…the book was confusing.

Effective TP is presupposed by the ability of the educator to demonstrate a sufficient level of content knowledge as well as the skills requisite to effective online teaching and learning. Cathy's comments relates not only to CP but clearly indicates that an educator who is perceived to possess a solid knowledge base and the ability to explicate and assist students in constructing knowledge has the propensity to foster a significant degree of CP.

The "division of labor" method used by groups of students to complete online collaborative projects was reported as a common occurrence among students in the courses of interest and an indicator within the theme identified as absence of online collaboration. In H355, one might speculate that low percentages of agreement with CP

are commensurate with the absence of group collaboration. One of the factors accounting for this may be a student LSP for independent, individual learning. Carol did not feel her interactions with other students made a difference to the way she thought about her course and stated:

> I do my assignments and I give my responses and.…I don't think that what other people say affects me or affects that class or affects how I feel about that….topic. I don't really need to do group projects (to learn)….I like to work ahead and I like to get my stuff done.

Carol's answer raises questions about the balance between accommodating LSPs and the use of direct instruction to facilitate student ability to learn effectively from teaching styles outside of their preferred method of learning. Competency development in higher order, collaborative problem-solving, a necessary skill in advanced practice, is predicated by the participation of group members. Comments made by Vanessa also indicate an absence of online collaboration but do describe the experience of cooperative group work. She stated "We divided up…okay this is what we need to do. So and so will do this. So and so you do this. Then we all brought everything to one person who compiled everything."

Cathy explained that students who lived within physical proximity to each other found it more convenient to collaborate face-to-face, corroborating the offline collaboration theme. "I did have a group of three other students that I worked with on our small group stuff so that interaction was good….That took place in person because we all work at the same place."

When asked about interacting with other students online outside of her organization Cathy remarked: "There really was not much at all. No. It really didn't offer any benefit so you kind of do what you need to do." She continued, adding her thoughts about the challenge of online collaboration. "When you work with other people you have to work around their schedule and not everybody works days and not everybody works nights….it's very hard to work with other people especially if you don't work with them."

Carol described another issue underlying the absence of collaboration and the effect of work/life responsibilities, insinuating that the option of collaborating online was not considered viable when she said:

> We had a project to do. We could do it in groups or we could do it by ourselves. I did mine by myself…It was hard to find somebody to be in a group whenever people live other places and stuff like that.

She went on to note the difficulty in coordinating the schedules of group members who worked full time in order to collaborate on a project. The responses of all three of the interviewees echoed those of an online instructor who, during a personal communication, stressed that students did not value collaborative assignments or indicate interest in establishing them as a learning strategy. Therefore, many faculty (who strive to meet the articulated needs of students) responded by omitting group collaboration as a teaching and learning technique.

Syllabus content (discussion, readings, problems, data analysis projects, 5 quizzes) suggested that this course does not require the use of collaborative activities to

be successful or effective. However, this may not dismiss the possibility that other strategies to facilitate CP could be incorporated into the design of the course are to enhance learning.

In the course known as A Multisystem approach to the Health of the Community (S475), students learn basic epidemiologic principles to promote the health of individuals and populations. Community assessment, health promotion and disease prevention are explored to implement and evaluate interventions.

During the interview, Barb was very specific about her LSP. Her comments speak to the importance of addressing diverse preferences in course design and content as follows:

> I'm much more of a visual learner…on the online learning, I wish that they had some kind of visual like videos or something that you can watch…it would be very beneficial to have a video of the instructor explaining the process….I don't know. I mean, I can find the information but to hear someone explain it to me…..I know at least one of the other courses I've taken….it was very beneficial.

The importance of LSP in determining effective course designs and teaching methods cannot be underestimated and will be included in the faculty development workshop described in Section 3.

Students enrolled in S475 had high perceptions of TP. However, perceptions of SP in S475 were the second lowest of all the courses. Barb offered a comment that was relevant to the decreased perceptions of SP, suggesting that TP could have increased the focus on the direct instruction dimension of the construct. "My only complaint about (the

groups) was just the students, when I would send an e-mail, I wouldn't hear for maybe 5 to 7 days…. There should have been stricter guidelines on the group thing." Her sentiment attested to the need to balance the use of facilitation with direct instruction as part of the course design and underscored the importance of integrating the three indicators of TP. Barb again remarked on the influence of direct instruction when asked if there had been guidelines as to the frequency of interaction required in the course. "it was more like, here's your group, here's your project, and they gave sample projects….and then it was just kinda do it." Her comments regarding the absence of structure coupled with her preference or need for strategies that include visual learning are incongruent with her survey responses that were primarily in agreement with each of the constructs, including TP.

The absence of online collaboration as well as the low perceptions of SP were addressed by Barb's responses to questions regarding the presence or absence of a required dialogue in the discussion forum.

> I mean you were in a group, and your group was scattered all over Indiana and the only way you had to communicate was online, unless you gave phone numbers, which I gave my phone number. But nobody ever called….I learned about nursing process….and it was a good educational thing. It's just that group….there should have been stricter guidelines on the group thing.

Barb stressed the lack of teaching guidelines as an impediment to her learning by repeating the comment. It is interesting to note that, because she was not physically situated within proximity to her peers, her learning experience differed from those who

worked and strategized together.

The course syllabus suggests the integration of interactive teaching strategies, discussion forums, application activities and peer review, all of which imply the intention to integrate some degree of student group participation in the course. However, the syllabus content is not reflective of the notably low perceptions of SP which seemed likely due to diminished or the absence of structural guidelines.

A substantive supplement to the survey analysis was obtained by interviewing two students enrolled in Health Policy (B304), a course in which social, cultural and political issues that affect health care delivery are explored, including the impact of policy decisions on professional nursing practice and health services. In addition to explanatory remarks on the three a priori themes, Katie and Nina shared thoughts about the emergent themes of LSP, work/life responsibilities, and offline collaboration.

TP perceptions were rated the lowest of all courses by the 17 students enrolled in B304. SP and CP perceptions also ranked in the low category. Katie was asked if she felt connected to the other students during the course. She indicated that offline collaboration was practiced by a small group of students enrolled in B304 who work in the same setting and shared her perspective on SP with descriptive detail:

> Actually yes…it was mostly in responses to discussion questions. This is a cohort of nurses…who had met earlier in the fall…Also some of us do work together and recognize each other from the hospital. It was kind of good that we did have some knowledge of each other….if you have people that you click with, you can zone in on those people as friends and cohorts and colleagues to ask questions

specifically.

The pre-and post- face-to-face sessions were only available to students enrolled in courses offered by one of the 8 campuses. The implications of this variation in the program design would require further study to be identified. Interviewee responses suggested that online interactions took place only because of the course requirement. When Nina was asked if there was much online discussion outside of what was required by the instructor, she replied: "No…I think we were so busy…It's just we have a lot…It's just I think being older, and a mom having my own family I just do what I have to get done." Her response was congruent with the theme work/life responsibilities and implied that extensive amounts of personal and professional concerns are an impediment to collaborative learning. Katie also referenced work/life responsibilities in her comments ".reminders on the side (of the menu) of what's coming up is helpful, especially with working and trying to maintain a house and everything that's going on, to be able to see those (helps)". The instructor had placed structural indicators to facilitate a sense of direction in the course.

Nina shared her opinion that the quality of the relationship between TP and CP is contingent upon the assignment and instructor inquiries.

> (When) we had to ask questions ourselves to our fellow students and then they have to answer it. …the questions couldn't be like yes or no. They have to be more critically thinking questions. I personally thought that that helped. I don't think the instructor needs to be there to get people to think critically. I think it's all in the assignment.

Nina's perception was incongruent with the low agreement scores for TP. The integration of higher order questions and the development of CT skills are objectives of online learning that were evident in the design of this course. Nina's instructor appeared to be cognizant of the power of inquiry to promulgate CT by her employment of the practice and insistence that students submit a substantive response. According to Nina "the instructor's involved, they're just sitting back letting the students do it which is pretty awesome…personally for me I think I learn better like that" a comment indicating the LSP of this student is to have the instructor facilitate rather than provide direct instruction. Nina also implied that the quality of the questions and the nature of the assignments were conducive to CT. When asked about the value of having instructor participation in discussions, she replied: "It doesn't really make a difference. So far to me, it has not…I don't think the instructor needs to be there to get people to think critically. I think it's all in the assignment." When asked about the motivation to participate in online discussions, she replied: "It doesn't motivate me. I will say that the (Health Policy) topic isn't very motivational….when it comes to law and policies and even though that's very important in our career, it's just something that does not interest me." Lack of interest in the topic, a view of TP as irrelevant, and work/life responsibilities seem to account for the low perceptions of SP.

A review of the syllabus did not produce any evidence of strategies that may have been used to facilitate CP. Independent reading, use of the internet, small groups, and individual writing are strategies suggestive of an emphasis on independent learning.

Analysis of the mixed methods data involved the triangulation of data obtained by the CoI survey, interviews, and the contents of the course syllabi. The syllabi for each course were inspected in an attempt to further explicate both the quantitative and qualitative findings of the study. Details related to teaching and learning activities and assignments seemed to align with TP, SP, and CP. Descriptors such as case studies, discussion forums, participation in experiential activities, lectures by instructor, assigned readings, and exams implied higher or lower levels of instruction or group interaction.

Discussion of Quantitative and Qualitative Data

A series of steps were undertaken to explore and respond to the research questions by examining the data obtained from the survey. The first two questions were intended to obtain an understanding of the impressions of each student regarding the presence of the CoI in the courses they had recently completed. The first question regarding the perceptions of RN to BSN students of teaching, social and cognitive presence was intended to provide information about student perceptions in general. The information generated by the response to this question served as the data required to answer research question number two regarding how student perceptions of teaching, social, and cognitive presence compare across different RN to BSN courses. This question was intended to guide the analysis of more specific quantitative data by identifying patterns and variations based on student perceptions. Results of the steps conducted to answer the two questions are displayed in tables as the salient information needed to progress to each of the next steps in the research process.

The levels of perception used to illustrate the comparison between courses, syllabi

content and scores were calculated by dividing the number of students who responded "agree", "neutral" or "disagree" by the total number of individuals who responded to the questions for each construct. I assigned the parameters of the levels of perceptions to facilitate comparisons of data needed to answer each of the research questions. The percentages of perception designations were categorized as either "low" (≤75%); "moderate" (76% - 84%) or "high" (≥ 85%). An examination of two items of the demographic data reported by students was conducted to obtain general comparative information. The data were first disaggregated by age range and enrollment status (see Table 1) to identify any links between the two variables followed by a comparison of age range and percent agreement with CoI constructs to further a rudimentary understanding of associations between age and agreement (see Table 2). It was obvious that the responses to the question were based on different perspectives of students and could not be explicated by a review of the data alone.

Percentage of perception levels of each construct were determined by first combining the responses of agree and strongly agree as well as the responses of disagree and strongly disagree. Next, the percentages of agreement with CoI constructs were compared with student enrollment status in an attempt to ascertain whether full-time and part-time student perceptions differed by status (see Table 3). Comparisons of data by course, number of respondents per course and perceptions of CoI constructs were performed for three reasons: to identify variations among the courses of interest and all other courses referenced by students; to ascertain the distribution of the 109 respondents across courses and to compare percentages of student perceptions of each construct by

construct by course (see Table 4). The syllabi content were coded with two of the categories of TP identified by Garrison (2007) (see Table 6).

Table 7

Summary of Perceptions of CoI Constructs by Courses of Interest and Syllabi Content

		CoI Constructs and Student Perception Levels		
Course of Interest	Syllabus Content	TP	SP	CP
B331	DI, F	Moderate	Moderate	High
S475	DI, F	High	Low	High
S487	DI, F	High	High	High
H355	DI	Low	Low	Low
P345	DI	Low	Moderate	Moderate
S474	Inconclusive	Low	Low	Low
B304	DI, F	Low	Low	Low
B344	Inconclusive	Low	Low	High

Note. Syllabus Content entries are coded using categories of TP identified by Garrison (2007) and are listed here to illustrate triangulation of data. "DI" (Direct Instruction), and "F" (Facilitation). The codes were assigned based on interview transcriptions and a review of the syllabi from each course of interest. Survey data in greater detail is reported in Table 3 which can be consulted to explicate the CoI Constructs and Student Perception presented here. I identified perceptions as Low ≤ 75%; Moderate= between 75% and 85%; High ≥ 85%. Percentage scores were rounded.

The coded syllabi content and a summary of the perception levels of each construct by courses of interest are summarized in Table 7. Direct instruction (DI), facilitation (F) and inconclusive were terms used to differentiate between the syllabi teaching and learning strategies of each course of interest. Strategies listed as written assignments, assigned readings, online exams, and individual writing were considered indicative of courses with higher levels of direct instruction than interaction. Listings that suggested a greater degree of facilitative or interactive methods included online group

presentations, forum discussions, and participation in experiences related to the topics. Syllabus teaching strategies such as readings, problems, and web resources were considered to be inconclusive or vague. An explication of the alignment between the perceptions reported by students and the category of teaching method used in each course was conducted with more specificity because the TP construct was differentiated.

Table 8

Perceptions of CoI Constructs by Courses of Interest

Course Number	*n*	TP Perception Level	SP Perception Level	CP Perception Level
B344	6	74%	75%	90%
H355	16	73%	57%	74&
P345	2	65%	78%	76%
S474	9	69%	74%	74%
S475	7	87%	60%	86%
S487	7	86%	89%	93%
B304	17	63%	64%	72%
B331	8	79%	84%	90%

Note. High Perception= ≥ 85%; Moderate Perception = 76%-84%; Low Perception = ≤ 75%. Percentage scores were rounded.

Although face-to-face meetings would have been preferable the possibility was precluded by the distance in physical proximity between myself and interviewees. The presence of nonverbal cues during the interview would foster the ability of the interviewer to respond appropriately by asking for and providing clarification if the subject appeared to be confused. Body language and facial expression can guide the interview process by allowing the interviewer to modify the interview accordingly based

on nonverbal cues. Although the absence of nonverbal cues was a challenging aspect of the telephone interview, the experience mirrored online communication in the need for teaching and learning methods that compensate for the challenges to SP. In retrospect, the telephone method of interviewing seemed well-suited to a study of online learning.

The employment of a professional audio-recording/transcription service expedited the analysis of the interview transcripts. Transcribed interviews were e-mailed to me within 24 hours of the interview and were downloaded into a password- protected personal computer. Concurrently to the review of transcripts, to organize and ensure the accuracy of reporting, qualitative data matrices were developed to align course number, names of interviewees, emergent and a priori themes, text segments, teaching constructs. This proved to be an invaluable exercise in the data analysis process in that every component of the matrices were methodically assessed in conjunction with all other components entered in the matrices.

The third research question was intended to identify which practices or experiences might explain the variations of student perceptions across different RN to BSN courses. This was addressed by not only examining each segment of the matrices to identify connections between them but also by comparing data that emerged from the interviews to the perceptions generated by the surveys. Qualitative data analysis findings were systematically recorded. Each entry began with the course description, identification of the interviewee's pseudonym, the inclusion of quotations, a discussion of the congruency of the interview commentary with the relevant quantitative data analysis, and a description and interpretation of the course syllabi and its explication of the interview

and survey results. The ability to identify areas in need of further analysis were easily identified using the matrices for organization.

Interpretation of Findings

With respect to the first research question related to the perceptions of RN to BSN students of the CoI seemed to be contingent upon a variety of factors. Although it is through the interaction of TP, SP, and CP that meaningful learning occurs, the goal of a CoI is to facilitate student CT skills through CP. Findings demonstrated, that aside from two courses with only one respondent, high perceptions of CP (≥85%) were present in 6 of the 14 courses. This means that students enrolled in less than half of the courses were not experiencing CP at high levels and that perceptions of CP and higher order thinking are not consistent across courses. The percentage point differences between perceptions by age range related to TP, SP, and CP are minimal, suggesting that age is not a factor in RN to BSN student perceptions of the presence of each construct in their online courses. This suggests that student responses to the teaching and learning strategies applied in the program are similar, regardless of age. The data generated through perceptions of CoI constructs by enrollment status demonstrated that there is virtually no distinction between the perceptions of full-time and part-time students (see Table 3). It appears that the different influences of life/work responsibilities and LSPs associated with full- and part-time had no bearing on the perceptions of each group.

To answer the second research question, it must be taken into consideration that student perceptions of the CoI were influenced by a variety of factors. Perceptions of the constructs were compared across different RN to BSN courses. The perceptions of CP

reported by students enrolled in Data Analysis, Health Policy, and Applied Health Care Ethics were the lowest (≤ 75%) of all courses. Students in these three courses also reported low perceptions of TP and SP. Garrison (2007) posited that courses in which it has been demonstrated that knowledge acquisition is primarily facilitated by independent learning, as in the three courses identified, can still be successful in the absence of collaboration. The main objectives of these courses is to disseminate knowledge and information as opposed to encouraging student co-construction of knowledge through collaborative learning experiences. I would suggest, however, that although cooperative behavior (as opposed to collaborative) may not prohibit online learning, unless group interactions include some degree of collaboration, the outcomes may be more superficial than substantive. Whether students participated in offline collaboration or were enrolled in courses in which the absence of online collaboration was identified, students routinely distributed sections of group-assigned projects among themselves, working independently and cooperatively returning their completed segment to a group member for compilation and submission. Among those students who lived and worked in close proximity to each other, the cooperative approach appeared to be integrated into collaborative discussions when students met to discuss a group project. The majority of learners in the program were unable to meet face-to-face due to the physical distance between them and the additional time required to travel to a destination away from their university campus site.

