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Comparison Between Faculty And Student Perception Of Instructor Presence In Online Courses

Samantha D. Penney
Indiana State University

COMPARISON BETWEEN FACULTY AND STUDENT PERCEPTION OF INSTRUCTOR PRESENCE IN ONLINE COURSES

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Samantha D. Penney

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COMMITTEE MEMBERS

Committee Chair: Dr. Robin Burden, Ph.D.

Associate Professor of Teaching and Learning

Indiana State University

Committee Member: Dr. Susan Kiger, Ph.D.

Professor Emeritus of Teaching and Learning

Indiana State University

Committee Member: Dr. Donna Selman, Ph.D.

Interim Chair, Department of Biology

Indiana State University

ABSTRACT

Each year more reports indicate that online programs are in demand. These programs are sought after by the population to fit into their lives. As a result, concern for quality online courses is at the forefront of the higher education industry. This also increases the concerns for how to teach online classes and how to engage the students in the course materials. The theoretical construct of community of inquiry (CoI) determines that engagement or interaction. This study compares the similarities and differences of CoI experienced by faculty and students. The study uses each of the CoI types of presence: social, teaching, and cognitive. This study found that there were significant differences between the perceptions of students and faculty on the CoI types of presence and instructor presence.

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CHAPTER 1

Online learning has become a prominent focus in the education field. Based on research by Allen and Seaman (2013) in the fall of 2011, a minimum of 6.7 million students were taking at least one course online, a 32% growth from the previous year. In addition, the U.S. Department of Education indicated online learning will become more effective than traditional face-to-face learning (Means et al., 2009). This led to the need for more research regarding online learning and online learners. Conrad (2014) stated "that interaction and communication—the hallmarks of learning communities—are necessary, positive structures that enhance our well-being and health as learners" (p. 381). She tied this basic premise to the need to investigate the interactions between students and faculty through the innovative use of technology and the increased need for learning (Conrad, 2014). Therefore, as more educational programs and courses moved to the online realm, one of the areas of interest became a theory of community of inquiry (CoI), which are different types of presence: social, cognitive, and teaching. As the move to online delivery of programs increased, CoI became an area of interest to the distance education community.

One of the three areas that comprises CoI is cognitive presence. "Cognitive presence is defined as the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community of inquiry" (Garrison, 2007, p. 65). It also "means being cognitively active, in that learners seek the most effective and efficient ways of solving a

learning problem, and apply these solutions at the end" (Kozan & Richardson, 2014, p. 68). Cognitive presence relates to the engagement of students through critical thinking and inquiry (Redmond, 2014). Ultimately, cognitive presence is essential to educational transactions, and it relies on how integrated and encouraged communication is within the classroom (Garrison et al., 1999). Archibald (2010) found that teaching and social types of presence "contribute to the prediction of cognitive presence" (p. 74). Hence, it is no surprise that Hosler and Arend (2012) found 46.9% of the variance in cognitive presence was explained by teaching presence, and they found that the teaching element facilitated discourse and made the largest contribution toward explaining cognitive presence. Their finding on facilitated discourse related back to Garrison et al.'s (1999) point on how cognitive presence is reliant on communication. Overall, cognitive presence consists of triggering events and types of knowledge: exploration, resolution, and integration (Garrison, 2017).

Social presence, another component of CoI, is commonly used to describe the feeling of belonging learners express (Rovai, 2002a). A sense of community, according to Drouin (2008), is significantly proportional to the level and quality of interaction made available in the course. With the increased availability of interaction, the sense of community also increases. Therefore, social presence is a key indicator to developing a sense of community. The current thinking stipulates that if there is an increase in the social presence of faculty and students in a course, student satisfaction would be maximized. Pavlis-Korres and Leftheriotou (2016) demonstrated support for this line of thinking: "An online environment—synchronous or asynchronous — which empowers engagement of learners, active participation and interaction and immediacy between educator and learners as well as between learners themselves, can promote learning satisfaction for participants and improve learning outcomes" (p. 186). Overall, social presence is

represented by three types of communication: affective, open and cohesive (Garrison, 2017). Through communication, there is a link between interactions of faculty and students and CoI.

Teaching presence is also part of that link between interactions. Teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson et al., 1999, p. 5). Design, as it relates to courses, refers to the composition and layout. Facilitation is an interaction of the faculty with the student, the content, and the system. Direction tends to be what the faculty is facilitating. Anderson et al. (1999) summarized teaching presence by stating that "through adequate teaching presence, formal learning that facilitates personally relevant and educationally defined outcomes is achieved" (p. 5). In other words, a direct relationship exists between teaching presence and social presence in correlation to student satisfaction.

The impact of instructor-to-student interactions and their effect on student achievement increases as more students take online courses (Allen & Seaman, 2013, p. 17). Micari and Pazos (2012) stated that the relationships amid students and instructors have a profound impact regarding the quality of students' experiences and learning. They reported that the more students perceive a connection through positive relationships with their professors, the higher the students' final grades. They also found a lack of research around the notions of quality and number of interactions. Other studies have shown that informal discussions with professors regarding intellectual issues motivate students to aspire to achieve at higher levels than expected (Komarraju et al., 2010). This, in turn, affects students' confidence in a positive manner, increasing their ability to do well in the course. With the positive influences that instructor-to-student interaction has on student achievement, more colleges and universities

need to include instructor-to-student interactions as part of the requirements for quality online education.

However, one factor that impacts social presence and teaching presence in online courses is transactional distance. The majority of online students are not in the same geographic space or temporal space as their classmates and teachers; therefore, they do their course work on their own (Dockter, 2016). This concept of distance is captured in Moore's theory of transactional distance. There are three items necessary for transactional distance: "student autonomy, dialogue/interaction and course structure" (Forte et al., 2016, p. 18). Teaching presence is a component within transactional distance regarding course structure, which is the design of the course and the direction stated within it. Also, with facilitation come interactions with the students, the content, and the system.

Purpose and Significance of Study

Online programs in higher education tend to experience consistent growth. As a result, there is an increasing need to identify the best practices in developing and offering online courses. There are diverse studies involving student perception, student engagement, student satisfaction, and student retention regarding online learning. According to the literature, CoI and its areas of cognitive, social, and teaching presence are the main factors in online education (Garrison, 2017). However, while these areas have been studied, there is a need for further investigation.

One area that needs further investigation is interactions, which is a component of CoI. According to Moore (1989), interactions are broken down into three types: student-to-student interactions, student-to-instructor interactions, and student-to-content interactions. Further literature included student-to-interface interactions, which is an additional type of interaction

(Hillman et al., 1994). Literature shows that student-to-instructor interactions lead to students' increased perception of how well they do in a course (Micari & Pazos, 2012).

Garrison and Arbaugh (2007) suggested a variety of issues related to CoI that need further investigation. They suggested that when it comes to the study of online education, there is limited discussion on the usefulness and justification regarding the CoI framework. They indicated that limitations were in three main areas:

> (1) the need for enhanced methodological and analytical rigor in future studies; (2) the need for conceptual refinement of the relationships and interactions between/among the elements, both particularly and collectively; and (3) the need for testing the framework in disciplines other than education. (Garrison & Arbaugh, 2007, p. 165)

In addition to the points above, Garrison and Arbaugh suggested using quantitative content analysis instead of using coding protocol to assess validity.

The current study addressed several of the suggested limitations by testing the framework in multiple disciplines and examining relationships between elements and between different audiences. This study, using a quantitative methodology, implemented the CoI framework survey consisting of Likert-type scale responses (Garrison et al., 2017). This study surveyed multiple disciplines within the university, including education, business, the arts, sciences, technology, and health fields.

Although Lambert and Fisher (2013) implemented a mixed-methods design in the education field, using the 34-item CoI framework survey, it was limited to one specific educational course. They found that the CoI framework instrument supported the use of the essential aspects of the three presences. They used survey data, demographic data, and qualitative data gathered from course blogs. Their study had a small sample size which was

limited to 15 graduate students. They stated that "teaching methods, student characteristics, and learning environments are variables that differ depending on the situation" (Lambert & Fisher, 2013, p. 13) and therefore cannot be reliably replicated. The current study addressed Lambert and Fisher's issue of sample size and the one-course limitation by surveying all online students at a midwestern university.

Further investigation is needed, as stressed by Garrison and Arbaugh (2007), on testing the framework in multiple discipline areas and looking at relationships between elements. Additionally, the link between instructor interactions and CoI shows a need to explore the perceptions of student-to-instructor interactions based on different audiences. These perceptions should be explored further to see whether faculty and students perceive the same quality and quantity of interactions.

Research Questions

The overarching purpose of the study was to examine if there are differences between faculty and student perceptions of instructor interactions. In asking if there are differences between faculty and student perceptions of instructor interactions, many areas needed to be addressed based on the CoI survey, including the inclusion of new questions on instructor interaction. These areas were based on the elemental classifications provided in the CoI survey and provided understanding of instructor presence by querying of cognitive presence, social presence, and teaching presence. Additionally, the modified questions on instructor interactions were assessed. Hence, the research questions of this study addressed each area of the modified CoI survey and instructor interactions:

- Is there a difference in teaching presence between faculty and students?
- Is there a difference in social presence between faculty and students?

- Is there a difference in cognitive presence between faculty and students?
- Is there a difference in instructor interactions between faculty and students?

In addition, interactions were also explored through an open-ended question:

- Do you have any comments regarding the interactions within the course?

Definitions of Key Terms

Community of inquiry is defined as a "a framework that posits that a meaningful educational experience consists of teaching presence, social presence, and cognitive presence" (Lowenthal, 2016, p. 159). CoI was first created by Garrison et al. in 1999.

For the purposes of this study, *interaction* is the active engagement between a student and the faculty, the content, or the infrastructure (Moore, 1989). Interactions occur through any number of methods. Agudo-Peregrina et al. (2014) stated that "interactions between students and teachers, as well as interaction among students, may lead to effective learning by means of intellectual stimulation and exchange of ideas" (p. 542). Wang et al. (2014) defined interaction as a dialogue initiated by humans, occurring between humans and machines. This interaction is seen as connectivist learning.

Instructor-to-student interactions are defined as communications between the faculty member and the student. Interactions may use any number of media to initiate and conduct the communication. Some media that could be used are discussion boards, email, voice, or video. Quality of the interactions is defined as respecting each communicator on the basis of culture, diversity, and general personal respect; addressing the content or intent of the communication; and meeting general netiquette requirements (Anderson & Garrison, 1998; Kuo et al., 2014).

Online is defined as the development and implementation of course materials in a learning management system. In this study, the learning management system is Blackboard.

Tu and McIssac (2002) explained that *social presence* is "the degree of feeling, perception, and reaction to another intellectual entity" (p. 146). Social presence is also seen as an interaction with respect for the communication between others regarding the interaction (Lowenthal, 2016; Short et al., 1976). In addition, Kehrwald (2008) asserted, "Social presence is a quality of people in online environments, conveyed through their use of language, media, and communication tools" (p. 99). He expounded further, saying that "participants in technology-mediated environments cultivate social presence to achieve meaningful interactions, establish and maintain relations, and create productive social systems in these environments " (Kehrwald, 2008, p. 99). Rovai (2002b) promoted the understanding that *social presence* represents a sense of community. A sense of community is defined as a common term that is used to describe the feeling of belonging, which learners who have common interests and activities express. He further stated that enhancing social presence should be planned by instructors (Rovai, 2002b, p. 8). *Social presence* is the sense of belonging in a course that occurs through quality interactions between faculty and students.

The definitions of other interactions are important for clarification of CoI. *Student-to-content interaction* is defined as the first interaction that a student encounters online (Moore, 1989). "It is the process of intellectually interacting with content that results in changes in the learner's understanding, the learner's perspective, or the cognitive structures of the learner's mind" (Moore, 1989, p. 2). Another interaction is the *student-to-interface interaction*, which is defined as when "the learner must interact with the technological medium in order to interact with the content, instructor, or other learners" (Hillman et al., 1994, p. 33). The final interaction is *student-to-student interaction*, which is "inter-learner interaction, between one learner and

other learners, alone or in group settings, with or without the real-time presence of an instructor" (Moore, 1989, p. 4).

Teaching presence is an interactive engagement between the students and the faculty in a given course. The engagement occurs when faculty communicate one-on-one with a student and act personably, demonstrating personal characteristics. Lowenthal (2016) defined it as "the way an instructor establishes oneself as a 'real' person and 'there' using communication media while teaching" (p. 159). He further added that *teaching presence* is "the design and facilitation of social and cognitive processes toward an educational goal" (Lowenthal, 2016, p. 159).

As stated in a presentation, CoI is about relationships, and "students learn in relationships" (M. Mentzer, personal communication, October 31, 2017). It is the interaction between a student and content, a student and instructors, and a student and other students. These interactions are the basis of the three types of presence of CoI. The relationship amid social presence and teaching presence helps to set the climate of the course. The relationship amid social and cognitive presence supports discourse within the course. The relationship amid cognitive and teaching presence supports regulated learning, and all three of these relationships make up the educational experience.

CHAPTER 2

LITERATURE REVIEW

Instructor interactions are a necessity for online courses. Instructor interactions determine the potential level of student engagement in the course. The more there is a perception of instructor interaction, the higher the student success (Noel-Levitz, 2011). Both student and faculty perceptions of the quality, quantity, and other characteristics of instructor interactions strengthen the success of the students within the course. This finding called for a study on what differences, if any, there were between faculty and student perceptions of instructor interactions. In order to quantify the possible differences between faculty and student perceptions, a review of literature needed to be conducted in several areas: social learning theory, CoI theory, the transactional distance model, and typologies of online interactions.

