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An Exploratory Study of Teacher Perception of Social Presence: Design and Instructional Practices for New Online Teachers

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DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy
Organizational Learning & Instructional Technology

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DEDICATION

In memory of my dissertation chair, Deborah LaPointe, whose beacon of excellence in online instruction will forever be an inspiration and guide for me to follow.

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ABSTRACT

The purpose of this qualitative study was to explore the perceptions of high school teachers regarding social presence in online instruction. Participants were nine teachers, all new to teaching online. The influence of an Online Social Presence Rubric was studied along with other variables that affected understanding of social presence during one teaching semester. Five primary questions guided the research with the intention of furthering knowledge about social phenomena in the field of online education: (I) What do teachers identify as the central constructs to social presence; (II) How does the Online Social Presence Rubric affect teachers' understanding of social presence; (III) In what ways do teachers perceive, use or adopt the rubric as an instructional tool; (IV) What other variables influence the teachers' perceptions and practices of social presence; and (V) What did teachers learn about social presence after teaching their first online course?

Participants were experienced classroom teachers in a large urban school district who were part of a high school's transition to online course delivery. The

research design compared analysis in semi-structured and open interview questions before and after the online classes were taught. Observation of each online class within the learning management system took place at the end of the semester.

Due to the exploratory nature of this research, the small number of participants and its specific geographic context, this study offers only descriptive and speculative findings on how teacher social perceptions influence design and instructional practices. The findings included what teachers learned after a significant loss in social presence occurred during instruction and includes suggestions for improving social presence in online courses.

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Chapter 1

Introduction

As one high school teacher in this study suggested, “You have to get their hearts before you get their minds.” While the link between social phenomena and teaching content to many educators appears obvious, research studies have found the subject complex and difficult to prove or refute. The accelerating use of computer-mediated communication in education is raising new questions about the role of social presence and relationships in learning. What role should social presence play in online courses? Does social presence provide value to academic learning? How is social presence being lost, gained or leveraged by instructors and students who are experimenting with a variety of communication and social networking tools?

Communication, through the use of language, symbols and non-verbal cues, “arose out of social interaction” (Argyle, 1969) and is based on “universal principles of semantics, syntax and phonology” (Lenneberg, as cited in Argyle, 1969, p. 65). Communication is constructed out of an agreed-upon language of symbolic representations of meaning. Herbert Blumer’s (1969) third premise of symbolic interactionism is the “use of meanings by a person in his (or her) action involves an interpretative process” (p.5). To communicate, whether imparting information, ideas or associations with another person face to face, or through the use of a communication tool, is to some extent a psychologically mediated process. The advancement of communication devices is largely dependent upon the human capacity to mediate and infer meaning. The definitions of communication in the Oxford English Dictionary (OED) ("Communication," 2010) are undergoing revisions that are more representative of the revolution taking place with the use of Web 2.0 social and interactive devices: “The transmission or exchange of information, knowledge or ideas by means of speech, writing, mechanical or electronic media, etc.” One of the OED illustrative quotations is taken from The New York Times (2008): “Every day they (youth) interact with

friends through multiple channels of communication including cell phones, text messages, instant messages, e-mail and face-to-face conversations."

Social Presence

What is social presence, and in regards to this study, what is social presence in the context of computer-mediated communication and online education? To summarize post-Internet definitions, which will be discussed in greater detail in the forthcoming literature review, social presence is an interactive human phenomenon where cognitive, affective and identity attributes can be reciprocally projected and received between two or more persons. These are foundational social capacities necessary to construct such outcomes as affective connection, co-awareness, a sense of belonging or knowledge collaboration, and construction in an online course or learning community (Garrison, Anderson, & Archer, 2000; Gunawardena & Zittle, 1997; Picciano, 2002; Swan & Shih, 2005; Tu & McIsaac, 2002).

What has evolved from Lascaux Caves, Silk Road, maritime explorers, Pony Express, the telegraph, the telephone, television and computer-mediated communication is the capacity to exchange more information at greater speeds. Humans cross the divide of space and time and communicate with each other and share social cues that more closely emulate face-to-face interactions. On the other hand, when a professor was recently asked the difference between distance and face-to-face education, he promptly replied the former was like a love letter (B. Noll, personal communication, April 2, 2009). Nevertheless, advances in technology are changing how we communicate, interact and learn. People are able to project, as well as receive, identities through computer-mediated communication to build meaningful relationships and online communities of practice (Gunawardena, 1994). What is socially lost or gained by advancements in computer-mediated communication is ongoing with research and debate.

Social presence, within the distance education context, is a complex concept. Social presence has undergone the scrutiny of many researchers, yet

an agreed upon meaning continues to be elusive. This is partly attributed to the nature of the concept itself. Blumer (1969) points out the research challenge involved:

> In view of the nature of our problems, our observations and our data in social psychology, I expect that for a long time generalizations and propositions will not be capable of the effective validation that is familiar to us in the instance of natural science. Instead they will have to be assessed in terms of their reasonableness, their plausibility and their illumination. (p.182)

In addition to the validation problem, social presence, or one of the representations of social presence, has been studied by diverse disciplines, such as psychology, sociology, anthropology and education (Rice, 1992). Each discipline's particular orientation and emphasis is convergent, divergent or hard to correlate with each other. Yet these perspective differences may help illuminate this multifaceted phenomenon. Rather than one point of view disproving the other, a mature understanding may necessitate the allowance of some ambivalence.