The interviewees made significant contributions that addressed the third research question as to which practices or experiences may explain the variations of student

perceptions across different RN to BSN courses. An important finding of this study concerns the connection between LSP and perceptions of CoI constructs. Studies of the LSPs of students in online RN to BSN programs are scarce. However, according to Smith (2010) studies of the LSP of nursing students enrolled in traditional classrooms have most frequently used Kolb's (1984) learning style inventory (LSI) which delineates four styles: diverger (appreciates multiple perspectives, group work and brainstorming sessions); assimilator (is a thinker and watcher, appreciates ideas and abstract concepts); converger (is a thinker and doer who is less concerned with people) or accommodator (is a feeler and doer, people-oriented with an intuitive trial-and-error approach to problem-solving). In a study of LSPs of nurses enrolled in an online RN to BSN program, Smith (2010) found the predominant learning style was accommodator. She stated that working in groups can be challenging for the assimilator and converger and stressed the importance of accommodating all learning styles in an online course. A variety of LSPs were identified in the study and it stands to reason that perceptions of learning will be influenced by personal preferences in how the learning takes place. Although an investigation of the LSPs of RN online learners was not the focus of this study, a greater understanding of the impact of LSP on online learning warrants further research.

Characteristics of the courses with higher perceptions of CP (≥ 85%) were discussed by interviewees enrolled in four of the six courses: Transition to Baccalaureate Nursing Practice; Multisystem Approach to the Health of the Community; Nursing Management; and Comprehensive Nursing Health Assessment. Three of the four also had high/moderate perceptions of TP. The teaching and learning best practices that facilitated

CT and contributed to CP were articulated by students in these courses as: sharing of diverse perspectives to facilitate meaningful learning and engaging students through critical inquiry. Both of these activities are associated with SP which is consistent with the study findings of Shea & Bidjerano (2009) which revealed that participants who experienced SP were also more likely to report higher perceptions of CP. (instructor facilitation style that encourages students to think deeply (TP); practice differentiated learning based on student LSP (TP); incorporate sharing of perspectives into course design (TP) (SP); course content and instructor that motivates students to apply higher order thinking (TP).

Regardless of LSP, most students who were interviewed did not express a preference for collaborative learning and several indicated a lack of time and interest in participating in forum discussions. Most students only participated in online discourse when it was required. This does not necessarily suggest, however, that the preference for group learning is absent in this population, but rather that there is a lack of motivation to participate in online collaborative learning activities outside of the course requirement. The role of motivation is especially important in online learning and, the findings of this study indicate that lack of motivation is a deterrent to online collaboration. Gormley (2013) found that higher levels of intrinsic motivation and self- regulation are required in online learning because online programs place a higher level of responsibility on learners than traditional learning environments. Gormley's (2013) findings indicated that extrinsic motivation plays a greater role in online participation than intrinsic in that students are participating in discussion forums primarily because it is a requirement of the course. It

seems that both students and instructors lack the motivation to participate in a collaborative discourse and, instead, gravitate to a cooperative method of group work.

In addition to course designs that excluded collaborative assignments, student work/life responsibilities were reported as impediments to participation beyond the postings required for online discourse. The lack of time, scheduling difficulties and family and work obligations were cited by interviewees as constraints to more frequent participation. In the foreseeable future, the RN returning to online BSN degree programs will continue to experience work/life responsibilities, while the increasing complexity of the health care environment that can lead to a deleterious effect on patient safety and the quality of care continues to escalate. Research has identified collaborative online learning as a major catalyst to the development of the CT skills needed for nurses to become increasingly proficient in higher order thinking. In response to these conditions, it is essential that online instructors develop and deliver nursing courses that incorporate collaborative learning experiences designed to engage and sustain the attention and participation of students. Innovative assignments that require collaborative group problem-solving project work can be integrated into course designs in ways that mitigate the time and work challenges in order to develop CT. The issue here is not whether students have a preference for collaborative learning, but that the development of CT skills required for professional nursing practice is an evidence-based outcome of collaborative learning studies. Several barriers to online collaboration were articulated by the interviewees. Lack of time, scheduling difficulties and family and work obligations

were noted to be challenges to online collaboration as a result of work/life responsibilities.

Students in the 50+ age range were more amenable to participating in forum discussions than those in the lower ranges (25-35 and 36-49).This may be interpreted as the predisposition of older students to prefer visual and face-to-face learning as was the norm during their first nursing education experience. Another possibility was introduced by a 50+ student who recognized the reciprocal benefits of sharing years of experience with nurses who were in the early stages of their professional career. Nurses who had graduated more recently were able to share perspectives on clinical practice that were observed and interpreted through "fresh eyes."

Courses that were primarily designed to provide information and instruction were less conducive to online discourse. Garrison (2007) postulated that courses with content that required higher levels of direct instruction, lack of collaboration did not preclude meaningful learning. The responses of interviewees enrolled in Pharmacology, Data Analysis, and Health Policy were congruent with the syllabus content and course descriptions that suggested higher levels of instruction and lower levels of collaboration. Health Care Ethics and Health Care Policy students reported low perceptions of TP, SP, and CP. Interviews suggested that the syllabus, survey scores, and student perceptions were congruent with a course that was primarily void of collaboration. Responses of students enrolled in B331 (Transition to Professional Practice) and S487 (Nursing Management) confirm that those who experienced an alignment between perceptions of TP, SP, and CP reported the experience of higher order thinking. In fact, courses in which

students responded with low perceptions of TP and SP and yet reported moderate or high perceptions of CP were in the minority.

The study revealed that the majority of students in every course agreed that TP and SP perceptions were low, which is not surprising given the information from personal communication with instructors and interview responses from students validating that the design of courses in the program did not predispose them to collaborative learning.

It should also be noted that the roles of course design and facilitating discourse in teaching and learning tend to be less explicit than teacher behaviors associated with direct instruction and therefore may not have been considered by students when responding to statements in the CoI survey.

Study findings support Garrison's (2007) premise that TP and instructor style influence students' perceptions of whether an online instructor is engaged in the learning process beyond availability and prompt responses to student question. Clear instructions, learning objectives, and participation guidelines should be made explicit by instructors Interviewed students expressed frustration when these components were absent or unclear and described the discussion postings as responses to assigned topics rather than as contributions to a conversation with peers. Stodel, et al.(2006) studied student perceptions of online learning through the CoI and discovered that, although instructors logged on several times each day, read postings, and responded quickly when there were questions or concerns, they did not post daily. Although daily posting is unlikely to be feasible, it is critical that instructors moderate and guide the direction of the discourse (Garrison & Cleveland-Innes, 2005; Stodel et al., 2006). Instructors who are transitioning

from traditional classroom teaching may not have acquired the skills requisite to effective online teaching and learning.

The question of whether there are certain practices or experiences that might explain the variations of student perceptions across different RN to BSN courses was addressed in several ways. LSP, especially as it relates to a predisposition toward group as opposed to individual learning, had an impact on perceptions of the presence of CoI constructs. Phenomena associated with the emergent themes also accounted for individual and group variations. The theoretical foundation of CoI is based on constructivism and Vgotsky's (1962) theory that group interaction contributes more to the learner's understanding than could be achieved individually. In this study, findings indicate that students were actually engaging in a form of cooperative learning in which different individuals are responsible for solving a specific portion of a problem, followed by the consensual combination of each individual solution to resolve the problem as a whole (Roschelle & Teasley, 1995). Garrison et al. (2010) described the importance of cultivating online group collaboration as a catalyst to CT. Plante and Asselin (2014) described the association between social presence, the sense of connectedness and caring experienced by online students and the development of CT skills.

Although cooperative learning is common in the RN to BSN program, the study results indicated that online collaboration is either absent or occurring at very limited levels in the majority of courses under study. Cooperative efforts, although conducive to efficiency in project completion and one of the contributors to the co-construction of knowledge, in and of themselves do not meet the criteria of authentic collaboration. This

suggests that an opportunity to optimize distance learning through online-collaboration could be created.

The existence of work/family responsibilities was described by students as a primary reason for selecting an online RN to BSN degree completion program as opposed to a face-to-face learning platform. The majority of students were overwhelmed with responsibilities outside of the virtual classroom that may account for a reticence (or inability) to spend the additional time required by collaborative online participation. This paradoxical situation is consistent with online studies that identified barriers to convenience and flexibility resulting from the amount of time required for consistent, substantive participation (Brindley et al., 2009; Piezon & Feree, 2008; Wright & Lawson, 2005). Scheduling difficulties and numerous commitments prevent the integration of the synchronous teaching and learning methods conducive to collaboration and SP. Group assignments for most courses are designed to meet the needs of busy parents and full time employees who are now participating in an educational endeavor that requires additional time and energy. In addition to increased student satisfaction, (Hare, 2006) found that perceptions of self-efficacy in the ability to contribute online time and cognitive skills also increased when instructors designed and facilitated content in ways that accounted for the personal and professional challenges inherent in the lives of the RN pursuing advanced degrees.

A review of the three data sources revealed that the results of the survey were congruent with the interview data. However, the syllabi as a third source, basically confirmed that courses identified by the survey and described during the interviews were

designed for either higher levels of interactive or independent learning. Data obtained from interviews, surveys, and the syllabi of courses designed to guide students primarily through direct instruction (such as Pharmacology and Data Analysis) were more clearly congruent than data derived from the same sources regarding courses considered by faculty and students to be more conducive to interaction. The study identified the presence of a number of best online practices such as prompt replies to student questions and concerns, group assignments, required participation in discussion forums, and assignments that evoked higher order thinking. In addition, the study revealed the discrepancy between the understanding of collaborative learning in theory and collaborative learning in application.

Students enrolled in S487 and B331 had higher CP perceptions and cited reasons that were congruent with the literature as important benefits of applied collaborative learning. Learning from diverse perspectives provided deeper learning overall, a sense of connectedness and being a "part of the course" and was perceived to be satisfying and encouraging. Assignments that motivated students to explore the Internet in attempts to expand the capacity for CT suggest that instructors who designed, facilitated and instructed in accordance with the CoI conceptual framework were leading students toward higher order thinking. Authentic collaboration is viewed as an ongoing process of mutual engagement where both personal and social transformation occur by the co-construction of knowledge through negotiation, reflective communication, and cooperation (Maor, 2003; Redmond & Lock, 2006; Vygotsky, 1962).

Conclusion

Quantitative comparisons of student perceptions of each construct across courses demonstrated that overall levels of perception did not differ widely with the exception of two courses in which perceptions were reported as low to moderate across all constructs. Courses designed to impart knowledge from teacher to learner are less dependent on interaction for effective learning to occur and in this study, had lower perceptions of SP and TP than the other courses of interest. Perceptions of TP were reported as high in only two courses; perceptions of SP was high in three courses; and perceptions of CP were high in six of the 14 courses offered during the Spring semester sessions.

When the interpretation of survey data was deepened by student interviews, it became apparent that the extent of student perceptions of the CoI constructs was influenced by several factors. The students who made mention of a particular LSP during the interview did so in the context of TP and SP and whether their preference aligned with each. Those who felt that group participation was a catalyst to meaningful learning cited exposure to diverse perspectives as the salient feature of group interaction. Interviewees who advocated the incorporation of visual learning strategies in online courses seemed to appreciate TP instruction that integrated synchronous online learning experiences and videos of instructors explaining various aspects of the courses.

Barriers to the viability and depth of online collaboration included work/life responsibilities; under-appreciation for the value of collaborative learning; and a perception of TP as low to moderate based on the extent of instructor-guided discourse. Student perceptions of TP and SP were influenced by the structure of collaborative

experience including that of one cohort who met face-to-face for 2 hours at the beginning and end of the course. The practice of off-line collaboration among students who lived within close proximity to each is a factor to be taken into consideration during course design. By incorporating some degree of synchronous collaboration (either online or face-to-face) in online courses, student opportunities for CT and meaningful learning increase.

Several students perceived that instructors had taken work/life responsibilities into consideration when designing the course. Clarity in the organization and structure of assignments and content and posting reminders of due dates, upcoming module preparation, and readings were appreciated by busy students. Others found that work/life responsibilities experienced in common with peers was an important determinant of feeling connected and encouraged by SP.

Faculty who are currently teaching or plan to teach online will benefit from a workshop designed to maximize the ability to provide effective, successful learning experiences. Levels of patient safety, quality of care, CT, and interprofessional collaboration in problem-solving and decision making are inextricably interwoven in the professional practice of health care providers today. Instruction that is not guided by an established, validated theoretical construct such as the CoI model of online learning runs the risk of underpreparing students to function effectively in a complex environment. Application of the CoI's holistic, comprehensive approach to constructivistic teaching and learning has been demonstrated to mitigate many of the challenges inherent in online learning. Faculty development in creating and sustaining a CoI has the potential to

advance the efficacy of online learning through the implementation of best practices in program design, delivery, and evaluation.

Limitations

The small sample size precluded a comprehensive analysis of quantitative data, reducing the generalizability of the findings. The participant recruitment method was not optimal in that the e-mail addresses used to contact students had been submitted as alternate e-mail options originating from outside the school and reportedly were infrequently if ever checked by students. The rate of return from the first round of survey distribution was only 14%. In addition, the request for course numbers in the initial survey was open-ended, resulting in a lack of course data from 22 students. It was decided that the omitted course information coupled with the low response rate warranted a second distribution of surveys with each course number and title itemized, instructing students to click on the course in which they were enrolled. Although 100% of respondents identified the course in which they were enrolled only 24 additional completed surveys were returned.

Student enrollment in the online RN to BSN program at the study site is generally intermittent with varying numbers of students enrolled in courses at a particular time. This may have resulted in inconsistencies in the findings due to the fluctuations in attendance. Although the study was situated to obtain data based on the perceptions of students, it was not targeted toward an evidence-based identification of the impact of the presences on CT or other learning outcomes which may be a disincentive for faculty to make changes that could enhance the efficacy of the program.

Several of the students interviewed had completed the survey at the end of the first Spring Session but, because the earliest the second round of surveys could be distributed was the eighth week of the second Spring Session, interviews could not be conducted until the quantitative data were manually added to the first round of survey responses and analyzed. Because several weeks had elapsed between the survey completion in round one and the date of the interview, a number of students struggled to remember the conditions experienced during the course of interest. This limitation may have been overcome by sharing portions of the course syllabus at the start of the interview to facilitate student recall of their perceptions.

It is the responsibility of the instructor to guide the CT skill development of students enrolled in online RN to BSN programs. Therefore, it is important that educators be well-versed in best practices in teaching and learning conducive to CT. There is also a need for online instructors to recognize and apply the principles of collaborative learning, to operationalize strategies to build and sustain an online CoI, while recognizing the impact of LSP and work/life responsibilities on student participation in discussions. To address these and other findings of the study that will benefit online educators, a faculty development workshop has been designed and will be described in Section 3.

Section 3: The Project

Introduction

Patient safety and the quality of health care in the United States are continuously subjected to conditions that both heighten and hinder the caliber of care. In light of the increasing complexities in the health care field, the rise in patient acuity, and the recognition that basic nursing education is no longer sufficient to meet the changing demands, nursing education must respond in ways that are innovative and timely in order to sustain the advanced proficiency currently required in all areas of professional nursing practice.

The RNs who aspire to obtain a BSN are gravitating to online learning as an increasingly popular alternative to traditional degree completion programs. (Altmann, 2011). Because computer-mediated education is subject to the same accreditation essentials required in on-site BSN education, best practices that enhance the skills and abilities of online learners must be incorporated into the design and delivery of each course. Research has demonstrated that online interaction and collaboration are highly conducive to successful computer-mediated learning (Breen, 2013; Du et al., 2013; Garrison, 2005; Vitale, 2010). Studies have also identified the development of an online culture in which social interaction and communication emulate that of conventional classrooms to be one of the most daunting aspects of the co-construction of knowledge (Moore & Kearsley, 2012). The quality of learning in the nursing field has a direct impact on patient safety and quality of care. In advanced nursing education, effective, meaningful learning is paramount to the successful, safe practice of caregivers who must

attain, develop, and apply CT skills (Cronenwett et al., 2007). The incorporation of group discussion, collaborative problem-solving, and inquiry in online learning must be facilitated by instructors in a manner that encourages higher order thinking. Although the CoI survey results showed fairly high perceptions of TP, the majority of interviewees indicated that TP was mostly limited to providing instructions, grading assignments, and tracking student postings. Collaborative learning in the courses was limited or absent.

Based on the findings identified in Section 2, a 3-day workshop has been designed to enhance faculty proficiency in online teaching and learning strategies. The purpose of the workshop is to expand the overall understanding and use of best practices in online teaching and learning through a highly interactive workshop comprised of lecture, group discussion, and opportunities for online collaborative problem-solving. Instructors will align adult learning theory, best practices in online learning, experiential activities, and collaborative learning before, during, and after the workshop.

Description and Goals

"Student-Centered Online Learning: Optimizing Cognitive, Social, and Teaching Presence" is a 3-day workshop created to enhance faculty proficiency in online teaching and learning strategies. The evidence-based foundation for the workshop curriculum is based on the following: the student perceptions of effective learning techniques identified in the study through interviews described in Section 2, a literature review of best practices in online education, and the constructs of the CoI framework. A goal of the workshop is to maximize the ability of online educators to design and facilitate collaborative online learning experiences that cultivate the CT skills of students. The aim

of the professional development experience is to enable educators to incorporate the principles of the CoI framework, with an emphasis on TP, into online course development and delivery. In addition, the workshop has been designed to demonstrate the relationship between self-awareness and effective online teaching and learning and the role of self-awareness in the design, delivery, facilitation, and evaluation of online courses, student interactions, and meaningful learning.