Social learning theory provides a foundation for behaviors which, according to Cook (1976), introduces interactions. He continued by stating that Bandura "faults traditional behavioral theories in that by not considering the *interactions* of cognitive mediation and environmental contingencies they are incomplete rather than inaccurate " (Cook, 1976, p. 32). Kang and Im (2013) stated that students gain new knowledge from interaction, which is how information and knowledge is shared from student to peers and students to faculty. The concept of interaction results from social learning theory. A large part of CoI is social learning theory; hence, interactions are also a component of CoI.

Considering the CoI theory's framework, Garrison (2017) stated that the importance of collaborative learning is integral to outcomes that illustrate deep and meaningful learning outcomes. He further stated that a community of learners is required to have a meaningful learning experience. He summarized the definition of CoI by stating that "the Community of Inquiry (CoI) theoretical framework is a generic and coherent structure of a transactional educational experience whose core function is to manage and monitor the dynamic for thinking and learning collaboratively" (Garrison, 2017, p. 24). CoI focuses on meaningful learning of the individual through a collaborative educational experience. The process of developing "meaningful learning experiences is through the development of three interdependent elements—social presence, cognitive presence, and teaching presence" (Garrison, 2017, p. 24). By examining these three elements, the use of instructor interaction is demonstrated.

Social presence is the process of the individual to connect with the group. The individual has to feel he or she is within a trusted environment to be able to communicate openly. This identification will then allow the individual to develop a personal and affective relationship with group members by incorporating the individual's own personalities (Garrison, 2017). In order for an instructor faculty member to show presence online, the faculty member must employ some aspects of social presence. Baker (2010) found that instructor immediacy and student motivation had a positive correlation. The more an instructor is present socially, or shows immediacy, the higher the students' motivation in the class. The process of being present socially engages deeper critical thinking, which in turn pulls in cognitive presence.

Cognitive presence, the second principal area, also relates to instructor presence and has been found to be integrated with teaching presence and social presence in various studies. (Baker, 2010; Garrison & Arbaugh, 2007). Cognitive presence illustrates a reflective process that

"deepens the meaning of our experiences" (Garrison, 2017, p. 50) and it is linked with critical thinking. It is also how a learning community can be supported and sustained (Garrison, 2017). One of the correlations found between social presence and cognitive presence is that if the faculty member has more control in the course, social presence decreases but cognitive presence in the form of critical thinking increases (Costley, 2016). Giannousi and Kioumourtzoglou (2016) indicated that cognitive presence predicts student satisfaction. The authors also said cognitive presence is an outcome of teaching presence and social presence.

Teaching presence, the third principal area, is a conglomerate of facilitation, design and organization, and direct instruction. It can be argued that teaching presence is developed from the behaviors exhibited by teachers. Rubin and Fernandes (2013) provided support to this concept by indicating that faculty experience similar tasks as group leaders. Whereas leaders develop goals, organize tasks, provide feedback, and maintain the daily needs of employees, similarly, faculty create lesson goals, develop activities, solve issues, guide work, give information, and provide feedback. Carrying the argument a bit further, teaching behaviors consist of interactions expected in the course. "Instructors can demonstrate leadership in their course by modeling appropriate interactions, establishing clear requirements, and setting the tone for the course" (Mandernach et al., 2006, p. 251). Since these behaviors can be interpreted as faculty demonstrating leadership in their courses and with their students, their behaviors are the actions used to guide the students, which can again be tied to interactions through collaboration (Jézégou, 2010). This tie brings back the connection to the CoI theory. The CoI framework was developed based on the foundations of constructivism and collaboration using research on community and inquiry by John Dewey (Garrison et al., 2010). Another researcher phrased it in a different manner: "[The CoI framework] provided a collaborative constructivist perspective to understand the dynamics

of an online learning experience" (Arbaugh et al., 2008, p. 133), which further illustrates the need for collaboration as well as communication skills in the world of today. Online courses present an ideal place for students to practice those skills prior to moving into the workforce (Lambert & Fisher, 2013).

One reason that community is important between students and instructors is the theory regarding the transactional distance model. The transactional distance model is the process used to describe when instructors and students are disunited by time and space (Moore, 1993). Moore (1993) used the term dialogue to mean an interaction or multiple interactions in a series. He continued by clarifying that "a dialogue is purposeful, constructive, and valued by each party" (Moore, 1993, p. 23). He further indicated that dialogue is important to the quality of distance teaching, as the instructor must provide dialogue amid the instructor and each learner along with the learning materials.

The action of dialogue between the learner and learning materials is one type of online interaction. Moore (1989) also described the areas of interactions that are in online courses. In his 1989 article, he referred to types of interactions, which include learner-to-learner interaction, learner-to-instructor interaction, and learner-to-content interaction. A fourth interaction has been emerging with the prevalence of online education, student-to-interface interaction. Mladenova and Kirkova (2014) found that well-designed online learning content and learner-to-interface interaction affect the results of training and the educational quality.

Social Learning Theory

One of the main components of the CoI is the social learning aspect. This aspect is included in the concept of teaching presence, as many of the behaviors that faculty use and exhibit are, in part, affiliated with social presence, which is a component of social learning.

Albert Bandura defined social learning as the possession of greater cognitive capability by a person which then allows for options when that person is controlling their environment (as cited in Cook, 1976). He emphasized the self–regulation process that humans have and the need to experience learning. The development of goals leads to the direction of behavior by either achieving the goal or alternatively failing to meet the set requirements. A person uses self-regulation through setting goals or developing new behaviors as a process to identify and obtain future benefits (Bandura, 1979). Bandura (2001) found that "people are not just onlooking hosts of internal mechanisms orchestrated by environmental events. They are agents of experiences rather than simply undergoers of experiences" (p. 4).

As an agent of experience, a person engages and interacts with others as the person draws from the same experience. Short et al. (1976) found "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships is an important hypothetical construct that can usefully be applied more generally" (p. 65). The authors called this social presence. The authors further claimed that social presence is an aspect of the process of communication. Additionally, they stated that social presence is affected by not just one non-verbal cue but by systems of cues. Simply put, the entire act of communicating with others can show and demonstrate social presence. With social presence, researchers found that when communicating with another person in the same online course, "participants experience interactions with that person as human-human interactions, not as human-machine interactions" (Kehrwald, 2008, p. 97). Hence, social presence has to do with student-to-student interaction or student-to-instructor interaction and not student-to-content interaction. He further stated that "social presence cannot be established, indeed cannot exist, without interpersonal interaction" (Kehrwald, 2008, p. 97). Interpersonal interaction online can be seen through interactions in a

discussion board, collaboration on a group project or activity, or even interactions with the faculty.

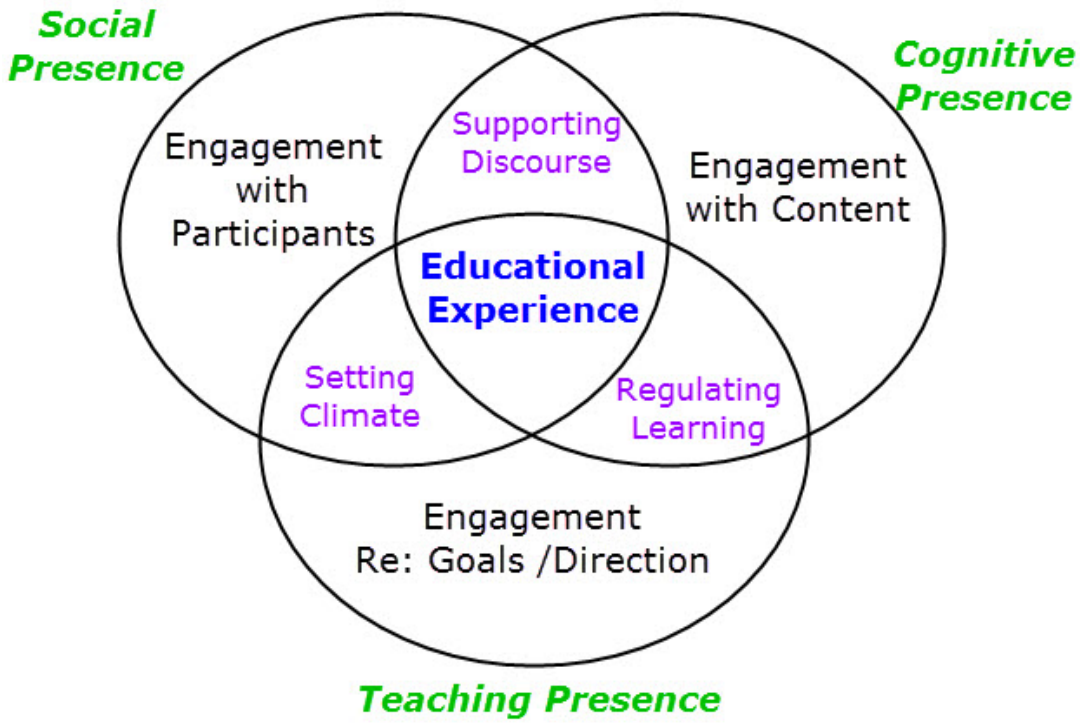
Mykota and Duncan (2007) provided a reason to include social presence between participants, or, in their case, students in an online course. The authors stated that "if educators desire learners to be highly collaborative in their professional practice, it is important that they are provided pre-course instructional activities necessary to embrace computer-mediated communication so as to ensure best practices in their course work" (Mykota & Duncan, 2007, p. 166). The authors further concluded, regarding the affective domain of interpersonal communications, that "affective communication for online learning needs to recognize that instructors and course designers must facilitate and deliberately structure interaction patterns to overcome potential barriers to establish social presence" (Mykota & Duncan, 2007, p. 167).

Community of Inquiry Model

Garrison et al. (1999) created the CoI model and the focus is community, which Garrison (2017) defined as "purpose, collaboration, and trust" (p. 11). In the case of CoI, community consists of faculty and students, therefore allowing Garrison to create the model based on three elements: social presence, teaching presence, and cognitive presence (Garrison et al., 2003).

Figure 1

Elements of an Educational Experience.



Note. From "Critical Inquiry From a Text-Based Environment: Computer Conferencing in Higher Education," by R. Garrison, T. Anderson, and W. Archer, 1999, The Internet and Higher Education, 2, p. Figure 288. Reprinted with permission.

CoI has its foundations based in the theories of collaboration and constructivism, as proposed by John Dewey. The actions of collaboration are an integral part of human intelligence and evolution (Wilson, 2012). Basically, people are predisposed to and need to collaborate. Garrison (2017) stated that "the Community of Inquiry theoretical framework is a generic and coherent structure of a transactional educational experience whose core function is to manage and monitor the dynamic for thinking and learning collaboratively" (p. 24).

Although Garrison may be the definitive authority on CoI, others who researched the subject have developed their own definitions which vary but generally focus around the three elements. Jézégou (2010) framed a differing definition for CoI:

> A group of people, who are voluntary members with various expertise of equal value . . . are jointly involved in a problem solving process based on the general principles of the scientific method and in a collaborative learning process; these combined processes facilitate the individual and collective construction of knowledge. (p. 51)

Even though his definition differs from Garrison et al. (1999), the intent of the definition is still on collaboration, community, and presence.

CoI research measures presence at both the individual and group level (Rubin & Fernandes, 2013). Jézégou (2010) indicated that two conditions should be met in order to develop a CoI: Each individual learner must be motivated to interact and maintain their involvement, and learners must be efficient in maintaining "the socio affective, emotional, and cognitive aspects" (p. 52) of their collaborative interactions. Thus, in essence, each student is also included in a larger collective or community.

CoI is important in that it offers a way to gather information on the perceptions students and faculty members have on the learning process online. By concentrating on the three elements of CoI—cognitive, social, and teaching—all areas of instruction and learning are covered. It is especially difficult to gather information on perceptions when dealing with online courses. Facial and body language cues from either the faculty or students cannot often be observed as online courses are not always taught with synchronous or asynchronous video. The preponderance of online classes tend to be asynchronous in nature, and considering that "learning in online courses occurs through the interaction of the faculty, student, and course materials, mediated by

technology" (Rubin & Fernandes, 2013, p. 118), the focus of CoI is, in reality, not just about the presence online but also about the interactions that occur within and between types of presence. In the study conducted by Lambert and Fisher (2013), "CoI scores and student comments show that the integration of exploration, application, and reflection in course activities sufficiently challenged students intellectually" (p. 13). The processes of exploration, which demonstrated both social and cognitive presence; application, which likely included both teaching and social presence; and reflection, primarily cognitive presence, all illustrated how integrated CoI can be.

