

The Community of Inquiry Framework and Distance Education in Social Work

A Dissertation

Presented to

the Faculty of the Graduate School
of Millersville University of Pennsylvania

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Social Work

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March 29, 2019

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ABSTRACT OF THE DISSERTATION

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Problem Statement

Social work education is facing an increased use of distance education formats, including fully online and blended/hybrid/mixed-mode models (Cummings, Chaffin & Cockerham, 2015; Hill-Jones, 2015; Zidan, 2015). However, many social work educators remain skeptical about the effectiveness of distance education formats (Moore, 2005; Pelech, Wulff, Perrault, Ayala, Baynton, Williams, Crowder, & Shankar, 2013; Sharkey, 2000; Vernon, Vakalahi, Pierce, Pittman-Munke, & Adkins, 2009) and research remains focused in that domain (Bentley, Secret, & Cummings, 2015; Cummings, et al., 2015; Hill - Jones, 2015; Kurzman, 2013; Reamer, 2013; Zidan, 2015). The field of social work education has yet to fully examine and adopt a consistent model for course design, implementation, and evaluation that supports the values and purpose of the social work profession (Blackmon, 2013; Reamer, 2013; Zidan, 2015).

Summary of Investigation

The Community of Inquiry (CoI) framework, a research-based seminal work, provides a structure for integrating a collaborative constructivist approach to course design, implementation, and evaluation (Garrison, 2017). The CoI framework suggests that by fostering three essential elements: social presence, cognitive presence, and teaching presence, a community of inquiry can be created to promote student engagement and learning (Garrison, Anderson, & Archer, 2000). This research explored the concepts of the CoI framework, its presence in the literature, and the framework's applicability to distance formats in social work education. Results of the study indicate that both students and instructors perceive the essential elements of the CoI in distance education format social work courses. Furthermore, the research indicates that the elements of the Community of Inquiry (CoI) framework exist in social work courses at all levels of study (BSW, MSW, and DSW) and in varied distance education course designs. Students and instructors with diverse experience with distance format social work courses recognize the existence of the primary elements of the CoI framework.

Signature of Investigator ____Tami J. Micsky____

Date ____ March 29, 2019 ____

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Acknowledgement

This work would not have been possible without the support of many people. First, the members of my DSW cohort and in particular Lisa, Amy, Krista, and Micah who have provided comfort and reassurance during the difficult times, laughter when I needed it most, and above all, encouragement, and strength. My colleagues at Mercyhurst University, Dr. Laura Lewis, Dr. Nicole John-Danzell, and Dr. Emmaleigh Kirchner who provided time, guidance, and assistance, without hesitation. To my students, who displayed genuine interest in my research and provided motivation to seek understanding of the needs of social work students.

I am grateful to all of those with whom I have had the pleasure to work during this and other related projects. Each of the members of my Dissertation Committee, including Dr. Joyous Bethel and Dr. Curtis Proctor, have provided me extensive guidance and encouragement. I would especially like to thank Dr. Leonora Foels, the chair of my committee. Through our work together, she has become a personal and professional inspiration. She has provided instruction and mentoring that I will carry with me throughout my career.

Finally, the pursuit of this project would not be possible without the support of my family. I would like to thank my parents, whose love and pride provide motivation to continue to achieve beyond expectations. My sweet and loving pup, Lindy, truly my “best friend.” My amazing, successful, tenacious children, Leann, Ethan, Riley, and Jonathan, who continue to inspire me to “be the change” in our world. Most importantly, I wish to thank my devoted and thoughtful husband, Gregg, who has walked beside me on every step of this challenging journey, holding my hand and guiding me through. I cannot wait for the next adventure.

Chapter 1: Introduction

This paper is to examine the Community of Inquiry (CoI) framework and its applicability to social work distance education. The CoI framework, a research-based seminal work, provides a structure for integrating a collaborative constructivist approach to course design, implementation, and evaluation (Garrison, 2017). This chapter describes the extent of the problem facing social work distance education, a theoretical lens with which to view the problem, and the significance to social work education.

Problem Statement

Social work education is facing an increased use of distance education formats, including fully online and blended/hybrid/mixed-mode models (Cummings, Chaffin & Cockerham, 2015; Hill-Jones, 2015; Zidan, 2015). Yet, many social work educators remain skeptical about the effectiveness of distance education formats (Moore, 2005; Pelech, Wulff, Perrault, Ayala, Baynton, Williams, Crowder, & Shankar, 2013; Sharkey, 2000; Vernon, Vakalahi, Pierce, Pittman-Munke, & Adkins, 2009) and research remains focused in that domain (Bentley, Secret, & Cummings, 2015; Cummings, et al., 2015; Hill - Jones, 2015; Kurzman, 2013; Reamer, 2013; Zidan, 2015). The field of social work education has yet to fully examine and adopt a consistent model for course design, implementation, and evaluation that supports the values and purpose of the social work profession (Blackmon, 2013; Reamer, 2013; Zidan, 2015).

Distance education formats include benefits such as, access for non-traditional students (Blackmon, 2013), students with disabilities (Hill-Jones, 2015; Reamer, 2013), students with full-time employment responsibilities (Reamer, 2013), or those in remote and rural locations (Hill-Jones, 2015; Kurzman, 2013; Reamer, 2013). Cummings and colleagues (2015) point out the increased demand for flexibility and accessibility in educational formats, which has resulted

from changes to the American family, financial burdens, and transportation costs. Others point to student comfort with online, technologically based communication and advancement of a digitally literate social work workforce as benefits to web-based formats (Blackmon, 2013; Ferrara, Ostrander & Crabtree-Nelson, 2013). Importantly, Garrison (2016) suggests that utilizing digital technologies presents an avenue to make connections between and among students and instructor without the restriction of “space or time” (p. 37). Conversely, distance or online courses have many challenges. Lack of direct interpersonal interaction among students and instructors, concerns about dishonesty, and an assumption that online formats have an institutional financial motivation are uppermost concerns (Kurzman, 2013; Reamer, 2013).

The field of social work has been slower to adopt or explore the use of technology in education as compared to other academic disciplines (Hansen, Resnick, & Galea, 2002). Existing research into distance education in the social work field primarily focuses on effectiveness or appropriateness for the field of social work (Bentley, et al., 2015; Cummings, et al., 2015; Hill - Jones, 2015; Kurzman, 2013; Reamer, 2013; Zidan, 2015.) Despite the reluctance to embrace technologically based learning, online and blended/hybrid/mixed-mode course formats continue to infiltrate higher education, including social work programs. Blackmon (2013) posits that the field of social work education is not addressing the movement toward online education with the same haste as other applied disciplines, such as business and nursing. Blackmon further recommends that social work educators identify teaching strategies that thoughtfully integrate technology into courses as part of the learning process, not just as a mechanism for communication. Cummings, et al. (2015) concur and recommend identifying “specific pedagogical approaches and instrumental mechanisms” (p. 119). Zidan (2015) indicates that future research should focus on formats that provide a high level of interaction between

educators and students and development of curriculum that fits with student needs while maintaining social work pedagogy. Therefore, rather than continuing to debate the appropriateness of online education in social work programs, it is crucial that social work educators identify and research pedagogical approaches that are effective and lead to increased student satisfaction, motivation, and learning outcomes (Cummings, et al., 2015; Zidan, 2015).

Theoretical Frameworks

To understand the challenges and complexities of distance education, it is necessary to discuss transactional distance theory. Specifically, to appreciate why it is difficult for social work educators to adopt distance education formats, this paper will employ diffusion of innovation theory, change theory, and social exchange theory.

Transactional distance theory. Transactional distance theory, first considered in the 1970s and later formalized by Michael G. Moore, considers distance education as more than a description or a format for education. The theory proposes that distance education itself, is a pedagogical approach to teaching and learning. Moore (1997) describes distance learning as teacher-learner relationships, separated by space and time. Transactional distance theory considers the relationships formed between participants, the regularity of their communication, and structure of such interactions. Moore (1997) states:

The transaction that we call distance education occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners.

This separation leads to special patterns of learner and teacher behaviours. It is the separation of learners and teachers that profoundly affects both teaching and learning.

With separation there is a psychological and communications space to be crossed, a space

of potential misunderstanding between the inputs of instructor and those of the learner. It is this psychological and communications space that is the transactional distance (p. 22).

Moore (1997) identified three aspects of learning that establish transactional distance: structure, dialogue, and learner autonomy. Dialogue refers to the communication between instructor and student and includes frequency and medium of transmission. Structure reflects the course design and delivery format. Learner autonomy relates to personal responsibility, personality characteristics, and the overall potential for a student to take ownership of his or her learning (Garrison, 2000; Moore, 1997). Garrison (2000) questions the comprehensiveness of transactional distance theory suggesting that the nature of the interrelationships among structure, dialogue, and autonomy are unclear. Instead, Garrison (2017) views the educational process as a “unified transaction,” where teaching and learning are inherently intertwined and overlapping. In essence, both learners and educators are responsible for the transaction of learning, constructing meaning and collaborating for understanding.

Contained within the concept of transactions in education, the issues of responsibility and control can be applied to teaching and learning (Garrison, 2017). The educator is responsible for creating the learning environment and when technology is introduced, the task of creating a safe, collaborative space for sharing and creation of new knowledge becomes much more challenging (Garrison, 2017). Such thinking, points to the complexity of the educational transaction and the barriers to adoption of distance formats. Thus, the transactional distance theory provides a foundational understanding of distance education and further points to the need to develop a clear framework for interpreting and developing distance education formats in social work programs.

Diffusion of innovation theory. The diffusion of innovation theory, developed by Rogers in 1962 can apply to the adoption of distance education formats in general, and to social work education, specifically. The theory explains how, over time, an idea, intervention, or change spreads, or diffuses throughout a social system. Rogers (1995) proposed five stages of change as part of the diffusion of innovation process: knowledge, persuasion, decision, implementation, and confirmation. Tabata and Johnsrud (2008) use diffusion theory to describe the varying rates of adoption of innovation. Tabata and Johnsrud identify faculty characteristics that influence rates of adoption including, “relative advantage (the degree to which an innovation is perceived as better than those currently in use), compatibility (perceived consistency with the existing values, past experiences, and needs of potential adopters), complexity (degree of difficulty to understand or to use the innovation), trialability (the opportunity to experiment with it on a limited basis), and observability (the extent to which the results of the innovation are visible to others)” (p. 629). Research on the idea of adoption of innovation indicates that the “complexity of innovation is inversely related to its adoption, so the innovation must be perceived as simple to take on if it is to be successfully implanted” (Gannon-Cook, 2010, p. 25). Instituting online education formats is not viewed as “simple,” suggesting a barrier to adoption. Providing educators with a clear framework for course design and implementation may help to reduce, or overcome this barrier.

The diffusion of innovation theory posits that different strategies must be used to appeal to different types of adopters. Rogers (1995) describes adopter categories as 1) innovators, 2) early adopters, 3) early majority, 4) late majority, and 5) laggards. Innovators are described as active information seekers who are able to cope with uncertainty and are often first to incorporate change. Early adopters and early majority, typically well-informed and thoughtful

decision makers, utilize the information gathered by innovators to make decisions about adoption. As the majority begins to adopt the innovation, systemic, economic, and status pressures begin to mount, leading the late majority toward adoption. Finally, the final adopters, the laggards are conservative, typically adhering to traditional methods. They are skeptical to change and the last to adopt innovation.

Research indicates that some social work faculty are unconvinced that distance education formats are appropriate for social work education (Moore, 2005; Pelech, et al., 2013; Sharkey, 2000; Vernon, et al., 2009). An examination of the perceived effectiveness of online formats in social work education among social work faculty, revealed that online instruction is not perceived to be as effective as traditional, face-to-face classroom instruction (Moore, 2005). Furthermore, content based courses such as policy, research, and Human Behavior and the Social Environment (HBSE) were perceived to be more suitable for online education (Moore, 2005). This research points to a lack of alignment between faculty perceptions, student perceptions, student outcomes, and effectiveness. Studies have concluded that online instruction is as effective as face-to-face learning. Huff (2000) compared a television delivered course to a face-to-face course and concluded that distance instruction was as effective as a traditional classroom setting. Research from Kleinpeter and Potts (2000) found no difference in grades when comparing on-campus and distance Master of Social Work students. Further, Webber, Currin, Groves, Hay and Fernando (2009) examined distance social work education by comparing students in an online course with those in a traditional classroom. Webber, et al. found that students met learning outcomes equally and online students expressed satisfaction with the course delivery format.

Change theory. To consider teaching in a distance, online format educators and organizations must consider sizeable change – in beliefs, strategies, and potential resources. Distance education formats have disrupted the traditional “technology” of face-to-face lecture and potentially threatens established methods and organizations (Garrison, 2017). Lewin’s theory of change indicates that the avoidance of change is a product of environmental forces that influence individual behavior.

Lewin’s three step model provides insight into planning for change and proposes that the change process involves research and planning (Cummings, Bridgman, & Brown, 2016). The first step in the process of change is to unfreeze the existing situation or status quo. This can be accomplished by building trust and encouraging active participation in the solution process. The second step in Lewin’s process of change is to implement the alternative, to encourage movement. Actions that may assist with implementation include educating or convincing participants that the current behavior/situation is not beneficial, re-framing the problem and solutions, providing potential beneficial change behaviors, and soliciting/sharing support from leadership (Kritsonis, 2005). Finally, once the change is implemented, the environment will need to be restabilized. The new behavior must become part of the organization, normalized, and institutionalized or participants may revert to former behavior (Kritsonis, 2005).

Although the potential for change in social work education is significant, it must be supported by what Lewin defines as “driving forces.” Importantly, this system includes, but is not limited to, university and department leaders, which must outweigh those that oppose change - what Lewin defines as “restraining forces” (Kritsonis, 2005). Garrison (2017) reminds innovators that when introducing “disruptive” approaches, one must consider the needs of traditional students, faculty, and the institution. If these needs and values are not addressed, the

innovation will be intensely resisted (Kritsonis, 2005). One may thus conclude that social work educators and stakeholders may view distance education formats as “disruptive.” Therefore, this research considers the values and needs of the “forces,” or stakeholders involved, including social work students, faculty, administrators, institutions of higher education, social service agencies, client systems, and the larger community.

Social exchange theory. Social exchange theory involves a series of interactions (or exchanges) that generate obligations (Emerson, 1976). It is based on the premise that the exchange of resources is a fundamental form of human interaction and proposes that in order to engage in a behavior, the individual must anticipate a benefit or reward. As indicated by the diffusion of innovation theory, a person’s decision to adopt new ideas is often based on how the level of complexity relates to the reward. In this instance, social work educators are considering the questions: Does the decision to adopt distance education formats provide a reward or benefit? Do those rewards/benefits outweigh the complexity and work involved with designing and implementing online and blended/hybrid/mixed-mode courses? Subsequently, this research must address those questions by utilizing a model of distance course design, implementation, and evaluation that provides a benefit to social work educators and students.

Significance to Social Work Education

The purpose of the social work profession is “to promote human and community well-being. Guided by a person and environment construct, a global perspective, respect for human diversity, and knowledge based on scientific inquiry, social work’s purpose is actualized through its quest for social and economic justice, the prevention of conditions that limit human rights, the elimination of poverty, and the enhancement of the quality of life for all persons” (CSWE, 2015, p. 5). The Council on Social Work Education (CSWE) is the national association

representing social work education in the United States. The CSWE (2015) Educational Policy and Accreditation Standards (EPAS) outlines the role of social work educators across program offerings and provides a clear description of the expectations placed on social work programs, whether those programs are offering courses in a traditional or distance format.