All faculty members teaching in online or face-to-face nursing education programs will be invited to attend. The level of workshop content is applicable to a diverse audience, from novice to expert in online teaching and learning. Five general goals are designed to

- optimize the ability of online educators to design and facilitate collaborative online learning experiences that cultivate the CT skills of students;
- foster the ability of faculty to identify the learning style preferences of students and adapt the course content and teaching strategies accordingly;
- demonstrate the relationship between self-awareness and effective online teaching and learning as well as the role of self-awareness in the design, delivery, facilitation, and evaluation of online courses, student interactions, and meaningful learning;
- enable educators to incorporate the principles of the CoI framework with an emphasis on TP, into online course development and delivery; and
- increase the self-efficacy of faculty in the integration of best practice online teaching and learning strategies into online nursing courses.

Learning Objectives and Outcomes

A major intended outcome of the workshop is to enhance faculty proficiency in online teaching and learning to facilitate nursing student development of the skills requisite to providing safe, high quality, professional patient care. Learning objectives have been identified to make the outcome expectations explicit and to serve as evaluation parameters. The objectives are derived from studies that substantiated the benefits of establishing and sustaining a CoI (Anderson et al., 2001) and provided the rationale behind integrating best practices in online teaching and learning into course design and delivery (Breen, 2013; Chickering & Ehrmann, 1996; Dewey, 1933; Du et al., 2013; Garrison, 2005; Kala et al., 2010; Kolb, 1984; Pololi & Frankel, 2005; Vitale, 2010; Vgotsky, 1962).

By the end of the workshop, participants should be able to

- explain the underlying rationale behind the integration of an online CoI by developing strategies to create community;
- differentiate between the three constructs and indicators of the CoI through the integration of best practices into online course design to facilitate their presence;
- integrate an understanding of self-awareness and learning style principles into online teaching and learning practices by recognizing and working to avoid personal bias in the development of online learning techniques;
- identify and collaboratively develop pedagogical strategies that promote online interaction by completing a team project designed to synthesize

workshop learning;

- incorporate differentiated instructional strategies based on student learning style preference assessments into online course design;
- apply the teaching and learning strategies incorporated into the collaborative project to the design and instruction of online courses;
- develop a transfer of learning plan for the integration of workshop content into online practice; and
- describe the components of an online course evaluation in the development of an online learning rubric.

Rationale

As distance education becomes increasingly prevalent in nursing education, instructors transitioning from traditional teaching and learning methods need to become aware of the changing role of faculty as they face the challenges inherent in computer mediated education. Twomey (2004) described the "technology/pedagogy divide" (p. 453) evidenced by the disparity between educator approaches to online teaching, with some contending that technology may override pedagogy. As research continues to illuminate the understanding of best practices in online nursing education, instructors need to be cognizant of factors facilitating effective teaching and learning strategies. Faculty development programs that provide the substantive dissemination of information and opportunities for the practical application of online teaching methods can contribute to the implementation of best evidence-based teaching and learning. The CoI model has been used to guide, explain, and prescribe the posture of e-learning from a collaborative-

constructivistic perspective (Garrison et al., 2000). According to Garrison et al (2001), the CoI framework elucidates processes and behaviors required to construct knowledge through the cultivation of several forms of "presence" that include three core elements: (CP), (SP), and (TP) (Shea & Bidjerano, 2009). Carlon et al. (2012), Redmond and Lock (2006), and Shea and Bidjerano (2010) agreed with the contention of Garrison et al. (2001) that effective online learning occurs in a community of students and instructors as a function of the interaction between these three constructs. A workshop framed by the solid pedagogy offered by the CoI and based on study results emanating from student perceptions of cognitive, social, and teaching presence will enable faculty to develop and integrate online strategies to cultivate and sustain the presences.

The content of the workshop includes the theoretical, contextual, and practical aspects of incorporating best practices to facilitate the inclusion of cognitive, social, and teaching presences into online nursing courses.

Study Findings Substantiating the Need for Faculty Development

In Section 1, the problem identified for the study included a description of the need to identify and assess which of the online learning techniques students perceived to be most effective in facilitating learning development and higher order thinking. Informal conversations with online faculty at the study site indicated that collaborative problem-solving was rarely incorporated as a teaching strategy by instructors in the RN to BSN program. The study revealed that the majority of students in every course agreed that TP and SP were low. Instructors and interview responses from students validated that the design of courses in the program did not promote collaboration. Participation in forum

discourse generally occurred as a product of the course requirement as opposed to student-initiated conversations. It seems that, in addition to the lack of collaborative strategies in course designs, both students and instructors lacked the motivation to participate in a collaborative discourse and, instead, gravitated to a cooperative method of group work.

Students also expressed frustration when instructions, learning objectives, and participation guidelines were not made explicit. Although the purpose of this study was to assess student perceptions of the constructs of the CoI, an understanding of the emergent themes that were identified will also contribute to optimizing online learning in ways that are congruent with current realities of professional nursing practice. Findings of this study identified that student perceptions of a CoI were influenced by LSPs, the absence of online collaboration, and work/life responsibilities.

According to interviewed students, the CoI-based teaching and learning factors that cultivated CT and contributed to CP were described as follows: the sharing of diverse perspectives to facilitate meaningful learning (SP); an instructor facilitation style that encouraged students to think deeply (TP); critical inquiry techniques that engaged student participation in discourse (TP, SP); the integration of differentiated learning techniques based on student LSP (TP); and a course design that incorporated sharing of perspectives into the learning process (TP, SP).

Although many of the assignments and projects facilitated CT, the majority of interviewees reported that teacher-initiated inquiry was limited. The CT occurred mainly through self-directed interpretation and research used to respond to the assignments.

Collaborative problem-solving was generally absent—a condition that most students did not find problematic. Study findings indicated that instructor motivation to develop learning activities directed toward student collaboration was limited. The majority of those interviewed reported that they appreciated the asynchronous format of online learning and felt the practice of collaboration would be time-intensive and without value. This line of thought seems to be a product of the "not knowing what I don't know" dynamic as well as an indicator of LSP. One of the emerging themes from the study was related to LSP and its influence on perceptions of the CoI constructs. Study results indicated that faculty would benefit from a development workshop that introduces ways to develop and sustain a CoI. Combining an understanding of the results of the CoI survey, interviews, and recommendations of students with the dynamics of practical application will expedite the ability of faculty to transfer the learning from classroom to computer.

Review of the Literature

A literature search was conducted to investigate the design, development, and evaluation of faculty development programs. A variety of topics or themes were identified as relevant to the development of the workshop project. Studies that explicated teaching and learning strategies used to incorporate the CoI constructs into faculty development programs was one area of investigation. Potential barriers to conducting effective faculty education programs and best practices that facilitate adult learning were additional topics explored in the literature. Findings of this study identified potential subject matter for incorporation into the program. LSP, adult learning theory, evaluation

of online learning, and transfer of learning were examined from a faculty education perspective. Key words and phrases used to search for literature related to the development of a faculty workshop included *faculty development, CoI studies; adult learning theory; program design; best practices in adult education; barriers to adult learning,* and *adult learning assessment strategies*. Search engines such as Medline Ovid, CINAHL (Cumulative Index to Nursing and Allied Health Literature) and Google Scholar and Walden libraries were searched to find articles related to specific elements of the workshop that emerged from the study findings.

CoI Constructs and Faculty Development

Studies using the CoI framework yielded several recommendations for the practical application of research findings that supported the selection of a faculty development workshop as the project genre.

It was discovered that aspects of what online learners miss about face-to-face learning is related more to SP than to the other two constructs (Stodel et al., 2006). To stimulate creative sharing, Stodel et al. (2006) suggested that instructors create opportunities for students to take a more active role in co-constructing their learning by encouraging the pursuit of information that may deviate somewhat from an assigned topic. They also suggested that in order to develop and sustain community, students need to shift their focus from independent to interdependent learning. This requires instructors to actively guide online discussions, serve as role models in their online interactions, provide examples of community-building behaviors, and offer constructive feedback. Educators cannot assume facilitation and effective communication will happen

without TP (Stodel et al., 2006).

An investigation of SP in online nursing education revealed that instructors can positively influence nursing student perceptions of SP by using specific strategies directed toward SP (Mayne & Wu, 2011). Personal e-mail messages from the instructor, opening a "Meet and Greet" section to facilitate the "real" presence of online students, and the formation of small groups based on student-submitted information about areas of interest and work experience are examples. They concluded that the role of the instructor is to encourage a culture of reflection in which TP and SP cultivate CP.

In other studies incorporating the CoI, there was a strong relationship between collaborative constructivism and higher order learning (Akyol & Garrison, 2014). Higher perceptions of CP were reported by students who felt that getting to know their online peers gave them a sense of belonging, suggesting that instructors need to be cognizant of the magnitude of the influence of SP on CP (Shea & Bidjerano, 2009). Several practical contributions to online learning were identified from an exploration of SP. It was suggested that students and instructors express respect for learners' efforts in teaching and learning activities to help students feel that it is worthwhile to post questions, ideas, and opinions. Researchers found that sharing beliefs and values and work and professional interests of students and instructors increased SP over time (Sung & Mayer, 2012).

Several practice implications emerged from studies of TP including the articulation of clear, concise objectives and structured discussion guidelines are fundamental to TP (Kupczynski et al., 2010). Students can be helped to achieve cognitive

engagement by the innovative use of functions in the learning management system (Nagel & Kotze, 2009). In addition, students reported that communication timeliness and TP were positively related to meaningful learning (Skramstad et al., 2012).

Potential Barriers to Faculty Development in Online Teaching

Resistance to change, feelings of low self-efficacy, and fear of the unknown are examples of factors that can have a deleterious impact on engagement and learning (Ford, Ford, & D'Amelio, 2008). The possibility that workshop participants may be anxious or harboring concerns about online teaching was considered and it was determined that the agenda could support opportunities for discussion of concerns or frustrations should the need arise. The respectful acknowledgment of and listening to individual and collective concerns is important to sustain faculty engagement during the workshop and is consistent with a philosophy of education based on student-centered learning.

Ensuring that the quality of traditional nursing courses remains high in the online platform is a pressing concern of nursing school faculty (Avery, Cohen, & Walker, 2008; Benson, 2003; Little, 2009). Rather than employing constructivism theory and inquiry using collaborative pedagogy, nursing educators tend to transfer the content of classroom lectures to online courses (Vitale, 2010). Barriers to the transition from traditional to online teaching and learning have been cited as increased workload, altered role of the instructor, lack of technical support, reduction in the quality of the courses, and negative attitudes of other faculty (Clay,1999). The most important issue expressed by faculty regarding online teaching was developing interactions between and among students and instructors (Rockwell, Schauer, Fritz, & Marx, 2000) which underscores the merits of

positioning the constructs of the CoI as the foundation of the faculty development workshop.

Best Practices in Faculty Development

Because faculty members are learners with similar needs, universities need to consider their faculty development programs in the same way they consider academic programs for students (Diaz et al., 2009). Improvement in student learning has been demonstrated in institutions whose faculty development programs have several best practices in common including the creation of offerings based on goals related to student success and those in alignment with current educational strategies (Diaz et al., 2009) Following is a discussion of the best practices in adult learning relevant to faculty development.

Constructivists believe meaningful learning is a process in which learners actively engage in dialogue, interaction, and communication (Dewey, 1933; Vgotsky, 1962). The CoI framework itself is based on a collaborative-constructivist learning theory used to develop SP, CP, and TP (Garrison, 2011). Examples of learning strategies based on constructivism include case studies, concept mapping and problem-based learning, all of which are conducive to higher order thinking (Kala et al., 2010).

The practice of blending the application of technology with teaching and learning pedagogies is advocated by a number of researchers who have found the pedagogically sound design of learning activities to be critical to the achievement of educational outcomes (Chen et al., 2010; Twomey, 2004). Despite the fact that studies have demonstrated the positive relationship between theory-based educational design and

effective learning Reeves, Harrington, and Oliver (2004) argued that online instructors often fail to apply the results of research to course design.

Significant learning experiences emerge from the design of an educational design that includes interactions between the instructor, learners and content. Different types of interaction promote learning at different levels (Ally, 2004). Ally (2004) encouraged the use of instructional methods in which interactions progress from lower to higher-levels based on behaviorist, cognitivist, and constructivist schools of learning. Activities that require learners to apply information to a practical situation facilitates student ability to construct their own knowledge rather than to simply accept information from the instructor.

Experiential learning is widely accepted as an exceptionally effective adult teaching method. Kolb (1984) believed that active learning is a vehicle for adapting to the world through the application of theory to practice, keeping the learner in touch with the realities being studied. Knowles' assumptions used as the framework for his program planning model included several characteristic of the adult learner including: (a) the need to know; (b) motivation; (c) an orientation to learning; (d) readiness to learn; (e) self -concept; and (f) lived experiences (Knowles, Holton, & Swanson, 2011). A number of learning theorists purport that self-concept and self-awareness are linked to teaching skills (Brookfield, 1987; Palmer, 2003; Pololi & Frankel, 2005). Howe-Murphy (2007) and Levine (1999) agreed that educator self -awareness and an understanding of personal predispositions are fundamental to the practice of student-centered teaching. Self-awareness and the practice of self-reflection has also been described as central to

enhancing teaching (Schön, 1983).

Self-direction is another characteristic of adult learners that underlies Knowle's assumptions. The locus of control in learning lies with the adult who may or may not require instructor guidance (Lowry, 1989). Scaffolding by the educator should be incorporated into development programs in order to facilitate student self-reliance (Cercone, 2008). This can be accomplished by encouraging students to voice problems and concerns, providing examples of complete problems, and by integrating a variety of scenarios and perspectives that encourage learners to make self-directed decisions (Cercone, 2008).

Alkhasawneh, Mrayyan, Docherty, Alashran, and Yousef (2008) referred to LSP as a group of cognitive, affective, and physiological characteristics used to indicate how a learner perceives, interacts with and responds to the learning environment. According to Felder (1996) learning styles are important considerations in program and course development because they determine the manner in which students approach learning tasks. He suggested that if instructors teach exclusively in a style that is the least preferred by students, the discomfort level may be great enough to interfere with learning. However, students should be assisted in developing skills in both preferred and less preferred modes of learning. Felder (1996) further contended that learning needs of students in each preference category should be met at least part of the time. There are a variety of LSP models and instruments that can be used for this purpose, but Kolb's (1984) 12 item Learning Style Inventory (LSI) has been used fairly consistently in nursing education (Cavanaugh, Hogan, & Ramgopal, 1995).

Another best practice in adult education, the Socratic method, is a teaching technique that involves the use of systematic, open-ended questions to facilitate CT and engage the learners in a variety of thought-demanding ways (Saran & Neisser, 2004). Socratic inquiry has been established as a salient feature of self-directed learning because it is used to guide the learner toward independent analyses of problems and their possible solutions. The role of the educator is to ask questions that require the learner to delve more deeply and creatively into the topic at hand to build and sustain a learning community (Golding, 2011).

It has been found that online learning requires higher levels of intrinsic motivation because online programs place a higher level of responsibility on learners than noted in traditional learning environments (Gormley, 2013). Several research-based effective teaching principles have been identified, one of which states that "students' motivation generates, directs, and sustains what they do to learn" (Ambrose, Bridges, Lovett, DiPietro & Norman, 2010, p. 69). Two concepts have been identified as central to motivation: the value of a particular goal and the expectations for successful achievement of the goal. Best practices to facilitate value include connecting the material to student interest, providing reality-based tasks, identifying the relevance to current and future nursing practice and demonstrating one's own passion and enthusiasm for the role of collaborative learning (Ambrose et al., 2010). Educators' reluctance to incorporate collaborative projects in online courses may be due to a lack of value for collaborative learning or perceptions of limited proficiency in collaborative problem solving case development.

The creation of an online environment that incorporates the caring philosophy at the heart of nursing practice has been an ongoing challenge. When nursing student perceptions of caring behaviors conveyed by online instructors were studied, resulting themes included writing clear instructions, demonstrating empathy, and expertise (Sitzman, 2010). Other nurse researchers reported similar findings and added setting boundaries for confidentiality (Mayne & Wu, 2011), encouraging students to express points of view (Cobb, 2011) and managing diversity, conflict, and ambiguity (Billings & Halstead, 2009). Affective learning in online courses has been explored resulting in recommendations that instructors practice attentiveness to emotion because the affective dimensions of learning are especially important in human service professions such as nursing: a function of both SP and TP (Reilly et al., 2012). In keeping with these recommendations Marek (2009) suggested the use of a web-based synchronous learning environment to assist instructors and learners in recapturing the human touch absent from online course structures.

Practices to Facilitate TP, SP, and CP

The type of question posed has been found to influence the depth of interaction as well as the development of CT skills, an outcome of CP in the CoI (Garrison et al., 2010). Effective TP is a function of design and organization that incorporates discourse facilitation and direct instruction. Setting curriculum and methods by sharing personal meaning and focusing the discussion were also identified by Garrison, et al. (2010) as practices that reinforce TP. According to Chickering and Ehrmann (1996), the use of the good practice principles of education develops cooperation and reciprocity among

students. They emphasized that effective learning is collaborative and social as opposed to competitive and isolated and concurred with Garrison et al. (2010) and Meyer (2004) that sharing ideas and responding to others fosters CT.

The Teaching Presence Survey (framed by the CoI model) was used to obtain student perceptions of TP and timeliness of instructor response. Results indicated that the classes with the least amount of time between student posting and teacher response had higher perceptions of TP (Skramstad et al., 2012). It has been determined that when students were encouraged to explore new concepts to clarify their thinking, perceptions of successful online learning were high (Kupczynski et al., 2010). Conversely, lack of feedback was the largest perceived instructor action responsible for lack of success. Other instructor variables contributing to student satisfaction in online learning were reported as feedback, preparation, encouragement, and interactivity, behaviors that support the findings of similar studies (Bolliger & Martindale, 2004). To provide students with scaffolding learning experiences that sustain a constructivist online environment, Rovai (2007) stressed the importance of skilled facilitation that encourages student engagement in productive discussions while attending to communication issues related to a culturally diverse student population.