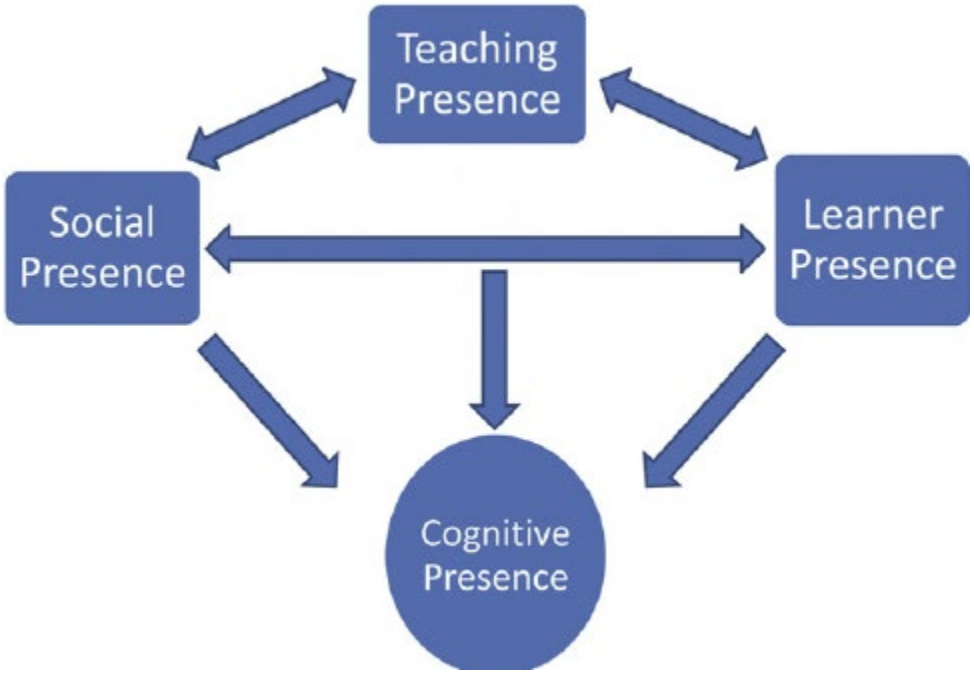
CoI has been studied and adopted by researchers for about the past 20 years (Garrison, 2017). One reason for its implementation is the meticulous guidelines used in measuring each CoI presence (Arbaugh et al., 2008). Garrison (2017) stated CoI provides the tight structure and approach needed to understand the complexities demonstrated through educational experience. Garrison found that the CoI framework is such that it establishes critical inquiry and collaboration guidelines. Hence, the framework illustrates strength through collaboration and interactions, especially in the area of creating an online community (Lambert & Fisher, 2013). Lambert and Fisher (2013) articulated, "The strength of CoI is that it offers specific areas and actions that might tend to make a course more engaging (e.g., organization of course, facilitation, affective expression, group cohesion, exploration, resolution, etc.)" (p. 12). Hence, by addressing ways the CoI survey evaluates student perceptions of presence, the results can be used to plan actions related to the development of online courses including course design, the amount of instructor presence, or how the course is organized. These plans can be used to make changes or improvements in any of the specific areas. Rubin and Fernandes (2013) found that their study provided evidence that CoI truly created a community of learners that existed on multiple levels. The authors also found that the perceptions of CoI were shared across the course. Therefore, CoI

as a model with its survey tool are an integral part of measuring and developing presence in an online course.

Since the introduction of CoI in 2001, an adaptation to the model was proposed by Shea and Bidjerano (2010). Although their model is similar to the original CoI model, Shea and Bidjerano argued that CoI does not include self-efficacy, which is a needed component in the framework. Self-efficacy is the thought that one can succeed with a task or situation, and this belief is a major component in the revised CoI model. Garrison (2017) stated that self-efficacy is a consideration of the original CoI Model but not a focus of it. “Assigning roles to individuals based on their formal organizational status (e.g., instructor) would undermine the CoI as a collaborative constructivist process” (Garrison, 2017, p. 31). He continued by stating that “it is less of a question *who* than *how* ideas are being shared; the emphasis is on the process and responsibilities of collaborative inquiry” (Garrison, 2017, p. 31). Hence, his statement justifies the use of the original CoI model in this study.

Figure 2

Suggestion for Revised Community of Inquiry Model.



Note. From "Learning Presence: Towards a Theory of Self-Efficacy, Self-Regulation, and the Development of a Communities of Inquiry in Online and Blended Learning Environments," by P. Shea and T. Bidjerano, 2010, Computers & Education, 55, p. 1727. Reprinted with permission.

Social Presence

Social presence focuses on how much social interaction occurs in an online course, but in reality it is much more. Tu and McIssac (2002) defined social presence as "the degree of feeling, perception, and reaction to another intellectual entity" (p. 146). Thus, social presence has a depth to it beyond the seemingly simple actions of social interaction. In addition, Kehrwald (2008) asserted social presence centers on the students' actions as people in the online environment which occurs through the process of communication, through language and media. He expounded, saying that "participants in technology-mediated environments cultivate social

presence to achieve meaningful interactions, establish and maintain relations, and create productive social systems in these environments" (Kehrwald, 2008, p. 99). Another definition of social presence described it as the "strength of the social relationships and emotional connection among the members of a class or learning community" (Rubin & Fernandes, 2013, p. 118).

Additionally, current research shows a relationship between students' perception of social presence and their perception of learning. Therefore, students who have a high satisfaction with their faculty also have an overall high social presence, indicating that students' concept of social presence predicted their concept of learning in online classes (Richardson & Swan, 2003; Russo & Benson, 2005). Since social presence is the interaction between others, it can involve what is considered a community, specifically a community of learners.

Others interpreted social presence as more diverse. Rubin and Fernandes (2013) saw CoI and social presence on two fronts. One is the individual level and the other is the community level. According to the authors, social presence on an individual level depends on how that individual interacts with the community and how the individual personally feels. Social presence on an individual level includes personally "identifying with the community, communication in a trusting and comfortable environment, and developing interpersonal relationships with others in the class" (Rubin & Fernandes, 2013, p. 118). The second front occurs at a community level where social presence is a student's sense of shared belonging. Social presence at the community level also represents an interpersonal relationship between class members along with the experience of trusting and being comfortable with the members (Rubin & Fernandes, 2013). Rubin and Fernandes indicated that social presence at the individual level varies, but it is more measurable at the community level in online courses because online courses specifically incorporate social presence in their design and teaching processes. This again pulls in design and

development from teaching presence, which illustrates the interconnectivity of the different elements of CoI.

The interconnectedness of the elements of CoI is one of the reasons the elements play off of each other so well. For instance, student social presence and faculty social presence can influence community (Pollard et al., 2014). As for students in a classroom, research shows that the most central priority for students is establishing a shared social identity and not a personal one (Garrison et al., 2010). Also, the social presence of peers impact the classroom community, while faculty social presence is less impactful but still significant. The aspects of social presence, teaching presence, and faculty social presence are all predictors of learning environments (Pollard et al., 2014). However, despite all the research on the three types of presence, there is still limited research regarding faculty. Lowenthal (2016) confirmed the lack of information, calling for further research into the role of faculty and the process faculty use to create social presence in their online classes. He determined that investigating faculty social presence is a needed requirement, especially when researching how teachers facilitate discussion in an online course. The faculty also facilitates student social presence while establishing and maintaining his or her own faculty social presence (Lowenthal, 2016). This mixed process tends to lead faculty into setting up social presence interactions that translate more into the area of teaching presence than to social presence. The faculty tend to focus more on instructional design rather than adding discussion points to the conversation. Lowenthal recommended a shift in the thought and actions of social presence. “Establishing a social presence in an online course helps meet the needs of students who may experience feelings of isolation when learning at a distance” (Kilburn et al., 2016, p. 306). Therefore, the focus of the faculty members needs to be on integrating faculty social presence into their course designs and teaching processes, contributing to the conversation

with and among students, and adding personal points and professional points to the course and discussion that relate to the topic of discussion.

Cognitive Presence

Cognitive presence focuses on the student and course content. It is how the student interacts with the content, processes the content, and addresses the learning outcomes. Garrison et al. (2001) stated that cognitive presence is defined "as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry" (p. 11). Cognitive presence applies to all the four stages of practical inquiry process. As students participate in practical inquiry, they are "addressing triggering problems, exploring the concepts and issues that underlie the problems, integrating information to identify solutions, and evaluating those solutions and considering further applications" (Rubin & Fernandes, 2013, p. 121). With cognitive presence, the CoI model is implemented when the students begin to interact with the stages of practical inquiry. The interactions occur during the learning activities which have been developed by faculty members and are activities which include social interactions with other students (Rubin & Fernandes, 2013). The cognitive presence involves interactions between the students and the content but also includes aspects of teaching presence from the faculty.

The importance of teaching presence in the midst of interacting with cognitive presence relies on the learning activities and materials that the students do and use. Akyol and Garrison (2011) found that students "noted the importance of resources and learning activities in order to develop deep approaches to learning . . . [The students] described learning activities as relevant, challenging, collaborative and engaging" (p. 242). Rubin and Fernandes (2013) found in their review of literature that many studies have identified social and teaching presence as indicators

of cognitive presence. Still, cognitive presence can be influenced by the individual and the differences each individual student exhibits as he or she works through an online course. These differences could include "differences in student motivation, the time students dedicate to their classwork, self-efficacy, and self-regulation" (Rubin & Fernandes, 2013, p. 121). The elements of CoI are interconnected throughout each of the types of presence.

Teaching Presence

As discussed previously, teaching presence is an integral part of the CoI model, in that it addresses the design and development aspects related to learning activities and materials. In addition to the definition from Anderson et al. (1999), Rubin and Fernandes (2013) defined teaching presence as the process of the instructor creating learning experiences, facilitating student activities, and guiding students to deep learning through interactions. According to Richardson et al. (2015), instructor presence is a derivative of social presence and teaching presence. With regard specifically to teaching presence, its components are design and administration, facilitating discourse, and direct instruction (Richardson et al., 2015). Some authors used teaching presence and instructor presence synonymously (Hodges & McGuinness, 2014; Sheridan & Kelly, 2010). Overall, the similarities between the definitions of teaching presence focus on the design, guidance on the content, and instruction.

The definitions of teaching presence and the growth of online learning both provide insight into the impact of teaching presence on the CoI model. The last 10 years of research supports the importance of teaching presence (Garrison et al., 2010). Garrison and Arbaugh (2007) stated that teaching presence is "a significant determinant of student satisfaction, perceived learning and sense of community" (p. 163). This supports the findings from Rubin and Fernandes (2013) on individual-level teaching presence and students. The authors found that

teaching presence on an individual student level refers to the students' perceptions around the interactions initiated and designed by the teacher. The authors found similar concepts when looking from a faculty perspective:

> [Teaching presence] is the shared perception of the teachers' actions to support teaching by designing learning materials and activities and organizing the class's progression through them; facilitating discourse among the members in a range of modalities (in discussions, groups, webinars, or other settings); and providing feedback and direct instruction for the entire group. (Rubin & Fernandes, 2013, p. 120)

Hence, from both the student and faculty perspectives, the perception seems to be that teaching presence is an indispensable part of the CoI model.

Student perceptions, in the student's own words, are difficult to find unless the study contains a qualitative component. Lambert and Fisher (2013) included a qualitative component in their study. In reference to faculty interaction and teaching presence, one student in the study stated,

> The instructor follows up with probing questions, asking for clarification and specificity to prove that the student knows and is trying to master the objectives at hand. Students are expected to respond to one another's thoughts, posts, assignments, as well. This pedagogical practice builds an online learning community. (Lambert & Fisher, 2013, p. 12)

According to this student, the instructor presence consisted of follow-ups and clarification, as well as specificity, which led to the development of the learning community. Fellow students had similar experiences in the study. "The course was well organized and easy to follow. Due dates were always posted and questions about completing assignments were minimal. You were

always available for questions and sent feedback on assignments very quickly. Much appreciated" (Lambert & Fisher, 2013, p. 12). This student's comment further demonstrates the need for teaching presence in the form of development and design of the class, in addition to the social contact through feedback and emails.

Other researchers also concluded that faculty behaviors lead to teaching presence. Mandernach et al. (2006) found that active faculty and quality course designs relate "to students' sense of 'connectedness' and 'learning' in the online environment" (p. 249). The authors also saw that "instructors have a responsibility for setting the tone and climate of the overall learning environment through their engagement in the course. The active participation of online instructors fosters increased student participation which, in turn, enhances and motivates student learning" (Mandernach et al., 2006, p. 250). The authors further concluded that participation by instructor in online courses is vital to student success during the learning stages and the creation of the community of learners.

Faculty involvement continues to encourage student growth and a positive climate in the online classroom (Mandernach et al., 2006). Rubin and Fernandes (2013) illustrated the importance of teacher presence in CoI:

> Teachers affect the degree of social presence by the way that they design assignments, such as using group activities, as well as by teaching activities such as creating informal discussion areas, rewarding students for having discussions with one another, modeling openness and encouraging it among students and through many other teaching behaviors. (p. 118)

Teacher presence influences every area of not just instruction but also the social aspects of course interactions and cognitive presence through modeling and rewards. The quote also

highlights how teaching presence can affect student engagement and success. Lowenthal (2016) stated that "simply put, teaching presence involves instructional design and organization, direct instruction and the facilitation of discourse in the goal of establishing social presence and cognitive presence" (p. 149). These activities further emphasize the relevance of teaching presence. Teaching presence is considered to be more critical as direct instruction and instructional design become increasingly more important. However, the concepts of design and teaching presence do not consider the impact of courses that are not designed by the faculty (Lowenthal, 2016).

Another consideration of online courses and online course design is the use of technology. Further consideration of technology should be included in course design along with pedagogical aspects (Chan & Bose, 2016). Chan and Bose (2016) stated technology should be chosen to support the pedagogy within a classroom. They claimed the main purpose of technology "is to help students engage in high levels of learning throughout the course, instead of being distracted and frustrated with technology-related problems, course navigation issues, and other technical errors" (Chan & Bose, 2016, p. 343). Unfortunately, designers and faculty do not always consider technical aspects when developing a course. "This requires considering student access to technologies (e.g., internet bandwidth, software, hardware) as well as other campus resources such as the Information Technology Helpdesk, disability resource center, writing center, tutoring center, library, testing center" (Chan & Bose, 2016, p. 343). The authors advised that faculty discuss how to develop technology integrated online courses with instructional designers (Chan & Bose, 2016). They also suggested engaging in clear communication with students at the start of a course by detailing the course expectations and course policies. This is a best practice that is echoed throughout online course design research.