Social work educators seek to socialize future social workers to the profession (Anastas, 2010). Whether delivered in-person or in an online format, the process of social work education involves the transmission of knowledge, skills, and values of the profession and takes place inside and outside the classroom. Social work educators have expressed concern about teaching fundamental social work skills in an online format (Ferrara, et al., 2013; Siebert & Spaulding-Givens, 2006; Zidan, 2015). A considerable amount of social work practice is grounded in face-to-face interaction, leading to concerns about the ability to effectively impart and assess these skills in a distance education format (Ferrara, et al., 2013). Generalist social work practice is grounded in rapport building, empathetic communication, and the importance of human relationships (Cummins, Sevel, & Pedrick, 2011; Hepworth, Rooney, Dewberry-Rooney, Strom-Gottfried, 2016; Howe, 2008; Walsh, 2014). Similarly, social work educators use relationships and presence with and among students to encourage learning and to provide a model for future professional practice. Fox (2011) posits that educators' relationships with students establishes meaning beyond instruction and parallels that of social worker and client. Hill-Jones (2015) asserts that through classroom interaction, educators mentor students and model professional behavior and clinical skills. Therefore, interpersonal interaction and presence are central to social work education. Moreover, effective use of interaction or presence in the classroom may increase students' learning outcomes specific to the course. Presence may be of further benefit, as

students gain generalist practice skills that they later apply in field placements and the professional world.

The Council on Social Work Education (CSWE) attempts to support the social work profession's goals through initiatives, activities, and centers, providing opportunities for leadership and professional development (About CSWE, n.d.). CSWE has initiatives, commissions, and councils that seek to address the needs of social work professionals and educators. The CSWE website provides a list of online program offerings, but states that it does not maintain an exhaustive list. It further states that all social work programs, regardless of delivery method, are subject to the same accreditation standards (Online and Distance Education, n.d.). Importantly, CSWE has accredited several social work programs administered entirely online, supporting the notion that social work education can be provided effectively in the online environment.

In November 2016, the Council on Social Work Education (CSWE) Commission on Research Priorities for Improving Social Work Education published results of a survey of members highlighting eight research priorities including “supporting inquiry around the outcomes of online and hybrid education and the consistency of online programs with accepted standards of “quality” in online learning” (CSWE Education Commission on Research, 2017, p. 4). CSWE collaborated with sister organizations the National Association of Social Workers (NASW), the Association of Social Work Boards (ASWB), and the Clinical Social Work Association (CSWA) to develop the *Standards for Technology in Social Work Practice*. The document details the need for social work educators to remain current with emerging knowledge and techniques in technology enhanced or technology based education formats. Standard 4.01 addresses the use of technology in social work education and states: “Social workers who use

technology to design and deliver education and training shall develop competence in the ethical use of the technology in a manner appropriate for the particular context” (NASW, et al., 2017, p. 44).

The National Association of Social Workers (NASW) Code of Ethics (2017) were recently updated to include extensive technology related revisions pertaining to informed consent, competent practice, conflicts of interest, privacy and confidentiality, sexual relationships, sexual harassment, interruption of services, unethical conduct of colleagues, supervision and consultation, education and training, client records, and evaluation and research. The increased use of technology in social work practice necessitates increased experience with technological platforms and an understanding of the ethical challenges presented by technology. Social work students who are exposed to online formats and communication will likely learn from those experiences, transferring those skills to later practice.

Although social work educators may be late to adopt distance education formats, one can observe a shift in perception and implementation. Vernon, et al. (2009) found that despite skepticism, social work programs have felt pressure within institutions to develop online courses. Similarly, Sharkey (2000) argues that social work educators should model lifelong learning and remain open to new ideas, opportunities, and technological changes. As online and blended/hybrid/mixed-mode social work courses and fully online social work programs continue to grow, it is important for educators to understand methods that will increase effectiveness (Moore, 2005). Pelech, et al. (2013) conducted interviews with a small group of social work educators with experience in distance education. As a result of these discussions, the authors suggest that educators need resources and supports to be able to teach online courses more

effectively across the curriculum. It is still not clear what these resources are, which makes this research timely and essential to future advances in social work education.

Chapter 2: The Community of Inquiry Framework

The following chapter will provide a description of the Community of Inquiry (CoI) framework, including a brief definition of its major components, its history, the theoretical underpinnings, the interdependence of the essential elements, as well as, the influence of course format, and student perception of presence and community. This chapter also emphasizes the usefulness of the Community of Inquiry (CoI) Survey Instrument (see Appendix A) and provides avenues for future research, including unexplored disciplines, including, social work.

Description of the Community of Inquiry (CoI) Framework

The Community of Inquiry (CoI) framework encompasses features and characteristics that create community and encourage student satisfaction and success in learning environments (Garrison, 2016; Vaughan, et al., 2013). The CoI framework was originally developed to provide a structure to understand the mechanisms of computer-mediated distance education, as well as, a methodology to practice and evaluate online learning (Garrison, et al., 2000). However, Garrison (2016) related that the framework could have application to any form of thinking and learning in a collaborative environment. The CoI framework helps educators to understand the process of using presence to create a community of deep learning, critical thinking, and inquiry (Garrison, 2017).

Garrison, Anderson and Archer (2000) proposed the three elements that comprise the Community of Inquiry (CoI) framework: social presence, cognitive presence, and teaching presence. Garrison, et al., (2000) conceptualize social presence as “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as real people” (p. 89). Cognitive presence centers on supporting the development of skills, knowledge, and understanding (Garrison, et al.

2000). This includes exploring and examining content, integrating material into assignments, and resolution of dilemmas (Garrison, et al., 2000). Teaching presence focuses on course design and organization, instructor preparation, course materials, course facilitation, direct instruction, and learning experiences (Garrison, et al., 2000). The Community of Inquiry (CoI) model, at its core, submits that the formation of a collaborative constructivist community of learners is reliant on the interface of the three core elements (Garrison, 2017).

History of the Community of Inquiry (CoI) Framework

The Community of Inquiry (CoI) framework provides a context to understand the formation of a collaborative learning environment in the online and blended/hybrid/mixed-mode classroom (Garrison, 2017, 2016). Formal online learning is based on communication for the purposes of learning through networked computer systems (Bangert, 2009). In the educational environment, communication often focuses on asynchronous written communication; however, current formats frequently incorporate synchronous verbal and text communications. A blended/hybrid/mixed-mode format is described as “the organic interaction of thoughtfully selected complementary face-to-face and online technologies” (Garrison & Vaughan, 2008, p. 148). The convergence of the traditional classroom and online environments, presents a model of education that takes advantage of the benefits of both formats (Ayala, 2009; Garrison, 2017).

Garrison (2016) reported that Matthew Lipman began using the term “community of inquiry” in the 1980s “when he and his colleagues began to rethink educational practice from the perspective of a reflective paradigm” (p. 53). Lipman (2003) described the assumptions of the standard education paradigm as transmission of knowledge from those who know to those who do not; knowledge of the world is unambiguous, unequivocal, and unmysterious; knowledge is distributed among disciplines that are nonoverlapping; the teacher plays an authoritative role;

and students acquire knowledge by absorbing information, i.e., data about specifics. Conversely, Lipman described the reflective paradigm and posits that education should be focused on inquiry. The dominant assumptions of the reflective paradigm include: education is the outcome of participation in a teacher-guided community of inquiry; students are stirred to think when knowledge is ambiguous, equivocal, and mysterious; relationships between and among disciplines are recognized; teachers are prepared to concede error; students are expected to be thoughtful, reflective, reasonable, and judicious; and “the focus of the educational process is not on the acquisition of information but on the grasp of relationships within and among the subject matters under investigation ” (p. 19).

Lipman (2003) suggested that in order to institute a reflective paradigm and course formats that revolves around inquiry, the classroom must be transformed into a community of learners who cooperate and contribute to one another’s learning. The community, as described by Lipman, exhibits the following features that help to form a true community of inquiry, not merely a community of learning: questioning, inclusiveness, participation, shared cognition, a quest for meaning, feelings of social solidarity, deliberation, impartiality, modeling, thinking for oneself, challenging as a procedure, reasonableness, reading, discussion, and relationships – face-to-face being advantageous, but not essential.

Lipman’s (2003) reflective paradigm is grounded in the work of John Dewey and his concept of inquiry. Dewey (1959) highlighted the value of an emphasis on activity versus passivity, the importance of communication, and social relations. He described the process of inquiry in the classroom:

The problem is to find what conditions must be fulfilled in order that study and learning will naturally and necessarily take place, what conditions must be present so that pupils

will make the responses which cannot help having learning in their consequence. The pupil's mind is no longer to be on study or learning. It is given to doing the things that the situation calls for, while learning is the result (p. 125).

Dewey (1959) reminds educators of the importance of the environment in learning, placing much of the responsibility on the educator to create and foster conditions that lead to inquiry and learning. Furthermore, Dewey (1959) suggested that education is conceived as a reconstruction of experience, making the process of inquiry and education also the end goal. Dewey (1938) advanced that the foundation of instruction should begin with the experience that learners already possess; growth and expansion of content will follow from the attention to prior experience and inquiry.

Theoretical Underpinnings of the Community of Inquiry (CoI) Framework

Constructivism acknowledges the influence of experience and environment and further provides a lens, which views learning as the construction of knowledge, meaning, and identity. According to Garrison (2016), “the constructivist approach focuses on individuals constructing meaning and making sense of new experiences by integrating them with prior knowledge” (p. 16). Grossman-Dean (1993) suggested that constructivism promotes the idea that “we cannot know an objective reality apart from our views of it” (p. 58). Thus, knowledge is, essentially, created through interaction with the environment.

Expanding on the constructivist model, social constructivism stresses the importance of social aspects and interpersonal interaction as vehicles for knowledge acquisition. Social factors contained in the environment, include cultural, historical, political, and economic conditions (Grossman-Dean, 1993). Social constructivism indicates that our understanding and assumptions are continually changing and influenced by the communities in which we belong. Students and

instructors become parts of a learning community, influencing one another's beliefs and constructing meaning, collectively. Tisdell, et al. (2004) postulated that while it is possible to learn through lecture and reading, the social constructivist framework highlights the learning that takes place through a social, interactive process. Garrison (2016) described the interactive, community process as essential to creating conditions that support exchanging ideas, validating knowledge, and constructing meaning. From the social constructivist approach, learning is a process, not just an outcome. Garrison pointed out that the "CoI framework is a process model that focuses on free inquiry where participants are not constrained by confirmation bias and where they learn as much about the inquiry process as they do about the content being studied...The greatest assurance of quality learning outcomes is to ensure a deep and meaningful learning experience through collaborative inquiry" (p. 55).

The creation of a community of learning involves collaboration, learning through active participation, and the construction of a social context. The Community of Inquiry (CoI), first introduced by Garrison and his colleagues (2000), identifies elements that produce an online community, which encourages inquiry and creates an environment of collaboration and active participation. Garrison (2016) advanced that the CoI framework utilizes the strengths of technology to encourage individuals to "stretch their breadth and depth of learning through collaboration" (p. 54).

At the core of the Community of Inquiry (CoI) is collaborative learning theory, which highlights the need for shared activities that motivate students to participate and use critical thinking skills (Garrison, 2016, 2017; Vaughan, Cleveland-Innes & Garrison, 2013). Collaborative activities encourage a shift from independent learning, which is a common approach to distance learning, to interdependence among students and instructor. Garrison

(2017) postulates that learning in isolation is an illusion and learners, in reality, are influenced by the environment, experiences, and communication with others. Thinking and learning is often dependent upon the social environment and communication, encouraging exposure to alternative perspectives, ideas, or solutions. Collaboration with others in a safe, established community of learning allows learners to explore, examine, and express new ideas (Fox, 2013; Garrison & Arbaugh, 2007; Palloff & Pratt, 2007).

The philosophical and theoretical assumptions associated with the Community of Inquiry (CoI) theoretical framework are grounded in collaborative constructivism (Garrison, 2016, 2017; Vaughan, et al., 2013). A collaborative constructivist community of learners requires a balance between individual needs and the needs of the learning community. Garrison (2016) highlighted the focus on shared interests in a learning community, indicating that people have the propensity to join with others who have common interests, forsaking personal interests to join a community where the central dynamic is collaborative thinking. In the online classroom, the common interest is typically focused on learning content, increasing knowledge, and improving skills. However, a learning community, no matter the setting, has multiple purposes. Beyond the focus on academic endeavors, learners are concerned with social aspects and find value in the interpersonal interaction of a classroom (Kim, Kwon, & Cho, 2010; Picciano, 2002; Richardson, Maeda, & Caskurlu, 2017; Richardson & Swan, 2003).

The premise of the Community of Inquiry (CoI) framework is that the classroom incorporates a collaborative experience that is also individually constructivist, a seemingly contradictory, but essential combination. According to Lipman (2003), a community of inquiry is where “students listen to one another with respect, build on one another’s ideas, challenge one another to supply reasons for otherwise unsupported opinions, assist each other in drawing

inferences from what has been said, and seek to identify one another's assumptions" (p. 20). The sense of community in a learning environment is essential to sharing of divergent ideas, open communication, and the formation of relationships.

Interdependence of the Elements

Garrison, Anderson, and Archer (2000) theorized that the model of Community of Inquiry (CoI) assumes that collaborative learning is constructed within the community through the interaction of three core elements. Figure 1 depicts the three essential elements: social presence, cognitive presence, and teaching presence. The blending of the three mutually reinforcing elements creates a community through communication, shared teaching responsibilities, and learning activities (Garrison, 2017).

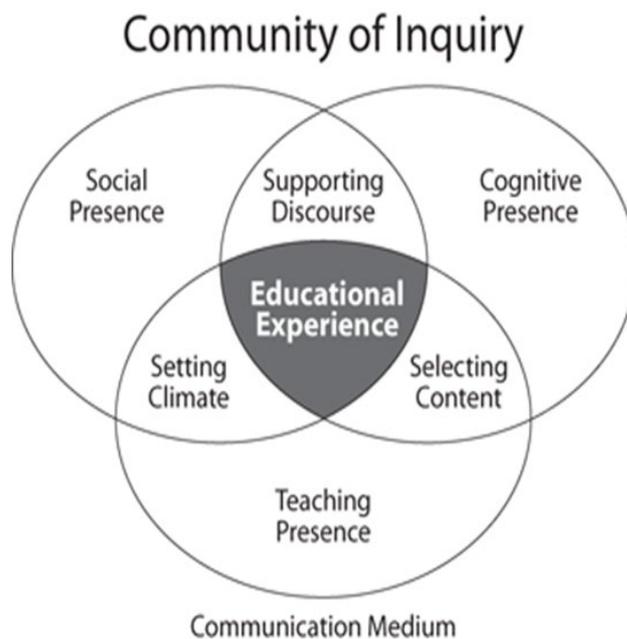


Figure 1. The Community of Inquiry Model. Reprinted from “Critical inquiry in a text-based environment: Computer conferencing in higher education.” D. R. Garrison, T. Anderson, & W. Archer, 2000. *The Internet and Higher Education*, 2, p. 88.

Several scholars suggested that the Community of Inquiry (CoI) framework should include additional elements – learner presence (Shea, Hayes, Smith, Vickers, Bidjerano, Picket, Gozza-Cohen, Wilde & Jian, 2012) and emotional presence (Cleveland-Innes & Campbell, 2012). Garrison (2017) indicated that the research does not reach the threshold for creating a separate presence. Furthermore, the creation of a separate learner presence would undermine the collaborative foundation of the framework (Garrison, 2017). Therefore, this paper focuses on the framework as validated through extensive research.

Garrison (2017) constructed a template that further explains the three presences and includes categories of indicators that suggest the manifestation of the three elements. The indicators as listed in Table 1, provide clear examples of the presences and have guided the coding of transcripts in early research.