Researchers have identified several strategies to foster SP including posting photos of faculty and students with introductory comments; encouraging interactions through group assignments; inviting participants to share challenges; using e-mails, online chats and videos are strategies that will be discussed as practical applications of theory and learning principles during the workshop (Esani, 2010; Gallagher-Lepak et al.

2009; Mayne & Wu, 2011).

Discussion questions that evoke higher order thinking are essential to the development of CP. The use of well-defined questions that help nursing students link the new knowledge to professional practice, are related to course objectives, and cultivate competency in analysis and synthesis of information are highly recommended (Vitale, 2010). Student engagement and active construction of knowledge that helps students achieve deeper levels of knowledge construction are enabled through the integration of collaborative learning processes (Redmond & Lock, 2006). The CoI is a collaborative online learning framework in which CP is viewed as a cycle of inquiry that moves students from understanding the problem at hand to practical application of problem-solving strategies (Garrison, 2007). Collaborative learning practices facilitate the development of CT, problem-solving, self-reflection and co-construction of knowledge (Chiong & Jovanovic, 2012).

Each of the categories to be included in the workshop are well-represented by scholarly research and publications on adult education. The design of the faculty development workshop is intentionally aligned with the structure and organization of the literature review. A description of the theoretical and conceptual foundations that substantiate the use of selected teaching and learning strategies precedes the discussion of their practical application.

Program Design and Description

Several conceptual frameworks were used to guide the development and design of the workshop including the CoI, constructivism, and the ADDIE (analyze, design,

develop, implement, and evaluate) instructional design model (Alman, Tomer, & Lincoln, 2013; Lee et al., 2010). The general infrastructure used in the design and development of the faculty workshop is based on the three elements of the CoI and the research and learning theories upon which they are based. In addition to several group-oriented assignments throughout the program, participants will be assigned a group project to be submitted at the end of the workshop that requires the design of a best-practice strategy for each presence including identification of a learning theory; learning objectives; description and rationale for each strategy; and an evaluative process.

The study itself provided the information needed in the first stage of the ADDIE Design. Key questions used in the analysis stage such as "What is the purpose of the program?" "Who are the learners?" and "How will the program be delivered?" (Alman et al., 2013) were answered throughout the study. A backward design approach was used for the project development to complete the second stage by first identifying the learning objectives and outcomes followed by creating an instructional plan to help learners achieve the outcomes. In the development phase, plans are transformed into materials: invitation e-mails; pre-workshop reading assignments; and visual organizers such as online presentations, handouts, hard copies of formative and summative evaluations to support the learning objectives. Implementation involves operationalizing the plan, during which I will be attentive to the reaction of learners to each element of the program and open to modifying areas that do not maximize the learning of faculty. In this project, the evaluation process referenced by the ADDIE design will be ongoing and described further in the evaluation subsection.

Because the construct of TP is comprised of three specific components including design and organization, course facilitation, and direct instruction, the workshop content is also intended to address each of these facets of TP. Best practices to facilitate TP, SP, and CP cannot be compartmentalized in that they are contingent upon and responsive to each other. Prior to the first day of the workshop, participants will complete a personality predisposition assessment to serve a dual purpose during the workshop: (a) to demonstrate the importance of self-awareness on teaching and learning from a personal perspective and (b) to provide a frame of reference throughout the workshop intended to engage students on a personal as well as professional level. An interpretation of the results is situated at the beginning of the workshop to explicate the influence of personality predispositions on teaching and learning.

One of the primary goals of developing and implementing the workshop was to align the findings of the study with the content of the program. This will facilitate faculty understanding of the impetus behind the development of the workshop and heighten their awareness of ways the study results were used in the selection of the content. In order to provide context and the rationale underlying the selection of the CoI as the framework of the study prior to presenting the study results, a detailed overview of the CoI and the three elements that comprise the model has been placed next on the agenda. To facilitate faculty understanding of the study, distinctions will be made between CP, SP, and TP; definitions of terms such as CT, collaborative learning and cooperative group work and the importance of aligning e-learning with a substantive framework will be included.

Thematic analysis of the interview transcripts revealed that students had specific

learning preferences based on their predispositions. The influence of learning styles on student perceptions of the online experience will be covered in the workshop within the context of effective TP. To inform the best practice segment of the workshop, the literature was reviewed to identify instructor behaviors that support the development of each construct as well as the behaviors identified by students as effective strategies to facilitate meaningful learning. Due to the interactive nature of the constructs, overlap and integration in the practices supporting them was common as was demonstrated in the qualitative analysis of this study. Principles of adult learning theory and best practice recommendations support the use of experiential activities as essential opportunities for students to assimilate knowledge (Baghdadi, 2011; Breen, 2013; Chickering & Ehrmann, 1996; Darabi et al., 2011; Kolb, 1984).

In her study of online discussions, Meyer (2004) noted that the questions posed by the instructor to initiate dialogue influenced the level of student responses. The essential role of inquiry in creating successful learning communities will be emphasized as one of the core tenets of the CoI and will serve as a topic of small group discussion. A systematic method of questioning, Socratic inquiry, will be used throughout the workshop to model and demonstrate the practical application of the technique. Because of the relationship between collaborative learning and CP, this topic will be explored during the workshop through small group activities that require faculty participants to develop a problem-based higher order learning experience.

Day two of the session is focused on online strategies to develop CT. Nursing competency in CT is a requirement of the American Association of Colleges of Nursing

as documented in the *Essentials of Baccalaureate Education for Professional Nursing Practice* (AACN, 2008) and online programs are as responsible as traditional nursing education programs in fulfilling this mandate. A discussion of LSPs and differentiated instructional strategies is scheduled to take place on the second day of the workshop.

The agenda for day two is focused on several activities based on CT development strategies including: online learning and collaborative problem-solving; designing discussion questions; case studies; and online learning assessment. Participants will explore a variety of assessment tools commonly used to measure various aspects of online course efficacy including: the Constructivist On-Line Learning Environment Survey (Taylor & Maor, 2000); the National Survey of Student Engagement (NSSE, 2000); Rovai's Classroom Community Index (Rovai, 2002b); and the Bento and Schuster Students' Self-perceptions of Online Participation Instrument (Booth et al., 2011). Several other areas to consider in determining a method of evaluating online teaching and learning were listed by Zhu, Payette, and DeZure (2014). Course content and design, instruction delivery, interaction and communication, student time spent on learning tasks and assessment of student learning are areas that can be evaluated using questionnaires, surveys, and interviews. Nursing educators are well-versed in the importance of course and program evaluation in traditional learning platforms. Distinctions between online learning assessments and those employed in face-to-face classroom environments will be made and explored in preparation for the development of an assessment strategy included in the group project assignment.

Participants will be working in online collaboration forums the morning of the

third day to complete the assigned workshop project. Consideration was given to the work/life responsibilities of busy faculty by providing time within the workshop itself for participants to develop and complete the assigned project. Visual presentations of the projects will take place after lunch and discussed between and among group members for the remainder of the session.

Implementation

Potential Barriers

Faculty development program attendance may be negatively impacted by the increasingly busy schedules of instructors. Although school administrators have stressed the importance of online teaching education, the perceived need of the faculty for competency development in this area may be low. Attendance may also be affected by resistance to technological innovation among faculty who teach in traditional classroom settings and those who contend that their current online teaching methodologies are meeting the learning needs of students. Attitudes of resistance may actually be rooted in fear of the unknown and perceived loss of control resulting in lack of motivation (Hall & Hord, 2011).

The majority of online courses have been modeled on traditional forms of instruction and their underlying principles rather than capitalizing on the unique possibilities afforded by computer-based learning environments. Online educators may not concur with this assessment and, in that case, they may not embrace the need for e-learning-specific education and development.

Implementation and Timetable

Upon completion and approval of all aspects of the project study, a meeting with the Dean of the Undergraduate Baccalaureate Program and the Director of the RN to BSN Degree Completion Program will be scheduled to discuss the project implementation. Given the scheduling demands of the stakeholders, it may be several weeks before the initial meeting is added to calendars. The purpose of the meeting will be to collaborate on the strategies for workshop implementation. A 4 week timetable following an informational presentation at an all-faculty meeting will be proposed to guide the execution of the program.

During the first week of planning, a request to be added to the monthly all-faculty meeting agenda will be submitted to provide an overview of the workshop and deliver a personal invitation to faculty to participate. Electronic invitations to all faculty will be sent as an immediate follow-up to the meeting. A 1 week deadline for registration will be scheduled to determine the number of attendees, which will impact the selection of space for the sessions, small group assignments, necessary materials, and food requirements. An appropriately sized conference room will be reserved by an administrative assistant as soon as possible because areas for meetings, faculty development, and conferences are at a premium in the school. At this point, the development of workshop materials such as visual presentations of the program content and results of the study will be initiated.

Preparatory information including program goals and objectives, individual and small group assignments, and the workshop agenda will be delivered via e-mail to participants at the start of the second week. Program materials will continue to be

developed and arrangements for breakfast food and snacks to be delivered to the conference area each day of the program will be made. Early in the third week, e-mail reminders will be sent to registrants delineating program logistics and encouraging the completion of the pre-reading assignments as well as the Enneagram and LSP assessments to be discussed on the first day of the workshop.

Depending upon the scheduling needs of faculty, several workshops may be scheduled. Because of the collaborative nature of the sessions, video-taping would not be an option. However, a condensed version of the program could be designed to accomodate educators unable to attend the initial offering. Ideally, the first workshop will be conducted during the fourth week of the timeline.

Roles and Responsibilities

My general responsibilities include collaborating with school administrators to determine the best implementation strategy and timeline, preparing materials, scheduling a conference room and refreshments, intermittently e-mailing registrants to remind them of the need to complete the program pre-work, and facilitating the workshop itself. Audio-visual tools will be tested for functionality prior to the first day by the technician assigned to the nursing school. An administrative assistant will be responsible for setting up and removing refreshments, photocopying handouts, and making herself available if unanticipated needs or requests arise that fall within her jurisdiction. Faculty participant responsibilities will entail notifying me in advance if unable to attend, arriving on time, working collaboratively with group members, completing all pre-work and readings, participating actively during the sessions and providing honest and constructive

feedback during and following the workshop.

Project Evaluation

An outcome-based approach to evaluation was deemed appropriate for the project. Schalock (2001) described two types of outcome-based evaluations applicable to the workshop. Effectiveness outcome-based evaluations determine the extent to which a program met its stated goals and objectives – a beneficial method in this case to appraise whether participants felt the workshop fulfilled its stated purpose in the short term. Impact outcome-based evaluations are used to ascertain whether a program made a difference compared to no program or an alternative program. The data collected to assess the impact of the workshop on online learning over time will be used to guide the direction of future programs in addition to offering information as to the efficacy of the workshop designed for the project.

Evaluation of the project will be performed in several stages. Adult learning assessment should be an ongoing process that begins with a pre-program faculty needs assessment, continues with formative evaluations during the program, concludes with a verbal and written summative evaluation, and follows up with a transfer of learning assessment and support group feedback (Caffarella, 2002). Although a formal needs assessment was not conducted prior to the design of the workshop, we will begin the first day with an informal assessment by asking participants to identify their hopes and concerns regarding the workshop. This will serve as an icebreaker and provide insight into faculty perspectives, information essential to accommodate the learning modifications that may need to be considered during the program. Responses will be

scribed on a flip chart that will remain in the conference room for the duration of the workshop and will be referenced periodically to visually demonstrate whether each of the issues are being addressed as the sessions progress.

Best practice formative assessments have been explained as a compilation of five strategies: clarifying learning intentions and criteria for success; facilitating classroom discussions that validate student understanding; providing feedback to foster learner progress; encourage students to be resources for each other and activate students as responsible for their own learning (Black & Wiliam, 2009). In addition to the overt formation strategies, I will distribute a handout asking to describe which, if any new knowledge was relevant and applicable, what did you learn that has or will enhance your skills in online teaching? And which, if any, experience has challenged your previously held perspectives? The three questions are based on the learning target areas most familiar to nursing faculty: knowledge, skills, and attitudes. The handouts with empty circles will be available for participants to complete at any time during the day. I will review them during breaks and at times when learners are engaged in small group discussions and, where feasible, modify the aspects of the workshop experience in ways that would better meet the needs of learners.

At the conclusion of the third day, I will facilitate a brief dialogue with all students regarding perceptions of the program. Debriefing questions designed to ascertain what went well, which segments of the session could have been changed or omitted and whether participants have questions or concerns will be posed. The open sharing of perspectives of one participants may trigger a thought to share for another participant

and enrich the feedback through faculty interaction.

An example of the summative assessment participants will be asked to complete prior to their departure on day three can be found in Appendix A. The purpose of the assessment is to obtain information about the extent to which the learning objectives had been met. A Likert-like survey includes seven questions (one addressing each of the objectives) and three additional open-ended questions. The nonverbal feedback option allows faculty who are reticent to share comments with the entire group to provide feedback in a format that aligns with their LSP.

To optimize the successful integration of concepts and best practices into the learning environment, and to cultivate confidence in actualizing the workshop content, faculty will develop a transfer of learning plan with members of their small group during the workshop. Several strategies used to create an effective learning transfer plan have been described including conducting a proactive, objective analysis of potential catalysts and barriers to transfer and ensuring the cohesive alignment of workshop content and objectives (Vella, 2008). In addition, 2 months after the workshop, I will electronically distribute a transfer-of-learning survey (see Appendix A) to obtain post-workshop feedback about whether faculty are successfully integrating the strategies addressed during the program (Holton, Bates, & Ruona, 2000).

Despite the implementation of a workshop designed to facilitate transfer of learning, continued perceptions of low self -efficacy will have a deleterious impact on the application of online learning strategies and techniques. Studies of skill transfer have identified peer support during and after programs to be conducive to motivation to apply

the new skillsets to the learning environment (Chiaburu & Marinova, 2005). Participants will receive information regarding the times and locations of informal online learning support groups to be initially facilitated by me and followed by participant-guided meetings. Information generated from the follow up, evaluative strategy will be used to enhance the effectiveness of future faculty development workshops and provide insight into the challenges and barriers encountered by faculty during the transfer and implementation process.

Implications

Implications for the School of Nursing

There is a dearth of information on nursing student participation in e-learning and, according to Booth et al. (2011), conducting an appraisal of students' perception of e-learning is the first step in developing a pedagogically sound, learner-centered online curriculum. The RN to BSN students are gravitating to online learning as work/life responsibilities continue to permeate American culture. Because computer-mediated education is subject to the same accreditation essentials as on-site BSN education best practices that enhance the skills and abilities of online learners must be incorporated into the design and delivery of each course. The purpose of the workshop is to expand the overall understanding and use of best practices in online teaching and learning through a highly interactive workshop that is intended to meet the developmental needs of faculty who are now teaching or are planning to teach online in the future. One of the outcomes of the workshop is to increase faculty self-efficacy in cultivating a CoI in which a spirit of inquiry is emulated and encouraged. The skills generated in a genuine, collaborative

online CoI will be transferred to the health care practice arena and will equip nurses to function more effectively in interdisciplinary decision-making and problem-solving. The ability of RNs to participate in advanced teaming behaviors has the propensity to significantly impact situations in which collaboration is essential. Nurses will be better prepared to manage conflict, negotiate, reach consensus, and use CT to advocate for patients and peers. The attitudes and behaviors cultivated by online SP will assist students in recognizing when and how to encourage connection and communication between colleagues, patients, and other members of the health care team. CoI design components that are applied to online course designs are transferrable to the clinical setting and conducive to inquiry-based nursing assessments and decision-making at an advanced level.

Broader Implications

Wide-spread acceptance of innovative professional practice models in nursing has been founded on research-based evidence that substantiate the effectiveness of a particular intervention. The integration of a CoI in online nursing education will be predicated upon the depth of faculty understanding of its merits as well as the capacity of instructors to maximize its potential. An evidence-based faculty development workshop that facilitates knowledge and acceptance of the framework at the local level of nursing education, will be more likely to be espoused at the national level. This will contribute to the proficiency of greater numbers of nurse educators to positively impact patient care.

The content and quality of learning in the nursing field has a direct impact on patient safety and quality of care. Online course designs that incorporate the CoI

principles and practices will maximize the ability of online educators to inculcate advanced CT. Meaningful learning is paramount to the successful, safe practice of caregivers who must attain, develop, and apply CT skills which can be facilitated in a CoI.

Sociocultural Impact

Technological and medical advances call for continual evaluation of nursing education and practice to ensure accurate alignment with sociocultural trends and current realities. Because online learning programs are preferred by nurses who are inundated with work/life responsibilities, nursing education must respond in a manner that is commensurate with the shifts in the sociocultural milieu. The cultivation of advanced CT skills through these programs is essential to the nurse's ability to influence patient safety and to contribute to enhancing the quality of patient care. The project is one that will facilitate the ability of online nursing instructors to incorporate collaborative learning as a staple of courses. It has been demonstrated that collaborative problem-solving is an important conduit to the development of CT. Online courses for RNs who are enrolled specifically to develop attributes aligned with nursing professionalism (CT, problem-solving, interdisciplinary collaboration, higher order thinking approaches to decision making in patient care) need to involve faculty who are proficient in online teaching and learning strategies that cultivate CT. The project will contribute to enhancing the proficiency of faculty in the online learning venue. Students who develop the CT and collaboration skills required by the health care environment will be better able to identify and implement strategies that will increase the quality of patient care and, through the

application of advanced CT skills, contribute to or innovate interventions that promote patient safety. The overall benefit to society from nurses who are academically prepared to meet the challenges of a technologically complex health care environment in which providers strive to provide high quality care to patients with advanced levels of acuity is significant. RNs transitioning from basic nursing degree preparation to the acquisition of advanced degrees are in need of education that facilitates their ability to meet the challenges and mitigate the barriers to ensuring the safety and quality of care required by individuals in this current health care environment.