Transactional Distance Theory

Garrison (2017) said that CoI is a transactional educational experience, ensuring that at some point in the duration of the course there will be moments of transactional distance. Moore (1993) stated the following about transactional distance theory: “Distance education is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept. It is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated” (p. 22). Moore said that the transaction was defined by Dewey and is more about the interplay between the individuals and their behavior patterns than about the separation between teachers and students. It is this separation that intensely affects teaching and learning. Moore (1993) further emphasized transactional distance as “psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of the instructor and those of the learner” (p. 23). Space, the separation, and the effects of space cannot be discounted. There are three variables which can close the space: structure, dialogue, and learner autonomy.

The first variable is dialogue, which is defined as an interaction or chain of interactions between faculty and learners during the process of giving instruction and responding to instruction. The dialogue should be “purposeful, constructive, and valued by each party” (Moore, 1993, p. 23). The dialogue is determined by the faculty and that faculty’s educational philosophy as well as the personalities of both the faculty and learner.

Next, according to Moore (1993), is structure. Structure can be defined as the pieces of course design, including objectives, instructional processes, and assessment methods. Moore indicated that there is a symbiotic relationship between dialogue and course design. If the course is designed to have a large amount of dialogue between the faculty and the learner, then the

program has an open structure with the course design focused on allowing and supporting the dialogue. If the course is designed to have highly structured course materials and detailed instructions, there is less dialogue between the faculty and learners (Moore, 1993). Moore (1993) said, “Successful distance teaching depends on the institution and the individual instructor providing the appropriate opportunities for dialogue between teacher and learner, as well as on appropriately structured learning materials” (p. 27).

Finally, Moore (1993) defined learner autonomy as the learners determining their learning experience and process. He indicated that a distance education program that is designed to have less dialogue and little structure can cause a learner to be more autonomous. A program that is designed to have more dialogue and is highly structured can create fewer opportunities for autonomous learners (Moore, 1993). Building on transactional distance theories, Gorsky and Caspi (2005) stated the importance of the transactional distance theory was its reliance on the dimension of transactional distance for distance education programs (p. 2). In particular, transactional distance (rather than temporal or spatial distance) is a more accurate representation of the type of distancing that can be found and manipulated in distance education programs.

Typologies of Online Interaction

An interaction is the process by which one collaborates with someone, interfaces with something, or connects with someone or something else. Akyol et al. (2009) stated the CoI framework is the interaction amid the three types of presence. Hence, the interaction occurs student-to-student, student-to-teacher, student-to-interface, and student-to-content. For an online course or program to be a success, it requires the use of more than one interaction type and immediacy, which is the different from transactional distance (Pavlis-Korres & Leftheriotou, 2016). Bernard et al. (2009) also supported this finding: “The major conclusion from this review

is that designing ITs [interaction treatments] into DE [distance education] courses, whether to increase interaction with the material to be learned, with the course instructor, or with peers, positively affects student learning" (p. 1264). The authors define interaction treatments (ITs) as interactions that are "designed and arranged by teachers to encourage such [selected] behaviors" (p. 1248). The authors also found that access to interaction treatments in distance education corresponds with a learning boost. In addition, the stronger and better quality a treatment possesses, the deeper the effectiveness of the treatment (Bernard et al., 2009). If interaction is required for online success, it is understandable that the lack of interaction would be a barrier to online communication between both students and the teacher, in addition to students to students. A more in-depth definition can be found in a study by Pavlis-Korres and Leftheriotou (2016):

> Creating an online environment that promotes socio-emotional-driven interaction, such as exchanging empathetic messages, encouraging self-disclosure, and discussing the backgrounds and interests of learners will help promote feelings of friendship and connections to others, and consequently increase immediacy between learners, educator, and content in a way that fits the requirements of effective online adult education. (p. 194)

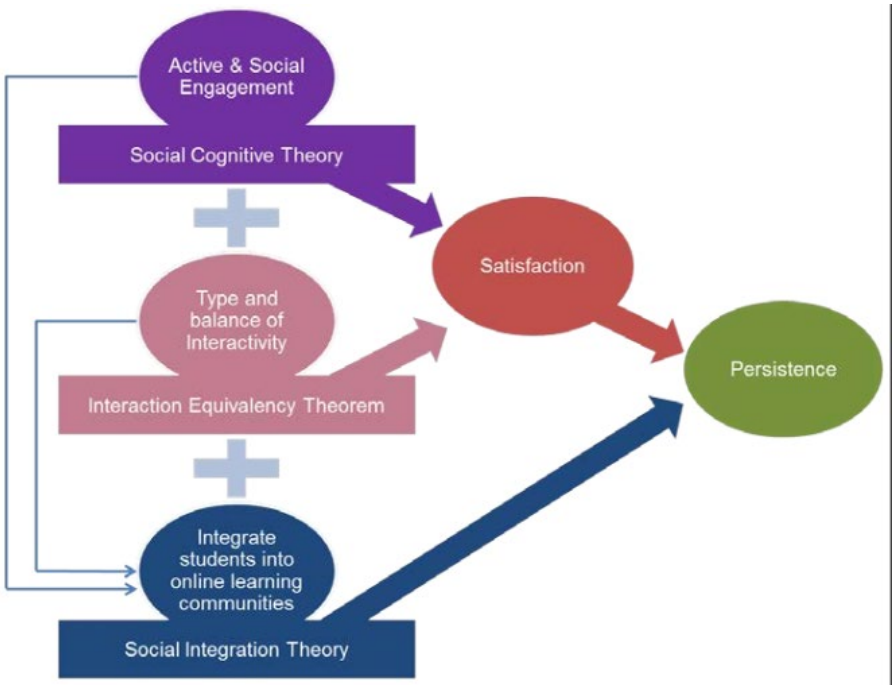
In this definition the authors included the emotional elements of social presence. These elements can be seen as part of the student and, therefore, group dynamics of a course. These elements, such as developing real interactions, using critical thinking, facilitating collaboration, and connecting with and among learners, are necessary elements of group dynamics.

In addition to elements of group dynamics, Chan and Bose (2016) stated that the crucial element to developing online courses that are engaging cognitively, emotionally, and physically, is to include all types of interactions. Croxton (2014) denoted three elements required for course

interactivity in her framework of course interactivity (Figure 3). The first element is supporting educational outcomes, student satisfaction, and course persistence. Overall, meaningful student engagement on all levels of interaction is important. Since all levels of interaction are an integral part of teaching presence in CoI, Croxton further stated that there needs to be a consideration of learning styles and student preferences to create balanced interactivity. This balance includes identifying who the audience of the course is and designing the course for that audience. She continued by declaring the importance of creating interactions and interactivity in online courses that are purposeful and meaningful, in addition to balanced. Well-developed interactions and interactivity can lead to increases in students' persistence rates. She stated that interactions and interactivity are a main focus of online course design. She also stated that interactions and interactivity help students to embed themselves in the academic and social systems of a community, both formally and informally (Croxton, 2014). The importance of interactions and interactivity was further solidified through Chan and Bose's (2016) research on using multiple interactions within an online class.

Figure 3

Framework for Course Interactivity.



Note. From "The Role of Interactivity in Student Satisfaction and Persistence in Online Learning," by R. Croxton, 2014, Journal of Online Learning and Teaching, 10, p. 320. Reprinted with permission.

Student-to-Instructor Interaction

One study found that student-to-instructor interactions had considerable and favorable outcomes on student satisfaction with a course when the course was provided by trained instructors (Johnson et al., 2014). Johnson et al. (2014) found that students do not like interacting with each other online, and this causes dissatisfaction. The authors also found that in the online environment, the faculty should move from the role of deliverer of knowledge to facilitator of experiences by interacting with the students. Research shows that when a student feels comfortable approaching a faculty member, the student will achieve a higher final grade. In addition, students' awareness of their capacity to do well in a course is interrelated with how

positive their relationship is with their faculty (Micari & Pazos, 2012). Research illustrates the importance of student-to-instructor interactions; however, often faculty fail to see the impact had by them on students. Finally, by increasing the student-to-faculty interactions of part-time students, the students will increase their perceptions of how well they will do in an online class, which emphasizes the importance of faculty interactions (Laird & Cruce, 2009).

In addition, Chan and Bose (2016) said the instructor's role is to support and guide the student. They continued by declaring, "It is difficult to be motivated to learn in an environment that lacks support, encouragement, trust, respect, fairness, and clear expectations" (Chan & Bose, 2016, p. 342). They encouraged the development of a welcoming learning environment that promotes a safe, motivated place to learn. They also encouraged the faculty to exhibit respect, support, fairness, and equity, all of which lead to success in online courses (Chan & Bose, 2016; Gunawardena et al., 2001; Gunawardena & Zittle, 1997; Kilburn et al., 2016). Truly, the overall key to student completion of courses and student engagement is faculty participation (Simmons Estes, 2016). "One of the greatest predictors of student satisfaction is the prevalence, quality, and timeliness of student-instructor communication" (Croxton, 2014, p. 318). When online faculty members take responsibility through interactions such as "asking questions, using humor, addressing individuals by name, initiating discussion, and sharing personal examples" (Pavlis-Korres & Leftheriotou, 2016, p. 194), it can lead to students feeling closer to the faculty member. Hence, an instructor must create an online social presence in order to help eliminate the isolation that typically occurs with distance education (Kilburn et al., 2016).

Kilburn et al. (2016) continued, stating that social presence is a good tool for increasing instructional effectiveness. The focus is to create an environment which puts students in a comfortable position with both the instructor and peers. Making the students comfortable in the

course can be achieved through student-to-faculty interaction, which increases with habitual feedback and communication (Chan & Bose, 2016). The need for faculty interactions is further supported by Croxton (2014). Students need to have access to their faculty and to have quality and quick feedback during their course. In research conducted by Preisman (2014), the author found that written feedback and guidance were especially important to online students, more so than seeing and hearing the instructor. The author continued by stating that instructor feedback and communication were the top indicators to students of teaching presence (Preisman, 2014). "Teaching strategies that faculty can use to support student engagement and retention include implementing constructivist practices, building a sense of community among students, offering opportunities for critical thinking, and developing self-regulated learners" (Simmons Estes, 2016, p. 81). Student-to-instructor interaction is also an opportunity for the students to become familiar with their faculty and the teaching nature of their faculty (Chan & Bose, 2016). Regardless of the communication medium, an important aspect of student-to-instructor communication is the focus on non-class-related issues such as careers, community engagement, and other projects.

Shea and Bidjerano (2013) explained the integration of student-to-instructor interactions of CoI into teaching or instructor presence by illustrating how teaching presence influences meaningful learning, or cognitive presence. In addition, teaching presence predicted social presence, which led the authors to indicate that the teaching presence part of social presence is an outcome of course design (Shea & Bidjerano, 2013).

Student-to-Student Interactions

Student-to-student interaction is the basis for most of social presence. Shea and Bidjerano (2013) noticed that students ranked social presence more positively and more frequently in

highly interactive courses. The authors then stated that the emotional aspects of connectedness and having positive emotions around social presence are predictors of cognitive presence, specifically meaningful learning. Hollenbeck et al. (2011) found this to be true in their research which was illustrated by students without peer engagement, or connectivity, who felt that they had more chances of performing poorly in their courses. Croxton (2014) also found that student-to-student interaction is essential for online student satisfaction. The author further stated that it is more so the "balance of interaction" (Croxton, 2014, p. 317) that is critical to both satisfaction of the student and completion of the course. Chan and Bose (2016) offered several options for how to provide student-to-student interactions in online courses, "such as building online learning communities, peer instruction and other collaborative learning activities (e.g., discussion, group presentation, etc.) . . . student-created videos to introduce themselves" (p. 335). One objective of student-to-student interactions is to build collaboration around and reflection on learning (Chan & Bose, 2016). Student-to-student interactions are considered a critical aspect of online learning.

Student-to-Content Interactions

Another critical aspect of online learning is student-to-content interactions. In order to retain students and enable them to succeed, courses need structure from the very beginning that enables students to interact with fellow classmates and course content (Simmons Estes, 2016). Additionally, the instructor for the course should provide interaction with students for both the course and the institution as a whole. By providing opportunities for engagement, or interaction, with the content, faculty members ensure that the student has ample opportunity for student satisfaction. Online student-to-content interactions are a substantial indicator of student satisfaction ratings (Croxton, 2014). Chan and Bose (2016) indicated that students in online

classes tended to emphasize more course content than social interactions with the stipulation that the content must both stimulate student's learning and engage the students, providing its importance.

> Such [engaging] content should communicate clear learning outcomes and expectation, promote active learning that assists real-world applications, match content difficulty levels with students' skill levels, contain frequent and constructive feedback to help students learn the correct concepts and skills, and allow students control over the process, pace, and/or choice in learning (e.g., materials, activity, or assessment). (Chan & Bose, 2016, p. 343)

By creating a structure that specifies outcomes and promotes active learning, the faculty keeps the student engaged with the needed course content and materials (Preisman, 2014). By focusing more on the design of the course, or teaching presence, faculty may increase the student-to-content interactions in a positive manner. However, the same focus may cause negative results as the learning content may negate interactivity between the students and their online course (Croxton, 2014).

Student-to-Interface Interactions

Although there is not much literature available on student-to-interface interactions, Jézégou (2010) found that information and communication technologies allow social interactions to be delivered between students and faculty and between faculty themselves. Preisman (2014) continued along the same line of inquiry by speaking to learning environments. The author found that students and learning environments are impacted by creating presence, closeness, and/or peer connections in online courses (Preisman, 2014, p. 2). Learning environments or similar technologies are interfaces with which students and faculty must interact in order to get to

additional functions, such as the communication technologies. Walker et al. (2016) found that the learning management system (LMS), such as Canvas or Blackboard, had both a positive and a negative effect on students when used for online teaching and learning. Overall, the authors found that the issues with the LMS were similar to most software issues. Issues such as the lack of organization and the lack of ease of use cause students and faculty to disengage with the technologies. On the positive side, they found that when training and familiarity with the technologies occurred, the technologies were seen as benefits of the interface. Another benefit was having a standard uniform system implemented (Walker et al., 2016).