Table 1

Community of Inquiry Categories and Indicators (Garrison, 2017)

<i>Elements</i>	<i>Categories</i>	<i>Indicators (examples)</i>
Social presence	Personal/affective	Self projection/expressing emotions
	Open communication	Learning climate/risk-free expression
	Group cohesion	Group identity/collaboration
Cognitive presence	Triggering event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Applying new ideas
Teaching presence	Design and organization	Setting curriculum and methods
	Facilitating discourse	Shaping constructive exchange
	Direct instruction	Focusing and resolving issues

Vaughan, et al. (2013) indicated that the presences and corresponding indicators are progressive or developmental in nature, building throughout the course. However, Garrison (2016) noted that the process of building community is not linear; rather, it is fluid and shifts as the learning experience evolves. The author goes on to describe the goal of the Community of

Inquiry as the attempt to unify the elements of an educational experience (social, cognitive, and teaching presences) in a theoretical framework that highlights the balance between thinking and learning, personal reflection and peer discussion, and self and co-regulation (Garrison, 2016). The process of collaborative inquiry requires a balance and movement between individual and collective environments.

Social presence. Hackman and Walker (1990) provided a description of social presence as “teacher immediacy” and describes behaviors that create nearness as “encouragement, praising and self-disclosure, and nonverbal behaviors that reduce psychological distance between interactants such as smiling, gesturing, and movement” (p. 198). Others have expanded the definition by including the students’ contribution to social presence and focused on mutuality and interaction not only between the instructor and student, but also between and among students (Rourke, Anderson, Garrison, & Archer, 1999; McLellan, 1999). Garrison (2009) described social presence as “the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities” (p. 352). Prior to the significant growth of online and distance education formats, the definition of social presence was limited to the actions of the educator and suggested that physical proximity and in-person interaction were necessary to develop social presence. Miller (2014) expanded the idea of social presence as “the exchange of social cues and the feeling that one is authentically interacting with another person in the virtual relationship” (p. 29). Recent definitions of social presence offer a broad perspective of the element, and redefined it as “the extent to which persons are perceived to be real and are able to be authentically known and connected to others in mediated communication” (Bentley, et al., 2015, p. 494).

Social presence is no longer restricted by the physicality of the educator (LaMendola, 2010). However, creating presence in the online education environment presents a distinct challenge. Generating social presence at a distance differs greatly from the traditional classroom setting. Interactions are time delayed, lack the additional information provided by body language and other non-verbal cues, and can be altered by one's interpretation of text alone (Fox, 2013). Hackman and Walker (1990) indicated that social presence could be measured in terms of gesturing, smiling, and using vocal variety. Because these types of actions or interactions require physical interface, they are difficult, if not impossible to incorporate into the fully online classroom. The blended/hybrid/mixed-mode model of online instruction may provide opportunities for instructors to incorporate gestures, facial expression, and emotional interaction in synchronous sessions. However, some actions that increase social presence are achievable in the fully online (and blended/hybrid/mixed-mode) format and include addressing students by name, using "get to know you" postings/activities and self-disclosure activities (Sung & Mayer, 2012), questioning (Vaughan, et al., 2013), praising (Hackman & Walker, 1990; Sung & Mayer, 2012), encouraging online discussion (Barnett-Queen, Blair, & Merrick, 2005; Garrison, 2017), allowing expression of emotion (Garrison, 2017; Sung & Mayer, 2012), and providing individualized feedback (Sung & Mayer, 2012).

Cognitive presence. Cognitive presence is a fundamental element in critical thinking, a process and outcome that most see as a primary goal of higher education. (Garrison, et al., 2000). Cognitive presence is conceptualized as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community or inquiry (Garrison, et al., 2000; Garrison, 2016). The concept of cognitive presence has a foundation in the work of Lipman and Dewey, who highlighted the importance of constructing learning from

experience and reflective thinking. Cognitive presence involves critical thinking and rational judgement within purposeful relationships (Garrison, 2017).

The practical inquiry model helps to define the concept of cognitive presence. Garrison and Arbaugh (2007) described four phases of cognitive presence: 1) Triggering Event – identification of problem that requires inquiry; 2) Exploration of the problem through critical reflection and discourse; 3) Integration - construction of meaning and ideas; 4) Resolution – application of new knowledge in multiple settings. Educators provide assignments, activities, and guidance that help students move through the phases of practical inquiry, which leads to cognitive presence (Lambert & Fisher, 2013).

In order to achieve “deep learning,” students must develop the cognitive capacity for metacognition (Garrison, 2016; Garrison & Akyol, 2013). Garrison (2017) described metacognition as “an awareness and ability to individually and collaboratively assume responsibility to regulate the thinking and learning process” (p. 60). This awareness leads to the ability to assess the learning process and to self-regulate (Garrison, 2017). The application of metacognition to the Community of Inquiry (CoI) framework necessitates consideration beyond the individual (Garrison, 2016, 2017). Research has indicated that metacognition is also a product of interaction with and understanding of interactions with other individuals (Iiskal, Vauras, Lehtinen, & Salonen, 2011; Son, Kornell, Finn, & Cantlon, 2011). Garrison (2016) indicated that thinking in a collaborative-constructivist environment requires both self and co-regulatory activities.

Teaching presence. Anderson, Rourke, Garrison, and Archer (2001) defined 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.

50). Teaching presence, which establishes the structure of the course, is conceptualized by Garrison, Anderson, & Archer (2000) as having three dimensions; instructional design and organization, facilitating discussion and activity, and direct instruction. Teaching presence is often viewed as the most challenging responsibility for educators as the element provides the curriculum, approaches, methods, guidance, and focus for a course (Garrison & Vaughan, 2008; Vaughan, et al., 2013). A strong, active presence by educators is related to students' sense of community and learning (Shea, et al., 2006).

It is important to understand the shared responsibility of teaching presence. Researchers point out that the element is titled “teaching presence” versus “teacher presence” because the responsibility for this, and all, elements is shared among the instructor and students (Garrison, 2017; Vaughan, et al., 2013). Participants, whether instructor or student, in a constructivist community of inquiry hold responsibility for teaching presence (Vaughan, et al., 2013). Both students and instructor hold responsibility for clarifying expectations and requirements, engaging in discussion, processing misconceptions, and evaluating understanding (Vaughan, et al., 2013). Garrison (2017) indicated that while the participants must have open communication and shared responsibility for learning, there is a need for a facilitator or leader to design and direct the interactions. Garrison (2016) reminds educators that student-to-student interaction is highly important, but direction and feedback from an instructor is valued, motivating, and effective.

Evidence and Insights

Garrison, Anderson, and Archer (2000) provided the foundation for empirical research in the Community of Inquiry (CoI) framework across multiple disciplines and in varied educational settings. The CoI framework has received wide-ranging empirical support in the literature (Akyol, Garrison & Ozden, 2009; Akyol, Ice, Garrison & Mitchell, 2010; Garrison, Cleveland-

Innes & Fung, 2010). Descriptive analysis of (distance and online learning) publications during the period of 2009 to 2013 revealed the most frequently used theoretical perspective was the community of inquiry framework (Bozkurt, et al., 2015). The same study reported the CoI seminal article (by Garrison, Anderson, and Archer, 2000) as the most cited in the studies of this period (Bozkurt, et al., 2015). Since the initial work of Garrison, Anderson, and Archer (2000), researchers have investigated areas of the CoI framework including, the Community of Inquiry Survey Instrument, the individual elements, the relationship among the elements, varied disciplines, student perceptions, satisfaction, and performance, and course format and design.

Community of Inquiry (CoI) Survey Instrument. The research has determined that the Community of Inquiry (CoI) Survey instrument is a valid, reliable measure of the CoI and its essential elements. While a considerable number of studies have focused on the individual elements of the CoI framework (Picciano, 2002; Richardson, et al., 2017; Richardson & Swan, 2003; Sung & Mayer, 2012; Wisneski, Ozogul, & Bichelmeyer, 2015), research regarding the dynamic relationships between and among the presences, increased recently, primarily as a result of the creation and validation of the Community of Inquiry Survey instrument. The CoI Survey consists of 34 items derived from the presences that allow researchers to study the contextual dynamics of the CoI. Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, and Swan (2008) reported on the development and validation of the CoI survey instrument. Their findings suggest that the instrument is a valid, reliable, and an efficient measure of the dimensions of the CoI.

The Community of Inquiry Survey instrument has been modified and utilized as a tool to examine instructor perceptions. A study completed by Vladimirschi (2012) explored how instructors of online courses make provisions for culturally diverse learners in an online

community of inquiry. The researcher modified and augmented the original survey to the perspective of the instructor, which includes questions related to cross-cultural efficacy (Vladimirschi, 2012).

Individual Elements

Social presence. Ferrara, Ostrander, and Crabtree-Nelson (2013) examined the use of the Community of Inquiry (CoI) framework for hybrid courses in clinical social work education using two case examples from clinical courses taught in a Master of Social Work program. Ferrara, et al. (2013) indicate that “through the online discussion, students must work together in their efforts to participate in dialogue, listening to each other’s opinions, reacting, and interacting. There is social presence here” (p. 442). The authors go on to indicate that instructors can further enhance social presence by highlighting student strengths and encourage depth of thinking.

Sung and Mayer’s research (2012) utilized the Online Social Presence Questionnaire (OSPQ) with 612 college students in two different online learning courses in two universities in South Korea. The study yielded specific factors that influence social presence in the online environment including respect for effort, sharing of personal information to build relationships, displaying an “open mind” and a hospitable atmosphere, maintaining awareness of the identity of the learner, and sharing of personal stories and experiences. The factors that Sung and Mayer (2012) describe are fully achievable in the online format. Nevertheless, it is clear that instructors must make a determined effort to incorporate these techniques through announcements, emails, and group and individual feedback. Thus, actions that happen naturally in an in-person educational environment require additional effort in the fully online classroom (Garrison, 2016).

Several studies have examined the influence of social presence on the satisfaction and success of online learners. Richardson and Swan (2003) examined students' perceived social presence and its relationship to their perceived learning and satisfaction with course instructors. Richardson and Swan surveyed 97 students in an online course at Empire State College and found that students with high overall perceptions of social presence scored high in terms of perceived learning and perceived satisfaction with the instructor. The researchers found all three variables highly correlated and a regression analysis showed that 42% of the variability in perceived learning was predicted by perceived social presence. Similarly, Kim, Kwon, and Cho's 2010 study used multiple scales with 84 students in online courses to examine the relationship among demographic and other variables, social presence, and learning satisfaction. The study found a close link between "quality instruction and students' perception of social presence and learning satisfaction" (p. 1517).

Picciano (2002) conducted a study to examine performance in an online course as compared to student interaction and sense of social presence in the course. Data on multiple independent (measures of interaction and presence) and dependent (measures of performance) variables were collected and subjected to quantitative analysis. The study examined perceived social presence, interactivity, and learning among students enrolled in an online course and found strong correlations among these variables. Initially, the researcher found no correlation between those variables and actual performance on tests or written assignments. However, after dividing the students into groups perceiving low, medium, and high social presence there were significant differences. For instance, students in the high social presence group scored higher than the medium, and the medium group scored higher than the low social presence group. Furthermore, Richardson, Maeda, and Caskurlu (2017) conducted a meta-analysis and found a

moderately large positive average correlation between social presence and satisfaction, and social presence and perceived learning.

Cognitive presence. Research reveals that the instructor's ability to design questions and activities that support students' movement through the phases of inquiry, influence the quality of cognitive presence (Arnold & Ducate, 2006; Murphy, 2004). Inquiry based on considering dilemmas and problem-solving absorbs students in the community of inquiry, thereby increasing cognitive presence (Gorsky, Caspi, Antonovsky, Blaue, & Mansur, 2010). Research by Joo, Lim, and Kim (2011) investigated the relationships among perception of presence, perception of usefulness, ease of use of the online learning tools, learner satisfaction, and student persistence in an online university located in South Korea. The study, which surveyed over 700 students, confirmed a connection between cognitive presence, satisfaction, and student persistence.

Garrison and Cleveland-Innes (2005) utilized the Study Process Questionnaire to examine 75 students' approach to learning throughout four distance education courses. The Study Process Questionnaire examines surface, achieving, and deep levels of learning. Researchers indicate that the level of learning should increase over the length of the course, with the highest scores for deep learning toward the end of the course. The study revealed that the students' approach to study is strongly influenced by course design and teaching approach, leading researchers to believe that in order to achieve cognitive presence, course design and implementation must include strong organization and teaching presence. Furthermore, Garrison and Cleveland-Innes (2005) found a connection between cognitive presence and social presence reporting that "social interaction and presence may create the condition for sharing and challenging ideas through critical discourse, but it does not directly create cognitive presence or facilitate a deep learning approach" (p. 143). Vaughan, et al. (2013) described pushing beyond

social interaction and relationship building to academic interaction that leads to critical thinking and deep learning. Cognitive presence has a foundation in social presence in that establishing relationships is imperative in order to have a purposeful learning experience. Likewise, teaching presence is also necessary to create the framework for exploration, integration, and clear academic expectations (Vaughan, et al., 2013).

Teaching presence. Studies have indicated that a strong teaching presence is expected and necessary to create a community of inquiry (Garrison, 2006; Perry & Edwards, 2005). Garrison and Cleveland-Innes (2005) found that students expect structure, guidance, and leadership from the instructor. Additional studies found teaching presence to be a strong predictor of perceived learning and satisfaction with the course (Arbaugh, 2007; Richardson & Swan (2003); Akyol, et al., 2009). Research conducted by Rubin and Fernandes (2013), confirmed the centrality of teaching presence, finding that teaching presence is largely responsible for social and cognitive presence.

Wisneski, Ozogul, and Bichelmeyer (2015) studied differences in teaching presence between online and traditional classroom environments in a Master of Business Administration program. Using a mixed methods approach, the researchers examined courses taught by six instructors and found that “instructors who engage students in the communicative process of learning achieved higher levels of teaching presence” (p. 24). Moreover, Wisneski and colleagues indicated that “providing words of encouragement, affirmation, or validation of student contributions had a positive impact on teaching presence” (p. 18). Essentially, one may view these “words of encouragement” as a component of facilitation, as well as, social presence, validating the interdependence of the presences. In essence, teaching presence is a shared

responsibility, implying that students could also provide positive feedback to peers, thereby increasing social and teaching presence.

Research regarding the use of the Community of Inquiry (CoI) framework for course design and assessment of learning experiences speaks to the essential components of teaching presence. Kupczynski, Wiesenmeyer, and McCluskey (2010) examined student perceptions of teaching presence and indicators of success in online courses. The researchers found that instructional design and organization of the course were correlated the students' perceived likelihood of success. Garrison and Cleveland-Innes (2005) conducted a study examining cognitive presence that also pointed to the importance of guided discourse and strong leadership. Garrison (2016) cautioned that students value clarity, but do not want to be overly regulated and should contribute to the level of teaching presence.

Relationship among the elements. Garrison and Arbaugh (2007) explained the relationship between the three elements of the Community of Inquiry (CoI) framework, "Social presence lays the groundwork for higher level discourse; and the structure, organization, and leadership associated with teaching presence creates the environment where cognitive presence can be developed" (p. 163). Each of the three elements supports the others, providing an environment that encourages a sense of community and collaborative construction of knowledge, skills, and critical thinking ability. In a study of cognitive presence in online formats conducted by Garrison and Cleveland-Innes (2005) the researchers concluded that social interaction, nor can the exchange of content create an environment that leads to deep and meaningful learning. Teaching presence creates the meaningful exchanges that lead to collaborative inquiry and knowledge acquisition. Mills and colleagues' (2016) study further highlighted the

interdependence of the three presences, as researchers found that one presence's functioning influences the outcomes of the others.