Numerous opportunities for experiential learning will be provided throughout the workshop where participants will also practice the transfer of knowledge gained from course content to its practical application in their individual teaching milieus. The workshop is characterized by small group collaboration to aid faculty in the emulation of this practice when facilitating online collaborative learning. A variety of teaching tools will be provided to assist in the knowledge transfer and strategies to facilitate sustenance of CoI practices are offered such as follow up small group discussions.

Summary

In the next section, reflections on the process of the design and development of the project provide an opportunity to consider options for future innovations in nursing education. An appraisal of the project limitations and strengths and its potential societal impact are also discussed in Section 4, in addition to recommendations for future research.

The concept of scholarship will be explored from an analytical perspective to

create a synthesis of the components of the project study through both personal and professional points of view.

Section 4: Reflections and Conclusions

Introduction

Higher order thinking and the development of cognitive skills are manifested by the ability to synthesize—to create a whole by combining the parts. This section offers an opportunity to perform a synthesis of data, learning, perceptions, inferences, and an appreciation of the balance between objectivity and subjectivity. Included is a discussion of the strengths and limitations of the faculty development project as well as its impact on social change. A variety of subsections are comprised of a self-analysis related to focal points of the journey toward a doctoral degree from my perspective. Section 4 concludes with a discussion of future research to expand the study findings.

Project Strengths

The creation of the faculty development workshop "Student-Centered Online Learning: Optimizing Cognitive, Social, and Teaching Presence" was based on the backward design model guided by first identifying the desired results, next determining how the results will be assessed, and finally producing the lesson plan (Wiggins & McTighe, 2005). Learning objectives were clearly defined, a formative and summative evaluation strategy that aligned with the objectives was added to the curriculum, and the workshop content covering the objectives was conducive to the transfer of learning by practical application of content.

Teaching and learning strategies congruent with the principles and best practices of adult learning included experiential activities, opportunities for reflection, sequential scaffolding of the material beginning with pre-workshop reading, Enneagram personality

assessment, and LSP inventory assignments. The workshop was designed to be highly interactive, to accommodate the time constraints of the faculty, and to facilitate participant feedback to meet the LSPs of the participants. The modeling of effective online student-centered learning was incorporated into the design. Skills such as facilitation, Socratic inquiry, and making the CoI constructs explicit through activities were threaded throughout the workshop. Ample opportunities to illustrate the relationship of CT on CP were provided through the exercises and group projects. This aligned with the goal of increasing the self-efficacy of faculty in their ability to facilitate online collaborative learning.

All activities were designed to promote the transfer of learning from the classroom to online instruction. Group activity topics such as "Creating Community," "Actualizing the BSN Essentials," and composing ill-structured problems that are open to interpretation and intentionally ambiguous to enhance student CT are examples.

Sequencing of the topics and activities was an intentional progression from theoretical, conceptual content to the practical application of best practice principles. The report of the CoI study findings was scheduled early on Day 1 to engage participants in the remainder of the workshop. The concluding invitation to reconnect as a learning community provided students with the security of follow-up activities and a sense that the facilitator cared about the issues that may surface after the workshop.

Recommendations for Remediation of Limitations

The project included a number of limitations that could be rectified to enhance the effectiveness of the faculty development program. Upon reflection, several factors related

to the workshop were identified that might have been edited, modified, added, or deleted.

The connection between the objectives of the workshop and social change is not clearly evidenced by the structure and content of the program. A more explicit emphasis on the impact of an online CoI that facilitates the development of collaborative learning on patient safety and quality of care is recommended. The problem statement describes a need for RNs to attain advanced proficiency in higher order thinking skills to meet the increasingly complex demands of the health care environment. One of the challenges of online education is related to facilitating CT skills. Although the workshop is replete with the theoretical underpinnings and the application of best practice online teaching and learning strategies, it fails to consistently incorporate the problem-related rationale behind the content and the essential role of CT skills in advanced nursing practice.

Despite the fact that the school of nursing strongly advocates faculty development, the expectation that instructors will attend an optional 3-day workshop may be unrealistic. The possibility of financial remuneration for attendees, mandatory attendance required by the dean, or an alternative to physical attendance should be explored. Webinar registration, access to archives of videos of the workshop, or multiple offerings of the 3-day experience may be conducive to faculty participation. Faculty retreats are held biannually, and it is recommended that a condensed version of the workshop be suggested as a retreat topic.

It is my assumption that the school will provide the financial resources needed to offer continental breakfasts, materials, snacks, and lunch for the participants. Budgetary constraints may limit my ability to incorporate an appreciative, holistic experience for

faculty attendees into the workshop. Patrons of nursing education and school alumni could be asked to contribute to the funding of the workshop. The availability of fiscal resources from other budgets in the school could also be investigated.

A primary limitation of the workshop is that it presumes that faculty will perceive a need to enhance their current online teaching and learning skills. The philosophy of "it's not broken, don't fix it" may impede the progress of implementing a workshop that seemingly addresses a nonexistent need. Because students are resistant to the practice of authentic online collaboration for a variety of reasons, instructors are reluctant to require and facilitate a teaching strategy that is time consuming and lacking in evidence from nursing education research. The remedy for this constraint lies in communicating that the dearth of information on nursing education and the CoI does not preclude the need for investigation and incorporation of the model to enhance online teaching and learning in the nursing profession. Faculty who are concerned about lack of proficiency in computer technology and online teaching methodology are reluctant to integrate technological innovations into their professional practice. A tutorial on the basic skills necessary for computer-mediated teaching could be offered prior to the 3-day workshop to facilitate self-efficacy in the area of general use of technology that may be the source of resistance.

Scholarship

To me, one of the most important aspects of scholarship is perseverance. The quest for knowledge that informs the foundation of a project can be conducted at a variety of levels. Going "beyond the basics" of the learning, self-direction, and spirit of inquiry invested in the scholarship process can make the difference between an outcome

that is ordinary and one that is extraordinary.

When the approach to scholarship is systematic, structured, and guided by a clear and accurate understanding of the goals and purpose of the scholastic undertaking, the cognitive development of the scholar is enhanced. Connections between research findings, what is discovered during the search for information and interpretation of the literature is facilitated by anchoring the scholarship process in a formula that allows for deviations that contribute to the overall purpose. A step-by-step methodology also augmented my ability to stay focused on the relationship between the inquiry process and the outcomes.

Scholarship does not occur in a vacuum. Good scholarship involves interdependent learning and is enriched through the sharing of diverse perspectives. The steps in reviewing and reporting findings from the literature, although solitary undertakings, are made robust from the feedback offered by other learners. Receptivity to a variety of approaches to scholarship used by others is one of the characteristics of a true scholar who periodically must humbly acknowledge the contributions of others as more effective than her own. In addition to following an academic structure used in the process of learning, authentic scholarship is a product of keeping the end result in mind, which is making a substantive contribution to the greater good. Mindfulness of the importance of the purpose of inquiry provides the intrinsic motivation to go “beyond the basics” and to persevere in service of what is in the best interest of those who may benefit from the efforts of educators.

Project Development and Evaluation

Throughout my professional career as a nurse educator in health care organizations and academia, I have been developing, implementing, and evaluating educational and formative programs for adults. The information I disseminated, the experiential activities incorporated into the programs, and the facilitation of the experiences were directed toward individuals and groups that had little or no prior knowledge of the content. The project I developed for this study was the first one targeted toward colleagues who hold prestigious positions at the university, have a solid grasp of the educational process, and have occasionally served as mentors to me. It was important to stay focused on the outcome, always keeping the problem statement in the forefront of the project design as opposed to wondering how I could raise the bar to accommodate such a distinguished group of learners.

The process of integrating diverse aspects of the study into the program development was a valuable exercise. It was challenging to synthesize the vast amount of information accumulated during the study in order to determine what should be included and what might be omitted from the workshop. I was motivated to test my own CT skills in a way that was distinctly different from the application of those skills in prior program development projects.

Designing the evaluative components of the program generally paralleled my previous experience in program evaluation. During the faculty development workshop, more time for open discussion and requests for participant feedback will be allotted. I have utilized the assessment of the degree to which the learning objectives were met a

number of times and found it to be a successful mechanism for producing an evaluation with substance.

Leadership and Change

Basic principles of change management are incorporated in the study and the project. Realizing that an understanding of the purpose of the change is paramount to a successful transition from one way of teaching to a different way influenced the content of the program. Exploring the predisposition to embrace or resist change will occur early in the workshop with the Enneagram discussion on self-awareness. The presentation of evidence-based data from the study findings will also serve as a powerful conduit to decreasing resistance. Nurses are conditioned to utilize evidence-based information to facilitate change in clinical practice and the importance of this is emphasized throughout nursing education.

I have always espoused the philosophy of servant leadership, which purports that the leader is in essence a servant first and leader second (Greenleaf, 1991). Opportunities to emulate the characteristics of servant leadership during the workshop are numerous. Listening to the concerns, learner presentations, questions, and feedback of students are included in each of the 3 days of the workshop. Those who may be vocal about the barriers to change or are in other ways displaying skepticism about the merits of best online practices will be treated with the acceptance and empathy that is associated with nonjudgmentalism. In fact, the resistance expressed will likely offer concerns that had not been previously considered. Sensitivity to the rationale behind resistance will be required to encourage a classroom culture of open-communication and respect for the dignity of

all. As I designed the program, I was mindful of the need to balance change management philosophy and servant leadership in working with faculty who may not be predisposed to embrace the tenets of the CoI and apply the constructs to their online teaching and learning strategies.

Analysis of Self as Scholar

Throughout the study, including the program development segment, I recognized that my impatience resulted in a sense of frustration and discouragement. I discovered that my assumptions about my work may or may not align with the assessments conducted by my professors and realized early in the program that the value and magnitude of what I was learning far outweighed the angst produced by my habit of impatience. For the most part, I managed to sustain my optimism and the joy of learning. I recognized the importance of precision and believe my scholarly writing skills have dramatically increased as well as my ability to clearly communicate my meaning as opposed to assuming that the reader of my work would comprehend the meaning without the inclusion of details I deemed unnecessary.

Research has always been a fascinating endeavor for me and the investigatory component of the study brought many hours of joy into my life. I learned that I need to overcome the temptation to skim the content of articles due to impatience. My understanding of online learning was magnified when I practiced annotating the core articles for comprehension. The outcome of investing the time and energy in reading more carefully was well worth the time involved in a more deliberative reading method.

I learned that the “addiction” to study can become a barrier to maintaining good

health and sustaining relationships. I had often observed doctoral candidates sitting on the sidelines with their laptops in hand, typing furiously and frequently. My mantra was "to complete a master's degree program, students must be driven; in a doctoral program, they must become passionately obsessed." Although I made concerted efforts to balance study with activities to facilitate physical, emotional, and mental health, I was largely unsuccessful. In retrospect, my perfectionism was my enemy in that my numerous rewrites and redesigns were self-inflicted and added to my stress and feelings of overwhelming fatigue. I learned that the seductive nature of scholarship can be resisted through the support, encouragement, and patience of family and friends. In short, scholarship, as I stated earlier, does not occur in a vacuum.

Analysis of Self as Practitioner

A continuous transfer of learning took place. I was able to translate the theoretical components of my study into practical application in my classroom. I experienced an epiphany about the nature of teaching and am incorporating my new knowledge into the courses I teach in hopes that it will facilitate higher order thinking among my students. My teaching and learning strategies have been profoundly impacted by my involvement in the doctoral program and my CT skills are much stronger than before I enrolled. I am applying those skills in very different ways and, although some of the strategies have fallen short, many others have been successful and appreciated by students.

I will be teaching my first fully online course in the next semester and have converted a face-to-face course into a hybrid with four modules that focus on collaborative online learning. These occurrences have revitalized my passion for teaching

and have strengthened my resolve to continue to work toward integrating CT into online education.

That said, I continue to grow and readily admit that I do not know what I do not know. My online teaching ability will require advanced education in this area to facilitate the effectiveness of my techniques. Although I recognize the profound impact of new knowledge on my professional practice, I am also aware that learning is a life-long process and that it not only benefits the individual scholar but must be disseminated so that others can reap the benefits. The faculty development workshop will provide an opportunity for me to serve as an agent for transfer of learning and dissemination of information and promote the goal of increasing patient safety and quality of care.

Analysis of Self as Project Developer

I learned the importance of surrendering my personal and professional concerns to create a program that would be in the best interest of the RNs moving into an advanced practice arena. The goal of enhancing patient safety and quality care by maximizing the proficiency of caregivers in problem-solving, collaboration, and higher order thinking had to transcend my assumptions about collegial receptivity to the workshop.

Using the three-stage backward design model expedited my ability to develop the project. Beginning with the end, so to speak, provided a development pathway that enabled me to stay on track with ensuring congruency between the learning objectives, goals, workshop content, and the evaluation. Although my organizational skills are strong, the questions to be asked to create student understanding and transfer of learning mitigated the challenge of how to organize the project content to best meet the goals of

the workshop. Thought-provoking questions such as "What meaning should students make in order to arrive at important understanding?" and "What essential questions will students explore?" were aligned with the facilitation of CT skills and were used in the design of each day (Wiggins & McTighe, 2005). In the second stage of the backward design, I considered the criteria by which the performance would be assessed in light of the stage one desired results and determined that the learning objectives would guide the evaluation. Finally, in order to scaffold the content, and ensure that all three stages of the backward design were aligned, I especially focused on "How will the unit be sequenced and differentiated to optimize achievement for all learners?" My familiarity with LSPs of the undergraduate student will need to be expanded. I think I fell short in making my intentions clear in this area and as a project developer over all, will be more attentive to incorporating LSP strategies that are student-centered.

The Project's Potential Impact on Social Change

For many years I have believed in and promoted the application of CT as an essential element of effective communication. The practice of reflecting prior to responding is antithetical to the quick-fix mentality and automatic reactions prevalent in society today. The use of CT has the potential to invalidate inaccurate assumptions, mitigate judgmentalism and bias, prevent and resolve conflict, and provide objectivity in problem-solving. I believe that the practice of Socratic inquiry fundamental to CT has the power to change the world for the better and the spirit of inquiry that forms a CoI is key to the ability to develop higher order thinking skills.

One of the benefits of asynchronous online learning is the opportunity it affords to

reflect on a particular question or topic. When I discovered the CoI framework of online learning and its focus on the use of inquiry to facilitate TP, SP, and CP, I realized that the caliber of meaningful reflection is predicated upon the caliber of the questions asked, the propensity of the assignment topic to generate CT, and the ability of the instructor to facilitate collaborative learning. The influence of collaborative problem solving on the development of higher order thinking skills cannot be underestimated and should be a strategy for learning in online education. Because of its emphasis on collaborative learning as a conduit to CT development, the formulation of a CoI using best-practice online teaching techniques became the theme of the faculty development workshop.

Distance education in nursing is increasing as a platform for RN to BSN degree completion programs. Nurses who graduated from traditional face-to-face BSN programs are immersed in the development of CT throughout the span of undergraduate education. Small group discussions, group project assignments and Socratic questioning by the instructor are just a few of the teaching-for-CT methods employed by faculty. It is imperative that the quality and ability to integrate CT into advanced practice are developed in online nursing education. Health care practitioners are now working collaboratively to provide patient care. The need to participate meaningfully in interprofessional environments and the increase in patient acuity requires the nurse to be proficient in CT. If the CoI is embraced by the faculty attending the workshop and incorporated along with best practices, collaborative learning will foster the competency of the practitioner in CT which, in turn, will enhance their ability to ensure patient safety and contribute to improving the quality of care.

The societal benefits derived from online RN education that incorporates the CoI are significant. The propensity of higher order thinking skills to improve the quality of care and patient safety can be actualized in multiple areas of patient care. CT developed through collaborative online learning in RN to BSN programs will not only maximize the accuracy and efficacy of patient health care assessments, it will foster the application of research to practice essential to quality improvement, and enhance the ability of RNs to communicate collaboratively with other care providers to avoid medical errors. The spirit of inquiry requisite to the practice of CT will encourage the RN to question assumptions. Invalid assumptions can serve as a barrier to compassionate, empathetic problem solving and decision making. Instructors must provide the impetus behind an ongoing commitment to patient safety through collaborative education. It is through a teaching and learning strategy that requires substantive student collaboration that such a commitment is enabled.

Implications, Applications, and Directions for Future Research

Advanced nursing practice requires the ability to integrate shared perspectives produced by CT that contribute to decision making and higher level problem solving. The effectiveness of the CoI as a catalyst to CT has been demonstrated and now requires dissemination of the value of the CoI approach to online learning in nursing education. The integration of the CoI constructs as an online learning framework has immense potential and is especially suited to nursing education in its inherent holistic approach to meaningful learning. CoI philosophy and the premises upon which the constructs are based are congruent with crucial aspects of nursing development. For example, the

emphasis on development of SP indicators such as caring, connection, and relationship building in online RN to BSN education can ultimately enhance the presence of an essential element of nursing practice. The cultivation of caring attitudes and actions in the discipline of nursing has implications for both patients and students and it is of concern that online learning is devoid of the emulation of caring behaviors practiced by instructors in traditional classrooms. It has been demonstrated that the caring behaviors of health care providers and the resulting feelings of patient trust and sense of connectedness have a positive impact on patient safety and health outcomes (Cronenwett et al., 2007).