Social presence is the type of complex psychological whole (a phenomena related to thought and language) that Lev Vygotsky (1986) argued not to reduce and study only elements, because the whole phenomena itself may be lost.

> It (psychological wholes into elements) may be compared to the chemical analysis of water into hydrogen and oxygen, neither of which possesses the properties of the whole and each of which possesses the properties not present in the whole. (p. 4)

For Vygotsky, a method of analysis in research is to study complete units, which keep their properties and integrity as holistic systems. Social researchers continue to struggle with this dichotomy: How does one understand the component parts that make up a phenomenon such as social presence, while at

the same time maintain the integrity of this type of interdependent system? An emphasis in one direction may have an unwanted result of the invalidation of the other.

This dilemma is made clear in the phenomena of distance education. It is difficult to isolate and identify the causal learning relationships. On the one hand, teaching is a craft of multiple experiences (background, education, culture, institution and myriad other factors) that any quantifiable reduction would miss and evade the messy social confluence that amalgamates into one learning moment. Or can computer-mediated communication reduce some of the unpredictability of teaching and learning outcomes? Content can be distributed through technology with little to no social interaction, such as in the form of a tutorial that does not extend beyond content management sharing. Computer-mediated communication is not inherently interactive (Eastmond, 1995).

A hypothesis one could argue is how the content can be transferred more efficiently to students with less time given to irrelevant social interactions. On the other hand, one of the identified problems with online learning is that it can be a cold, impersonal and isolating learning environment (Rourke & Anderson, 2002). Swan (2003) argues how interaction is essential to learning: “Socio-cognitive theories of learning maintain that all learning is social in nature and that knowledge is constructed through social interactions” (p. 25) and “no matter what learning theories we hold–behaviorist, constructivist, cognitivist or social–reciprocal events and mutual response in some form must be integral to our notions of how we learn” (p. 16). The research dilemma remains: What specifically about social interaction contributes to learning, and how does one accurately maintain Vygotsky’s salient systems perspective?

The crossing from theoretical debates and research on social presence to instructional application is circuitous. A great deal seems to get lost in the translation of *interpretive process*. For example, when we consider K-12 education and the existent pressures on summative testing, the curriculum is largely content driven, while social processes are given marginal attention in the

course assessment process (Black & Wiliam, 1998). Stiggins, Chappuis, Chappuis, and Arter's (2006) distinction between assessment *of* and *for* learning is a meaningful one regarding the instructional culture, what assessment type is valued, and curriculum design. Assessment *of* learning occurs after the learning has taken place. Assessment *for* learning occurs while learning is under way. The latter places greater value on formative assessment and an increased emphasis on the social interactions that contribute to learning, such as the self-esteem of students, self-assessment practices by students, and dialogue between instructors and students that are reflective and promote deeper student understanding (Black & Wiliam, 1998). Assessment *for* learning requires consideration of how to evaluate beyond rote and subject content quantity learning.

Rubrics

The use of rubrics to assess socio-affective-cognitive learning is a continuation of a 3,000-year history in performance assessment (Stiggins et al., 2006). Rubrics are effective instruments to assess performance criteria, develop descriptive scoring schemes, define learning targets for teachers and students, and provide clarification to observable application of knowledge (Arter, 2000; Jonassen, Peck, & Wilson, 1999; Moskal, 2000; Popham, 1997; Stiggins et al., 2006). It is hard to find assessment instruments for online learning that covers course social dynamics that are valid and can be readily utilized for instructional learning purposes. Rubrics have been used to assess social interaction in distance courses (Roblyer & Wiencke, 2003, 2004).

I developed an online social presence with a collogue, Michael Rulon, that originated out of this study's literature review (see Appendix C). We identified from the research five overarching descriptive areas that are operative and significant to the understanding of online social presence. A number of drafts and revisions took place in designing the rubric's descriptive language and the behavioral performance criteria to be conveyed explicitly and concisely.

In this exploratory study, the rubric is introduced as one of the many resources and influences encountered by a group of teachers new to online education. The rubric was made available to a group of high school teachers in an online pedagogy training and investigated, through qualitative methods, how instructors perceived, experienced and incorporated social presence before and after teaching an online class. This study will not seek to achieve instrument validity or reliability, but rather investigate a wider field of study that covers the preliminary knowledge that goes into constructing a performance assessment instrument like a rubric, such as exploring what social presence means to teachers in the context of teaching online and reactions to a developed rubric on this topic. The research intends to further the discourse concerning how teachers conceptualize social presence and the methods to teach, measure and assess this phenomenon in online education.

Problem Statement

The problem this study addresses is the inherent difficulty to operationalize the complex social presence phenomenon within an online course context into valid observable and measurable parts, and to understand the multifaceted relational systems involved. Social presence is usually not part of curriculum assessment and thus not recognized or sufficiently leveraged by instructors for learning purposes. In distance education, many of the social interactions found in the face-to-face classroom occur within the instructor's repertoire of personality, style, gesture, tone and tacit knowledge. As the use of learning technologies has rapidly grown, a current workforce of educators is largely unprepared to translate important social characteristics of their teaching approach into the online learning environment. While there are many encouraging indications that collaborative enterprises are taking place globally, brought about by the use of new communicative tools, there is also the risk of unwittingly marginalizing the social underpin to learning existent since the origins of human development. A variety of societal and educational pressures can be indentified today that might seek to reduce the "unquantifiable" instructional

social variable by administering greater technological control over instruction justified by educational cost reduction, academic performance improvement, uniform measurement of achievement standards, specificity of subject matter and devaluation of holistic development.