Garrison (2017) posits that the presences evolve over time, creating a learning environment conducive to inquiry. Akyol and Garrison's (2011) study found that social presence was dominant early in the course, while cognitive and teaching presences increased over time, following the expected increase in focus on academic requirements. This research indicates that instructor and student social presence is essential to the early formation of the relationships and sense of community that will lead to exploration of content via cognitive and teaching presences. The evolution and formation of the presences in a community of inquiry are not linear, but fluid and recursive, developing depending upon the needs of the students and instructor (Garrison, 2016).

Garrison, Cleveland-Innes, and Fung (2010) utilized the Community of Inquiry (CoI) Survey Instrument to explore the causal relationships among the three core elements, along with the influence of program of study, and student gender. Two hundred and eighty-seven students from four institutions in the United States and Canada completed the CoI Survey. The structural equation model confirmed the relationships among the three presences. Garrison, et al. (2010) found "evidence that the three presences are interconnected and influence each other in the hypothesized manner. That is, it was shown that student perception of teaching presence directly influences the perception of social and cognitive presence. Perceptions of social presence also significantly predict perceptions of cognitive presence. Therefore, social presence must be seen as a mediating variable between teaching and cognitive presence" (p. 35). Garrison (2017) suggested that while social presence influences teaching and cognitive presence, the influences are reciprocal, moving in both directions.

In a continued effort to understand the dynamic balance of the three presences, Kozan and Richardson (2014) investigated the relationships between and among the elements. The researchers found that cognitive presence might have a strong effect on the relationship between teaching presence and social presence. The findings support the idea that students first identify with the academic purpose of the group; therefore, activities that increase social interaction should also encourage cognitive presence (Garrison, 2016).

Disciplines. Continued growth in online and blended/hybrid/mixed-mode formats has broadened the variety of disciplines utilizing the Community of Inquiry (CoI). Early applications and study of the CoI framework were centered in computer and technology education (Garrison, 2000; Garrison, et al., 2000). The CoI Survey Instrument developed by Arbaugh, et al. (2008) has been employed in various disciplines including education, business, and health care (Bangert, 2009; Mills, et al., 2016; Shea and Bidjerano, 2009; Swan, et al., 2008). More recently, application of the CoI has expanded into the applied fields of business and health care. Wisneski and colleagues (2015) examined teaching presence in online and traditional Master of Business Administration (MBA) classrooms and found that instructors who intentionally designed the course to include elements of teaching presence, actually achieved greater perceived teaching presence. The researchers also confirmed that using words of “encouragement, affirmation, and validation” (p. 18) increased perception of teaching presence in the course environment.

Mills, Yates, Harrison, Woods, Chamberlain-Salaun, Trueman, and Hitchins (2016) studied the use of the Community of Inquiry (CoI) framework in nursing education. The aim of the study was to assess student satisfaction with a redesigned postgraduate core nursing and midwifery research subject. The study used a mixed methods approach, employing the validated CoI Instrument and follow-up interviews. The research yielded five major themes: (a) subject

design and delivery – beneficial, challenging, and effective, (b) cultivating community through social interaction, (c) application – knowledge, practice, research, (d) technology and technicalities, (e) student recommendations. Mills, et al. found that live online meetings with the instructor provided support, information, and direction. Conversely, the research found that discussion did not promote inquiry; but the researchers recognize the influence of time and teaching presence in developing depth in discussion. The study also revealed mixed opinions regarding social presence or the sense of connectedness. Mills, et al. pointed out the need for nurse researchers to use critical thinking and collaboration skills, indicating that when the CoI framework is implemented and developed effectively, it is a good fit for teaching nursing research. The CoI framework can equip students with knowledge, experience, critical thinking skills and the skills required for modern collaboration.

Student perception and performance. The literature provides information regarding the perception of graduate students in higher education. A 2007 study conducted by Lim, focused on identifying social, cognitive, and teaching presences using a case study approach. The researcher examined discussion transcripts and administered a survey to 23 students. The survey included open and closed ended questions, allowing students to share experiences and perceptions. Lim's findings from survey and discourse analyses suggested that the elements of cognitive, teaching, and social presences were evident in class discussion. Therefore, the researchers concluded that the online synchronous learning environment, presented in this case, encompassed all three elements of the community of inquiry framework.

Rubin and Fernandes (2013) conducted a study with 875 students in 126 sections of 44 unique graduate courses in a large, private Midwestern university. Utilizing the Community of Inquiry (CoI) Survey Instrument, the research focused on student perception of the presences at

the individual and group level. The study found that both individual and class-level communities of inquiry are relevant to understanding how online learning takes place. The research provided evidence that the CoI exists at multiple levels, including individual, section, and small group levels.

In a 2015 study, Horzum investigated online graduate students' perceptions of the Community of Inquiry (CoI). The researcher adapted the Community of Inquiry Survey Instrument to Turkish to determine if there is a relationship between CoI components and learning outcomes (perceived learning, satisfaction, and willingness to participate in online formats). The study also considered the influence of demographic variables and found that age affects perception, and may be influenced by technological comfort. The research found that perceptions did not differ according to gender or previous experience with online learning. Notably, Horzum's research found that the three elements are important to the formation of a community and an increase in the perception of one element, will affect the other elements in a positive fashion. The study further reveals that the existence of the three elements have a positive effect on learning outcomes.

Course format and design. A specific area of research examines the influence of course format on the development of a Community of Inquiry. Halverson, Graham, Spring, Drysdale, and Jeffery (2012) stated that the Community of Inquiry framework is one of the most employed theories for blended/hybrid/mixed-mode learning. Akyol, Garrison, and Ozden (2009) examined the three elements of the framework, concurrently in a blended and online learning environment that utilized the community of inquiry approach. The aim of the study was to examine the impact of course format (blended versus online) on the development of community and the three presences. Researchers examined the courses through a mixed methods approach incorporating

transcript analysis of online discussions, interviews, and the CoI survey. Akyol, et al. (2009) reported that the results of the study indicated that each element developed successfully in both courses. However, the research indicated a higher level of affective communication in the online course and a higher level of group cohesion in the blended/hybrid/mixed-mode course, resulting in higher perceptions of social presence in the blended/hybrid/mixed-mode course. The researchers report the differences suggest that incorporating face-to-face interactions early in the course, may present advantages when developing group identity and trust (social presence). This research points to some advantages in the blended/hybrid/mixed-mode format including, reduced time to develop group cohesion, higher levels of inquiry, and providing multiple forms of communication, which is more satisfying to students. In essence, these findings support the contention that the blended/hybrid/mixed-mode learning environment is effective in sustaining a community of inquiry. An additional study by Akyol and Garrison (2010) focused on cognitive presence in the online and blended/hybrid/mixed-mode environment. The study had implications beyond cognitive presence, which indicated that students in the blended/hybrid/mixed-mode course had “higher perceptions of learning, satisfaction, cognitive presence, teaching presence, and social presence” (p. 245).

A study conducted by Lambert and Fisher (2013) used mixed methods to examine a community of inquiry approach incorporated in an online graduate-level distance education course in Educational Technology program in a large Midwest university. The researchers scrutinized student perceptions and preference for online education. Lambert and Fisher’s work provides further support for the three essential elements of the Community of Inquiry (CoI) framework as a guide for online course design. The authors indicate that the strength of the CoI framework is that it offers specific actions that encourage participation (e.g., organization of

course, facilitation, affective expression, group cohesion, exploration, resolution, etc.)” (p. 12). The researchers further note the availability of advanced technologies to build presence and a sense of community, including wiki pages, synchronous online meetings, blogs, collaborative project work, and online presentations (Lambert & Fisher, 2013). These types of assignments encourage cognitive activity, while also increasing social presence and teaching presence. The authors suggest that research should move beyond the use and examination of discussion forums to explore other technological tools for the development of communities of inquiry.

A qualitative study conducted by Szeto (2015) assessed the use of the Community of Inquiry (CoI) framework as an instructional approach in a blended/hybrid/mixed-mode format engineering course in a Hong Kong university. The researcher used student and instructor interviews, video recordings, and class observations to examine the effects of the presences on shaping course experiences. The study indicated that “the teaching presence effect is prominent and overshadows the social and cognitive presences” (Szeto, 2015, p. 199). The author suggests that to balance out the effects of the three presences, instructors can build in more interactive activities and enhance instructions to inspire students’ inquiry. Hence, the results of the study indicate that the balance of the three presences depends greatly on the context of the course and the level of application of the CoI framework.

Conclusion and Implications

In keeping with the trend of growth in distance formats in higher education, social work programs are increasingly offering online and blended/hybrid/mixed-mode format courses (Bentley, et al., 2015; Blackmon, 2013; Ferrara, et al., 2013). Technology has enhanced the social work profession’s ability to reach diverse populations at all levels – micro, mezzo, and macro – by means of education, training, assessment, intervention, advocacy, and activism. The

opportunities presented through computer mediated communication are broad and ever-changing. Social work professionals have a responsibility to remain up-to-date with new technologies (NASW, et al., 2017) and to utilize those advancements for the betterment of society (NASW, 2017). Due to technological enhancements, the barriers created by distance have been reduced, if not eliminated. However, as previously stated, Garrison (2017) reminded educators of the challenges that distance presents when creating a collaborative learning environment. Thus, the Community of Inquiry (CoI) framework provides educators with a model for creating a safe, collaborative constructivist space to engage in deep learning.

Social work educators who are eager to adopt distance education formats, and those who are skeptical, can equally benefit from an understanding of the Community of Inquiry (CoI) framework and its applicability to social work education. The CoI framework is useful to, and fits with the pedagogical goals of social work. The benefits of using the CoI framework for social work course design, implementation, and evaluation include its strong connection to the values and principles of the social work profession. The CoI values presence and interpersonal interaction; employs collaborative learning models, including building on the experiences and ideas of others; recognizes the influence of the environment and experiences in the process of learning (constructivist approach); and appreciates the significance and usefulness of technology in education and the workplace (Garrison, 2016, 2017).

The profession of social work values the use of evidence based practices in intervention and education (Anastas, 2010; Hepworth, et al., 2017). The Community of Inquiry (CoI) framework provides an evidence based model for course design, implementation, and evaluation, which provides a foundation for creating theoretically grounded distance education courses and programs (Garrison, 2016, 2017). When social work educators provide effective distance course

formats, social work students and the social work field will likely benefit. Potential advantages of utilizing the CoI framework for social work education include improved student satisfaction, retention, and performance as evidenced by prior research in other disciplines. Students who experience quality programming will carry the ability to communicate, collaborate, utilize critical thinking, and construct meaning into the professional social work environment. Subsequently, benefiting individual social workers, social service organizations, and the client systems served by social workers.

Future research. Research regarding the Community of Inquiry (CoI) framework has been focused in the realm of technology and education, but has expanded into the applied, skill-based fields of business (Arbaugh & Rau, 2007) and nursing (Mills, et al., 2016). Garrison and Arbaugh (2007) indicated that the framework “has resonated with the online learning community and provided insights and methodology for studying online learning” (p. 157). Other scholars recommend that research regarding the CoI framework continue to expand to additional disciplines (Garrison & Arbaugh, 2007; Garrison, 2017). The Community of Inquiry Survey Instrument presents a tool to examine conceptual refinement of the relationships and interactions between/among the essential elements (Garrison & Arbaugh, 2007). In addition, Garrison (2017) recommends the use of qualitative methods to fully explore and gather insights into student and faculty perceptions of the presences.

Research regarding the applicability of the Community of Inquiry (CoI) framework to social work education is sparse. The social work field continues to focus much of its research on the effectiveness of online and blended/hybrid/mixed-mode formats, while essentially overlooking a validated, effective model for successful distance course design, implementation, and evaluation. Ultimately standing alone, Ferrara, et al. (2013) used the CoI framework to

conduct a qualitative examination of two hybrid clinical social work courses taught in a Master of Social Work Program. The researchers found value in the application of the CoI framework and the collaborative learning environment. Bentley, et al. (2015) provided a conceptual review of social presence in online social work courses and highlighted the importance of social presence to the social work profession indicating that the “professional demands of our discipline, which are centered in connective capabilities, interpersonal exchange, shared problem-solving, and collaboration with peers and other providers are addressed through the concept of social presence and the larger Community of Inquiry (CoI) framework” (p. 503). The authors recommend that future research address the use of social presence to inform development of practice skills, peer collaboration, and decision making.

LaMendola’s (2010) conceptual paper examined social presence in online social work courses and argued that social work “needs to confront the changes in culture that are taking place” (p. 113). The author advocates for a broadened vision of creating human associations to include online interactions, encouraging social work educators to consider technological forms of communication. The CoI framework provides a model that fits the needs of social work education and provides insights and techniques that will help educators to maintain high quality social work programs in the online format. The CoI framework can assist in course design and guide a social work educators’ instructional approach by focusing on concepts of human presence, inquiry, and community building in education.

Chapter 3: Methodology

This chapter presents the aims of the study, the research questions and hypotheses, and the research method for this study. It includes an overview of a mixed methods approach and rationale for selection of a correlational, cross-sectional, non-experimental design. Furthermore, the chapter outlines the population, sampling strategy, survey instruments, as well as, procedures for data collection.

Aims of Study

This study adds to the body of literature regarding the Community of Inquiry (CoI) framework by applying the model to social work distance education and exploring the existence of the presences in online and blended/hybrid/mixed-mode social work courses. This research provides social work educators with a model for distance course design, implementation, and evaluation that aligns with the goals of the social work profession and social work education. This research explored the CoI as a tool for course design and as a guide for social work educators' instructional approach.

The research questions for consideration within this study are:

- To what extent is a community of inquiry and the three essential elements (social presence, cognitive presence, and teaching presence) of the CoI framework existent in distance education format social work courses from the students' and instructors' perspective?
- How does the Community of Inquiry (CoI) framework meet the needs of social work distance education by creating an inquiry-based learning community?

The hypotheses for consideration in this study are as follows:

Hypothesis 1: Students in distance format social work courses perceive social presence, cognitive presence, and teaching presence in their distance format social work courses.

Hypothesis 2: Instructors in distance format social work courses perceive social presence, cognitive presence, and teaching presence in their distance format social work courses.

Hypothesis 3: No difference exists between instructor perception and student perception of social presence, cognitive presence, and teaching presence in distance format social work courses.

Hypothesis 4: No difference exists among student participants' overall mean sub-scale scores (teaching presence, social presence, and cognitive presence) based on demographic variables including level of study (BSW, MSW, DSW), experience with distance education formats (number of course enrollments), and distance course design.

Hypothesis 5: There is no statistically significant relationship between each of the presences.

Hypothesis 6: Instructors in distance format social work courses will find value in the Community of Inquiry (CoI) framework as a model for course design, implementation, and evaluation.

Research Design

A mixed methods research approach was selected for this study as it provided an opportunity to combine quantitative and qualitative techniques into one study and was most suited for addressing the research aims of this study. According to Johnson and Onwuegbuzie (2004), mixed methods represents a separate, “third paradigm” of research design (p. 14). Reasons for using a mixed methods approach include triangulation (comparison across methods), complementarity (clarification), development (methods influence one another), initiation

(findings conflict, leading to new frameworks), and expansion (broadened theoretical understanding) (Greene, Caracelli & Graham, 1989). This mixed methods research design allows for conceptualization of the Community of Inquiry (CoI) in distance education format social work courses and testing for significant relationships among the essential elements of the CoI.

The strengths of the mixed methods approach include the ability to investigate a broad, multifaceted problem that has not been previously explored (Johnson & Onwuegbuzie, 2004). Furthermore, the qualitative data may support the quantitative data, or vice versa, potentially overcoming the weaknesses of using just one technique. The use of a mixed methods approach provides insights into relationships among variables, thereby providing a more complete understanding of the phenomenon (Johnson & Onwuegbuzie, 2004).