Health care continues to undergo transformation as a result of technological advances. Because of the focus on computerized communication, patients are often treated in ways that are "high tech" as opposed to "high touch." The inability of the nurse to differentiate between when to be attentive to the computer to obtain patient data, lab values, test results and physician orders and when and how to apply higher order thinking skills in order to identify and solve problems essential to patient safety can result in placing the patient at risk. The absence of interpersonal relationships between the care providers and the patients and family leads to diminished levels of trust which, in turn, discourages open communication that can result in the omission of patient information that needs to be expressed to the providers in order to provide care that is safe and high in quality.

Constructivist learning theory is integrated into the teaching and learning strategies of nursing education, including the development of collaboration skills. This is

germane to online learning because, if constructivism recognizes the essential role of collaboration with peers and instructors, and if a goal of baccalaureate nursing education is to cultivate CT in students, the CoI is an ideal construct to assess student perceptions of the elements that suggest the presence of collaborative learning and CT.

Future studies of the impact of a CoI in online nursing education are needed in addition to research on the overall efficacy of learning in RN to BSN programs. A larger sample size from a wider range of universities is suggested.The perceptions of students who were not reporting high levels of work/life responsibilities were not explored in the study. Because the majority of students enrolled in RN to BSN programs are employed, it would be important to conduct a comparison of the perceptions of online learning between nurses who were experiencing some degree ofwork/life responsibilities and those who were not.

Only one of the eight campus sites required a pre- and post-course 2- hour face-to-face meeting of enrolled students. Research on whether there is a difference in perceptions of students who participated in a hybrid form of a particular course and those who did not may lead to the incorporation of face-to-face assignments in online programs as best practices.

Conclusion

In this section, a number of self-analyses were conducted and philosophies related to teaching and learning were explored. The actualization of scholarship is not an independent process. It requires knowledge and perspective sharing with others to objectify and affirm the subject under study. The evaluation of the project development

was in itself, a scholarly exercise and indicated that, although I am experienced in adult program design, the development of a workshop for esteemed colleagues gave me pause.

Upon reflection, several thoughts emerged on the topics of leadership and change. The awareness and application of change management principles is an important component to the success of the workshop and those who verbalize resistance to change should be treated with respect and dignity. Servant leadership is a philosophy that can guide an approach to functioning as a change agent. The idea that a leader is first, a servant and second a leader calls for a nontraditional perspective on the leadership role.

Regarding my role as scholar, my self- analysis resulted in the realization that an impatient, perfectionistic attitude toward scholarship is self-defeating. Creating a balance between a rapid perusal of literature and the annotation of an article to grasp its underlying meaning is a way for me to minimize frustration and the sense of feeling overwhelmed.

My ability to transfer theory to practice was described as continuous in the analysis of self as practitioner. The impending transition from traditional classroom teaching to online instruction calls for me to continue the acquisition of knowledge that will facilitate my effectiveness in using the online teaching and learning strategies. Fortunately, much of that knowledge was acquired during the study in general and during the development of the project in particular. Best online learning practices, the processes involved in facilitating an online CoI, and the benefits of employing a backward design in course development will provide invaluable contributions to my transition from novice to expert in the online education milieu.

The implications of the impact of CT on patient safety and quality of care were recounted in the final paragraphs of this section. Helping faculty appreciate the potential of incorporating the CoI philosophy and constructs into their online teaching to enhance student proficiency in CT could lead to better health outcomes in both in-patient and outpatient settings. As an educator, I believe the most valued accomplishment of a well-educated mind is the ability to discern what questions should be asked. To encourage a spirit of inquiry in students, educators must model the courageous questioning that emerges from critical thinking in order to challenge assumptions and the status quo.

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Appendix A: The Project

Student-centered Online Learning: Optimizing Cognitive, Social, and Teaching Presence

Professional Development/Training Curriculum and Materials

Table of Contents

Introduction

As distance education becomes increasingly prevalent in nursing education, instructors transitioning from traditional teaching and learning methods need to become aware of the changing role of faculty as they face the challenges inherent in computer mediated education. RNs who aspire to obtain a BSN are gravitating to online learning as an increasingly popular alternative to traditional degree completion programs. Townsend (2015) conducted a study of 109 students enrolled in an online RN to BSN program to explore perceptions of the constructs of a Community of Inquiry (CoI) (Garrison, 2007). Her findings demonstrated that a variety of factors influenced student perceptions of the teaching, social, and cognitive presence that facilitate meaningful online learning and critical thinking in a CoI. Based on the results of the study, she designed a 3 day faculty development workshop to expand the overall understanding and use of best practices in online teaching and learning. This highly interactive workshop is comprised of lecture, group discussion, and opportunities for online collaborative problem-solving. Faculty participants will align adult learning theory, best practices in online learning, experiential activities and collaborative learning before, during, and after the workshop.

The workshop is designed to enhance the teaching skills of a diverse faculty audience who are currently or will be teaching in online nursing education programs. The level of workshop content is applicable to a diverse audience, from novice to expert in online teaching and learning.

Workshop Goals

The workshop is guided by five general goals which are designed to:

- optimize the ability of online educators to design and facilitate collaborative online learning experiences that cultivate the critical thinking (CT) skills of faculty participants.
- demonstrate the relationship between self-awareness and effective online teaching as well as the role of self-awareness in the design, delivery, facilitation, and evaluation of online courses, student interactions, and meaningful learning.
- enable educators to incorporate the principles of the CoI framework, with an emphasis on teaching presence, into online course development and delivery.
- increase the self-efficacy of faculty in the integration of CoI principles and best practice online teaching and learning strategies into online nursing courses.
- foster the ability of faculty to identify the learning style preferences of students and adapt the course content and teaching strategies accordingly.

A major intended outcome of the workshop is to enhance faculty proficiency in online teaching and learning to facilitate RN development of the advanced skills requisite to providing safe, high quality, professional patient care. Learning objectives have been identified to make the outcome expectations explicit and to serve as evaluation parameters. The objectives are derived from studies that substantiate the benefits of establishing and sustaining a CoI (Anderson et al., 2001) and provide the rationale behind integrating best practices in online teaching and learning into course design and delivery (Breen, 2013; Chickering and Ehrmann, 1996; Dewey, 1933; Du et al., 2013; Garrison,

2005; Kala et al., 2010; Kolb, 1984; Pololi & Frankel, 2005; Vitale, 2010; Vgotsky, 1962).

Learning Objectives and Outcomes

The extent to which the program meets the learning objectives will be assessed in a summative evaluation at the end of the third day. The objectives are based on study findings that are considered conducive to proficiency in online teaching.

By the end of the workshop, participants should be able to:

- explain the underlying rationale behind the integration of an online CoI by developing strategies to create community.
- differentiate between the three constructs of the CoI including indicators through the integration of best practices to facilitate their presence.
- integrate an understanding of self-awareness principles into online teaching practices by recognizing and working to avoid personal bias in the development of online learning techniques.
- identify and collaboratively develop pedagogical strategies that promote online interaction by completing a team project designed to synthesize workshop learning.
- incorporate differentiated instructional strategies based on student learning style preference assessments into online course design.
- apply the teaching and learning strategies incorporated into the collaborative project to the design and instruction of online courses.

- develop a transfer of learning plan for the integration of workshop content into online practice.

Faculty Confirmation Letter

An invitation to attend the workshop and instructions for reservation will be offered to potential participants. One week prior to the workshop, those participants who have registered will receive e-mail confirmation of their registration and information regarding assigned pre-work as follows.

Dear faculty:

This note is to confirm your registration for the workshop "Student-centered Online Learning: Optimizing Cognitive, Social, and Teaching Presence." A link to the workshop electronic site is provided where you will locate your assigned group in a communication forum.

In preparation for Day One of the workshop, please collaborate with your group to:

1. introduce yourself (brief personal/professional background). Include a photo.
2. craft a "Team Philosophy of Technology in Education" (in 2 – 3 paragraphs, articulate your group's beliefs about the use of technology in education).
3. select a "team title" with the rationale behind your choice.
4. determine how you will introduce your team to the class (plan to create a PowerPoint presentation comprised of the introduction, team title, and philosophy for a maximum of ten minutes).

In addition, prior to the workshop, please individually complete the online Enneagram Personality Assessment (advanced format) at http://similarminds.com/advtest.html and bring your assessment "number" to the

workshop. (Attached is a brief explanation of the Enneagram). Also complete Kolb's Learning Style Inventory (attached) – we will be discussing your results during the workshop.

We will be using computers during all of the sessions so bring your lap-top and a jump drive. I will be distributing hard-copy "participant packets" via interoffice mail today that include instructions for project completion, assigned readings for each day, and an agenda to assist you in pre-planning. Reading the assigned articles prior to each day will facilitate your ability to participate in small group activities scheduled during the workshop and will be essential to the development of a team collaborative learning project.

I look forward to learning with you and sharing ideas about creating effective online education strategies. Please contact me with any questions you may have.

Best regards,

Beth Townsend MSN, RN

Workshop Overview

This workshop was designed by Beth Townsend, MSN, RN based on the findings of her 2015 study "Student Perceptions of the Community of Inquiry (CoI) in an Online RN to BSN Degree Completion Program." The topics selected for the workshop are intended to enhance faculty understanding of online teaching and learning using the CoI framework. Structured to be delivered in a 3 day hybrid format, the workshop includes both online and in-class forums that are intended to promote small group collaborative learning. Group projects, experiential activities, and lectures are designed to prepare faculty for the transfer of learning. Selected pre-readings are assigned to faculty to provide the baseline knowledge necessary to participate in group discussions, activities and projects.

A participant packet will be distributed to faculty after they have registered online via interoffice mail. Packet contents include the assigned readings and agendas for each day, a formative and summative evaluation, and a transfer of learning survey.

A "Facilitator Guideline" has been developed to explicate the agenda and to recommend teaching and learning strategies for each topic and activity.

Following are the faculty materials to be included in the participant packet and the facilitator guidelines that provide a brief overview of the lesson plan for each day.

Participant Packet: Document 1

Day 1 Theme: Theoretical Frameworks (Classroom)

Subtopics: Self-Awareness, Community of Inquiry, Adult Learning Theory

Preparatory reading:

Felder, R. (1996). Matters of style. *ASEE Prism, 6*(4), 18-23.

Howe-Murphy, R. (2007). *Deep coaching: Using the enneagram as a catalyst for profound change.* El Granada, CA: Enneagram Publishing.

Nagel, L., & Kotze, T. (2009). Supersizing e-learning: What a CoI survey reveals about teaching presence in a large online class. *Internet and Higher Education,* doi: 10.1016/j.iheduc.2009.12.001.

Ryan, M., Carlton, K., & Ali, N. (2004). Reflections on the role of faculty in distance learning and changing pedagogies. *Nursing Education Perspectives, 25*(2), 73-80.

Vitale, A. (2010). Faculty development and mentorship using selected online teaching strategies. *The Journal of Continuing Education in Nursing, 41*(12), 549-556.

Wei, C., & Chen, N. (2012). A model for social presence in online classrooms. *Educational Technology Research and Development, 60,* 529-545.

Overview of the Day

The emphasis today is on creating connections between faculty and the facilitator. We will focus on self-awareness and its impact on teaching and learning by discussing the results of the enneagram and Learning Style Preference (LSP) assessments. The CoI online framework will be introduced and its role in enhancing the efficacy of online learning will be explicated. Results of the Townsend (2015) doctoral study of RN to BSN

students' perceptions of online learning (based on the CoI model) and the alignment of her study findings with the workshop content will be explored. Adult learning theory and its relevance to online pedagogy will be described and the best practices for online learning derived from theoretical concepts will be examined. Day 1 will conclude with an opportunity for small groups to begin collaborating on the team project and the completion of a formative evaluation.

Day 1 Agenda

8:30 – 9:00 a.m.	Continental breakfast
9:00 – 10:00 a.m.	Welcome, introductions including LSP and Enneagram number, workshop overview
10:00 – 10:45 a.m.	Introduction to the Enneagram (self-awareness) and the Kolb LSI Lecture and large group interaction
10:45 – 11:00 a.m.	Break
11:00 – 12:30 p.m.	Introduction to the Community of Inquiry (CoI) Lecture Presentation and group discussion of findings from "Student Perceptions of the CoI in an Online RN to BSN Degree Completion Program" Discussion of student feedback from interviews: "What Works and What Won't"

12:30 p.m. – 1:15 p.m.	Lunch
1:15 p.m. – 2:00 p.m.	Adult Learning Theories and Online Learning– lecture and small group discussion
2:00 p.m. – 2:15 p.m.	Break
2:15 p.m. – 3:15 p.m.	Creating Community: Best Practices in Cognitive, Social, and Teaching presence – lecture and small group learning activity.
3:15 p.m. – 4:00 p.m.	Team Project*: Best Online Practices for Cognitive, Teaching, and Social presence – initial small group planning
4:00 p.m.	Formative evaluation and adjourn

*Project: Collaborate with pre-assigned team members to develop online best practice strategies for cognitive, social and teaching presence used to create communities of learning. Your completed project will include identification of a guiding learning theory or best practice; learning objectives; a description and rationale for each strategy; the actual online learning activity; and an evaluative process. Finally, your team will prepare a 30 minute visual presentation to be delivered to the class on day 3.

Participant Packet: Document 2

Day 2 Theme: Best Practices (Classroom)

Subtopics: Critical Thinking, Collaborative Problem-Solving, Differentiated Learning Evaluations and Assessments

Preparatory reading:

Ally, M. (2004). Foundations of educational theory for online learning. *Theory and Practice of Online Learning, 2,* 15-44.

Maor, D. (2003). The teacher's role in developing interaction and reflection in an online learning community. *Computer Mediated Communication, 40*(1), 127-137.

McCarthy, B. & McCarthy, D. (2006). *Teaching around the 4MAT cycle: Designing instruction for diverse learners with diverse learning styles.* Chapters 1 and 2. Thousand Oaks, CA: Corwin.

Rovai, A. (2007). Facilitating online discussions effectively. *Internet and Higher Education, 10,* 77-88.

Saade, R., Morin, D., & Thomas, J. (2012). Critical thinking in e-learning environments. *Computers in Human Behavior, 28,* 1608-1617.

Shea, P., Vickers, J., & Hayes, S. (2010). Online instructional effort measured through the lens of teaching presence in the community of inquiry framework: A re-examination of measures and approach. *International Review of Research in Open and Distance Learning, 11*(3), 127-153.

Swan, I., Shen, J., & Hiltz, S. (2006). Assessment and collaboration in online learning. *Journal of Asynchronous Learning Networks, 10*(1), 45-62.

Vitale, A. (2010). Faculty development and mentorship using selected online teaching strategies. *The Journal of Continuing Education in Nursing, 41*(12), 549-556.

Overview of the Day

Day 2 will focus on the practical application of the theory and content discussed

in day 1. The role of LSP in online learning will be explored in addition to the differentiated learning strategies used to accommodate a variety of LSPs. A CoI construct, teaching presence (TP) will be discussed in detail and specific teaching techniques used to provide collaborative learning through problem-solving will be presented. Faculty will work in groups to design an online learning assessment followed by a continuation of team project work.

Day 2 Agenda

8:30 a.m. – 9:00 a.m.	Continental breakfast
9:00 a.m. – 11:00 a.m.	Learning Style Preferences (LSP) Differentiated Learning Online Learning and Critical Thinking (CT) Lecture Facilitation and Teaching Presence - lecture Small group learning activity – BSN Essentials
10:30 a.m. – 11:00 a.m.	Online Learning and Collaborative Problem-Solving Small group learning activity – "Designing Online Discussion Questions"
10:45 a.m. – 11:00 a.m.	Break
11:00 a.m. – 12:00 p.m.	Small group report-outs on CT and Problem Solving activities
12:00 p.m. – 12:45 p.m.	Lunch

12:45 p.m. – 1:15 p.m.	Rubrics for Online Learning Assessment – lecture
1:45 p.m. - 2:15 p.m.	Small group activity - development of online learning assessment strategies and transfer of learning plan.
2:15 p.m. – 2:30 p.m.	Break
2:30 p.m. – 3:30 p.m.	Development of online learning assessment strategies, continued. Small group report-outs.
3:30 p.m. – 4:00 p.m.	Continue team project work
4:00 p.m.	Formative evaluation and adjourn

Participant Packet: Document 3

Day 3 Theme: Practical Application (Three Hours Online: Two Hours Classroom)

Subtopics: Online Collaboration Experience and Report-Outs

Overview of the Day

Teams of faculty will collaborate on their group project assignment online throughout the morning. Given the responsibilities of full time faculty, the ability to use workshop time to complete the project will be much appreciated. Throughout the afternoon, teams will present their project and a feedback discussion will be facilitated. The purpose of the dissemination of a transfer of learning survey 2 months after the workshop will be explained. A follow-up online teaching support group session will be scheduled and the day will conclude with faculty completing a summative evaluation

Agenda

9:00 a.m. – 12:00 p.m.	Online group assignments (work within forums in LMS)
12:00 p.m. – 12:45 p.m.	Lunch
12:45 p.m. – 3:00 p.m.	Presentation and discussion of online group assignments
Breaks as needed	
3:00 p.m. – 4:00 p.m.	Continue team project presentations if necessary Faculty reports of transfer of learning plan and selection of pre-test for online students.
4:00 p.m.	Workshop summative evaluations and adjourn

Participant Packet: Document 4

Formative Evaluation (To be completed at the end of days 1 and 2)

What new knowledge was relevant and applicable for you?

What did you learn that has or will enhance your skills in online teaching?

Which, if any, experience has challenged your previously held perspectives?