There is a general consensus in the literature that social presence is a complicated human relational phenomenon and that advancements in communication technologies are presenting new questions about its role and value within an online educational context. Technology-mediated learning has grown at such an accelerated rate that it is becoming ubiquitous throughout all levels of education. The accessibility and utilization of technology is not uniform by any means throughout and between countries. Chongwony (2008), in his dissertation that investigated *Social Presence in Postsecondary Learners Enrolled in Online Learning Environment*, remarks how the transition from face-to-face to web-based instruction is often haphazard, with little to no training in eLearning pedagogy. The author goes on to paraphrase the research done by Tu in addressing how the changeover to online instruction occurs “without serious consideration and examination of factors that encourage, sustain and enhance students’ learning and satisfaction in an online learning environment (Tu, 2002a)” (p. 20).

Researchers have had difficulty in agreeing on what social presence means and the overall influence it has on learning. This has been historically true in the face-to-face classroom, though teacher immediacy behaviors have demonstrated a positive correlation to learning (Gorham, 1988). With the addition of technology-mediated learning, the task of understanding social presence becomes more complicated but at the same time offers new advantage points to re-examining this concept’s correlation to learning. This does not mean a change in instructional practices is forthcoming. Researchers have struggled to design and administer instruments to measure social presence (Tu, 2002b), and instructors are often uncertain how to transfer an abstract concept into a pragmatic lesson plan. Social presence is often undervalued, marginalized or

underutilized in educational environments (Swan, Shen, & Hiltz, 2006). When one considers the soaring high-school dropout rates in the United States and the high attrition rates that may occur in online courses (Committee on Education and Labor, 2009), the stakes are high to evaluate the learning environment and incorporate teaching practices, which are able to leverage available online interactive-collaborative tools successfully for learning outcomes.

Research Questions

This study introduced a social presence rubric and explored the affects of that rubric and other variables on instructors' understanding of the social presence concept. The following key questions were addressed:

I. What do teachers identify as the central constructs to social presence?

II. How does the Online Social Presence Rubric affect teachers' understanding of social presence?

III. In what ways do teachers perceive, use or adopt the rubric as an instructional tool?

IV. What other variables influence the teachers' perceptions and practices of social presence?

V. What did teachers learn about social presence after teaching their first online course?

Significance of Study

The results of the study will add to the limited number of available instructional tools that address the phenomenon of online social presence. The aim is to further develop a scoring rubric that will assist instructors in how to introduce, leverage, monitor or assess a complex multifaceted social phenomenon for instructional purposes. This study examined teacher experience

and knowledge in this subject area that can in turn be used to construct assessment tools that can effectively cover complex psychological and relational processes that are connected to teaching and learning. Future studies may build upon this research and provide additional data in the development of effectual, valid and reliable online social presence instructional and assessment tools.

Limitations of Study

Qualitative research attempts to understand human experience with depth and describe a given phenomena holistically although the resultant weakness is generalizability and the criticism of the amount of researcher subjectivity involved. This study did not fully investigate instrument validity or inter-rater reliability. While there are political and academic pressures to show instrument validity and inter-rater reliability, an instrument's validity first must be determined. The complexity involved in studying an instrument's capacity to measure online social presence requires an initial emphasis toward validity with the understanding that further research will be required beyond this study. The exploratory nature of this study initiated dialogue among online instructors about further developing an online social presence rubric and its practicality in an online or blended course. The study was conducted over a finite time frame that affected the amount of data gathering and the capacity to saturate certain areas of interest to the study. The introduction of the Online Social Presence Rubric may have narrowed the field of focus in developing the constructs that make up the phenomenon. The sample size was nine high-school teachers. The participants are from one high school that is undergoing a change to an entirely online school. Some instructors will be new to online learning. These considerations will influence and limit the degree of generalizability outside the circumstances and conditions found within the parameters of this study.

As the researcher of this study, I carried a number of assumptions and biases about social presence and online education based on a multiplicity of factors, such as my own instructional online background and education, this study's literature review, and from the process of synthesizing information into

the development of social presence rubric. I think social presence is a valuable component to online instruction and that learning experiences will improve if instructors are better equipped to design and incorporate social presence into their online classes. I recognize this as a personal assumption and will discuss more in the methods chapter how I intend to strive toward understanding and maintaining standards of quality and verification during this study.

Chapter 2

Literature Review

This review of the literature begins with a brief examination of several social theories that either were not referenced, or given only periphery reference to, in the computer mediated social presence literature. Further consideration may offer additional insight to the field and future research. The literature review will examine the existing research relevant to the problem. Thematic areas covered will include definitions of social presence, measurement of social presence, social presence and learning outcomes, background to assessment and background to rubrics. Findings from this literature review will establish the need for additional educational research in the area of this study and will address and provide rationale for the research methodology discussed in Chapter 3.

Broadening the Theoretical Context

Short, Williams, and Christie (1976) founded social presence theory in their landmark publication of *The Social Psychology of Telecommunications*. The authors hypothesized that communication mediums varied in their interpersonal exchange capacity based on the degree of non-verbal cue transmission. They closely related their work to two social psychologists: Michael Argyle's approach-avoidance theory of proximity and Albert Mehrabian's research into the effects of implicit communication. Many social presence studies in computer-mediated communication begin the theoretical discussion with Sort et al. and the two psychology concepts of intimacy (Argyle & Dean, 1965) and immediacy (Wiener & Mehrabian, 1968). While these are important concepts to consider, having only two social psychological perspectives represented from the literature is conceivably a limiting theoretical foundation. There are exceptions. Biocca, Harms, and Burgoon (2003) incorporate Goffman's concept of "co-presence" to better understand how awareness operates as a construct in social presence. The Short et al. social presence theory has undergone re-examination by educational researchers as online education has come into existence. There is

an apparent need to broaden the theoretical base to social presence and consider additional perspectives to understand this multifaceted phenomenon.