As Padgett (2017) reported, researchers have been using a mixture of qualitative and quantitative methods and the literature on the mixed methods approach continues to expand. However, the challenge of integrating, or merging, connecting, and embedding methods remains a consideration (Creswell & Plano Clark, 2011). Merging occurs when the two techniques are interwoven. Connecting materializes when the methods are separated by time, but have equal importance in the study. Conversely, embedding takes place when one technique takes precedence over the other (Creswell & Plano Clark, 2011). With integration as a primary goal, Padgett (2017) portrayed differing paths to implementing mixed methods: sequential, concurrent, and complicated. In a sequential design, data is collected in two phases, with qualitative data typically collected in the first phase. In a concurrent design, data is collected concurrently, in one phase. Padgett (2017) described the enumerable possibilities of mixed methods design, referring to these multiple forms of research design as complicated designs. As described below, the study utilized an embedded, concurrent design.

In this study, the quantitative measures explored both student and instructor perception of the existence of the essential elements of the Community of Inquiry (CoI) framework in distance education format social work courses. The qualitative measure (open-ended question) invited instructors to share in-depth perceptions about the usefulness of the CoI in social work distance education, which is not included in the quantitative survey instruments (Appendixes A & B). According to Creswell, Plano, Guttman, and Hanson (2003), “in concurrently gathering both forms of data at the same time, the researcher seeks to compare both forms of data to search for congruent findings (e.g., how the themes identified in the qualitative data collection compare with the statistical results in the quantitative analysis)” (p. 217-218).

This study employed a concurrent mixed methods approach with a QUAN(qual) design, which allowed the secondary, qualitative method to be embedded in the primary quantitative method (Engel & Schutt, 2017). The quantitative method takes precedence over the qualitative method because this study, primarily, sought to understand the presence of, and relationships among, the CoI’s essential elements in distance education format social work courses from the perspective of social work students and educators. The secondary, qualitative data provides insight into just one aspect, educator perception of the usefulness of the CoI framework for course design, implementation, and evaluation. To provide value to the study, the qualitative question was prefaced and grounded in the quantitative portion of the investigation (Creswell & Plano, 2011). The rationale for this approach is that the quantitative data and results provide a general picture of the research problem, while the qualitative data and its analysis was intended to investigate social work educators’ views in more depth.

This research employed a correlational, non-experimental design. This study did not attempt to intervene on the faculty or students’ perceptions of distance education format social

work courses. The study attempted to understand noncausal relationships between variables, leading to a non-experimental, correlational design. This study used an observational correlational design and will not involve intervention or manipulation of variables (Spector, 1981). Field (2013) asserted that correlational research provides a “natural view” of the phenomenon being studied (p. 13). The study observed and evaluated the relationships among elements of the Community of Inquiry (CoI) framework and participant demographics, through a “natural view,” that was not influenced by the researcher.

The measurement, or observation of all variables, was taken at one point in time, indicating a cross-sectional design. The usefulness of a cross-sectional design can be found in its ability to establish relationships between and among variables (Spector, 1981). Potential problems with this design approach include that it only establishes relationships, not causality and because only self-report methods were used for collecting data, false relationships may be possible (Spector, 1981). Furthermore, because this design provides information from a specific time, it is possible that a study could have different results if gathered at a different time (Rubin & Babbie, 2017). Rubin and Babbie (2017) point out that “although cross-sectional studies don’t permit definitive, conclusive inferences about what is really causing what, they can have value in building our profession’s scientific knowledge base” (p. 282).

Correlational research does not attempt to influence variables, and cross-sectional design is limited to examining correlations at one point in time, thereby reducing internal validity. Internal validity refers to the extent of which the results of the study supports whether a variable is or is not a cause of change in another variable (Rubin & Babbie, 2017). This study did not seek to prove causality between or among variables. Although internal validity is lacking in a correlational cross-sectional design, this approach may have stronger external validity as the

study has a larger sample of social work students than would be possible in an experimental or quasi-experimental design (Rubin & Babbie, 2017). External validity refers to the extent to which findings from a study can be generalized outside of the study participants, to the external population or other situations (Rubbin & Babbie, 2017). This study utilized a survey to gather information from participants, gathering data from a wide variety of participants and increasing generalizability.

Variables. This research explored a number of variables, primarily the essential elements of the Community of Inquiry (CoI) framework. Social presence is operationalized as “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as real people” (Garrison, et al., 2000, p. 89). Cognitive presence centers on supporting the development of skills, knowledge, and understanding (Garrison, et al. 2000). This includes exploring and examining content, integrating material into assignments, and resolution of dilemmas (Garrison, et al., 2000). Teaching presence focuses on course design and organization, instructor preparation, course materials, course facilitation, direct instruction, and learning experiences (Garrison, et al., 2000). The three elements were measured with the Community of Inquiry (CoI) framework Survey Instrument (for students) and revised survey for instructors. The CoI survey is a five point Likert scale instrument with 34 items, which are grouped by the essential elements: teaching presence, questions 1 -13; social presence, questions 14 – 22; cognitive presence, questions 23 – 34.

Beyond the elements of the Community of Inquiry (CoI) framework, this research considered the social work program type/level. Students and instructors in all levels of social work education, Bachelor of Social Work (BSW), Master of Social Work (MSW), and Doctor of

Social Work (DSW), participated in this study. For this particular study, PhD was excluded as the Pennsylvania State System of Higher Education (PASSHE) system does not offer a PhD in social work. Prior research in other disciplines and in social work education, has focused on gathering the perspective of graduate level students and instructors (Horzum, 2015; Lambert & Fisher, 2013; Lim, 2007; Mills, et al., 2016; Rubin & Fernandez, 2013). This study is unique in that it examined the perspectives of students and instructors at all levels of social work education.

Furthermore, this research considered courses offered in varied formats – fully online with and without synchronous components and blended/hybrid/mixed-mode formats. The terms synchronous and asynchronous help to distinguish the types of activities that take place in distance education format courses. Asynchronous activities are those that allow students to complete assignments and review content within a flexible timeframe (Miller, 2014) and are often composed of written and video communications (Garrison, 2017). Conversely, synchronous activities require students, often with the instructor facilitating, to communicate at scheduled times (Miller, 2014) and often through verbal means (Garrison, 2017). Garrison and Vaughan (2008) described blended/hybrid/mixed-mode learning as “the organic integration of thoughtfully selected and complementary face-to-face and online approaches” (p. 148). This research faced a challenge in comparing varied distance education formats as there is a broad range of variation in blending and balancing the online, face-to-face, synchronous, and asynchronous components of distance education format courses.

Demographic information provides context to the data gathered through the Community of Inquiry surveys. Questions were included (see Appendix C) to gather information on age, level of study (BSW, MSW or DSW), Pennsylvania State System of Higher Education

(PASSHE) University location, length of experience with distance course formats, course format (fully online/synchronous, fully online/asynchronous, or blended/hybrid/mixed-mode), and course length.

Population and Sampling Strategy

Sampling strategy in mixed methods design can be more complicated because of the various components of the study. According to Onwuegbuzie and Collins (2007), the selection and size of the sample should be “informed primarily by the research objective, research question(s), and, subsequently, the research design” (p. 288). The objective of this study was to gain insights into the phenomenon of social work distance education and the existence of a community of inquiry, as well as, social presence, cognitive presence, and teaching presence in distance education format courses. Taking into account the QUAN (qual) design of this study, it was appropriate to employ a nonprobability convenience sampling strategy. The sampling strategy employed a hybridization of both purposive and convenience components in that the study selected individuals who maximized understanding of the phenomenon (Onwuegbuzie & Collins, 2007) and who the researcher had feasible access. That is, employing a combination of convenience and purposive sampling techniques allowed this researcher to access individuals who were able to provide insights into distance education in the field of social work.

The target population for the study was social work students and instructors who were participating in a distance education format social work course during the fall 2018 semester at a Pennsylvania State System of Higher Education (PASSHE) university. Established in 1983, the PASSHE system is made up of fourteen universities and serves over 105,000 students. Table 2 represents the PASSHE universities with accredited social work programs that were contacted to participate in the study. Cheyney University, Clarion University, and Indiana University are

excluded from the table as they do not offer a social work program. Bloomsburg University and East Stroudsburg University were excluded from participation in the study as the social work programs do not offer distance education format courses.

Table 2

PASSHE Universities with Accredited Social Work Programs

<i>PASSHE University</i>	<i>Participated in Study</i>	<i>Bachelor of Social Work (BSW or BSSW)</i>	<i>Distance SW Courses</i>	<i>Master of Social Work (MSW)</i>	<i>Distance SW Courses</i>	<i>Doctor of Social Work (DSW)</i>	<i>Distance SW Courses</i>
California University	no	X	yes	X	yes	-	-
Edinboro University	yes	X	no	X	yes	-	-
Kutztown University	yes	X	no	X	yes	X	yes
Lock Haven University	no	X	yes	-	-	-	-
Mansfield University	yes	X	yes	-	-	-	-
Millersville University	yes	X	yes	X	yes	X	yes
Shippensburg University	yes	X	yes	X	yes	-	-
Slippery Rock University	yes	X	yes	X (new)	N/A	-	-
West Chester University	no	X	no	X	yes	-	-

In order to recruit participants for the study, this researcher utilized university websites to obtain contact information for social work faculty chairs at the following PASSHE Universities:

Bloomsburg University, California University of Pennsylvania, East Stroudsburg University,

Edinboro University, Kutztown University, Lock Haven University, Mansfield University, Millersville University, Shippensburg University, Slippery Rock University, and West Chester University. As previously stated, Bloomsburg and East Stroudsburg Universities do not offer distance education format courses and were not contacted to recruit study participants. In August 2018, this researcher sent an email to social work program department chairs introducing the, then proposed, research and requesting support in distributing the survey to social work faculty and students. Six universities (Edinboro University, Kutztown University, Mansfield University, Millersville University, Shippensburg University, and West Chester University) responded with support and agreement to distribute the survey. In mid-October 2018, this researcher sent an email to social work program department chairs from the eight originally identified programs, requesting assistance in distributing the survey to faculty who are teaching a distance education format social work course during the Fall 2018 semester. The email invited faculty to first, review the cover letter and provide consent; second, participate in the survey; and third, requested assistance in distributing the study information and request for participation to current students. As noted in Table 2, six PASSHE University social work programs participated in the study: Edinboro University, Kutztown University, Mansfield University, Millersville University, Shippensburg University, and Slippery Rock University.

To assist with recruitment, the email sent to department chairs was sent directly to social work faculty known to the research team, who could complete the survey and assist with student participant recruitment. In addition, as an incentive to participate, instructors and students who completed the survey were entered in a drawing to receive one of four \$50.00 gift cards.

Measurements/Instrumentation

Participants in this study completed an online survey between October 18, 2018 and November 20, 2018 of the Fall 2018 semester. Student participants completed the Community of Inquiry (CoI) Survey Instrument (Appendix A), which is designed to measure social presence, cognitive presence, and teaching presence in distance education formats, primarily from the student perspective. The CoI survey is a five point Likert scale instrument with 34 items, which are grouped by the essential elements: teaching presence, questions 1 -13; social presence, questions 14 – 22; cognitive presence, questions 23 – 34. Arbaugh, et al., (2008) reported on the development and validation of the CoI survey instrument and state that Cronbach's Alpha yielded internal consistencies equal to 0.94 for teaching presence, 0.91 for social presence, and 0.95 for cognitive presence, indicating internal consistency and scale reliability. As specified in Chapter 2 of this document, the study's findings suggested that the instrument is a valid, reliable, and efficient measure of the dimensions of the CoI.

Additional study of the Community of Inquiry (CoI) Survey instrument was conducted by Swan, Richardson, Ice, Garrison, Cleveland-Innes and Arbaugh (2008) and verified the theoretical structure of the instrument and provided evidence that the CoI survey can be used for “continued explication of concepts in the model...and may be used for practical purposes, to guide design elements ahead of time, or to evaluate the existence of an online community of inquiry once implemented” (p. 8). Shea and Bidjerano (2009) found that the CoI survey followed the structure specified in the CoI framework. Bangert (2009) concluded that the CoI survey instrument is a valid tool to determine and enhance distance education formats.

Instructor participants completed the adapted Community of Inquiry (CoI) Survey (Appendix B), which is designed to measure social presence, cognitive presence, and teaching presence in distance education formats from the instructor's perspective. The 40 item educator

version of the survey was developed by Cleveland-Innes and is being tested via workshops at Mid-Sweden University and the Open University of China, as well as, research at the School of Nursing at Oregon Health and Science University (OHSU), which is yet to be published (Cleveland-Innes, 2017). Appendix B depicts the version of the survey developed by Cleveland-Innes and utilized by the researchers at OHSU. It contains a coding matrix allowing instructors to self-score the survey and assess their proficiency in creating an inquiry-based learning community within a distance education format course. Instructors were not asked to complete the coding matrix for this study.

Since a concurrent mixed methods design was utilized, this researcher added an optional open-ended question that attempted to elicit qualitative information about the instructors' perception of the Community of Inquiry (CoI) framework and its presence in distance education format social work courses. By including the open-ended research question, the study attempted to identify themes in the experience of social work instructors in the distance education format classroom. According to Creswell and Poth (2018), qualitative methods provide understanding of the context of a problem. This research explores the "problem" of providing social work curriculum in a distance education format and the applicability of the Community of Inquiry (CoI) framework to address the problem.

Data Collection Procedures

Data was collected via survey instruments mid-semester of Fall 2018. This timeframe allowed instructors and students suitable context to evaluate a course using the Community of Inquiry (CoI) Survey Instrument. As described above, the survey was distributed via email, with a cover letter/consent form (see Appendix D) to chairs of social work departments explaining the purpose of the study and requesting participation and distribution. The email included a link to

the survey through Qualtrics, which included a verification of consent that participants completed prior to starting the survey. Participants were able to complete the survey from any computer with internet access within approximately fifteen minutes. When an instructor participant chose to participate in the optional open-ended question, the survey occupied additional time. Reminders to complete the survey were sent by participating instructors via email and course announcement. Participants had the choice of opting out of the survey at any time.

Chapter 4: Data Analysis and Results

This chapter provides a description of the procedures used to analyze the quantitative and qualitative data gathered through this research. Results related to perception of the Community

of Inquiry (CoI) framework, differences between student and instructor perception, as well as, relationships among the three presences are presented. Furthermore, results of analysis of variance related to level of study (BSW, MSW, DSW), experience with distance format courses, and course design are presented.

Quantitative Data Analysis Coding

Quantitative data collected via Qualtrics was exported and loaded into SPSS program version 25 (IBM SPSS, Inc. Chicago, Illinois, USA). The following coding procedures were applied for data analysis. For descriptive statistic analysis, responses for Likert-type ordinal scale questions were coded as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. The student survey contains 34 items, which are grouped by the essential elements: teaching presence, questions 1 -13; social presence, questions 14 – 22; cognitive presence, questions 23 – 34. The instructor survey contains 40 items, which are not grouped by essential element, and includes an additional element of emotional presence, which is not examined in this study. See Appendix B for explanation of coding/scoring of the instructor survey.

Descriptive Analyses

Descriptive statistics were computed regarding instructor and student participants including frequencies, percentages, and means.

Instructor characteristics. A hybrid of convenience and purposive sampling strategies was used to recruit eleven (n = 11) faculty participants from a population of social work faculty teaching distance format courses in the Pennsylvania State System of Higher Education (PASSHE). Survey response rates from instructors were low. As such, and because of the exploratory nature of the study, analyses and statistical inferences regarding instructor responses

were limited. The educators were instructing social work courses being offered in online or blended/hybrid/mixed-mode formats during the Fall 2018 semester. The eleven faculty participants offered courses at the Bachelor of Social Work (BSW) (4 instructors), Master of Social Work (MSW) (5 instructors), and Doctor of Social Work (DSW) (1 instructor) level. One instructor chose “other” for level of study. The instructors’ age varied from age 37 to 69 years. The level of experience teaching distance education format courses varied from first time teaching to sixteen or more social work courses taught in a distance format. Seven of the eleven faculty reported experience teaching a total of between six and fifteen distance format courses. Frequencies and percentages for nominal variables related to instructors are presented in Table 3.