Even though the research on CoI is thorough and covers a variety of areas, there is a need for further research. One of the main reasons for this study is that much of the research that has been conducted has been limited to smaller samples or to specific elements of CoI, or the research does not involve the perceptions of student and faculty. Garrison and Arbaugh (2007) called for the use of larger sample sizes in order to take CoI research to the next level. Aykol et al. (2009) called for more sampling with more courses at once instead of the common practice of using only a few courses. Another concern that researchers indicated is that the most of the research was conducted on social presence and largely ignored the other types of presence (Garrison et al., 2010, p. 7).

Summary of Literature

The main question of this study was what differences, if any, were there between faculty and student perceptions of instructor interactions? Some of the points from the literature review illustrated areas that need to be considered when continuing research in the area of CoI.

CoI should impact learning experiences through the use of teaching presence, cognitive presence, and social presence. Collaborative learning is one way instructors and students can use

to improve learning experiences (Garrison, 2017; Jézégou, 2010; Chan & Bose, 2016). By reducing transactional distance through social immediacy or social presence, students' motivation increases, which can then lead to deeper and more meaningful learning experiences (Aragon, 2003). Another element, cognitive presence, uses critical thinking to lead students' quality learning experiences. It is also tied to social presence and teaching presence through student satisfaction, which in turn predicts cognitive presence.

Teaching presence is the methods and behaviors that are exhibited by teachers during the development and implementation of course (Garrison, 2017). Teaching presence has a kinship to group leadership (Rubin & Fernandes, 2013). Teaching presence is the actions of building and delivering the interactions in a course that cause cognitive presence and social presence (Garrison, 2017).

Cognitive presence is the building of meaning from the content with which students interact (Garrison et al., 2001). Students use a mix of all types of presence, including cognitive, when interacting with learning activities and materials (Akyol & Garrison, 2011). In addition, cognitive presence also occurs in learning activities that include a social component with other students (Rubin & Fernandes, 2013).

Social presence comes into play with transactional distance theory, which encompasses both physical and social distance. By encouraging social presence through the development and use of interactions, or dialogue, in online courses, transactional distance can be decreased. Different types of dialogue help to integrate interactions into an online course. The dialogue or interactions fall under different categories or types.

The review of literature discussed various studies within the field of online education. The principal function of a CoI is to build personal meaning through collaboration and

clarification of understanding (Garrison, 2017). The main focus of the review of literature, as it relates to CoI and transactional distance, was CoI in regard to teaching presence. Garrison (2017) stated that "the role and responsibility of teaching presence is to monitor and manage the transactional balance, and by engaging the learners, collaboratively guide the process of achieving worthwhile and intended learning outcomes in a timely manner" (p. 69). The literature review revealed two deficiencies in the current body of research on CoI that I addressed in my design. First, most studies focused on a single or very small sample of courses. Second, no study has examined the perceptions of faculty and students in relation to all three types of presence.

CHAPTER 3

RESEARCH DESIGN

Methodology

The current study was a comparative study which was designed to examine the perceptions of students and faculty regarding instructor interactions, in essence CoI, in an online learning environment. As interactions are part of CoI, the CoI survey, which was created by Arbaugh et al. (2008), was given to students in college-level online courses at MidwestUniversity to determine their opinions on instructor interactions. The original survey was written from the student perspective, and a few additional questions to examine their opinions on instructor interactions were included. The survey was also adapted to provide the faculty perspective and was given to the faculty members to determine their opinions on instructor interactions. Then, the results of the two surveys were compared.

Purpose of the Study

The study's purpose was to examine alignment of the perspectives of instructor interaction between the students and faculty. If alignment did not occur, this may have indicated that there was transactional distance, as defined by Moore (1993), between faculty's perception of instructor interaction and student's perception of instructor interaction. Although student-to-instructor interactions have been found to be useful and needed as a part of online courses, the frequency required with the interactions and the quality behind them have not yet been identified

(Micari & Pazos, 2012). This comparative study looked specifically at student and faculty perceptions by using the newly designed instructor interaction questions, as well as the adapted questions in the original CoI survey. The CoI survey, with regard to teaching presence, looked into three areas—organization and design, direct instruction, and facilitation. The additional questions regarding instructor interaction addressed specifically how the teaching presence was perceived by students, whether there was a feeling of closeness or isolation from the teaching presence, and how students and faculty felt about the instructor presence.

Research Questions and Null Hypotheses

The overarching question of this study was to examine differences, if any, in faculty and student perceptions of instructor interactions. To answer the aforementioned questions, the following questions were addressed:

- Is there a difference in teaching presence between faculty and students?
- Is there a difference in social presence between faculty and students?
- Is there a difference in cognitive presence between faculty and students?
- Is there a difference in instructor interactions between faculty and students?
- Do you have any comments regarding the interactions within the course?

The null hypotheses were as follows:

- There is no difference in teaching presence between faculty and students.
- There is no difference in social presence between faculty and students.
- There is no difference in cognitive presence between faculty and students.
- There is no difference in instructor interaction between faculty and students.

Participants

This study's sample was drawn from a single four-year university in the midwest region of the United States. The university has over 12,000 students both on campus and online. The degrees offered online at the institution ranged from certificates to doctorates in professional fields as well as in arts and sciences. All participants voluntarily self-selected. There were two sample groups: faculty and students.

Faculty

Among faculty, 328 teach online courses. The faculty participants included both tenured and non-tenured members. Participants ranged from faculty teaching online for the first time to those who had taught online for more than 10 years. The faculty participants may or may not have had any professional training in teaching online. Faculty participants also included faculty from all the main teaching colleges at the university: arts and sciences, business, education, health, and technology. All faculty who teach online were invited during the fall term to participate.

The faculty survey consisted of 78 complete surveys and 36 incomplete surveys. Of the faculty participants who completed the entire survey, 51% (n = 40) were female and 49 % (n = 38) were male. The ethnic affiliations of the faculty participants were reported as 91% Caucasian (n = 71), 5% African American (n = 4), 1% Asian (n = 1), and 1% Latino or Hispanic (n = 1). The youngest faculty participant was 25 years and the oldest was 75, (M = 48.37, SD = 13.28). In terms of number online courses taught in one semester by each faculty participant, the majority taught only one course (35%, n =40) while others taught two courses (19%, n = 21), or three or more courses (16%, n = 18). Faculty participants have taught online for a number of years, the least is one year and the most is twenty years with the most commonly reported being one

(14.3%, *n* = 10) or three years (14.3%, *n* = 10), (*M* = 6.36, *SD* = 5.43). Many of the faculty participants (60%, *n* = 47) had taken a training course or a certificate course for teaching or developing online courses, while many participants (41%, *n* = 32) had not taken a course. The majority of faculty participants (64%, *n* = 50) had worked with an instructional designer, while some faculty participants (37%, *n* = 29) indicated they had not consulted with instructional designers. Eight out of 18 participants did not answer the qualitative research question so their responses were not included. Thus, the results relied on 70 fully complete surveys.

Students

During the fall of 2018, 5,346 graduate and undergraduate students who were taking at least one online course were invited to participate in this study.

With regard to the students who were surveyed, 477 completed the survey, of which 71.7% identified as female (*n* = 342), 28.1% identified as male (*n* = 134), and 0.2% identified as other (*n* = 1). The participants self-reported their ethnicity as 79% Caucasian (*n* = 379), 10% African American (*n* = 49), 2% Latino/Hispanic (*n* = 11), 2% Asian/Pacific Islanders (*n* = 10), 1% Native Americans (*n* = 7), and 4% other (*n* = 20). The student participants ranged in age from 18 years as the youngest to 67 as the oldest, (*M* = 32.07, *SD* = 11.20). The most commonly reported number of credit hours taken in the surveyed semester were three (30%, *n* = 143). The number of credit hours ranged from one to 18, (*M* = 7.08, *SD* = 4.19). The majority of students (51%, *n* = 242) reported that they had experience with online courses having taken between 1 and 10 courses in the past. With regard to orientation, 54% of participants (*n* = 257) reported they had taken an orientation prior to taking online courses; however, 46% of participants (*n* = 219) indicated they had not taken an orientation. The majority of students (42%, *n* = 199) had three to four years of college. Some participants (14%, *n* = 67) had only one to two years of

college experience. The student participants had diverse majors, reporting everything from accounting to theater. The most commonly mentioned majors were as follows: 18% in Nursing (n = 86), 7% in psychology (n = 35), 6.2% in other education (n = 31), 5.8% in health science and service (n = 29), 4% in criminology (n = 21), 4% in elementary education (n = 21), 3.6% in athletic training (n = 18), 3% in construction management (n = 15), and 2.4% in accounting (n = 12).

Instrumentation

Community of Inquiry Instrument

The CoI Framework Instrument (Appendices A and B) consists of 34 items. It was originally administered at four institutions in 2007 by Arbaugh et al. (2008). It was offered for use under a creative commons license. The items on the instrument were developed on a 5-point Likert-type scale ranging from *strongly agree* (1) to *strongly disagree* (5). The CoI instrument was designed to quantify aspects of teaching presence, social presence, and cognitive presence. Its main purpose was to develop a common instrument, which could be "adopted throughout the online learning research community" (Swan et al., 2008, p. 5). Specifically, the survey looks at facilitation, design and organization, and direct instruction as these comprise teaching presence. In the social presence section, the instrument takes into consideration "affective communication, open communication, and cohesive communication" (Garrison, 2017, p. 45). It also looks at "triggering event, exploration, integration and resolution" (Garrison, 2017, p. 66) in regard to cognitive presence. The instrument has become the common instrument used by those who are researching the CoI model.

Validity and Reliability

To examine the factor structure of the CoI instrument, Arbaugh et al. (2008) used a principal components analysis (PCA) with oblique rotation. The sample size was 287. The authors found that the three factors of social, teaching, and cognitive presence, represented 61.3% of the total variance. More than half the variance was accounted for by social presence factor. The authors conducted reliability analysis using Cronbach's alpha and found 0.94 for teaching presence, 0.91 for social presence, and 0.95 for cognitive presence (Arbaugh et al., 2008).

Bangert (2009) also conducted a study in reliability and validity of the CoI framework. His original sample was split into two groups. He first conducted an exploratory factor analysis with the first subgroup in which he constrained the model to a three factor solution. The factors that emerged were teaching presence, social presence, and cognitive presence. The three factor solution accounted for 65% of the total variance. The Cronbach's alpha coefficients were as follows: 0.96 for teaching presence, 0.91 for social presence, and 0.95 for cognitive presence (Bangert, 2009). He then conducted a confirmatory factor analysis with a second subgroup, the three factor model was tested and found to be a reasonable fit.

Daspit and D'Souza (2012) conducted a confirmation factor analysis in which they used the CoI instrument to measure three subscales of teaching presence (shape course design, facilitated discourse, and direct instruction); two subscales of social presence (knowledge sharing and open communication); and four subscales of cognitive presence (knowledge exploration, knowledge construction, knowledge resolution, and knowledge confirmation). The authors had 203 complete surveys submitted out of 236 given. They also found that overall the model had a good fit. The Cronbach's alphas were 0.90 for teaching presence, 0.88 for social presence, and

0.94 for cognitive presence (Daspit & D'Souza, 2012). Similar results regarding the validity of CoI as an instrument were also found by other researchers (Akyol et al., 2009; Dempsey & Zhang, 2019; Garrison et al., 2004; Rubin & Fernandes, 2013; Shea & Bidjerano, 2009; Swan et al., 2008).

Three factors underlying CoI include teaching presence, social presence, and cognitive presence. The instrument items for the teaching presence factor are:

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.
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.

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.
13. The instructor provided feedback in a timely fashion.

The following are the items identified on the social presence factor:

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.
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.
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.

The following are the items identified on the cognitive presence factor:

29. Problems posed increased my interest in course issues.
30. Course activities piqued my curiosity.
31. I felt motivated to explore content related questions.
32. I utilized a variety of information sources to explore problems posed in this course.
33. Brainstorming and finding relevant information helped me resolve content related questions.

34. Online discussions were valuable in helping me appreciate different perspectives.
35. Combining new information helped me answer questions raised in course activities.
36. Learning activities helped me construct explanations/solutions.
37. Reflection on course content and discussions helped me understand fundamental concepts in this class.
38. I can describe ways to test and apply the knowledge created in this course.
39. I have developed solutions to course problems that can be applied in practice.
40. I can apply the knowledge created in this course to my work or other non-class related activities.

Addition to Instrument

Six statements were added to the social presence area under the heading of quality interactions. An effort was made to provide clear, understandable statements that reflected the style of the original CoI. The statements were as follows:

23. I feel isolated from the professor within the online course.
24. I feel connected to the professor within the online course.
25. The instructor interacted with me on a personal level.
26. The quality of personal interactions was meaningful.
27. The instructor interacted with me on a professional level.
28. The quality of professional interactions was meaningful.

The instrument also included an open-ended question:

> Please share any comments regarding the professor and his/her interactions within the course.

Modifications to the Instrument for Faculty

In order to assess the faculty on their perceptions of CoI, the survey was rewritten from the faculty perspective. Thus, each question had some of the words changed so that a faculty could answer the items from their perspectives. For instance, the adapted version of the first statement in the survey was "I clearly communicated important course topics" instead of "My professor clearly communicated important topics." Two open ended question were also included:

1. Do you have any comments regarding the interactions within the course?
2. Do you have any other comments you would like to add?