The perspective of symbolic interactionism (SI), by authors (James, Baldwin, Cooley, Thomas, Dewey, Mead) who share a social ontology "about how the individual develops a self and a mind, that the dialectical relationship of the individual who possesses a self and a mind to the society in which he or she lives" (Musolf, 2003, p. 3) provides an encompassing theoretical backdrop to any study on social interaction, social presence or social learning. As will be later explored in this literature review, a number of researchers are exploring the influence of culture on social presence. Symbolic interactionism beginning with James and followed by contributions by Baldwin, Cooley, Thomas, Dewy and Mead recognize the importance of culture on human development, the self and mind (Musolf, 2003).

Cooley's (1922) concept of "a looking glass self" argues that we develop a self-concept through how other people view us. These people may not be immediately or physically present and they may also exist as imagined others. This concept of knowing self through how others perceive us has particular relevance to computer-mediated communication, as there are greater margins to project meaning about how one is being perceived in relational interactions. With fewer social cues there is more latitude for a person to imagine how they are being perceived and construct meaning about self. There are potential advantages and disadvantages to this type of computer-mediated communication arrangement.

It is beyond the scope of this review to investigate all the contributions made from symbolic interactionism to social presence theory. A reason why more perspectives from symbolic interactionism are not existent in social presence literature is theoretical overload. Yet, continued review of certain symbolic interactionism perspectives would likely contribute significantly to future research.

As this literature review will explore, there is disagreement in the social presence research findings regarding to what extent social presence contributes

to learning. The research by Vygotsky (1978, 1986) demonstrated how social interaction is foundational to learning processes, language, cognition and the construction of knowledge. “In our conception, the true direction of the development of thinking is not from the individual to the social but from the social to the individual” (Vygotsky, 1986, p. 36). Whiteside (2007) used Vygotsky as a guiding framework in her dissertation research on *Exploring Social in Communities of Practice within a Hybrid Learning Environment*. She found Vygotsky’s socio-cultural theory and the principles of “inner speech” and “zone of proximal development” as socially relevant learning concepts in computer-mediated educational environments. Vygotsky’s research redirects the research question about social presence from “Does social presence affect learning” to “How does social presence affect learning?”

Lewin’s (1951, 1997) Field Theory and its adaption by Gestalt Psychology (Kirchner, 2000) is understood as, “The field concept believes that all organisms exist only in environmental contexts with reciprocal influences on each other. As a corollary, no individual is understood independently of his/her surrounding field” (para. 12). This field concept, when applied to human interaction with computer mediated communication, can open many exploratory research avenues. For example, what are the *reciprocal influences* active in a virtual environment, a relatively recent technological invention? Lewin’s field-theoretical approach is characterized by a number of approaches that have continued to gain traction in social science: constructive method, dynamic approach, psychological approach, analysis beginning with the situation as a whole, and behavior at the time it occurs is a function of the field (Lewin, 1997). This helps illuminate how social presence operates in distance educational settings.

Another philosophical foundation to Gestalt psychology is Martin Buber’s (1996) *I and Thou* concept. In an article covering gestalt theory, Kirchner (2000) succinctly captures Buber’s philosophy of dialogue:

> Buber’s philosophy of dialogue, dialogic element in the form of the I-Thou relationship, was innovative for integrating the “between.” As Buber noted,

> all living is the meeting of a human being with another human being, which equals existence. There is no “I” without an “It” or a “Thou”. In the full meaning of this philosophy, the I-Thou relation, or dialogue, can be understood as a special form of the contacting process (Jacobs, 1989). (para. 13)

As will be reviewed, the relational principle of *dialogue* and *meeting with another* is evident in much of the immediacy research on teacher behavior toward students and learning. Additional research on the *contacting processes* within online courses is another area that calls for investigation.

Other significant social theories are not mentioned here. It is my point of view, based on the research found in the literature on computer-mediated communication and social presence, that the field needs to expand beyond Short et al. in the development of social presence theory. As social theory continues to evolve, the re-examination of past and relevant theoretical principles can help to understand the complex relational phenomenon being studied along with directing future research.

Definitions of Social Presence

There is no single agreed upon definition for social presence. Rather, researchers continue to redefine the concept, making it difficult to arrive at any definite conclusions for both researchers and instructors (Lowenthal, 2010). Whiteside (2007) identified 12 variations of the social presence definition in the literature since 1969. Because of discrepancies, virtually every author in the field is obligated to define or re-define what social presence means. Social presence is a multidisciplinary concept that risks the warning by John Henry Newman in *Discourse on the Scope and Nature of University Education* that spreading knowledge too thinly by trying to teach too many things (Hutchings, 2007, p. 15) and the concept loses instructional efficacy.