Table 3

Descriptive Statistics for Instructor Participants

<i>Variable</i>	<i>Attribute</i>	<i>n</i>	<i>%</i>
Age	37 to 69	-	-
	Mean = 50.9		
Level of Instruction	BSW	4	36.36
	MSW	5	45.45
	DSW	1	9.09
	Other	1	9.09
PASSHE University	California University of PA	0	0
	Edinboro University	4	40
	Kutztown University	1	10
	Lock Haven University	0	0
	Mansfield University	0	0
	Millersville University	3	30
	Shippensburg University	1	10
	Slippery Rock University	1	10

	West Chester University	0	0
Experience instructing distance format social work courses	First course taught	1	9.09
	2 to 5 courses	2	18.18
	6 to 10 courses	4	36.36
	11 to 15 courses	3	27.27
	16 or more courses	1	9.09
Course mode of delivery	fully online with mandatory synchronous sessions	4	36.36
	fully online with optional synchronous sessions	0	0
	fully online and asynchronous	5	45.45
	blended/hybrid/mixed-mode	2	18.18
Date course began	8/28/18		37.5
Length of course	4 weeks	0	0
	5 weeks	0	0
	6 weeks	1	9.09
	7 weeks	0	0
	8 weeks	0	0
	9 weeks	0	0
	10 weeks	0	0
	11 weeks	0	0
	12 weeks	0	0
	13 weeks	0	0
	14 weeks	0	0
	15 weeks	8	72.73
	16 weeks	2	18.18

Student characteristics. A hybrid of convenience and purposive sampling strategies was utilized to recruit 100 student participants ($n = 100$) from a population of social work students enrolled in distance education format courses in the Pennsylvania State System of Higher Education (PASSHE). The students were enrolled in social work courses offered in online or

blended/hybrid/mixed-mode formats during the Fall 2018 semester. Student participants were enrolled in Bachelor of Social Work (BSW) (38 students), Master of Social Work (MSW) (49 students), or Doctor of Social Work (DSW) (12 students) courses. One student reported level of study as “other.” The students’ age varied from 18 to 59. The level of experience/enrollment in distance education format courses varied from first time enrollment to sixteen or more social work courses completed in a distance format. Fifty-two of the 100 student participants reported two to five distance format course enrollments. Frequencies and percentages for nominal variables related to students are presented in Table 4.

Table 4

Descriptive Statistics for Student Participants

<i>Variable</i>		<i>Attribute</i>	<i>n</i>	<i>%</i>
Age		18 to 59	-	-
		Mean = 29.02		
Level of Study	BSW		38	38
	MSW		49	49
	DSW		12	12
	Other		1	1
PASSHE University	California University of PA		0	0
	Edinboro University		9	9
	Kutztown University		25	25
	Lock Haven University		0	0
	Mansfield University		8	8
	Millersville University		40	40
	Shippensburg University		18	18
	Slippery Rock University		0	0
	West Chester University		0	0

Experience instructing distance format social work courses	First course enrollment	17	17
	2 to 5 course enrollments	52	52
	6 to 10 course enrollments	16	16
	11 to 15 course enrollments	9	9
	16 or more course enrollments	6	6
Course mode of delivery	fully online with mandatory synchronous sessions	13	13
	fully online with optional synchronous sessions	12	12
	fully online and asynchronous	19	19
	blended/hybrid/mixed-mode	56	56
Date course began	8/27/18		35
Length of course	4 weeks	1	1
	5 weeks	2	2
	6 weeks	7	7
	7 weeks	0	0
	8 weeks	0	0
	9 weeks	0	0
	10 weeks	0	0
	11 weeks	0	0
	12 weeks	0	0
	13 weeks	0	0
	14 weeks	5	5
	15 weeks	42	42
	16 weeks	43	43

Survey data. Descriptive statistics were computed for each item of the Community of Inquiry (CoI) Survey Instruments (Appendices A and B) including frequencies, percentages, means, and standard deviations. Responses for individual questions were collapsed to combine “agree” and “strongly agree” responses. Sub-scale mean scores were calculated for the three presences for students and instructors. See Tables 5, 6 and 7 for detailed information.

Table 5

Descriptive Statistical Analysis of Community of Inquiry Student Survey Results

<i>Scale</i>	<i>Sub-scale questions</i>	<i>% Agreed or strongly agreed</i>
Teaching Presence	<i>Design and organization</i>	
	1. The instructor clearly communicated important course topics.	84.6%
	2. The instructor clearly communicated important course goals.	86.6%
	3. The instructor provided clear instructions on how to participate in course learning activities.	80.4%
	4. The instructor clearly communicated important due dates/time frames for learning activities.	81.4%
	<i>Facilitation</i>	
	5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.	66.3%
	6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.	70.4%
	7. The instructor helped to keep course participants engaged and participating in productive dialogue.	76.5%
	8. The instructor helped keep the course participants on task in a way that helped me to learn.	74.2%
9. The instructor encouraged course participants to explore new concepts in this course.	88.7%	
10. Instructor actions reinforced the development of a sense of community among course participants.	77.6%	
<i>Direct instruction</i>		
<i>*Questions 11 to 13 related to direct instructions were inadvertently excluded from the survey.</i>		
Social Presence	<i>Affective expression</i>	
	14. Getting to know other course participants gave me a sense of belonging in the course.	75.5%
	15. I was able to form distinct impressions of some course participants.	75.2%
	16. Online or web-based communication is an excellent medium for social interaction.	47.4%

	<i>Open communication</i>	
	17. I felt comfortable conversing through the online medium.	81.6%
	18. I felt comfortable participating in the course discussions.	88.8%
	19. I felt comfortable interacting with other course participants.	90.8%
	<i>Group cohesion</i>	
	20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.	70.4%
	21. I felt that my point of view was acknowledged by other course participants.	83.5%
	22. Online discussions help me to develop a sense of collaboration.	66%
Cognitive Presence		
	<i>Triggering event</i>	
	23. Problems posed increased my interest in course issues.	71.4%
	24. Course activities piqued my curiosity.	75.5%
	25. I felt motivated to explore content related questions.	79.4%
	<i>Exploration</i>	
	26. I utilized a variety of information sources to explore problems posed in this course.	87.7%
	27. Brainstorming and finding relevant information helped me resolve content related questions.	88.8%
	28. Online discussions were valuable in helping me appreciate different perspectives.	76.5%
	<i>Integration</i>	
	29. Combining new information helped me answer questions raised in course activities.	85.7%
	30. Learning activities helped me construct explanations/solutions.	87.8%
	31. Reflection on course content and discussions helped me understand fundamental concepts in this class.	88.8%
	<i>Resolution</i>	

32. I can describe ways to test and apply the knowledge created in this course.	78.4%
33. I have developed solutions to course problems that can be applied in practice.	83.7%
34. I can apply the knowledge created in this course to my work or other non-class related activities.	89.8%

Table 6

Descriptive Statistical Analysis of Community of Inquiry Educator Survey Results

<i>Survey Question</i>	<i>% Agreed or strongly agreed</i>
1. Students in my course can describe ways to test and apply the knowledge learned.	100%
2. My actions reinforce the development of a sense of community among course participants.	91.6%
3. Students in my course are motivated to explore content related questions.	83.3%
4. Course activities pique students' curiosity.	100%
5. I acknowledge emotion expressed by the students in my course.	83.3%
6. I clearly communicate important due dates/time frames for learning activities.	100%
7. Students in my course are able to form distinct impressions of some other course participants	91.7%
8. I clearly communicate important course goals.	100%
9. I provide feedback in a timely fashion.	100%
10. I provide feedback that helps students understand strengths and weaknesses relative to the course goals and objectives.	100%
11. I help to identify areas of agreement and disagreement on course topics in a way that helps students to learn.	91.7%
12. Students feel comfortable disagreeing with other course participants while still maintaining a sense of trust.	83.3%
13. Reflection on course content and discussions helps students understand fundamental concept	91.6%
14. Expressing emotion in relation to sharing ideas is acceptable in my course.	100%
15. Online discussions are facilitated in a way that is valuable for helping students appreciate different perspectives.	100%
16. I encourage course participants to explore new concepts in my course.	100%
17. I clearly communicate important course topics.	83.3%
18. Combining new information helps students answer questions raised in course activities.	91.7%
19. Brainstorming and finding relevant information helps students resolve content related questions.	66.6%

20. In my role as instructor, I demonstrate emotion in my presentations and/or when facilitating discussions, online or face-to-face.	91.7%
21. Learning activities helps students construct explanations/solutions.	100%
22. Students feel his/her point of view is acknowledged by other course participants.	83.3%
23. Students in my course feel comfortable taking on the role of teacher when the opportunity arises.	66.7%
24. Students utilize a variety of information sources to explore problems posed in my course.	91.7%
25. I keep course participants engaged and participating in productive dialogue.	91.6%
26. Students' feel comfortable interacting with other course participants.	100%
27. I provide clear instructions on how to participate in course learning activities.	100%
28. I find myself responding emotionally about ideas or learning activities in my course.	75%
29. Getting to know other course participants gives students a sense of belonging in my course.	91.6%
30. Students feel comfortable conversing online or face-to-face in my course.	91.7%
31. Online or web-based communication is an excellent medium for interaction with and among my students.	83.3%
32. Problems posed increase student interest in course content.	83.3%
33. Students feel comfortable expressing emotion through the online medium or in the face-to-face classroom.	75%
34. I help to focus discussion on relevant issues in a way that helps students to learn.	100%
35. Students can apply the knowledge created in my course to his/her work or other non-class related activities.	100%
36. Students feel comfortable participating in course discussions.	100%
37. Students develop solutions to relevant problems that can be applied in practice.	91.7%
38. I am helpful in guiding the class towards understanding course topics in a way that helps students clarify his/her thinking.	100%
39. Online or face-to-face discussions can help students to develop a sense of collaboration.	100%
40. Emotion is expressed, online or face-to-face, among the students in my course.	75%

Table 7

Descriptive Statistics for Community of Inquiry Educator and Student Survey Sub-scale Results

	<i>Sub-scale item</i>	<i>Overall mean sub-scale score</i>	<i>Overall SD sub-scale score</i>
Educator	Teaching Presence	4.45	0.34
	Social Presence	4.37	0.39

	Cognitive Presence	4.33	0.39
	Emotional Presence	4.08	0.55
Student	Teaching Presence	4.11	0.75
	Social Presence	3.99	0.61
	Cognitive Presence	4.11	0.57
	Emotional Presence	N/A	N/A

To determine student and instructor perception of the essential elements of the Community of Inquiry (CoI) framework using the two identified CoI survey instruments, a hypothetical mean was established. On a likert scale of 1 (strongly disagree) to 5 (strongly agree), “perception” of the essential elements of the CoI was determined to be a score of higher than the median or mid-point of 3 (neutral). Prior research validating the CoI Survey Instrument validates the survey as a reliable tool for examining the existence of a community of inquiry in distance education format courses (Garrison, et al., 2010; Swan, et al., 2008). Olpak, Yagci, and Basarmak (2016) conducted a meta-analysis to investigate different data collection tools for the concept of the community of inquiry. The researchers concluded that the CoI Survey Instrument originally developed by Arbaugh and colleagues (2008), has been widely accepted to determine CoI perception via scale.

Reliability Analysis for the Community of Inquiry Measures

Reliability analysis was used to measure the consistency of the Community of Inquiry student and educator survey instruments. For the student version, Cronbach's Alpha yielded internal consistencies equal to .93 for teaching presence, .85 for social presence, and .91 for cognitive presence, indicating internal consistency and scale reliability. For the educator version,

Cronbach's Alpha yielded internal consistencies equal to .81 for teaching presence, .80 for social presence, and .85 for cognitive presence, indicating internal consistency and scale reliability (Field, 2018). Prior research indicates that the CoI survey instrument is a "reliable measure for the existence of a community of inquiry in online learning environments" (Swan, et al., 2008, p. 8).

Test Assumptions for Analyses

All hypothesis, with the exception of Hypothesis 6, related to the qualitative measures, utilized mean comparisons in some form. As such, the test assumptions for mean comparisons was examined to determine if there were any flaws with the analyses. These assumptions were the following: random sampling, assumption of normality, and the homogeneity of the variances as noted by Field (2018).

The first assumption of random sampling, that data were collected from a random sample of social work students and instructors who have experience with distance education format social work courses, was not met. The sampling strategy employed a hybridization of both purposive and convenience components in that the study selected individuals who maximized understanding of the phenomenon (Onwuegbuzie & Collins, 2007) and who the researcher had feasible access. True random sampling was not possible as this research utilized a non-experimental approach, which sought to investigate the existence of the Community of Inquiry (CoI) Framework in distance education format social work courses. However, the results of this study can be applicable to a larger population of social work students and instructors as the sampling procedures ensured that responses would not be biased. To reduce demographic bias, participants of differing ages were solicited from a variety of sources (PASSHE Universities throughout the state of Pennsylvania), from all levels of study and instruction (BSW, MSW,

DSW), from a range of levels of experience with distance education formats, and from a variety of course design formats. To reduce non-response (participation) bias, an incentive was offered, thereby encouraging participation by students and instructors who may have declined participation without a monetary incentive (Rubin & Babbie, 2017).

The second assumption of normal distribution was fulfilled because enough independent observations had been collected to follow the *Central Limit Theorem*, which stipulates that, “the sum of independent observations having any distribution whatsoever approaches a normal distribution as the number of observations increases” and “sums of 50 or more observations approximate to normality” (Field, 2018, p. 177). Since this study secured 111 observations, normality can be assumed. Lastly, Levene’s Test of the Homogeneity of Variance was conducted for all mean comparisons. In each comparison for the following hypotheses, Levene’s Tests demonstrated that the variances were equal.

Means Comparisons Analyses

Hypothesis 1: Students in distance format social work courses perceive social presence, cognitive presence, and teaching presence in their distance format social work courses.

Single sample t-tests were conducted to determine if a statistically significant difference existed between student participants’ overall mean sub-scale scores for teaching presence, social presence, and cognitive presence and the hypothesized perception score of above 3 (neutral) for each sub-scale. The analysis indicates a statistically significant mean difference between student participants’ overall mean sub-scale score for teaching presence ($M = 4.11$, $SD = .745$) and the level hypothesized to indicate perception of teaching presence, $t(97) = 14.73$, $p = 0.000$. The analysis indicates a statistically significant mean difference between student participants’ overall

mean sub-scale score for social presence ($M = 3.99$, $SD = .615$) and the level hypothesized to indicate perception of social presence, $t(97) = 15.91$, $p = 0.000$. The analysis indicates a statistically significant mean difference between student participants' overall mean sub-scale score for cognitive presence ($M = 4.11$, $SD = .574$) and the level hypothesized to indicate perception of cognitive presence, $t(97) = 19.08$, $p = 0.000$. The one sample t-tests indicate that this sample of student participants scored the CoI survey items related to the essential elements of the CoI significantly above the mid-point of 3 (neutral).

Hypothesis 2: Instructors in distance format social work courses perceive social presence, cognitive presence, and teaching presence in their distance format social work courses.