Demographic Questionnaire

Faculty

For the faculty demographic questionnaire (Appendix C), the following items were included: gender, age, ethnicity, total number of online courses currently teaching this semester, number of years taught online, any training to teach online, whether the individual ever consulted with an instructional designer, and the name of course(s) currently teaching online.

Student

The student demographic questionnaire (Appendix D) included gender, ethnicity, age, current total online hours taking, number of online courses ever taken, any orientation to online taken, years in college, major, and the online course(s) currently taking,

Procedures

Recruitment

All 328 faculty members at this midwestern university were invited to participate in the study. This included those who taught at both the undergraduate and graduate level. The faculty email, shown in Appendix E, stated the need for this study and solicited participation of online

faculty members in the study. All 328 online instructors received the email. The faculty members were given a survey link that allowed them to access the survey. After the initial emails were sent to the faculty, a follow-up email was sent both one week later and two weeks later, for a total of three instances of contact.

All 5,346 graduate and undergraduate students who were taking at least one online course at Midwest University were invited via email to participate in the study during the fall 2018 term.

The email invited students to participate and provided the survey link that allowed them to access the survey (Appendix F). Follow up emails were also sent to students one week and two weeks after initial contact.

Informed Consent

The consent form was included at the top of the survey. The consent form for students (Appendix G) and for faculty (Appendix H) provided an invitation and then addressed the purpose of the study, the procedures, the possible risks and discomforts, possible benefits, and exclusions. The fact the study was voluntary was addressed in the potential risks for both groups, along with the participants' right to leave the study at any point. For the students, a point addressing that participation will not impact their grades was also included. Finally the point that participation in the study was confidential was included.

Both consent forms, as well as the study itself, were approved by the university's Institutional Review Board (Appendix I). Additionally, IRB extensions were requested and approved.

Data Collection

The data were gathered from the online faculty members at that university and from the students who took the online classes at the university. The demographic questionnaire and CoI survey data were gathered using Qualtrics, which is online survey software. The Qualtrics data were anonymized so that the researcher could not determine who responded and who did not.

Data Analysis

Data from Qualtrics were imported via Excel spreadsheets into Statistical Package for Social Sciences (SPSS), which was used for the data analyses. One portion of the CoI survey was not used in data analysis. The design and organization section was omitted from the faculty survey in error. Thus, it was purposefully not included in analyses of the student survey.

The quantitative data were split into two groups: survey results from online faculty members and survey results from online students. The groups were compared on teaching presence, social presence, cognitive presence, and instructor presence in order to examine the research questions. A review of the descriptive statistics was completed and reported for each group, faculty and students. Among students, 202 had complete data, while 272 had incomplete data on the CoI. Comparisons were made of the demographic variables of gender, age, number of years of college, and ethnicity between those with complete data and those with incomplete data using chi-square or t-tests depending on data type.

Given the large sample size difference between students and faculty, 70 student cases were randomly selected using SPSS from the completed 202 student surveys. This allowed for equal groups for the comparisons. The 70 student cases were then used alongside the 70 faculty cases to examine the research questions. This process was selected to minimize issues with having unequal groups.

The items from CoI were used to develop a composite variable for each factor including teaching presence, social presence, and cognitive presence. Additionally, the items from the instructor presence section was treated as its own composite variable. This resulted in four variables: teaching presence, social presence, cognitive presence and instructor presence. The composite variable was calculated by calculating the mean of the items within the subscale for each individual case. Assumptions were examined using Levene's test for homogeneity of variance and the Shapiro-Wilk test for normality. Then an independent measures *t* test was conducted comparing faculty responses with student responses on each composite variable.

Qualitative data analyses were performed for the open-ended questions from students and faculty. The questions were analyzed using emergent coding and thematic analysis (Saldaña, 2011). The responses to the questions were read through three times, and emerging patterns were identified. These patterns were then examined for themes that were important to the research question.

CHAPTER 4

RESULTS

The purpose of this study was to compare students and faculty on points of the CoI survey to see how they differ or are similar on instructor presence. This chapter contains the results of this comparison study conducted to examine the following research questions:

- Is there a difference on teaching presence between faculty and students?
- Is there a difference on social presence between faculty and students?
- Is there a difference on cognitive presence between faculty and students?
- Is there a difference on instructor presence between faculty and students?
- Do you have any comments regarding the interactions within the course?

Next will be an explanation of what was discovered from the surveys as it relates to students, faculty, and the Community of Inquiry.

Quantitative Results

Student Sample

The majority of student surveys (58%) were incomplete and unusable. Several demographic questions from the set of student surveys that were incomplete (n = 277) and the group of completed surveys (n = 202) were compared. The results can be seen in Table 1. No significant differences were found between incomplete and complete on gender (x^2 = 0.51, p =

.475), ethnicity ($x^2 = 2.55$, $p = .768$), years in college ($x^2 = 3.31$, $p = .508$), or age [$t(469) = 1.40$, $p = .162$].

Table 1

Comparison of Demographics Between Students with Complete Data and Incomplete Data

	Complete Student Survey $n = 202$		Incomplete Student Survey $n = 277$		Test Statistics	
					x^2	*t*-test
Gender					x^2 =0.51	
Male	$n = 60$	61.3 %	$n = 74$	26.7 %		
Female	$n = 141$	26.1 %	$n = 201$	72.6 %		
Ethnicity					x^2 = 2.55	
African- Am.	$n = 18$	7.8 %	$n = 31$	11.2 %		
Caucasian	$n = 162$	70.4 %	$n = 217$	78.3 %		
Other	$n = 50$	21.8 %	$n = 29$	10.5 %		
Years in College					x^2 = 3.31	
1-2 years	$n = 31$	13.5 %	$n = 36$	13 %		
3-4 years	$n = 83$	36.1 %	$n = 116$	41.9 %		
5-6 years	$n = 43$	18.7 %	$n = 50$	18.1 %		
7-8 years	$n = 31$	13.5 %	$n = 44$	15.9 %		
9 + years	$n = 13$	5.7 %	$n = 29$	10.5 %		
Age	$M = 31.26$	$SD = 10.69$	$M = 32.73$	$SD = 11.58$		t =1.40

In order to conduct the analyses of the research questions, 70 students were randomly selected from the 202 with complete data. Of these 70 students, Caucasians were most prevalent at 77% (n = 54) and African-Americans as the second largest group at 10% (n = 7). There were more females at 74.3 % (n = 52) of the group than males at 25.7% (n = 18). The largest group with regard to age was those in their twenties (52.9%, n = 37) followed by those in their thirties (23%, n = 16), (M = 30.30, SD = 10.94). Of the 70 students, the majority were in their third or fourth year of college (42.9%, n = 30) with the second largest group in their fifth or sixth year (21.4%, n = 15).

Assumptions

With regard to assumptions of homogeneity of variance, Levene's tests were run as part of the four t-tests. The assumption of homogeneity of variance was not significant for teaching presence, cognitive presence, and instructor presence. However, social presence showed significance on homogeneity of variance (F = 11.461, p = .001). However, t-tests are robust to violations of homogeneity of variance if the sample is larger than 30 and if the samples sizes are somewhat equal. Both of these criteria were applicable in this study.

A Shapiro-Wilk's test for normality was run for both the faculty and students on the four presence variables. Both faculty teaching presence, $W(70) = 0.96$, p = 0.03, and cognitive presence, $W(70) = 0.96$, p = 0.04, violated the test of normality, indicating the data significantly differed from the normal distribution. However, social presence, $W(70) = 0.98$, p = 0.36, and instructor presence, $W(70) = 0.98$, p = 0.24, had normal distributions.

The Shapiro-Wilk's test for normality for students showed all of the areas violated the test of normality, which indicated the data were significantly different that the normal distribution (Table 2). However, t-tests are robust to violations of normality when the sample

sizes are relatively large and the sample sizes are equal.

Table 2

Student results for Tests for Normality

	Shapiro-Wilks	df	Sig
Teaching Presence	.87	70	.000
Social Presence	.94	70	.003
Cognitive Presence	.87	70	.000
Instructor Presence	.96	70	.022

Analysis of Research Question

Independent measures *t* test were conducted to examine the quantitative research question.

Research Question: Is there a difference on teaching presence between faculty and students?

Null Hypothesis: There is no difference on teaching presence between faculty and students.

There was a significant difference between faculty and students on teaching presence $t(138) = -7.59$, $p < 001$, $r^2 = .29$. Faculty ($M = 1.87$, $SD = 0.50$) scored significantly lower on teaching presence than students ($M = 2.52$, $SD = 0.51$).

Research Question: Is there a difference on social presence between faculty and students?

Null Hypothesis: There is no difference on social presence between faculty and students.

There was a significantly significant difference between faculty and students on social presence $t(117.79) = -3.67$, $p < .001$, $r^2 = .10$. Faculty ($M = 2.21$, $SD = 0.66$) scored significantly lower on social presence than students ($M = 2.55$, $SD = 0.42$).

Research Question: Is there a difference on cognitive presence between faculty and students?

Null Hypothesis: There is no difference on cognitive presence between faculty and students.

There was a significantly significant difference between faculty and students on cognitive presence $t(138) = -5.78$, $p < .001$, $r^2 = .19$. Faculty ($M = 1.97$, $SD = 0.50$) scored significantly lower on cognitive presence than students ($M = 2.42$, $SD = 0.40$).

Research Question: Is there a difference on instructor presence between faculty and students?

Null Hypothesis: There is no difference on instructor presence between faculty and students.

There was a significantly significant difference between faculty and students on instructor presence $t(138) = -6.32$, $p < .001$, $r^2 = .22$. Faculty ($M = 2.23$, $SD = 0.48$) scored significantly lower on instructor presence than students ($M = 2.73$, $SD = 0.46$).

Qualitative Results

As part of the survey, both faculty and students had the opportunity to make comments regarding the courses they either provided or took. The question asked of faculty had two parts. The first question was “Do you have any comments regarding the interactions within the course?” The second question was “Do you have any other comments you would like to add?” The student question was “Do you have any comments regarding the professor and his/her

interactions within the course?" The responses to the questions were compiled into a list and read through several times. Then specific themes became apparent. As themes arose, they were written down. The list was then read through again and themes were identified and counted.

Faculty Comments

There were a variety of faculty comments. Several of the comments focused on issues with the survey, especially on the error with the first section, Design and Organization. Other comments on the survey related to the wording of the survey, because there were questions that still read as if from the student perspective and not the faculty perspective. Out of the 24 total comments, nine comments were made about issues with the survey itself. However, other faculty members made comments on other topics.

Out of the remaining 15 comments, eight can be categorized as positive toward online teaching and instructor presence and seven can be categorized as negative toward online teaching and instructor presence. In regard to positive statements from faculty, one faculty member provided the following, "I do try to interact with students fairly soon after they post on the FAQ forum or the active discussion board forum. Additionally, I meet with students virtually when requested and also answer email within 24 hours." Another faculty member made a positive comment toward online teaching, "I love online teaching. I get to know my students very well and often communicate one on one with them."

The negative comments ranged in topic area as well. Some focused on communication with students, as one faculty member stated, "Overall, I feel a lack of communication from my end towards the students. There are many factors for this, but I would like to think that from the university perspective, there could be more training available for first time instructors." Other

negative topics focused in other areas, such as students' and course needs. One faculty member commented,

> Teaching an online writing course has its limitations, especially for students with majors outside of the discipline (in this case, human resource development). Therefore, I strongly believe these students would be better served by a more general course in English, or to at least take a discipline specific course in person on campus.

Student Comments

Of the 477 students who completed the survey, 174 (36%) students provided comments. Of the students that commented, 52 students indicated they had professors who were adequate or good at interacting with the students. One student indicated the professor "is an amazing professor, I've honestly felt more personally connected to her than some in person professors." Another student also had a positive comment regarding instructor interaction,

> [A specific professor] is excellent in establishing an online community and allowing his students to get to know one another through positive interactions and the ability to facilitate an online discussion effectively. He is a true master, and I can say that with certainty, as I have taken many online classes, some very good, some just adequate and one [not at study university] that was downright awful.

In addition, 49 students indicated they had professors who did not interact at all or had very limited interactions, and five felt they had professors who lacked compassion toward them as a student. One student stated,

> I do not see a great deal of instructor engagement . . . I felt like I was in outer space or something. No matter what questions or comments we made related to the issues, there was never an answer. So, it appears instructors may not even be reading discussion posts

at all.

From those that commented, six students indicated they experienced some student-to-student communication in their course. Another student had little to no interaction with peers, "I do appreciate the low level of interaction because I work full time, but some expectation of responses to our peers may have helped our development." Another nine students indicated they had little or no student-to-student communication. One student who experienced student-to-student communication stated,

> I think that one on one class discussions via Collaborate were a great utensil for learning and discussion. I feel it should be utilized more to enhance student-instructor learning, understanding and discussion. It will help with forming a better relation with peers and instructors as well.

Regarding communication with the professor, two students felt that they were required or it was suggested that they come to campus to talk, and another 35 students felt the professor did not provide adequate communication by email, feedback in the course, or other methods. One student participant stated,

> [A specific professor] is horrific with communicating with her students . . . I have never felt so negatively about an online course than I do this one . . . The content is incredibly dense and pertinent to my career . . . Having to take such an important class online, especially with the poor environment this class produces, is quite a letdown."