Short et al. (1976) defined social presence in the context of telecommunications: “Degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships…” (p. 65). These

authors defined social presence as a quality of the communication medium and hypothesized communications media varied in the capacity to deliver social presence. While Short et al. did acknowledge that the medium would affect user perceptions, they did not incorporate this concept into the theory. Later researchers found that the relational perceptions had considerable influence on the communication medium's salience (Walther & Burgoon, 1992). The Oxford English Dictionary ("Salience," 1989) provides a definition to salience that has a particular meaning within the context of social psychology that is more aligned with these later researchers: "The quality or fact of being more prominent in a person's awareness or in his memory of past experience." For Short et al., salience meant the degree to which a person is perceived as a *real person* in mediated communication (Gunawardena, 1994). "The capacity to transmit information about facial expressions, direction of looking, posture, dress and non-verbal vocal cues all contribute to the social presence of a communication medium" (Short et al., 1976, p. 65). These authors theorized a communication device has more or less social presence, based on the degree to which it can transmit nonverbal social cues. More mediated cues equated more salience.

Short and his colleagues' social presence theory originated before the arrival of the Internet and online education. It would make sense that this definition needs revision with the development of web-based communication technologies. The number of social cues a communication device conveys is a critical factor in *real person* transference. In the 1990s, researchers started to question the communication medium as the only determinant of social presence. Researchers started to investigate other independent attributes that were acting upon the medium itself in fostering socially viable exchanges. These attributes included interpersonal characteristics, such as personal perception, affective involvement and cultural identity (Garrison et al., 2000; Gunawardena, 1994; Gunawardena & Zittle, 1997; Swan, 2003).

Short et al. (1976) stated social presence was closely related to Wiener and Mehrabian's (1968) concept of immediacy: "Those communication behaviors

(verbal and nonverbal) that enhance closeness to and nonverbal interaction with another" (p. 203). In other words, immediacy is a “measure of the psychological distance that a communicator puts between himself or herself and the object of his/her communication” (Gunawardena & Zittle, 1997, p. 9). Technological immediacy is understood as the amount of information a medium can transmit to generate immediacy or psychological closeness. Short et al. stated a key difference between the two concepts was how the social presence of the medium was established and will always be the same. Immediacy, on the other hand, was understood as variable. These authors gave the example of how a person can make intonations through the use of a phone that will affect immediacy (comradeship) or non-immediacy (aloofness). This suggests the delineation between the communication device and a person’s capacity to accommodate mediated communication limitations by the projection of feeling states that can narrow psychological distances is more interdependent than Short et al. theorized.

Salience, as defined by Short et al., represents how different communication tools offer differing capacities to replicate “real person” attributes of speech and non-verbal cues found in face-to-face communication. The previously stated Oxford English Dictionary definition of saliency, *what is prominent in a person's awareness,* may be a more applicable definition in the computer-mediated communication context than the “real person” meditated emulation.

The following social presence definitions that have proceeded Short et al. have broadened to include psychological projection, affect and identity as part of interpersonal and intrapersonal interactions between persons and the communication tools they use. Prominence in awareness is a more accurate description of the socio-psychological computer-mediated communication phenomenon.

Rourke, Anderson, Garrison, and Archer (2000) defined social presence as “the ability of participants in a community of inquiry to project themselves

socially and emotionally, as ‘real’ people (i.e., their full personality), through the medium of communication being used” (p. 94). The authors argued the effect of media was not the most formative factor in social presence but rather the communication context, which was produced through familiarity, skills, motivation, organizational commitment, activities and length of time. While the interpersonal dynamic is certainly important in the projection of self, the inclusion of intrapersonal dynamics that is happening in one’s own mind is also significant. Sociologist Erving Goffman (1959) pointed out how a person has a sense of their own projected identity and how this identity is perceived outside of him or herself, which in turn has consequential influence on social behavior. Gestalt psychology considers projection a natural human capacity to externalize aspects of self onto the environment to allow mutual understanding. Projection may also become imbalanced when a person projects an unwanted state in him or herself onto the environment without insight into this transference (Polster, 1973). Understanding human projection (interpersonal and intrapersonal) is complicated and difficult. How projection operates in online education does not detract from this complexity but rather offers research additional perspectives about this phenomenon.

Tu and McIsaac (2002) defined social presence “as the degree of awareness of another person in an interaction and the consequent appreciation of an interpersonal relationship” (p.133). This definition is similar to the OED definition of salience: *What is prominent in a person's awareness*. The authors acknowledge research that has shown perception and subjectivity as integral aspects to understanding mediated communication. In a basic sense, awareness in a medicated interaction where persons are aware of “being together” (Biocca, Burgoon, Harms, & Stoner, 2001). Erving Goffman (1959) extends this understanding with the idea of mutual awareness: “Co-presence renders persons uniquely accessible, available and subject to one another” (p. 22). Biocca (1997) agrees that social presence is a more dynamic process than the minimum level of being aware of the presence of another: “The amount of social presence is the degree to which a user feels access to the intelligence, intentions and sensory

impressions of another" (para. 7.2). Co-presence or co-awareness occurs along a continuum. People are more or less accessible or available to each other. This raises questions in need of further research. What are the differing degrees that awareness can attain in social presence? Is there an optimum level to be sought?