A single sample t-test was conducted to determine if a statistically significant difference existed between instructor participants' overall mean sub-scale scores for teaching presence, social presence, and cognitive presence and the hypothesized score of above 3 (neutral) for each sub-scale. The analysis indicates a statistically significant mean difference between instructor participants' overall mean sub-scale score for teaching presence ($M = 4.45$, $SD = .338$) and the level hypothesized to indicate perception of teaching presence, $t(11) = 14.88$, $p = 0.000$. The analysis indicates a statistically significant mean difference between instructor participants' overall mean sub-scale score for social presence ($M = 4.37$, $SD = .389$) and the level hypothesized to indicate perception of social presence, $t(11) = 12.16$, $p = 0.000$. The analysis indicates a statistically significant mean difference between instructor participants' overall mean sub-scale score for cognitive presence ($M = 4.33$, $SD = .387$) and the level hypothesized to indicate perception of cognitive presence, $t(11) = 11.88$, $p = 0.000$. The one sample t-tests

indicate that this sample of instructor participants scored the CoI survey items related to the essential elements of the CoI significantly above the mid-point of 3 (neutral).

Hypothesis 3: No difference exists between instructor perception and student perception of social presence, cognitive presence, and teaching presence in distance format social work courses.

Figure 2 depicts the overall mean sub-scale scores by group. Additional comparison between groups (students and instructors) using independent t-tests was not possible due to the low number of instructor responses ($n = 11$).

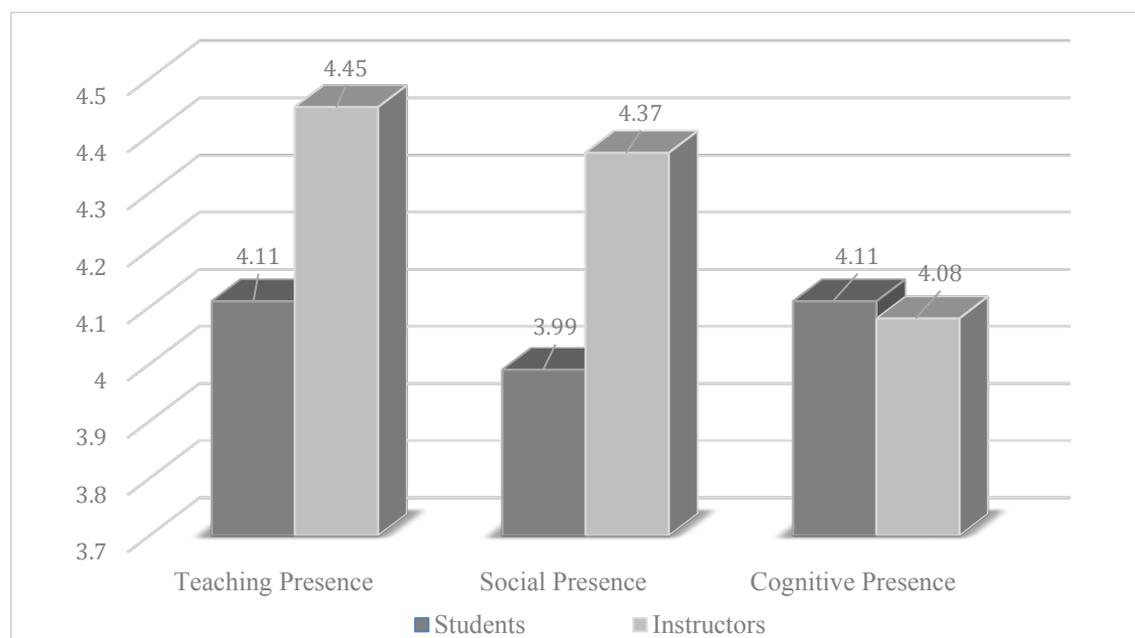


Figure 2: Summary of overall mean sub-scale scores by group.

Hypothesis 4: No difference exists among student participants' overall mean sub-scale scores (teaching presence, social presence, and cognitive presence) based on demographic variables including level of study (BSW, MSW, DSW), experience with distance education formats (number of course enrollments), and distance course design.

Analysis of variance was conducted to compare the effect of students' level of study (BSW, MSW, DSW), experience with distance format courses, and course design, on mean scores for teaching presence, social presence, and cognitive presence.

A One-Way ANOVA was conducted to compare the effect of the student participants' level of study (BSW, MSW, DSW) on mean scores for teaching presence, social presence, and cognitive presence. An analysis of variance indicated that the effect of level of study on mean scores for teaching presence was statistically significant $F(2, 94) = 4.16, p = 0.019$. Post hoc comparisons using Scheffe's test indicated that the mean score for BSW students ($M = 4.38, SD = 0.69$) was significantly different ($p = 0.04$) than the mean score for MSW students ($M = 3.97, SD = 0.73$). However, mean scores for BSW students and MSW students did not significantly differ ($p < 0.05$) from mean scores of DSW students ($M = 4.01, SD = .63$). See Table 8 for detailed information.

Table 8

ANOVA Comparing Student Overall Mean Score for Teaching Presence by Level of Study

Source	df	SS	MS	F	p
Between groups	94	2.61	.871	4.16	0.019
Within groups	3	51.19	.544		
Total	97	53.78			

An analysis of variance indicated that the effect of level of study on mean scores for social presence was not significant, $F(2, 94) = 2.31, p = 0.105$.

The analysis of variance indicated that the effect of level of study on mean scores for cognitive presence was statistically significant, $F(2, 94) = 3.71, p = 0.028$. Post hoc comparisons using Scheffe's test indicated that the mean score for BSW students ($M = 4.21, SD = 0.50$) was

significantly different ($p = 0.032$) than the mean score for MSW students ($M = 3.98$, $SD = 0.62$). However, means scores for BSW students and MSW students did not significantly differ ($p < 0.05$) from mean scores of DSW students ($M = 4.04$, $SD = 0.43$). See Table 9 for detailed information.

Table 9

ANOVA Comparing Student Overall Mean Score for Cognitive Presence by Level of Study

Source	df	SS	MS	F	p
Between groups	94	1.27	.424	3.71	0.028
Within groups	2	30.70	.327		
Total	96	31.97			

A One-Way ANOVA was conducted to compare effect of student participants' experience with distance education courses (number of enrollments) on mean scores for teaching presence, social presence, and cognitive presence. The analysis of variance indicated that the effect of students' experience with distance education courses on mean scores for teaching presence was significant $F(4, 93) = 2.89$, $p = 0.026$. Post hoc comparisons using the Scheffe's test indicated that the mean score for students with one enrollment in a distance format course ($M = 4.48$, $SD = 0.78$) was significantly different ($p = 0.037$) than the mean score for students with 11 to 15 distance format course enrollments ($M = 3.51$, $SD = 0.53$). The remaining comparisons using Scheffes's test, related to teaching presence, were not significantly different ($p < 0.05$). See Table 10 for detailed information.

Furthermore, the analysis of variance revealed no significant statistical difference when comparing students' experience/number of course enrollments with both social presence, $F(4, 93) = 1.66$, $p = 0.167$, and cognitive presence $F(4, 93) = 1.28$, $p = 0.084$.

Table 10

ANOVA Comparing Student Overall Mean Score for Teaching Presence by Experience/Enrollments in Distance Format Courses

Source	df	SS	MS	F	p
Between groups	93	5.95	1.49	2.89	0.026
Within groups	4	47.93	.51		
Total	97	53.78			

A One-Way ANOVA was conducted to determine the effect of course design (fully online with mandatory synchronous, fully online with optional synchronous, fully online and asynchronous, blended/hybrid/mixed-mode) on mean scores for teaching presence, $F(3, 94) = 1.60$, $p = 0.194$, social presence, $F(3, 94) = .991$, $p = 0.401$, and cognitive presence, $F(3, 94) = 1.30$, $p = 0.280$. The analysis of variance indicated that the differences were not statistically significant.

Hypothesis 5: There is no statistically significant relationship between each of the presences.

Spearman's correlation coefficient was conducted to analyze relationships between teaching presence, social presence, and cognitive presence (Privitera, 2014). Correlations were computed, in separate tests, using the student overall mean sub-scale scores and instructor overall mean sub-scale scores. The correlation test revealed statistically significant ($p < 0.01$), positive relationships between the three elements of the Community of Inquiry (CoI) framework for both students ($n = 98$) and educators ($n = 12$). See Table 11 for detailed information.

Table 11

Spearman's Correlation Coefficient for Overall Mean Sub-scale Scores

	Social Presence	Cognitive Presence
Students		
Teaching Presence	.574**	.707**
Social Presence	--	.701**
Educators		
Teaching Presence	.867**	.772**
Social Presence	--	.801**

**Correlation is significant at the .01 level (2-tailed).

Qualitative Data Analysis

Hypothesis 6: Instructors in distance format social work courses will find value in the Community of Inquiry (CoI) framework as a model for course design, implementation, and evaluation.

Qualitative data obtained from the open-ended question responses were limited. The instructors who chose to comment indicated a general lack of knowledge about the Community of Inquiry (CoI) framework. Two instructors commented that the CoI appears to encourage sustained student engagement, while others commented on the framework's attention to social and emotional presence in distance education format courses. An instructor further commented that the CoI enhances student social work knowledge, values, skills, abilities, and ethics.

Chapter 5: Discussion and Implications

This chapter provides a discussion of the possible meanings, implications, and limitations of this study's results. Recommendations for future research on the Community of Inquiry (CoI)

and its applicability to distance education formats in the social work field will also be considered.

A variety of statistical analyses were used to examine the research questions. Descriptive statistics were computed for each item of the Community of Inquiry (CoI) Survey Instruments (Appendices A and B) including frequencies, percentages, means, and standard deviations. Responses for individual questions were collapsed to combine “agree” and “strongly agree” responses. Sub-scale mean scores were calculated for the three presences for students and instructors. One sample t-tests were conducted to determine whether the student and instructor overall sub-scale mean(s) were statistically different from a hypothesized mean score. Analysis of variance (ANOVAs) were conducted to compare the effect of students’ level of study (BSW, MSW, DSW), experience with distance format courses, and course design, on mean scores for teaching presence, social presence, and cognitive presence. Spearman’s correlation coefficient was conducted to analyze the relationship between teaching presence, social presence, and cognitive presence for both students and instructors.

Perception of the Elements of the Community of Inquiry (CoI) Framework

The Community of Inquiry (CoI) framework has been the subject of considerable research in a variety of disciplines, with limited examination in the field of social work. The results of this study, as determined by one sample t-tests, indicate that both students and instructors in distance format social work courses perceive the essential elements of the CoI, teaching presence, social presence, and cognitive presence, in their distance format social work courses. This research indicates that the elements of the Community of Inquiry (CoI) framework are perceived by student and instructor participants of social work courses at all levels of study (BSW, MSW, and DSW) and in varied distance education course designs. Students and

instructors with varied experience with distance education format social work courses (number of course enrollments) recognize the existence of the primary elements of the CoI framework.

Overall, students and instructors perceive the elements, but some difference is apparent when overall mean sub-scale scores of students and instructors are compared. See Figure 2.

Students and instructors scored survey items related to cognitive presence similarly. However, student and instructor participant overall mean sub-scale scores for teaching presence and social presence did not align. This result indicates some discrepancy between the two groups' level of perception of the elements. This discrepancy could be related to the fact that the Community of Inquiry Survey Instrument asks students to assess a course or instructor's performance, while the educator version of the survey asks instructors to complete a self-assessment. It is possible that instructors may be inclined to overestimate competence (or level of perception) when completing a self-assessment. In addition, it should be noted that instructor survey responses were limited, restricting the ability to compare students to instructors through additional statistical analysis. A larger sample of social work instructors may produce different results.

An additional noteworthy difference is apparent in responses to similar questions related to online communication. Only 47.4% of student participants "agreed" or "strongly agreed" with the statement: "Online or web-based communication is an excellent medium for social interaction." Conversely, 83.3% of instructor participants "agreed" or "strongly agreed" with a similar statement from the educator survey: "Online or web-based communication is an excellent medium for interaction with and among my students." The majority of students who participated in this survey do not see online or web-based communication as an "excellent" means for communication. However, the majority of communication in distance education format courses is conducted through web-based mediums. It should be noted that the statement uses the term

“excellent,” which may influence the students’ responses. Future research could investigate the perception of web-based communication further.

The quantitative data gathered from instructor participants in this study, although limited in scope, indicates that social work educators perceive the elements of teaching presence, social presence, and cognitive presence in their distance format social work courses. However, it becomes apparent through the qualitative data, that social work educators are not aware of the Community of Inquiry (CoI) framework and its potential applicability to distance format social work courses. Based on these results, and on the previous recommendations and research of Blackmon (2013), Cummings, et al., (2015), Reamer (2013), and Zidan (2015), social work educators could benefit from information, education, and training on the CoI framework. Furthermore, instructors could utilize the educator version of the CoI survey to understand the strengths and weaknesses of course instruction and make changes or improvements.

Demographic Influences

The influence of student demographic variables was apparent in multiple areas. The statistical analysis of variance (ANOVA) indicated a significant difference between BSW and MSW students’ overall mean sub-scale scores for teaching presence and cognitive presence. The overall mean sub-scale score for teaching presence for BSW students ($M = 4.38$) was higher than MSW students ($M = 3.97$). Likewise, the overall mean sub-scale score for cognitive presence for BSW students ($M = 4.31$) was higher than MSW students ($M = 3.98$). Based on these results, students’ perception of teaching presence and cognitive presence is influenced by the identified level of study. Prior research related to the Community of Inquiry (CoI) framework in social work education has gathered data related to graduate students (Ferrara, et al., 2013). Information

obtained through this study provides new data regarding BSW level students' perception of the CoI framework.

The statistical analysis of variance indicated a significant difference in the overall mean sub-scale score for teaching presence between students with one enrollment in a distance format course ($M = 4.48$) to students with 11 to 15 distance format course enrollments ($M = 3.51$). The research did not indicate statistically significant differences related to social or cognitive presence. These results indicate that students' perception of teaching presence in a distance format social work course differs depending on experience with distance education format courses. One may suppose that social work students' expectations for a high level of organization and facilitation (teaching presence) increases as a student gains experience with distance format courses. Future research could seek to explore experience with distance education format social work courses (number of course enrollments) as a factor in creating a community of inquiry.

This research did not find any statistical difference between the various course design formats for students' overall mean sub-scale score for any of the elements. This result indicates that the elements of the Community of Inquiry (CoI) framework are perceived to be present in a variety of distance format designs, including fully online with mandatory synchronous, fully online with optional synchronous, fully online and asynchronous, and blended/hybrid/mixed-mode course designs. This researcher anticipated a challenge in comparing varied distance education formats as there is a broad range of variation in blending and balancing the online, face-to-face, synchronous, and asynchronous components of distance education format courses. However, for this study, the design of the course did not appear to influence the students' perception of the elements of the CoI framework. Conversely, prior research has noted

differences in perception of the essential elements when the course design is taken in to account. Akyol, et al. (2009) compared blended and online courses, reporting a higher level of group cohesion in the blended/hybrid/mixed-mode course, resulting in higher perceptions of social presence. The results of a study conducted by Szeto (2015) indicate that the balance of the three presences depends greatly on the context of the course and the level of application of the CoI framework.

Analysis of variance among groups for instructor participants could not be conducted due to a small number of participants ($n = 11$).

Relationships Among the Elements

Correlation analysis of both student and educator responses revealed statistically significant relationships between the three elements of the Community of Inquiry (CoI) framework. This confirms prior research that points to the interdependent relationships between and among teaching presence, social presence, and cognitive presence (Garrison, 2010; Garrison & Arbaugh, 2007; Kozan & Richardson, 2014; Mills, et al., 2016).

Limitations

This research attempted to gather information from both social work students and instructors in the PASSHE system and is limited by the low number of instructor responses. In particular, instructors offered limited responses to the qualitative question, thereby restricting this study's ability to explore educators' understanding of the Community of Inquiry (CoI). Furthermore, instructors admit an incomplete knowledge of the CoI, thereby limiting the study's ability to gather informed data.