An additional 38 students indicated they had adequate or good communication or feedback with their professors. One positive comment from a student was, "[A specific professor] does a great job with his online classes. I have now taken three classes with him and all of the content is laid out with what is expected and all due dates. He is great to responding to

comments, questions, and concerns." Another student illustrated the differences between face-to-face and online courses,

> I have had some instructors that are really good about being available to talk on the phone or through email; however, there are instructors that are very difficult to get a hold for help with assignments or if you need help understanding a grade. It is very different that being in class where you're able to being class and build a relationship with the instructor and have them help you through your struggles.

There were other issues beyond communication, such as the design and development of the courses. The students' comments indicated that content was an issue due to it not being clear, not being available, or not being adequate. These issues were cited by 27 students. An additional 16 students indicated they had vague assignments such that they had issues with understanding what was required. One student commented on the activities and assignments,

> The activities and assignments in most of these online classes don't appear to be actual learning opportunities. The process is more one of evaluation of what I already know or can find out on my own and how I can display it to the professor. I don't feel as though I am learning much of anything but rather displaying information.

Another student stated,

> Originally she mentioned that she would be doing more recorded lectures but those have also stopped. I'm not sure what she thinks she is contributing to our learning. We read the material ourselves, we interact with one another on the discussion boards, our preceptors teach us the skills. I am not sure what she does exactly besides complain and make everything more difficult than it needs to be.

One student indicated they had issues with the timing on their exam. In addition, another seven students indicated they felt like their course was self-taught. One student felt that they learned on their own, “Much of the knowledge I’ve obtained has been my need and deep desire to become familiar with the material not because of the instructor/coursework.”

Other students in the study spoke to their overall commitment to online. Three students specifically mentioned not liking their courses, two students indicated they needed, liked, or loved online courses, one of the students stated simply, “I love online learning.” Another student commented on the overall feeling they got from online courses,

> Online classes feel like the professors don’t care. All they care about is that you submit your work, meaning you doing your discussion boards on time and reply to two other people’s initial posts. Which I find redundant because everyone pretty much writes the same things and having to comment the same lengthy comments on other students’ discussion board is a waste of time.

A different student commented on their preferences, “It is evident to me that I prefer an in-class learning experience but enjoy the flexibility of the online course.” A student commented from the survey,

> What is frustrating about online courses to me is that I am a typically a traditional classroom learner. No matter the amount or quality of the interaction with the course instructor for these online courses, it is still impersonal. However, I’m thankful for online courses because I am older and have bills to pay so I need to work while in school. Online courses allow me to do that, so I embrace in the impersonal and make it personal by saying this is my personal experience and make the best of it.

The last topic area of student comments was the design of the survey; 17 students had

issues in one capacity or another. Most indicated they could not find their courses listed in the survey demographics area.

The next area, Chapter 5, will discuss the findings further and will look into the importance of the results, the meaning behind the results, and any significance found in the study.

CHAPTER 5

DISCUSSION

This study's purpose was to give a comparison between students and faculty on the three different types of presence of the CoI survey and the adapted instructor presence. This study compared research questions:

- Is there a difference on teaching presence between faculty and students?
- Is there a difference on social presence between faculty and students?
- Is there a difference on cognitive presence between faculty and students?
- Is there a difference on instructor interactions between faculty and students?

Overall, it seems that faculty responses were more positive than student responses. This indicates that faculty are more likely to perceive a stronger sense of teaching presence than the students. One faculty member stated in the comments of the survey, "It is very important to ensure that the instructor is open to conversations with students, puts a face to the class, and interacts with students outside of the set course work. This is what I try to do at least." A different faculty member expanded on their process for interacting with students in their online course,

> I believe and have seen the online medium be just as interactive and lively as the on campus delivery of course materials. I engage with my students personally (by referring to them by name when I email them and mentioning personal info they have shared with

> me). I have a goal of responding to questions, inquiries and topic issues same day or within 24 hours. I grade their assignments in a timely manner weekly. I encourage them to email me with any issue. I am firm about deadlines but let them know I am here to help in anyway and the best way is for them to be proactive and contact me BEFORE a deadline if they have questions and concerns. I love the online environment and feel as if I get to know and interact with my student more than in a physical course room environment.

However, the student perception is not aligned with faculty. Generally, students perceived faculty behavior positively, but faculty perceived their behavior more positively. One of the 52 students, who commented positively on teacher presence, spoke about a specific faculty member, "[My professor] is excellent in establishing an online community and allow his students to get to know one another through positive interactions and the ability to facilitate online discussion effectively. He is a true master." It could be determined that both students and faculty found teaching presence to be significant in online courses. Khalid and Quick (2016) indicated in their study of online students' perceptions of course satisfaction that teaching presence was a "strong positive factor when associated with course satisfaction" (p. 66). Thus, students who had regular communications with their faculty had higher satisfaction rates with regard to their courses (Khalid & Quick, 2016). Kupczynski et al. (2010) found that instructor facilitation and direct instruction, both aspects of teacher presence, are seen by online students as strong indicators toward student success in online courses.

Preisman (2014) found that a concentrated effort to increase the amount of teaching presence in an online course was not worth the investment of faculty time or effort. Richardson et al. (2015) indicated that "instructor actions and behaviors were fairly balanced (45-55% or 55-

45%) between social presence and teaching presence" (p. 274). This current study found through faculty comments that many faculty members at this university did their best to engage with their students. Also in disagreement with Preisman (2014), this current study indicates that students actively seek teaching presence in their courses. From the open comments section in the survey, 49 students stated that their professors either provided limited interactions or did not interact at all, and five students felt they had professors who lacked compassion toward them as a student. Thus, students desire more teaching presence in their courses.

Faculty illustrated more variability than students on social presence. Again, the faculty perception can be seen to be more positive towards social presence than that of the students but the variability is not that large. Similar to Mathieson and Leafman (2014), this study finds that faculty and student perceptions are high and in alignment with each other to a degree. Also this study supports Mathieson and Leafman's (2014) statement that students' perceptions of social presence were less than the faculty perceptions, influencing the industry impressions. Within the aspect of social presence is communication. Overall, the faculty surveyed indicated a positive communication process with their students. However, one instructor stated in the survey, "Overall, I feel a lack of communication from my end towards the students. There are many factors for this, but I would like to think that from the university perspective, there could be more training available for first time instructors."

Plante and Asselin (2014) indicate that creating a sense of social presence, connecting with students, and having them connect to the LMS in online courses is a common issue faced by faculty members. This lack of social presence can lead to students feeling isolated, which is also known as transactional distance (Moore, 1993). The manipulation of dialogue that allows for the subcategory of open communication amid faculty and students influences the degree of

transactional distance (Moore, 2013). In this study, the mean response of the social presence question of "Getting to know other course participants gave me a sense of belonging in the course" indicates that perhaps students are perceiving some transactional distance in their courses. Students perceive less sense of belonging ($M = 2.88$, $SD = 0.79$) than faculty show ($M = 2.10$, $SD = 0.83$). Thus, it is possible that students experience more transactional distance than faculty. It is possible that communication could play a part in this transactional distance. One of the students commented on their course,

> There really is no interaction. She posts a topic for discussion and we talk about it. That's it! She never gives us any study material, lectures, feedback, or instruction. It is literally the same every week . . . The only meaningful interaction I've had with the professor was when she gave out the syllabus. Honestly couldn't tell you who she is either that's how much she barely reaches out.

Another student indicated the opposite, "[Professor's name] is an amazing professor, I've honestly felt more personally connected to her than some in person professors."

The third area of CoI is cognitive presence. Faculty perceptions of cognitive presence were higher than the students' perceptions. Cognitive perception focuses on engagement and how knowledge is acquired and applied. Kovanoviće et al. found that "the preference towards static content or discussions and different use of the available tools suggests a need for different instructional interventions and support for different groups of students" (p. 19) which could be a factor in this study. Perhaps faculty perceive that they are engaging and supplying opportunities for knowledge acquisition and application, but in reality the course is static and needs different instructional interventions. Kovanović et al. also suggested the importance of quality versus quantity when it comes to activities (Kovanović et al., 2015). The more cognitively engaging the

course materials and activities are, the more engaged the student is in the course. This may be why this current study found a difference between student and faculty perceptions on cognitive presence. One student illustrated the effects of quality of activity with their comments from the survey,

> This was difficult since I was answering questions related to my current coursework which is a joke. There is a weekly email sent from the instructor that reminds us to complete our readings. There have been no assignments due since week 1 syllabus quiz- for a doctorate level course. She had us complete a research project which was based on material NOT in our required readings or related to course material AND was added after the semester already started because as she stated, she went to a conference and they asked her to do this. The final project will be due in a few weeks but she hasn't even posted the assignment yet because she asked us to 'be patient with her.'

This type of situation covers more than just cognitive presence; however, it does address Kovanović et al.'s (2015) point on the importance of quality activities. If the faculty member from the quote had addressed the quality of their activities, it would have greatly diminished the student's concerns with the course content that they were attempting to learn. Other students in the survey commented that they had positive experiences with the activities within their courses, and that the activities were relevant to their majors, which they saw as important.

The final area is instructor presence. The faculty perceived more instructor presence in their courses than the student perceived. Again both students and faculty perceptions were generally positive but students were more likely to give a neutral response than a positive response. Faculty had more variability on instructor presence than students. However, faculty were more likely to give a neutral response regarding a perception of isolation than they were to

state that there was isolation ($M = 2.77$, $SD = 1.08$). The same can be said of faculty perceptions ($M = 2.44$, $SD = 0.99$) of connectedness with students. Seaton and Schwier (2014) found that faculty tend to struggle with their roles in online discussions boards, which are a common tool for creating instructor presence. One faculty member commented on the struggle with discussion boards, "I find relatively few (including me) enjoy the discussion board / collaboration activities of distance education. Not diminishing the potential value, just stating experience and observation." Another faculty member also illustrated the struggle with discussion boards, "I find that students do not interact much in these on-line classes. They complete the discussion board and I have to require interaction but it rarely results in careful on-line consideration of the questions being raised. I find it hard to get students to do more than complete the assignments for a grade." Students also struggle with discussion boards. One student commented, "I feel like there should be other ways to meet course objectives then discussion boards. They are boring, tedious work that no one has a real interest in doing."

As to students' perceptions of instructor interaction, several students commented on the lack of instructor presence. One student stated,

> I have no idea of [sic] the professor is good or bad one, as interaction of any kind in the course is non-existent. There isn't any interaction with the other students, and almost the only contact I have had with the professor is when he emails the class to remind everyone to take the quizzes and exams.

By contrast, the student survey responses on perceptions of isolation from their courses were more likely to be neutral than indicate a high degree of isolation ($M = 3.10$, $SD = 0.84$). Thus, although some students feel there is isolation, the overall perception is that isolation is not strongly present. However, this does not necessarily indicate that students feel strongly

connected with their professors in their courses. Students' perceptions do indicate there is an agreement of connectedness between students and faculty within the courses but both groups are more likely to give neutral answers than answers of strong agreement.

Limitations

There are a few limitations with this study. The first limitation was than an error was made in the faculty survey. The error caused the first subcategory, Design and Organization, to not be calculated for either group. This created a significant lack of information for the area of teaching presence. Another limitation was the sample sizes of the groups. The disparity in faculty and student sample size required narrowing the student group to 70 participants. The inclusion of faculty provided another limitation. This process had never been conducted prior to this study. This leads to limitations regarding how the statements were modified and whether entirely new statements should have been created to better fit the faculty needs. A final limitation was the broad scope of this study. The number of variables and components lead to doubts of stability of the research in regards to the amount of potential influences on the robustness of the data.

Future Research

Future research could focus on perceptions of both students and faculty on just a single area of CoI, such as just cognitive presence. There needs to be a focus on instructor presence with students to build out that concept further before proposing it be added to CoI. Thus, future research of just the addition of instructor presence to the area of social presence is recommended. Then, further research into student and faculty perceptions of instructor presence is needed. Additionally further research comparing student and faculty perceptions on CoI areas is recommended. If the studies are limited to single CoI areas and this study is replicated at other

universities, the resulting information would help to define further the concepts of CoI as well as what we understand about how faculty and students understand and perceive online education.

Conclusions

There were four main findings of this study. First, the perception of teaching presence is significantly different between faculty and students. This means that students and faculty see teaching presence in different ways. Faculty and student comments provided evidence of this difference.

Faculty and student perceptions of social presence were also significantly different. This means that overall, faculty and student perceptions are different but close to each other. It also seems through faculty and student comments that perhaps overall social presence in online courses is lacking.

Faculty and student perceptions of cognitive presence were significantly different. Therefore, faculty and students did not see these categories in the same way. The difference for cognitive presence was illustrated in the student comments on the activities provided in the course and the solutions the students developed.

The final finding is that perceptions of instructor presence, a newly added subcategory, were significantly different between students and faculty. This may indicate that there is isolation perceived between the student and instructor or perhaps a lack of interaction between the two. Overall, the student and instructor perceptions differed from each other. Finally, the results from this study were not supported by current literature on CoI and student and faculty interactions. Although differences were found in this study, it was not to the degree that current literature presented. This discrepancy indicates a need for future research into both how and why those differences of perception exist.

This study demonstrated that faculty and students do not agree, necessarily, on points within the CoI. It has also demonstrated that when considering instructor presence, faculty and students do not share a similar perception, which suggests a need for further study into instructor presence and how to improve it from both sides. Also this study has contributed to a needed area in the research of CoI by conducting CoI research using a larger sample of students.

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APPENDIX A: ADAPTED STUDENT COMMUNITY OF INQUIRY SURVEY INSTRUMENT

5 point Likert-type scale

1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

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.
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.