Presence is a basic state of awareness or consciousness. Biocca's (1997) summary of Jack Loomis' work on presence and the physical world states: "But as Loomis (1992) points out, presence is a basic state of consciousness. It is part of the attribution of sensation to some distal stimulus, or more casually, to some environment" (para. 55). Researchers have started to investigate the meaning of presence in virtual mediated environments:

> Such findings gave rise to the concept of presence, defined as "the perceptional illusion of nonmediation," a phenomenon in which "a person fails to perceive or acknowledge the existence of a medium in his or her communication environment and responds as he or she would if the medium were not there" (Lombard, Reich, Grabe, Bracken, & Ditton, 2000, p. 77). Over time this concept of presence has been refined to differentiate the constructs of physical presence (the sense that one is actually in another place, rather than interacting with technology) and social presence (the sense that other intelligent actors are also present and interacting with a person using a virtual environment). (Walker, 2007, p. 81)

Understanding the concept of *presence* in online courses is an important consideration. If users perceive a virtual environment as if the technological medium *were not there*, this would have considerable implications to the social dynamics. There is much philosophical debate over human consciousness that will continue into cyberspace. Entry into the fray of this speculative arena is beyond the scope of this study. At the same time, technology is raising many existential questions. Consider the popularity of Second Life, a virtual world accessible by the Internet, where there is the projection of identities through

avatars and the alteration of space and time relations. How is awareness being influenced by these developments? Understanding online social presence will continue to be interconnected with these types of philosophical questions.

Swan and Shih (2005) define social presence as “the degree to which participants in computer-mediated communication feel affectively connected to one another” (p. 115). These two authors hypothesized that online communicators, when using decreased affective communication channels, would increase more immediacy behaviors to establish an equilibrium of social presence than was comfortable. This relates to the Garrison et al. (2000) concept of affective projection. Communicators will seek out connections and project emotions in mediated encounters. The human condition is one inclined toward socio-emotional connection and a sense of belonging. Picciano (2002) defines social presence as “a student’s sense of being and belonging in a course and the ability to interact with other students and an instructor although physical contact is not available” (p. 22).

The generation of social presence definitions since Short et al. is less about the features of medium and more about the human social propensities that are operative in any given mediated encounter. The familiar maxim, “the medium is the message,” coined by Marshall McLuhan (1964), is still applicable to computer-mediated communication. The medium has a considerable amount of influence over how messages are conveyed and received. There are limitations and the loss of many social cues. Yet people have found ways to compensate and navigate around these limitations, as well as to push for the design of “more connective” communication tools.

Measurement of Social Presence

There is little agreement among researchers on how to measure social presence (Lowenthal, 2010). The differing social presence definitions contribute to the difficulty of deciding upon what types of measurable constructs to choose and study. As the following researchers have demonstrated, identifying and

studying the key constructs to social presence has led to inductive discovery and emergent meanings within this field of study.

The early method for measuring media social presence was a semantic differential technique (Osgood, Suci, & Tannenbaum, 1957) that Short et al. (1976) expanded upon. They used a bi-polar scale that included unsociable-sociable, insensitive-sensitive, cold-warm and impersonal-personal. Media with high social presence was determined to be warm, personal, sensitive and sociable. Researchers have found these to be too general of a measure in computer-mediated communication studies, particularly regarding the study of student perceptual experience.

Gunawardena (1995), in a study of whether online social presence is an attribute of the communication medium or users' perception of the medium, administered a questionnaire that included 17 five-point bi-polar scales that focused on university student reactions/feelings toward computer-mediated communication. The bi-polar scales included stimulating-dull, personal-impersonal, sociable-unsociable, sensitive-insensitive, warm-cold, colorful-colorless, interesting-boring, appealing-unappealing, interactive-non-interactive, active-passive, reliable-unreliable, humanizing-dehumanizing, immediate-non-immediate, easy-difficult, efficient-inefficient, unthreatening-threatening and helpful-hindering. Students were asked to respond to each five-point scale according to their feelings about the medium. For example, "5" indicated "very dull," while "1" indicated "very stimulating." If students where undecided or neutral, they circled "3." From this method, Gunawardena was able to measure student perceptions about the use of computer-mediated communication.

Gunawardena and Zittle (1997) developed a Likert scale survey using a 14-item questionnaire that corresponded to the concept of immediacy that was defined from the literature. In the study, there were 50 students in the "GlobelEd" computer conference from six universities. The questionnaire consisted of a 14-item social presence scale:

1. Messages on GlobalEd were impersonal.
2. Computer-mediated communication (CMC) is an excellent medium for social interaction.
3. I felt comfortable conversing through this text-based medium.
4. I felt comfortable introducing myself on GlabalEd.
5. The introductions enabled me to form a sense of online community.
6. I felt comfortable participating in GlobalEd discussions.
7. The moderators created a feeling of an online community.
8. The moderators facilitated discussions in GlobalEd.
9. Discussions using the medium of CMC tend to be more impersonal than face-to-face discussions.
10. CMC discussions are more impersonal than audio teleconferencing discussions.
11. CMC discussions are more impersonal than video teleconference discussions.
12. I felt comfortable interacting with other participants in GlobalEd.
13. I felt that my point of view was acknowledged by other participants in GlobalEd.
14. I was able to form distinct individual impressions of some GlobalEd participants even though we communicated only via a text-based medium. (p. 15)

To check the validity of their measure, the authors tested if high correlations (r=>.50) existed between the questionnaire scale and six bi-polar scales that corresponded to the research of Short et al. A strong positive correlation was found. This instrument gathered data on student perceptions about social presence using mediated communication devices. Other researchers have successfully adapted this survey to further study social presence in computer-mediated communication (Hostetter & Busch, 2006; Picciano, 2002; Richardson & Swan, 2003).

Another method of social presence measurement has focused on the identification of observable student behaviors during online social interactions using content analysis. Rourke et al. (1999) developed a community of inquiry model of online learning that identified three central indicators of presence: Teacher presence, social presence and cognitive presence. In regards to social presence, the authors identified three categories (affective responses, cohesive responses and interactive responses) and 12 indicators under these categories to social presence (see Appendix A).