This study utilized the Community of Inquiry (CoI) Survey Instrument to gather student responses. However, due to a researcher error, three questions pertaining to teaching presence

(direct instruction) were not included in the student survey. However, as previously noted, reliability analysis was used to measure the consistency of the Community of Inquiry student survey instrument. Cronbach's Alpha yielded internal consistencies equal to .93 for teaching presence sub-set.

This research utilized a combination of convenience and purposive sampling to engage participants in the survey process. Students and instructors were recruited through the PASSHE university system. Although this limited the sample to students within six specific universities in Pennsylvania, the researcher sought to include participants of varied age, level of study, and experience with distance education format courses. Although caution should be used when generalizing results of this study, because of the attempts made to avoid bias, one can suggest that social work students and instructors who participated in this study are representative of the general population of social work students and instructors.

Recommendations for Future Research

Based on the results of this study, this researcher offers the following recommendations for future research:

1. Using the Community of Inquiry (CoI) Survey Instrument, conduct additional research with social work students in distance education format social work courses from a variety of institutions of higher education throughout the United States.
2. Conduct research with social work students in distance format social work courses to compare perception of the elements of the CoI with additional measures including, satisfaction or performance.
3. Examine the perception of “web-based” communication in distance education format social work courses.

4. Examine the influence of course design, possibly comparing blended/hybrid/mixed-mode to fully online social work courses.
5. Conduct additional research with social work instructors who facilitate distance education format social work courses.
 - Consider providing education or training related to the Community of Inquiry (CoI) framework prior to administering the survey.
 - Conduct focus groups or interviews with instructors in addition to administration of the CoI Educator Survey Instrument.
 - Utilize the CoI for course design and examine levels of student perception of the elements of the CoI, student satisfaction and/or performance.
 - Utilize the CoI Educator Survey Instrument for instructor self-evaluation and gather perceptions of the usefulness of the tool.

Implications for Social Work Educators

This study sought to examine the existence of the essential elements and applicability of the Community of Inquiry (CoI) framework to distance education format social work courses. This study contributes to the knowledge about the CoI framework and the essential elements. The results of this study indicate that both social work students and instructors perceive the elements of teaching presence, social presence, and cognitive presence in their distance education format social work courses. The research has provided additional insights into the perceptions of social work students based upon level of study (BSW, MSW, DSW), and experience with distance education courses.

Because students and instructors perceived the Community of Inquiry (CoI) framework, it could be applied to the design, implementation, and evaluation of distance education format

social work courses. This study has revealed that the CoI Survey Instrument is a reliable way to gather data regarding social work students' distance education format course experience. Social work educators and students could benefit from application and continued study of the CoI framework. Additional research that utilizes the tools of the CoI framework, including the student and educator surveys, to integrate the elements of the CoI in course design, implementation, and evaluation will provide further information to understand the usefulness of this well-researched framework for distance education.

Appendix A

Community of Inquiry Survey Instrument (draft v14)

Teaching Presence*Design & Organization*

1. The instructor clearly communicated important course topics.
2. The instructor clearly communicated important course goals.
3. The instructor provided clear instructions on how to participate in course learning activities.
4. The instructor clearly communicated important due dates/time frames for learning activities.

Facilitation

5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.
6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.
7. The instructor helped to keep course participants engaged and participating in productive dialogue.
8. The instructor helped keep the course participants on task in a way that helped me to learn.
9. The instructor encouraged course participants to explore new concepts in this course.
10. Instructor actions reinforced the development of a sense of community among course participants.

Direct Instruction

11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.
12. The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.
13. The instructor provided feedback in a timely fashion.

Social Presence*Affective expression*

14. Getting to know other course participants gave me a sense of belonging in the course.

15. I was able to form distinct impressions of some course participants.
16. Online or web-based communication is an excellent medium for social interaction.

Open communication

17. I felt comfortable conversing through the online medium.
18. I felt comfortable participating in the course discussions.
19. I felt comfortable interacting with other course participants.

Group cohesion

20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.
21. I felt that my point of view was acknowledged by other course participants.
22. Online discussions help me to develop a sense of collaboration.

Cognitive Presence

Triggering event

23. Problems posed increased my interest in course issues.
24. Course activities piqued my curiosity.
25. I felt motivated to explore content related questions.

Exploration

26. I utilized a variety of information sources to explore problems posed in this course.
27. Brainstorming and finding relevant information helped me resolve content related questions.
28. Online discussions were valuable in helping me appreciate different perspectives.

Integration

29. Combining new information helped me answer questions raised in course activities.
30. Learning activities helped me construct explanations/solutions.
31. Reflection on course content and discussions helped me understand fundamental concepts in this class.

Resolution

32. I can describe ways to test and apply the knowledge created in this course.
33. I have developed solutions to course problems that can be applied in practice.
34. I can apply the knowledge created in this course to my work or other non-class related activities.

Appendix B

Community of Inquiry Educator Survey

Read each statement and answer based on a course you are currently teaching, or your overall design and teaching practice. NOTE that strongly disagree is first, receiving a score

value of 1. Once completed, please follow the scoring instructions on page 3. If you have questions, please ask a facilitator for further instruction.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
41. Students in my course can describe ways to test and apply the knowledge learned.	1	2	3	4	5
42. My actions reinforce the development of a sense of community among course participants.	1	2	3	4	5
43. Students in my course are motivated to explore content related questions.	1	2	3	4	5
44. Course activities pique students' curiosity.	1	2	3	4	5
45. I acknowledge emotion expressed by the students in my course.	1	2	3	4	5
46. I clearly communicate important due dates/time frames for learning activities.	1	2	3	4	5
47. Students in my course are able to form distinct impressions of some other course participants	1	2	3	4	5
48. I clearly communicate important course goals.	1	2	3	4	5
49. I provide feedback in a timely fashion.	1	2	3	4	5
50. I provide feedback that helps students understand strengths and weaknesses relative to the course goals and objectives.	1	2	3	4	5
51. I help to identify areas of agreement and disagreement on course topics in a way that helps students to learn.	1	2	3	4	5
52. Students feel comfortable disagreeing with other course participants while still maintaining a sense of trust.	1	2	3	4	5
53. Reflection on course content and discussions helps students understand fundamental concept	1	2	3	4	5
54. Expressing emotion in relation to sharing ideas is acceptable in my course.	1	2	3	4	5
55. Online discussions are facilitated in a way that is valuable for helping students appreciate different perspectives.	1	2	3	4	5
56. I encourage course participants to explore new concepts in my course.	1	2	3	4	5
57. I clearly communicate important course topics.	1	2	3	4	5
58. Combining new information helps students answer questions raised in course activities.	1	2	3	4	5
59. Brainstorming and finding relevant information helps students resolve content related questions.	1	2	3	4	5
60. In my role as instructor, I demonstrate emotion in my presentations and/or when facilitating discussions, online or face-to-face.	1	2	3	4	5

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
61. Learning activities helps students construct explanations/solutions.	1	2	3	4	5
62. Students feel his/her point of view is acknowledged by other course participants.	1	2	3	4	5
63. Students in my course feel comfortable taking on the role of teacher when the opportunity arises.	1	2	3	4	5
64. Students utilize a variety of information sources to explore problems posed in my course.	1	2	3	4	5
65. I keep course participants engaged and participating in productive dialogue.	1	2	3	4	5
66. Students' feel comfortable interacting with other course participants.	1	2	3	4	5
67. I provide clear instructions on how to participate in course learning activities.	1	2	3	4	5
68. I find myself responding emotionally about ideas or learning activities in my course.	1	2	3	4	5
69. Getting to know other course participants gives students a sense of belonging in my course.	1	2	3	4	5
70. Students feel comfortable conversing online or face-to-face in my course.	1	2	3	4	5
71. Online or web-based communication is an excellent medium for interaction with and among my students.	1	2	3	4	5
72. Problems posed increase student interest in course content.	1	2	3	4	5
73. Students feel comfortable expressing emotion through the online medium or in the face-to-face classroom.	1	2	3	4	5
74. I help to focus discussion on relevant issues in a way that helps students to learn.	1	2	3	4	5
75. Students can apply the knowledge created in my course to his/her work or other non-class related activities.	1	2	3	4	5
76. Students feel comfortable participating in course discussions.	1	2	3	4	5
77. Students develop solutions to relevant problems that can be applied in practice.	1	2	3	4	5
78. I am helpful in guiding the class towards understanding course topics in a way that helps students clarify his/her thinking.	1	2	3	4	5
79. Online or face-to-face discussions can help students to develop a sense of collaboration.	1	2	3	4	5
80. Emotion is expressed, online or face-to-face, among the students in my course.	1	2	3	4	5

Reference: Cleveland-Innes, M. Reflections on teaching. *Teaching for Flexible, Blended Learning*. Invited presentation, KTH Royal Institute of Technology, Stockholm, Sweden.

CoI Coding – Instructor Version

Add together the answer you provided for the question identified, and divide by the number of answers.

When you have a single, averaged score for each element, put in the scoresheet below.

	Social Presence (SP)	Cognitive Presence (CP)	Teaching Presence (TP)	Emotional Presence (EP)
Open Communication	$26 + 30 + 36/3$			
Personal Expression	$7 + 29 + 31 + 39/4$			
Group Cohesion	$12 + 2 + 22/3$			
Triggering Event		$3 + 4 + 32/3$		
Exploration		$15 + 19 + 24 + 35/4$		
Integration		$13 + 18 + 21/3$		
Resolution		$1 + 37/2$		
Direct Instruction			$9 + 10 + 34/3$	
Facilitation			$11 + 16 + 23 + 25 + 38/5$	
Design and Organization			$6 + 8 + 17 + 27/4$	
With TP				$5 + 20/2$
With SP				$33 + 40/2$
With CP				$14 + 28/2$

Totals	Social Presence (SP)	Cognitive Presence (CP)	Teaching Presence (TP)	Emotional Presence (EP)
Open Communication				
Personal Expression				
Group Cohesion				
SP SCORE (add numbers above)				
Triggering Event				
Exploration				
Integration				
Resolution				

CP SCORE(add numbers above)				
Direct Instruction				
Facilitation				
Design and Organization				
TP SCORE (add numbers above)				
With TP				
With SP				
With CP				
EP SCORE (add numbers above)				

Once you have your scores, go back and check the elements as defined by the CoI framework. If your average scores are 3.5 or above, you are on your way to using the pedagogical strategy to create an inquiry-based learning community, but have some improvements to make. Less than 3.5, you have some valuable growth opportunities! Give yourself a gold star for anything 4.5 or above. Share what you learned from this exercise.

Appendix C

Demographic Questions

Age: What is your age?

Level of Study: What is your level of study (student) or instruction (instructor/professor)?

- BSW
- MSW
- DSW
- Other

University: Which PASSHE University are you associated with (student or instructor)?

- California University of Pennsylvania
- Edinboro University
- Kutztown University
- Lock Haven University
- Mansfield University
- Millersville University
- Shippensburg University
- Slippery Rock University
- West Chester University

Length of experience with distance education formats.

- Students: Which category best describes your experience with distance education format social work courses?
 - first enrollment in a distance format social work course
 - 2 to 5 enrollments
 - 6 to 10 enrollments
 - 11 to 15 enrollments
 - 16 or more enrollments
- Instructors: Which category best describes your experience with distance format social work courses?
 - first time instructor of distance format social work course
 - 2 to 5 social work courses taught in distance format
 - 6 to 10 social work courses taught in distance format
 - 11 to 15 social work courses taught in distance format
 - 16 or more courses taught in distance format

Course format: Which category best describes this social work course?

- fully online with mandatory synchronous sessions
- fully online with optional synchronous sessions
- fully online and asynchronous
- blended/hybrid/mixed-mode (the course requires a combination of face-to-face and online learning)

Course start date: What date did this social work course begin?

Course length: What is the length (in weeks) of this social work course?

- 4 weeks
- 5 weeks
- 6 weeks
- 7 weeks
- 8 weeks
- 9 weeks
- 10 weeks
- 11 weeks
- 12 weeks
- 13 weeks
- 14 weeks
- 15 weeks
- 16 weeks

Appendix D

COVER LETTER & CONSENT FORM

You are invited to participate in a research study being conducted through Millersville University because you either teach or are enrolled in a distance education social work course.

Title of the Study: The Community of Inquiry (CoI) Framework and Distance Education in Social Work

Researcher: Tami Micsky, MSSA, LSW, CT, Doctoral Candidate at Millersville University.

Purpose of the Study:

The purpose of this study is to examine Community of Inquiry (CoI) framework and its applicability to social work distance education. The CoI framework, a research-based seminal work, provides a structure for integrating a collaborative constructivist approach to course design, implementation, and evaluation (Garrison, 2017). The CoI framework suggests that by fostering three essential elements: social presence, cognitive presence, and teaching presence, a community of inquiry can be created to promote student engagement and learning (Garrison, Anderson, & Archer, 2000).

Procedures: If you agree to participate in this study, we would ask you to complete the Community of Inquiry (CoI) Survey and demographic questions that may take approximately 20 minutes.

For instructors, please note that you will be asked to answer one, optional, open-ended question after completing the 34 item CoI Survey.

Risks and Benefits of Being in the Study:

No risks are anticipated with this study. You may stop at any time within the survey. If you should wish not to continue.

The benefits to participation in the study include the opportunity to share your thoughts and ideas about community and presence in the online environment. It is our hope that you will feel as if your experiences are important as findings from this study will inform course design, format, and evaluation of distance education social work courses.

Compensation:

Participants who complete the survey will be entered in a drawing to win one of four \$50.00 gift cards.

Confidentiality:

All information will be handled in a confidential manner to the extent provided by law, so that no one will be able to identify you when results are recorded. However, it is possible that University representatives may become aware of your participation in this study and may inspect and copy records pertaining to this research.

To help protect your confidentiality, we will:

- Our survey will be conducted through Millersville University's sponsored Qualtrics account and all provided information will be stored and secured within university parameters through use of password protection within Qualtrics and MU. Qualtrics

utilizes a data encryption software and all account access is logged and monitored by the Qualtrics InfoSec team.

- De-identified extracts from Qualtrics will be used by the research team members for data storage, data analysis, and final reporting.
- Information obtained from the optional, open-ended question will be kept on a password protected laptop computer and on a separate flash drive, which will be kept in a locked file cabinet contained in the primary researcher's locked faculty office.
- Final results from this study could be presented through future peer-reviewed publication and conference presentation. Since only aggregated themes noted will be reference, not individual outcomes, minimal risk of confidentiality breach upon dissemination should occur.

Voluntary Participation:

Your participation in this study is completely voluntary. There is no penalty for not participating. If you decide to participate in this study, you may discontinue your participation and withdraw from the study at any time without penalty. Any data that was collected as part of your participation in the study will remain as part of the study records and cannot be removed.

Contacts and Questions:

We encourage you to ask questions. If you have any questions about the research study itself, please contact: Tami Micsky (principal investigator), Doctoral Candidate, Millersville University at 814-823-9580 (cellular) or at tmicsky@millersville.edu or Dr. Leonora Foels (supervising faculty), Millersville University at 717-871-4732 or Leonora.Foels@millersville.edu.

This study has been reviewed and approved by the Millersville University of Pennsylvania Institutional Review Board, Protocol #427375952. If you have questions or would like to speak with someone other than the research team, contact Dr. René Muñoz, Director of Sponsored Projects and Research Administration, at either (717) 871-4457 or (717) 871-4146, or at rene.munoz@millersville.edu.

Statement of Consent:

By signing this consent form, I am indicating that

- I am a social work student currently enrolled in a distance education social work course. OR I am a social work instructor/professor and am currently teaching a distance education social work course.
- I have read the information described above and have received a copy of this information.
- I have asked questions I had regarding the research study and have received answers to my satisfaction.
- I am 18 years of age or older and voluntarily consent to participate in this study.

Signature of Participant

Date

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