Instructor Interactions

23. I feel isolated from the professor within the online course.

24. I feel connected to the professor within the online course.

25. The instructor interacted me on a personal level.

26. The quality of personal interactions were meaningful.

27. The instructor interacted with me on a professional level.

28. The quality of professional interacts were meaningful.

Cognitive Presence

Triggering event

29. Problems posed increased my interest in course issues.

30. Course activities piqued my curiosity.

31. I felt motivated to explore content related questions.

Exploration

32. I utilized a variety of information sources to explore problems posed in this course.

33. Brainstorming and finding relevant information helped me resolve content related questions.

34. Online discussions were valuable in helping me appreciate different perspectives.

Integration

35. Combining new information helped me answer questions raised in course activities.

36. Learning activities helped me construct explanations/solutions.

37. Reflection on course content and discussions helped me understand fundamental concepts in this class.

Resolution

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

Open Ended Questions

41. Do you have any comments regarding the professor and his/her interactions within the course?

APPENDIX B: ADAPTED FACULTY COMMUNITY OF INQUIRY SURVEY INSTRUMENT

5 point Likert-type scale

1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

Teaching Presence

Design & Organization

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

Facilitation

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

Direct Instruction

11. I helped to focus discussion on relevant issues in a way that helped students to learn.

12. I provided feedback that helped students understand their strengths and weaknesses.

13. I provided feedback in a timely fashion.

Social Presence

Affective expression

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

15. The student was able to form distinct impressions of some course participants.

16. Online or web-based communication is an excellent medium for students' social interactions.

Open communication

17. The students felt comfortable conversing through the online medium.

18. The students felt comfortable participating in the course discussions.

19. The students felt comfortable interacting with other course participants.

Group cohesion

20. The student felt comfortable disagreeing with other course participants while still maintaining a sense of trust.

21. I felt my point of view was acknowledged by the students.

22. Online discussions help the students to develop a sense of collaboration.

Instructor Interactions

23. There is an experience of isolation between the students and myself within the online course.

24. There is an experience of connection between the students and myself within the online course.

25. I interacted with students on a personal level.

26. The quality of my personal interactions were meaningful to the students.

27. I interacted with students on a professional level.

28. The quality of my professional interactions were meaningful to the students.

Cognitive Presence

Triggering event

29. Problems posed increased the students' interest in course issues.

30. Course activities piqued the students' curiosity.

31. The students felt motivated to explore content related questions.

Exploration

32. The students utilized a variety of information sources to explore problems posed in this course.

33. Brainstorming and finding relevant information helped the students resolve content related questions.

34. Online discussions were valuable in helping the students appreciate different perspectives.

Integration

35. Combining new information helped the students answer questions raised in course activities.

36. Learning activities helped the students construct explanations/solutions.

37. Reflection on course content and discussions helped the students understand fundamental concepts in this class.

Resolution

38. The students can describe ways to test and apply the knowledge created in this course.

39. The students have developed solutions to course problems that can be applied in practice.

40. The students can apply the knowledge created in this course to their work or other non-class related activities.

Open Ended Questions

41. Do you have any comments regarding the interactions within the course?

42. Do you have any other comments you would like to add?

APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE FOR FACULTY

1. With which gender do you self-identify?
    a. Male
    b. Female
    c. Other

2. What is your predominant racial or ethnic background?
    a. African-American
    b. Asian/Pacific Islander
    c. Caucasian
    d. Hispanic/Latino
    e. Native American
    f. Other

3. What is your age?

4. How many courses are you currently teaching online this semester?

5. How many years have you taught online?

6. Have you taken a training course or certification for teaching and or developing online courses?

    a. Yes, I have taken a training course.
    b. Yes, I have taken a certificate course.
    c. No, I have not taken either.

7. Have you ever consulted with an Instructional Designer regarding online course design?
    a. Yes
    b. No

8. Select an online course you are teaching this semester.

9. Select a second online course you are teaching this semester. (If you are not teaching additional online courses, please leave blank.)
    a. Click to select

10. Select a third online course you are teaching this semester. (If you are not teaching additional online courses, please leave blank.)
    a. Click to select

11. Select a fourth online course you are teaching this semester. (If you are not teaching additional online courses, please leave blank.)
    a. Click to select

APPENDIX D: DEMOGRAPHIC QUESTIONNAIRE FOR STUDENTS

1. With which gender do you self-identify?
    a. Male
    b. Female
    c. Other

2. What is your predominant racial or ethnic background?
    a. African-American
    b. Asian/Pacific Islander
    c. Caucasian
    d. Hispanic/Latino
    e. Native American
    f. Other

3. What is your age?

4. How many hours are you currently taking online this semester?

5. How many online courses have you take while in school (college or high school)?

6. Have you taken an orientation for taking online courses?
    a. Yes
    b. No

7. What is the amount of college you possess?
    a. 1-2 years
    b. 3-4 years
    c. 5-6 years
    d. 7-8 years
    e. More than 9 years

8. What is the department of your major?

9. Select an online course you are taking this semester.
    a. Click to select

10. Select a second online course you are taking this semester. (If you are not taking more than one online course, please leave blank.)
    a. Click to select

11. Select a third online course you are taking this semester. (If you are not taking more than one online course, please leave blank.)
    a. Click to select

12. Select a fourth online course you are taking this semester. (If you are not taking more than one online course, please leave blank.)
    a. Click to select

APPENDIX E: EMAIL TO INSTRUCTORS

From: Samantha Penney
Sent: Monday, November 02, 2015 8:30 p.m.
To: mrinstructor@communitycollege.edu
Subject: Request to participate in study on Instructor Interactions

I am writing to you to request your participation in a brief study. I am currently looking for online instructors who currently are teaching online or have taught online in this last school year 2016-17. This study would consist of responding to this survey request. All together it should not take more than about 15 minutes of your time per online course you teach.

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. I will be assigning pseudonyms to each instructor participant so as to keep you anonymous. The responses of your students are not identifiable as I am not asking for their name or other information. No personally identifiable information will be associated with your responses to any reports of these data.

The Indiana State University Institutional Review Board has approved this survey.
If you would like to participate in the study, please contact me at samantha.penney@indstate.edu or 812-237-8479 and we will start the process.

Thank you very much for your time and cooperation.

Samantha Penney | Ph.D Candidate
Dreiser Hall 239
samantha.penney@indstate.edu
812.237.8479 | Terre Haute, IN 47809

APPENDIX F: EMAIL TO STUDENTS

From: Samantha Penney
Sent: Monday, November 02, 2015 8:30 p.m.
To: mrinstructor@communitycollege.edu
Subject: Request to participate in study on Instructor Interactions

I would like you to participate in a study that I am doing as part of my doctoral work at Indiana State University. The study is looking into your perceptions of instructor interactions and how they compare to the instructor's perceptions of instructor interaction in your online course(s). As a student in your instructor's class, I am asking that you also agree to participate in the study. As a participant, I will only need about 15 minutes of your time to take a survey. The survey questions are similar to those that you take for your student evaluations but slightly different. Please click the link below to go to the survey Web site (or copy and paste the link into your Internet browser) and then begin the survey.

Survey link: https://indstate.qualtrics.com/SE/?SID=SV_e5MMQsUFucbldiZ

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. The responses are not identifiable as I am not asking for your name or other information. No personally identifiable information will be associated with your responses to any reports of these data.

The Indiana State University Institutional Review Board has approved this survey.
Should you have any comments or questions, please feel free to contact me at samantha.penney@indstate.edu or 812-237-8479.

Thank you very much for your time and cooperation.

Samantha Penney | Ph.D Candidate
Dreiser Hall 239
samantha.penney@indstate.edu

APPENDIX G: STUDENT INFORMED CONSENT

(Student Informed Consent)

CONSENT TO PARTICIPATE IN RESEARCH

Student Consent

Samantha Penney and Robin Burden, from the Department of Teaching and Learning at Indiana State University, invite you to participate in a research study. This study is being conducted to fulfill the dissertation requirements for a Ph.D. in Curriculum and Instruction. Your participation in this study is voluntary. Please read the information below. You may ask questions about anything you do not understand before deciding whether to participate.

You are being invited because you are currently enrolled in an online course which may include interactions with content, peers, and/or instructor (s).

PURPOSE OF THE STUDY

This study compares the instructor perceptions of instructor presence in online courses using the Community of Inquiry theory and student perceptions of instructor presence in online courses using the Community of Inquiry theory.

PROCEDURES

If you volunteer to participate in this study, you may complete a 30-minute online survey that will establish your perceptions regarding Community of Inquiry theory as it relates to social presence, cognitive presence, and teaching presence within your online course.

If you choose not to volunteer to participate in this study, you may select to opt out of the survey and discontinue the study.

POTENTIAL RISKS AND DISCOMFORTS

There are no known or foreseeable risks or discomforts related to this study. Should an unexpected injury occur, there is no compensation.
All records associated with this study will remain confidential and in the ownership of the researcher and faculty sponsor. Your instructor will not have access to the survey results.

Participation in this study is voluntary and will have no impact on your grade. Your instructor will not know if you are participating in the study or not. You have the right not to participate or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled. If you leave the study, your data will be eliminated from the study.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

A possible direct benefit of the research is the awareness of your course in regards to the Community of Inquiry theory related to social presence, cognitive presence, and teaching presence.

The knowledge gained from this study has the potential to improve instructional strategies in online coursework.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about this research, please contact identify research personnel:
Samantha Penney, Principal Investigator
Department of Teaching and Learning, Indiana State University
Terre Haute, IN 47809
samantha.penney@indstate.edu 812-237-8479

Dr. Robin Burden, Faculty Sponsor
Department of Teaching and Learning, Indiana State University
Terre Haute, IN 47809
robin.burden@indstate.edu 812-237-8728

RIGHTS OF RESEARCH SUBJECTS
If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN 47809, by phone at (812) 237-3088, or e-mail the IRB at irb@indstate.edu. You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with ISU. The IRB has reviewed and approved this study.

I understand the procedures described above. My questions have been answered to my satisfaction.

Your acknowledgement below serves as your voluntary agreement to participate in the study and your certification that you are 18 years of age or older and enrolled in an online course.

IRBNet #: 1135083-2
Approved Date: February 20, 2018

Expiration Date: February 19, 2019
Indiana State University Institutional Review Board

APPENDIX H: INSTRUCTOR INFORMED CONSENT

(Instructor Informed Consent)

CONSENT TO PARTICIPATE IN RESEARCH

Faculty Consent

Samantha Penney and Robin Burden, from the Department of Teaching and Learning at Indiana State University, invite you to participate in a research study. This study is being conducted to fulfill the dissertation requirements for a Ph.D. in Curriculum and Instruction. Your participation in this study is voluntary. Please read the information below. You may ask questions about anything you do not understand before deciding whether to participate.
You are being invited because you are currently enrolled as the instructor of record in an online course.

PURPOSE OF THE STUDY

This study compares the instructor perceptions of instructor presence in online courses using the Community of Inquiry theory and student perceptions of instructor presence in online courses using the Community of Inquiry theory.

PROCEDURES

If you volunteer to participate in this study, you may complete a 30-minute online survey that will establish your perceptions regarding Community of Inquiry theory as it relates to social presence, cognitive presence, and teaching presence within your online course.

If you choose not to volunteer to participate in this study, you may select to opt out of the survey and discontinue the study.

POTENTIAL RISKS AND DISCOMFORTS

There are no known or foreseeable risks or discomforts related to this study. Should an unexpected injury occur, there is no compensation.

All records associated with this study will remain confidential and in the ownership of the researcher and the faculty sponsor. No others will have access to the survey results.

Participation in this study is voluntary and will have no impact on you. No one will know if you

are participating in the study or not. You have the right not to participate or to leave the study at any time. If you leave the study, your data will be eliminated from the study.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

A possible direct benefit of the research is the awareness of your course in regards to the Community of Inquiry theory related to social presence, cognitive presence, and teaching presence.

The knowledge gained from this study has the potential to improve instructional strategies in online coursework.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about this research, please contact identify research personnel:
Samantha Penney, Principal Investigator
Department of Teaching and Learning, Indiana State University
Terre Haute, IN 47809
samantha.penney@indstate.edu 812-237-8479

Dr. Robin Burden, Faculty Sponsor
Department of Teaching and Learning, Indiana State University
Terre Haute, IN 47809
robin.burden@indstate.edu 812-237-8728

RIGHTS OF RESEARCH SUBJECTS

If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN 47809, by phone at (812) 237-3088, or e-mail the IRB at irb@indstate.edu. You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with ISU. The IRB has reviewed and approved this study.

I understand the procedures described above. My questions have been answered to my satisfaction.

Your acknowledgement below serves as your voluntary agreement to participate in the study and your certification that you are 18 years of age or older and teaching a distance class.

IRBNet #: 1135083-2
Approved Date: February 20, 2018
Expiration Date: February 19, 2019
Indiana State University Institutional Review Board

APPENDIX I: INSTITUTIONAL REVIEW BOARD APPROVAL

Institutional Review Board

Terre Haute, Indiana 47809
812-237-3088
Fax 812-237-3092

DATE:	February 20, 2018
TO:	Samantha Penney
FROM:	Indiana State University Institutional Review Board
STUDY TITLE:	[1135083-2] Comparison of Faculty and Student Perceptions of Instructor Presence in Online Courses
SUBMISSION TYPE:	Revision
ACTION:	APPROVED
APPROVAL DATE:	February 20, 2018
EXPIRATION DATE:	February 19, 2019
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # 7

Thank you for your submission of Revision materials for this research study. The Indiana State University Institutional Review Board has APPROVED your submission. The approval for this study expires on **February 19, 2019**.

Prior to the approval expiration date, if you plan to continue this study you will need to submit a continuation request (Form E) for review and approval by the IRB. Additionally, once you complete your study, you will need to submit the Completion of Activities report (Form G).

This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.