Rourke et al. (1999) identified two stumbling blocks to their social presence indicators in computer conferencing transcripts: Unit of analysis and inter-rater reliability. Text, as discrete units of analysis when observed, recorded and considered data in research, presents problems with validity and reliability. While syntactical units (a sentence or paragraph) allow consistent identification, they are “arbitrary designations that abide by logic that is usually external to the logic of the indicators of interest” (p. 60). Another method is the “thematic unit” that consists of a single thought or idea that can be extracted from a segment of content. But this method resists reliable and consistent identification. Rourke et al. suggest a combined approach: “The most appropriate unit would combine the flexibility of the thematic unit, which allows coders to capture a unit in its natural form, with the reliable identification attributes of a syntactical unit” (p. 60). Using their coding protocol, the authors achieved inter-rater reliability (0.91) during the first coding and (0.95) during the second application on a new set of transcripts. Garrison et al. (2000) stated the social presence indicators emerged from the literature and were refined by the analysis of computer conference transcripts. These authors indicated they worked on the “vexing problem” of determining an appropriate unit of analysis and experimented before settling on a coding template that best optimized objectivity, reliability and validity.

Garrison (2007) suggested social presence research can largely be described as “interpretivist” where communicative interactions have been studied using descriptive transcript analysis. Questions have been raised to move the

validity of the coding protocol to a quantitative approach. But at the same time, researchers have found this method difficult to code at the indicator level. The author asks a number of salient questions:

> What research questions would coding at the indicator level answer? How does being able to distinguish among the indicators add to the validity of the model? Are indicators too context-specific to expect a standard set of indicators across all online educational environments? What unit of analysis (e.g., sentence, paragraph, message or theme) should be employed? (p. 6)

Garrison finally asked if we are ready to develop more “psychometrically” rigorous instruments and move out of the early exploratory and descriptive phase of research.

The Rourke et al. (1999) community of inquiry model of online learning and the subsequent social presence categories and indicators has been adopted, added to and modified by a growing number of researchers. Swan’s (Swan, 2002, 2003; Swan & Shih, 2005) research has expanded upon and refined the indicators. The author includes 14 identifiers supported by additional sources, such as by the research of Hadumod Bussman and Dawn Poole. The affective indicators include paralanguage (features of text that convey emotion) and value (expressing personal values, beliefs and attitudes). The cohesive indicators included course reflection. The interactive indicators are revised considerably into acknowledgement (referring directly to the contents of others’ messages; quoting from others’ messages), agreement/disagreement (with others’ messages), approval (offering praise, encouragement), invitation (asking questions or otherwise inviting responses) and personal advice (offering specific advice to classmate). Hughes, Ventura and Dando (2007) revised the Rourke et al. social presence coding template to assess social presence along with emotional aspects. These authors tested their method through replication, amendments and validated their instrument.

Swan and Shih (2005) developed an interview questionnaire for students on their perceptions and experience about online discussions. Students who scored high or low in social presence also were interviewed. The interview questions were emailed to students two days prior to a 45-60 minute phone interview that included 14 questions:

1. What did you think about when you were preparing to post a message to the course discussion? Did you think about how you would sound to others? Did you think about how what you say would influence how others think of you?
2. Did you use any strategies to put “personal” touches in your messages? If so, why did you want to make yourself sound more personal in online discussions?
3. How did the ways other students wrote their messages influence your impressions of them? Did others’ language use influence your’s? If so, how?
4. What did you think about when you were responding to others’ message?
5. Did you choose certain people to respond to? Have you built a sense of bonding with those students?
6. Do you think a sense of bonding is important to learning in asynchronous learning environments? Why or why not?
7. What were the criteria you used while choosing which messages to respond to?
8. What are your impressions of your instructor? How were these impressions formed?
9. From my observation of the online class discussion, I noticed that your instructor encourages you to refer to your personal experiences while answering most of the questions. What do you think about this? Do you think this made the discussions more personal?

10. Did your instructor's style of writing influence the way you constructed your messages in the class? If so, how?
11. Did you notice that your instructor did not often participate in the class discussions? What do you think about this? Did you think this made the discussions more personal?
12. Would you prefer your instructor to participate in discussions publicly instead of giving private, personal feedback to your postings? Why or why not?
13. Do you think it is important that you have regular and personal interaction with instructor? Why or why not?
14. As the tone of your voice is not available in the online environment, did you find it to be a big constraint when communicating with your peers? If so, what did you do to overcome the constraints? (p. 136)

Doctoral students have started to study and contribute to the work of Rourke et al. (1999). A dissertation by Aimee Whiteside (2007) explored social presence in communities of practice within a hybrid-learning environment. The author found that the coding data was not able to entirely define social presence. She added two additional categories that were representative. The categories identified included affective investment, cohesiveness, interaction level, knowledge/experience and instructor involvement. Whether such additions to the social presence measurement categories gain any traction will be determined by future research. The category of instructor involvement is closely tied to the Rourke et al. (1999) community of inquiry model's category of teacher presence. As these authors have indicated, social presence and teacher presence are dependent upon each other.

Other important categories of social presence measurement that are starting to gain traction in the literature are cultural perspectives and influences. Gunawardena, Bouachrine, Idrissi, Alami, and Jayatilleke (2006), in an ethnographic study of online text-based communication in Morocco and Sri Lanka, identified several emergent constructs related to social presence. They

included self-disclosure, building trust, expression of identity, conflict resolution, interpretation of silence and the innovation of language forms to generate immediacy.