Participant Packet Document 5

Summative Evaluation

This summative evaluation is based on the learning objectives articulated at the start of the workshop. Your feedback is very much appreciated and will be used to enhance the quality of future workshops designed for faculty development of online teaching skills.

Based on a scale from 1 = Strongly Agree to 5 = Strongly Disagree, please circle the number which indicates the extent of your agreement with each of the workshop objectives.

By the end of the workshop, I was able to:	SA	A	N	D	SD
1. explain the underlying rationale behind the integration of an online CoI by developing strategies to create community.	1	2	3	4	5
2. differentiate between the three constructs of the CoI including indicators through the integration of best practices to facilitate their presence.	1	2	3	4	5
3. integrate an understanding of self-awareness principles into online teaching and learning practices by recognizing and working to avoid personal biases in the development of online learning techniques.	1	2	3	4	5
4. identify and collaboratively develop pedagogical strategies that promote online interaction by completing a team project designed to synthesize workshop learning.	1	2	3	4	5
5. apply the teaching and learning strategies incorporated into the collaborative project to the design and instruction of online courses.	1	2	3	4	5

6. develop a transfer of learning plan for the integration of workshop content into online practice. 1 2 3 4 5
7. describe the components of an online course evaluation in the development of an online learning rubric. 1 2 3 4 5

Please respond to the following:

1. How might you apply what you learned during the workshop?
2. What could be added, omitted, or changed to enhance your learning experience?
3. Please share any additional comments you may have.

Prior to the closing, disseminate information on the dates and locations of the OLLSG to each group of students and encourage their participation in mentoring and supporting each other toward enhancing the effectiveness of online teaching and learning. Express appreciation for faculty participation in the workshop and provide assurance of your continued commitment to advance the effectiveness of online learning at the university.

Participant Packet Document 6

To be distributed online 2 months following the workshop

Transfer of Learning Survey

To evaluate the quality of your preparation to transfer your learning from the faculty development workshop to your teaching, please place an "x" next to the number that best represents your view. Email your completed survey to bethann.townsend@waldenu.edu. Thank you!

Transfer of Learning from the Faculty Development Workshop to your Online Teaching and Learning

Please circle the number that best represents your opinion.

1 = No 2 = Somewhat 3 = Yes, definitely

1. During the workshop, I had a clear understanding of what and how to apply to my online teaching practice. 1 2 3
2. The transfer of learning activity conducted during the workshop contributed to my ability to apply what I learned. 1 2 3
3. If I needed to change what I was expected to apply to my online course(s) I was easily able to negotiate those changes.1 2 3
4. I felt comfortable with my ability to create a CoI in my online course(s). 1 2 3

In general, did the planned transfer activities assist you in applying what you had learned? Please explain your response.

Which topics would be most helpful to you if they were included in the support group sessions? Please place a checkmark next to your response(s).

____ Developing an online CoI

____ Online learning assessments

____ Strategies to engage students based on LSP

____ Problem-based learning

____ CT

Other requests:

Instructor Facilitation Guidelines

To assist the workshop instructor in understanding the content, offer recommended teaching strategies, and to promote effective delivery of the program, the following guidelines have been developed. Corresponding with the agendas for each day, each segment includes an overview of the content, recommended delivery method, and a list of materials required for the day.

Instructor Facilitation Guidelines (Corresponds to the Lesson Plan Above)

Day 1`Overview

Introduction.

The emphasis today is on creating connections between faculty and the facilitator. Focus on self-awareness and its impact on teaching and learning by discussing the results of the enneagram and Learning Style Preference (LSP) assessments. A number of learning theorists purport that self-concept and self-awareness are linked to teaching skills (Brookfield, 1987; Palmer, 2003; Pololi & Frankel, 2005). Howe-Murphy (2007) and Levine (1999) agreed that educator self -awareness and an understanding of personal predispositions are fundamental to the practice of student-centered teaching. Invite students to share their enneagram number.

Introduction to the Enneagram.

Deliver slide presentation of enneagram and its relevance to teaching. Encourage faculty interaction throughout the presentation.

Introduction to the CoI online framework.

According to Garrison, et al (2001), the CoI framework

- elucidates processes and behaviors required to construct knowledge.
- consists of several forms of "presence" which include three core elements: cognitive presence (CP), social presence (SP), and teaching presence (TP) (Shea & Bidjerano, 2009).
- is formed by the interaction of CP, SP, and TP.
- encourages collaborative learning to cultivate CP.

Present Townsend (2015) study results.

Present the results of the Townsend doctoral study of RN to BSN students' perceptions of online learning (based on the CoI model) and the alignment of her study findings with the workshop content.

- Quantitative comparisons of each construct across courses demonstrated that overall levels of perception did not differ widely.
- Courses designed to impart knowledge and less dependent on interaction, can still be effective.
- Perceptions of TP were reported as high in only two courses; perceptions of SP was high in three courses; and perceptions of CP were high in six of the 14 courses offered during the Spring semester sessions.
- Collaborative learning was limited or absent.

Conclude the presentation of study findings with the feedback from the interviewees.

Discuss Feedback from Interviewees

Feedback from Interviewees

"What Works and What Doesn't"

Succinctly comment on the importance of each concept as it relates to successful online teaching and learning.

Teaching Presence

Design	…she was very knowledgeable, presented herself very well. She was very well spoken. Her instructions were easily understood…you could really know what she wanted…it was her style that made all the difference."
Instruction	"I love structure and instruction. Like a lot of structure. So you can know what's expected of you then I can take care of it."
Feedback	"Great job doesn't help me learn. I usually do really well but I actually want to discuss the information as well as grades." "It doesn't help if instructor says if you don't hear from me you're doing fine. I want feedback regularly so I know what I did right or wrong to prepare for the next assignment. They build on each other."
Facilitation	"She had me thinking in ways I had never thought before. I didn't even like the class but it was fine. It made it meaningful to me because she was willing to put her effort into it."

Social Presence

Design	"Introductions on discussion boards need to be done every time – that really helps. Photos make it easier to discuss with people you don't know. Smaller groupings make discussion forums more personal." "There was the project at the end…I mean we participated as a group, but you weren't doing anything with the other people. You came as your own person and then you just took part in the group activity."
Instruction	"My only complaint about (the groups) was just the students, when I would send an email, I wouldn't hear for maybe 5-7 days. There should have been stricter guidelines on the group thing." "I really appreciated (the instructor) going over what her nursing history was and how she went from a brand new nurse to teaching so much, and it was encouraging. It was encouraging listening to the other students and what their aspirations were."

Cognitive Presence

Instruction	"I like the idea of looking up studies that have to do with the topic: teaching nurses how to go deeper, and where that information is available."
Facilitation	"(When) we had to ask questions ourselves to our fellow students and then they have to answer it. …the questions couldn't be like yes or no. They have to be more critically

	thinking questions. I personally thought that that helped. I don't think the instructor needs to be there to get people to think critically. I think it's all in the assignment."
Design	"(When) we had to ask questions ourselves to our fellow students and then they have to answer it. …the questions couldn't be like yes or no. They have to be more critically thinking questions. I personally thought that that helped. I don't think the instructor needs to be there to get people to think critically. I think it's all in the assignment."

Adult Learning Theory and Best Practices

Discuss the relevance of adult learning theory to online pedagogy. E-learning is based on educational theories that are rooted in behaviorism, cognitivism, and constructivism (Anderson & Dron, 2011; Conole, Dyke, Oliver, & Seale, 2004; Evgeniou & Loizou, 2012). Best practices to develop TP, SP, and CP are based on student-centered learning. Socratic inquiry, problem-based learning, case studies, collaborative projects all contribute to interaction and meaningful learning.

Collaboration on Project Development.

Day 1 will conclude with an opportunity for small groups to begin collaborating on the team project and the completion of a formative evaluation.

Allow 45 minutes for small group discussion regarding their project. Explain that faculty should consult the pre-reading literature, content from today, and scholarly resources found online during the workshop to develop the team project. Refer to the project description on the day 1 agenda as follows:

*Project: Collaborate with pre-assigned team members to develop online best practice strategies for cognitive, social and teaching presence used to create communities of learning. Your completed project will include identification of a guiding learning theory or best practice; learning objectives; a description and rationale for each strategy;

the actual online learning activity; and an evaluative process. Finally, your team will prepare a 30 minute visual presentation to be delivered to the class on day 3.

Day 1 Teaching Strategies	**Materials**
Facilitation	LED projector and presentation slides
Lecture that engages student participation	Extra participant packets
Small group collaboration	Formative assessments
	Extra flash drives

Day 2 Overview

Introduction to LSPs

Deliver content by slide presentation. According to Smith (2010) studies of the LSP of nursing students enrolled in traditional classrooms have most frequently used Kolb's (1984) learning style inventory (LSI) which delineates four styles:

- diverger (appreciates multiple perspectives, group work and brainstorming sessions);
- assimilator (is a thinker and watcher, appreciates ideas and abstract concepts);
- converger (is a thinker and doer who is less concerned with people)
- accommodator (is a feeler and doer, people-oriented with an intuitive trial-and-error approach to problem-solving).

In a study of LSPs of nurses enrolled in an online RN to BSN program, Smith (2010) found the predominant learning style was accommodator. She stated that working

in groups can be challenging for the assimilator and converger and stressed the importance of accommodating all learning styles in an online course. Invite students to share their LSP and facilitate a discussion to encourage understanding of its relevancy to online learning.

Online learning and CT.

In the context of a CoI, CT is referenced as higher order thinking facilitated by collaborative learning. The process of CT consists of four categories including: a triggering event; an exploration for information, knowledge and alternatives to understand the situation; integrating the knowledge and information to gain insights; and resolution of the problem with an application of an idea or hypothesis (Garrison, Cleveland-Innes, & Fung, 2010). Discussion questions that evoke higher order thinking are essential to the development of CP.

- The use of questions that help nursing students link the new knowledge to professional practice and course objectives; (Vitale, 2010).
- Use ill structured problems, case studies, collaborative project work, post substantive questions requiring higher order responses.

The Essentials of Baccalaureate Education for Professional Nursing Practice (BSN Essentials).

Participants are familiar with the purpose, content, and importance of compliance with the BSN Essentials. Therefore, a discussion or explanation of the document is unnecessary.

- Emphasize the sections that address CT as a competency to be developed

in nursing education.

- Review the relationship between the Essentials and online learning.

Collaborative Problem Solving

The ability to solve problems in collaboration with others is fundamental to the provision of safe, high quality nursing care. Effective, collaborative participation in online problem solving calls for the use of higher order thinking skills, an essential component in educational preparation for practicing in a team-based health care environment. Collaborative learning in the traditional classroom has been explored extensively and outcomes have substantiated the positive correlation between collaborative learning strategies, such as problem-based learn (PBL), team-based learning (TBL) and the development of CT skills (Alkhasawneh, Mrayyan, Docherty, Alashram, & Yousef, 2008; DeGraff & Kolmos, 2003; Hmelo-Silver, 2004; Pate & Miller, 2011; Rogal & Snider, 2008).

Facilitate a small group activity asking faculty to resolve unstructured problems such as:

- Physician-assisted suicide should be legalized in every state.
- Artificial insemination should be an option for single women.
- Adolescents should be able to make their own life-and-death decisions.
- The use of synthetic biology to “create life” should be encouraged.

Have each group describe the experience to the class.

Online learning Assessments.

- Puzziferro (2008) used the Motivated Strategies for Learning Questionnaire (MSLQ) to measure learning strategies and the Online Technologies Self-Efficacy Scale (OTSES) to measure online learning self-efficacy.
- Taylor and Maor (2000) designed the Constructivist On-Line Learning Environment Survey (COLLES) to measure student perceptions of six constructs relative to online learning: professional relevance; reflective thinking; interactivity; cognitive demand; affective support; and interpretation of meaning.
- Murphy (2000) studied collaboration and problem solving by measuring learner progression through six stages of collaborative problem solving using an instrument developed from the online learning unit "Solving Problems in Collaborative Environments" (SPICE) (Murphy, 2000; Murphy, 2003).

Small group activity.

Participants will collaborate on explaining a variety of assessment methods. Assign each group a separate rubric and assessment tool to critique. Have groups report out.

Faculty will also independently develop a transfer of learning plan to be presented on day 3.

Teaching Strategies	**Materials**
Small group assignments	Extra participant packets

Facilitation of report-outs	LED projector and slides
Slide presentations	Formative evaluations
	Extra flash drives
	BSN Essentials – 1 hard copy

Day 3 Overview

The morning is dedicated to group online, collaborative learning that synthesizes the workshop. Participants will work in online collaboration forums to finalize the project as described in the introduction to the workshop

During the afternoon, teams will present the completed projects and individuals will describe the transfer of learning plans best suited to their assigned courses. After each presentation, the instructor will facilitate a dialogic peer review consisting of questions and commentary to model the Socratic method.

Socratic questioning is highly conducive to CT and examples to elicit meaningful dialogue include:

"Why did you think that was important?

"What was it about the _____that made it a significantly powerful teaching method?"

"How did you determine the _____of the _____?"

"How did you reach that conclusion?"

"If something could be added or edited, what might that be?"

"What do you see as the strengths of the _____?

"What might have been done differently to enhance the _____?"

Prior to adjournment, schedule the time and date of the first online teaching support group and remind participants that they will receive a transfer of learning survey in approximately 2 months. Express appreciation for their participation and extend an offering to continue to serve as a resource for online teaching and learning.

Appendix B: Permission to Access Participants

OFFICE OF THE VICE PRESIDENT FOR RESEARCH

December 12, 2014

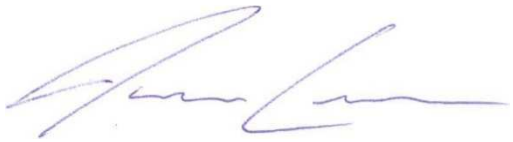
To Whom It May Concern,

Our office recently received an IRB application entitled, "Student Perceptions of the Community of Inquiry in an Online RN to BSN Degree Completion Program" from Beth Townsend, a Clinical Assistant Professor at the Indiana University School of Nursing. This project was approved as an exempt submission.

As a recruitment method, Ms. Townsend plans to send an email to a large number of nursing students. As an IU School of Nursing faculty member, she has legitimate access to this contact information. The Indiana University IRB has deemed this recruitment technique acceptable since this email will include a letter of invitation to participate in a completely voluntary research study. This sh1dy will have no bearing on any sh1dent grades or final evaluations.

If you have any further questions, please contact me at XXX-XXX-XXXX.

Sincerely,



XXXX, JD, CIP

Research Compliance
Consultant
Office of Research
XXXXX University
XXXXX
XXXXX

Appendix C: Participant Recruitment Letter - Survey

Dear RN to BSN student:

My name is Beth Ann Townsend. I am a doctoral student at Walden University and I am conducting a research study of RN perceptions of online learning. (You may already know me as a faculty member at Indiana University School of Nursing. However, this study is part of my doctoral research and is completely separate from and unrelated to that role). The purpose of this letter is to invite you to participate in the study by filling out a survey that takes approximately 15 minutes to complete.

I am conducting the study to gain a better understanding of online learning in nursing education. By completing the survey, you will be contributing invaluable information that will promote the advancement of best practices in computerized learning in nursing education. If you choose to participate, please click on the link to Survey Monkey provided below, followed by reading the informed consent information and consenting to participate in the study. I thank you for taking the time to consider this request.

Appendix D: Reminder Participant Recruitment Letter - Survey

Dear RN to BSN student:

This is a reminder that you are invited to take part in a doctoral study about online learning. To participate in the study, if you have not yet done so, please read the information below and consider completing a survey to provide your input.

My name is Beth Ann Townsend. I am a doctoral student at Walden University and I am conducting a research study of RN perceptions of online learning. (You may already know me as a faculty member at Indiana University School of Nursing. However, this study is part of my doctoral research and is completely separate from and unrelated to that role). The purpose of this letter is to invite you to participate in the study by filling out a survey that takes approximately 15 minutes to complete.

I am conducting the study to gain a better understanding of online learning in nursing education. By completing the survey, you will be contributing invaluable information that will promote the advancement of best practices in computerized learning in nursing education. If you choose to participate, please click on the link to Survey Monkey provided below, followed by reading the informed consent information and consenting to participate in the study. I thank you for taking the time to consider this request.

Appendix E: Informed Consent Quantitative Component

As a student enrolled in the Indiana University RN to BSN Degree Completion Program, you are invited to take part in a research study of RN perceptions of online learning. This form is part of a process called "informed consent" to allow you to understand the study before deciding whether to take part.

The study is being conducted by a researcher named Beth Ann Townsend, who is a doctoral student at Walden University. You may already know the researcher as a faculty member at Indiana University School of Nursing, but this study is separate from that role.

Background Information:

The purpose of this study is to increase educator and student understanding of online education by exploring student perceptions of the online learning experience. It will examine a variety of aspects of computer-mediated education, including higher order thinking and the most effective learning modalities.

Procedures:

If you agree to be in this study, you will be asked to:

- complete an online survey comprised of 34 statements related to the online course in which you are currently enrolled (if more than one course, please select only one course upon which to base your responses. You are also welcome to complete an individual survey for each course in which you are enrolled.) Surveys can be completed in an environment of your choosing.
- respond to five demographic questions with one or two words.

Here are some sample statements that you will respond to by using an "agreement" scale that ranges from 1 (strongly disagree) to 5 (strongly agree):

- The instructor provided feedback in a timely fashion
- I felt comfortable conversing through the online medium.
- I can apply the knowledge created in this course to my work or other non-class related activities.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at Indiana University or in the RN to BSN Completion Program will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life such as fatigue, or becoming upset. Being in this study would not pose risk to your safety or wellbeing. Potential benefits include providing future students and educators with a greater understanding of online learning. The knowledge gained through your perceptions of the learning experience will contribute to the advancement of computer-mediated education and its associated best practices. Study results will also assist in preparing RNs to practice at an advanced level, contribute to

patient safety and facilitate quality of care. All students and instructors in the RN to BSN program will have access to the summary of the results of the study.

Payment:

You will not receive payment for your participation in the study.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by storing it in a password-protected computer hard-drive kept in the home of the researcher in addition to a flash-drive that will be retained in a fire-proof lock box which can be accessed by the researcher alone. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions

If you have any questions, you may contact the researcher via cell phone at 317-709-5512 or email at bethann.townsend@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. Walden University's approval number for this study is 01-23-15-0343265 and it expires on January 22, 2016. **Please print or save this consent form for your records.**

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By completing the survey I understand that I am agreeing to the terms described above.

Appendix F: Community of Inquiry Survey

Your responses to the statements on this survey need to be based on your perceptions of ONE course. If you are enrolled in more than one course, you are welcome to complete a separate survey for each course (you may use the same link).Click on the course in which you are currently enrolled:

B331 Transition to Baccalaureate Nursing Practice

B304 Health Policy

B344 Comprehensive Health Assessment

B403 Gerontological Nursing

B404 Informatics

H355 Data Analysis

H365 Nursing Research

K301 Complimentary Health

K434 Global Health Issues in Nursing

P345 Pharmacology

R470 Clinical Capstone

S474 Applied Health Care Ethics

S475 Multisystem Approach to the Health of the Community

S487 Nursing Management

Please indicate your agreement with the following statements:

#	Statement	Agreement 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree				
1	The instructor clearly communicated important course topics.	**1**	**2**	**3**	**4**	**5**
2	The instructor clearly communicated important course goals.	**1**	**2**	**3**	**4**	**5**
3	The instructor provided clear instructions on how to participate in course learning activities	**1**	**2**	**3**	**4**	**5**
4	The instructor clearly communicated important due dates/time frames for learning activities.	**1**	**2**	**3**	**4**	**5**
5	The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.	**1**	**2**	**3**	**4**	**5**

6	The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.	**1**	**2**	**3**	**4**	**5**
7	The instructor helped to keep course participants engaged and participating in productive dialogue.	**1**	**2**	**3**	**4**	**5**
8	The instructor helped keep the course participants on task in a way that helped me to learn.	**1**	**2**	**3**	**4**	**5**
9	The instructor encouraged course participants to explore new concepts in this course.	**1**	**2**	**3**	**4**	**5**
10	Instructor actions reinforced the development of a sense of community among course participants	**1**	**2**	**3**	**4**	**5**
11	The instructor helped to focus discussion on relevant issues in a way that helped me to learn.	**1**	**2**	**3**	**4**	**5**
12	The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.	**1**	**2**	**3**	**4**	**5**
13	The instructor provided feedback in a timely fashion.	**1**	**2**	**3**	**4**	**5**
14	Getting to know other course participants gave me a sense of belonging in the course.	**1**	**2**	**3**	**4**	**5**
15	I was able to form distinct impressions of some course participants.	**1**	**2**	**3**	**4**	**5**
16	Online or web-based communication is an excellent medium for social interaction.	**1**	**2**	**3**	**4**	**5**
17	I felt comfortable conversing through the online medium.	**1**	**2**	**3**	**4**	**5**
18	I felt comfortable participating in the course discussions.	**1**	**2**	**3**	**4**	**5**
19	I felt comfortable interacting with other course participants.	**1**	**2**	**3**	**4**	**5**
20	I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.	**1**	**2**	**3**	**4**	**5**
21	I felt that my point of view was acknowledged by other course participants.	**1**	**2**	**3**	**4**	**5**
22	Online discussions help me to develop a sense of collaboration.	**1**	**2**	**3**	**4**	**5**
23	Problems posed increased my interest in course issues.	**1**	**2**	**3**	**4**	**5**
24	Course activities piqued my curiosity.	**1**	**2**	**3**	**4**	**5**
25	I felt motivated to explore content related questions.	**1**	**2**	**3**	**4**	**5**
26	I utilized a variety of information sources to explore problems posed in this course.	**1**	**2**	**3**	**4**	**5**
27	Brainstorming and finding relevant information helped me resolve content related questions.	**1**	**2**	**3**	**4**	**5**
28	Online discussions were valuable in helping me appreciate different perspectives.	**1**	**2**	**3**	**4**	**5**
29	Combining new information helped me answer questions raised in course activities.	**1**	**2**	**3**	**4**	**5**

30	Learning activities helped me construct explanations/solutions.	**1**	**2**	**3**	**4**	**5**
31	Reflection on course content and discussions helped me understand fundamental concepts in this class.	**1**	**2**	**3**	**4**	**5**
32	I can describe ways to test and apply the knowledge created in this course.	**1**	**2**	**3**	**4**	**5**
33	I have developed solutions to course problems that can be applied in practice.	**1**	**2**	**3**	**4**	**5**
34	I can apply the knowledge created in this course to my work or other non-class related activities.	**1**	**2**	**3**	**4**	**5**

Specify full or part-time student in this program:

Number of courses completed in this program to date:

Age range (circle one) 25-35 36-49 50+

Would you be willing to participate in a 20-30 minute telephone interview as a follow-up to the survey? If yes, please provide your contact information:

- Students who participate in the interview will receive a $25.00 Walmart Gift Card that will be mailed to your preferred location.

Appendix G: Informed Consent Qualitative Component

You are invited to take part in a follow-up study of RN perceptions of online learning. All students enrolled in the Indiana University RN to BSN Degree Completion

Program were invited to participate in the first part of the study by voluntarily completing a survey about online learning. This part of the study is being conducted to further deepen the understanding of online learning through the interview process. You have been selected from among interested students because this part of the study calls for as diverse a sample as possible, including those whose online learning experiences are likely to contribute to a deeper understanding of survey responses. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Beth Ann Townsend, who is a doctoral student at Walden University. You may already know the researcher as a faculty member at Indiana University School of Nursing, but this study is separate from that role.

Background Information:

The purpose of this study is to increase educator and student understanding of online education by exploring student perceptions of the online learning experience. It will examine a variety of aspects of computer-mediated education, including higher order thinking and the most effective learning modalities.

Procedures:

If you agree to be in this study, you will be asked to:

- participate in a one-on-one semistructured interview either in person or by telephone if the distance between the researcher and participant locales are prohibitive.
- respond to questions about your online learning experience during a 20-30 minute time period.
- agree to allow electronic audio recording of the interview to ensure the accuracy of the transcription of the conversation which will be transcribed by professional transcriptionists.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in this part of the study. No one at Indiana University or in the RN to BSN Completion Program will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life such as fatigue, or becoming upset. Being in this study would not pose risk to your safety or wellbeing. Potential benefits include providing future students and educators with a greater understanding of online learning. The knowledge

gained through your perceptions of the learning experience will contribute to the advancement of computer-mediated education and its associated best practices. Study results will also assist in preparing RNs to practice at an advanced level, contribute to patient safety and facilitate quality of care. All students and instructors in the RN to BSN program will have access to the summary of the results of the study.

Payment:

You will receive a $25.00 Walmart gift card for your participation in the interview. This will be mailed to your preferred location.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. The audiotape of the interview will be transcribed by professional transcriptionists who have signed a non-disclosure form as a condition of employment with the audiotaping/transcription service known as "RecordiaPro." Data will be kept secure by storing it in a password-protected computer hard-drive kept in the home of the researcher in addition to a flash-drive that will be retained in a fire-proof lock box which can be accessed by the researcher alone. Data will be kept for a period of at least five years, as required by the university.

Contacts and Questions

If you have any questions, you may contact the researcher via cell phone at 317-709-5512 or email at bethann.townsend@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. Walden University's approval number for this study is 01-23-15-0343265 and it expires on January 22, 1016.You may print or save a copy of this consent form.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to this email with the words 'I Consent' I am agreeing to participate.

Appendix H: Nondisclosure Form Audio and Transcription Service

Each transcriptionist agrees to an agreement with the following clause:

Proprietary Information; Publicity. Consultant agrees that all Deliverables, and all other business, technical and financial information (including, without limitation, the identity of and information relating to customers or employees) developed, learned or obtained by or for or on behalf of Consultant during the period that Consultant is to be providing the Services that relate to Company or the business or demonstrably anticipated business of Company or in connection with the Services or that are received by or for Company in confidence, constitute "Proprietary Information." Proprietary information also includes information received in confidence by the Company from its customers or suppliers or other third parties. Consultant shall hold in confidence and not disclose or, except in performing the Services, use or permit to be used any Proprietary Information. However, Consultant shall not be obligated under this paragraph with respect to information Consultant can document is or becomes readily publicly available without restriction through no fault of Consultant. Upon termination or as otherwise requested by Company, Consultant will promptly provide to Company all items and copies containing or embodying Proprietary Information (including without limitation all Deliverables), except that Consultant may keep its personal copies of its compensation records and this Agreement. Consultant also recognizes and agrees that Consultant has no expectation of privacy with respect to Company's telecommunications, networking or information processing systems (including, without limitation, stored computer files, email messages and voice messages) and that Consultant's activity, and any files or messages, on or using any of those systems may be monitored at any time without notice.

On 5/13/2015 2:47 PM, XXXXX@XXXXX wrote:
Subject from website: Other

Contact Phone Number: XXXXXXXXXX

Appendix I: Interview Guide

Good morning. This is Beth Townsend calling. I am the doctoral student who emailed the survey about the online course you just completed. The purpose of my call today is to ask some follow-up questions related to the survey. I have six questions that I would like you to answer and the interview will take approximately 30 minutes. Is this a convenient time for you to speak with me? You have been selected as one of the 10 interviewees because I am interested in exploring the course you just completed in greater detail. I am very grateful that you are taking the time to answer the questions. I do need to inform you that this conversation is being audiotaped so that I can later transcribe it accurately and look for themes that might surface. No one is here with me or listening in any way to the interview. The questions refer to the course you just completed (If the student had concurrently completed more than one course, the interview will be repeated for each additional course if the individual agrees).

1. Please describe your interactions with the other students and with your instructor. How would you characterize them?
2. What problem-solving strategies did you or others in the course use to complete assignments or projects?
3. Which aspect(s) of your online learning experience in this course did you find to be the most motivating?
4. Please describe your level of online participation in discussions. What do you think were underlying factors that caused your (high or low) participation?

5. How would you summarize your thoughts and feelings about your online experience in this course? To what extent did others (students, instructor) contribute to these thoughts and feelings?
6. The syllabus of the course we're referring to includes_____. Can you tell me about how your experience with that was?

   What other comments or thoughts do you have that we may not have discussed?

   Thank you again for participating in this interview.

Appendix J: Permission to Use CoI Survey

Beth,
You have my permission to use the CoI Questionnaire.
Best wishes,
DRG

D. Randy Garrison
Retired Professor
University of Calgary
Calgary, Alberta, Canada

XXXXX@XXXXX
https://coi.athabascau.ca/

From: Beth Townsend [mailto:XXXXX@XXXXX.edu]
Sent: Monday, November 03, 2014 7:59 AM
To: D. Randy Garrison
Subject: Community of Inquiry questionnaire

Dr. Garrison - I am an EdD candidate and my dissertation topic is "Student Perceptions of the Community of Inquiry in Online RN to BSN Education." I'm writing to ask permission to use the Community of Inquiry questionnaire to survey 600 nurses. As I have explored the CoI and online learning, my excitement at the possibilities the framework offers for nursing education has increased! Please let me know at your earliest convenience if I may use the instrument. Thank you so much - Beth Townsend

Appendix K: Permission to Access Syllabi

XXXXX

To:
Townsend, Beth Ann

Tuesday, December 30, 2014 8:39 AM

You replied on 12/30/2014 12:00 PM.

Dear Walden IRB,

As a faculty member with permission from the program director, Beth Ann Townsend has legitimate and authorized access to course syllabi. The Indiana University IRB has approved her access to the course syllabi for her research purposes.

Thanks,

XXXXX

Jason J. Cerman, JD, CIP
Research Compliance Consultant
XXX Human Subjects Office
Office of Research Compliance
XXXXX
XXXXX
T: XXX.XXX.XXXX
E: XXX@XXX.edu

Appendix L: Perceptions of CoI by All Items and Age

Item #	Age	Agree	Neutral	Disagree	Item	Age	Agree	Neutral	Disagree
1	25-35	90.3%	6.5%	3.2%	7	25-35	71.0%	22.6%	6.5%
	36-49	100.0%	0.0%	0.0%		36-49	80.9%	12.8%	6.4%
	50+	82.8%	3.4%	13.8%		50+	58.6%	27.6%	13.8%
2	25-35	90.3%	3.2%	6.5%	8	25-35	61.3%	35.5%	3.2%
	36-49	100.0%	0.0%	0.0%		36-49	78.7%	17.0%	4.3%
	50+	86.2%	10.3%	3.4%		50+	75.9%	10.3%	13.8%
3	25-35	77.4%	9.7%	12.9%	9	25-35	67.7%	22.6%	9.7%
	36-49	89.45	10.6%	0.0%		36-49	91.5%	6.4%	2.1%
	50+	82.8%	10.3%	6.9%		50+	82.8%	10.3%	6.9%
4	25-35	83.9%	9.7%	6.5%	10	25-35	71.0%	25.8%	3.2%
	36-49	91.5%	8.5%	0.0%		36-49	72.3%	21.3%	6.4%
	50+	96.6%	0.0%	3.4%		50+	69.0%	27.6	3.4%
5	25-35	83.9%	16.1%	0.0%	11	25-35	77.4%	22.6%	0.0%
	36-49	74.5%	17.0%	8.5%		36-49	83.0%	10.6%	6.4%
	50+	75.9%	24.1%	0.0%		50+	58.6%	34.5%	6.9%
6	25-35	61.3%	29.0%	9.7%	12	25-35	67.7%	22.6%	9.7%
	36-49	76.6%	19.1%	4.3%		36-49	66.0%	23.4%	10.6%
	50+	65.5%	20.7%	13.8%		50+	82.8%	6.9%	10.3%
13	25-35	74.2%	17.2%	6.9%	20	25-35	80.6%	12.9%	6.5%
	36-49	76.6%	19.1%	4.3%		36-49	74.5%	21.3%	4.3%
	50+	75.9%	17.2%	6.9%		50+	75.9%	20.7%	3.4%
14	25-35	51.6%	22.6%	25.8%	21	25-35	83.9%	6.5%	9.7%
	36-49	66.0%	25.5%	8.5%		36-49	74.5%	17.0%	8.5%
	50+	58.6%	27.6%	13.8%		50+	75.9%	24.1%	0.0%
15	25-35	71.0%	19.4%	9.7%	22	25-35	71.0%	16.1%	12.9%
	36-49	66.0%	25.5%	8.5%		36-49	68.1%	21.3%	10.6%
	50+	58.6%	27.6%	13.8%		50+	82.8%	13.8%	3.4%
16	25-35	64.5%	22.6%	12.9%	23	25-35	67.7%	25.8%	6.5%
	36-49	59.6%	29.8%	10.6%		36-49	70.2%	14.9%	14.9%
	50+	34.5%	41.4%	24.1%		50+	65.5%	31.0%	3.4%
17	25-35	90.3%	0.0%	9.7%	24	25-35	80.6%	9.7%	9.7%
	36-49	78.7%	14.9%	6.4%		36-49	74.5%	12.8%	12.8%
	50+	72.4%	17.2%	10.3%		50+	79.3%	13.8%	6.9%
18	25-35	87.1%	9.7%	3.2%	25	25-35	83.9%	9.7%	6.5%
	36-49	87.2%	10.6%	2.1%		36-49	83.0%	12.8%	4.3%
	50+	86.2%	10.3%	3.4%		50+	82.8%	17.2%	0.0%
19	25-35	90.3%	6.5%	3.2%	26	25-35	87.1%	12.9%	0.0%
	36-49	91.5%	6.4%	2.1%		36-49	95.7%	4.3%	0.0%
	50+	93.1%	6.9%	0.0%		50+	96.6%	3.4%	0.0%

(table continued)

Item#	Age	Agree	Neutral	Disagree	Item #	Age	Agree	Neutral	Disagree
27	25-35	71.0%	19.4%	9.7%	34	25-35	83.9%	12.9%	3.2%
	36-49	91.5%	8.5%	0.0%		36-49	87.2%	8.5%	4.3%
	50+	79.3%	20.7%	0.0%		50+	72.4%	24.1%	3.4%
28	25-35	80.6%	12.9%	6.5%					
	36-49	74.5%	21.3%	4.3%					
	50+	75.9%	20.7%	3.4%					
29	25-35	80.6%	19.4%	0.0%					
	36-49	89.4%	10.6%	0.0%					
	50+	82.8%	17.2%	0.0%					
30	25-35	90.3%	9.7%	0.0%					
	36-49	87.2%	12.8%	0.0%					
	50+	89.7%	10.3%	0.0%					
31	25-35	83.9%	16.1%	0.0%					
	36-49	93.6%	6.4%	0.0%					
	50+	82.8%	17.2%	0.0%					
32	25-35	87.1%	6.5%	6.5%					
	36-49	83.0%	10.6%	6.4%					
	50+	75.9%	17.2%	6.9%					
33	25-35	83.9%	12.9%	3.2%					
	36-49	80.9%	17.0%	2.1%					
	50+	51.7%	41.4%	6.9%					

Note. Responses of strongly agree and agree were combined for the agree category. Responses of disagree and strongly disagree were combined for the disagree category. Percentages were determined by the total number of responses in a category ÷ *n* x number of items.