How to measure cultural influences in computer-mediated communication is important, as online learning communities increasingly consist of global membership. Each of the cultural properties found by Gunawardena et al. represents how a person's cultural context can play a significant role in social perceptions during mediated exchanges that will directly affect the degree, quality and type of social presence achieved.

In regards to self-disclosure, Gunawardena et al. (2006) found that participants in the study indicated the realness of the other people is expressed by disclosure of their private life. But there was a difference between Moroccan and Sri Lankan women in the degree of self-disclosure they were comfortable with. Cultural perceptions regarding social status influence how conflicts (online insults) are handled. Participants from both cultures indicated time was an important factor in building trust, and they would not reveal their real identity before trust was established. The high contextual nature of Moroccan culture, where identity is closely tied to interaction, background and surroundings, would likely be indicative that participants would struggle in expressions of identity, but the authors found participants were able to associate with group categories and associations to establish a sense of presence.

Culture was found to be a relevant influence on perceptions of the meaning of silence. Gunawardena and LaPointe (2007) point out how Asian and Pacific Island cultures are comfortable with silence offering time for integration and consensus, while Americans and Western European cultures can perceive silence as rudeness, inattention or uncertainty. The interpretation of silence in computer-mediated communication (where there can be extended periods) is an important cultural consideration.

In a cross-cultural study of online conferences in the United States and Mexico, participants from the two countries perceived social presence differently

regarding the *norming* and *performing* stages of group development. A Mexican focus group differed from a U.S. group over “power distance” (extent power, prestige and wealth unequally distributed in organizations and society) in that they wanted less personal status information provided and a greater emphasis placed on what members contribute to the conference (Gunawardena & LaPointe, 2007). Yildiz (2009) found, in web-based classroom postings, that when interest in native cultures shows, there is greater support and encouragement among participants. Tu (2001) found that cultural factors contributed to Chinese students not taking the initiative in online interactions and called for the design of interactive learning environments that would encourage Chinese students to participate more in online interaction.

The above-mentioned studies provide evidence that cultural factors should be incorporated into studies of online social presence. There is a need to develop further instruments to study this cultural category.

Other methods of study are being developed that are close, if not directly related, to online social presence. For instance, consider Ravai’s (2002a, 2002b) Classroom Community Scale to assess college students’ sense of learning and community. Social presence and community are often directly related to each other (Hostetter & Busch, 2006; Tu & McIsaac, 2002). A learning community is made up of cohesion, spirit, trust, interaction, interdependence and shared educational goals (Rovai, 2002c). The Classroom Community Scale contains a 20-item questionnaire and measures the learning community through two subscales: connectedness (respondents’ feelings regarding cohesion, spirit, trust and interdependence) and learning (the degree to which respondents shared educational goals and benefits through their interaction with other course participants) (Shea, 2006). This instrument has relevance to online social presence research and, in particular, the study of connectedness is closely tied to Picciano’s need for a *sense of belonging* in technology-medicated learning. Shea (2006), in a study about online students’ sense of learning community, incorporated measurement instruments devised by both Rovai and Garrison and

colleagues. This type of instrument adoption could be equally effective in the study of social presence.

Research on social presence has largely studied asynchronous text-based computer-mediated communication and student perceptions about the use of this medium. There is a lack of research regarding synchronous communication, such as webinar conferencing or classes, “texting” or “tweeting,” or interactions in a virtual reality, to name a few of a growing number of synchronous or synchronous-asynchronous hybrid devices and communicative environments. How can the coding methods and protocols developed to this point be applied to the study of social presence in live “real-time” mediated exchanges? What, if any, refinements or additions are necessary to study this rapidly evolving communication field? The evolution of the categories and indicators of social presence appears to be far from over. Garrison’s questions about the next phase of research on computer-mediated communication and social presence are a dialogue well worth having as communication mediums, user perceptions and cultural perspectives continue to interact and evolve.

Social Presence and Learning Outcomes

The literature gives a fragmented picture concerning the relationship between social presence and learning. Social-learning theorists might question the confusion, as learning (development of self and mind) comes out of social “dialectical relationships” (Musolf, 2003) and would argue the fault lies with the research design. Many studies found this review did not adequately clarify the construct learning or satisfactorily specify the learning performance criteria. The educational debate over learning outcomes between knowledge acquisition (memorization) and knowledge application (learning how to think) is far from finding resolution in curriculum design, assessment and policy (Littky, 2004). As noted in the forthcoming section, a number of studies measured cognitive learning from the data of multiple-choice exams. Whether multiple-choice is the right benchmark to measure cognitive learning is debatable. Multiple-choice exams can assess knowledge, and to some extent comprehension, which are the

first stages of Bloom's progression taxonomy of education objectives (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). The later stages of application, analysis, synthesis and evaluation are less likely to be effectively evaluated using a selected response test. A more accurate instrument would be extended written response or performance assessment (Stiggins et al., 2006).

Benjamin Bloom's (1956) six-stage progressive taxonomy is to be understood in relationship to two other taxonomies (affective and psychomotor), with the understanding that potential new categories would be found and combinations between taxonomies would take place (Anderson & Krathwohl, 2001). The Zajonc-Lazarus debate over emotion as independent of cognition, or the two being intertwined, has continued in psychology since the 1980s. The often-made distinction between affective and cognitive learning is not so easily distinguishable. Leventhal and Scherer (1987), in an article that covered the two perspectives, came to the conclusion: "We believe that it will be extremely rare to find emotional reactions totally separate from perceptual or cognitive reactions in the human animal" (p. 23).

Studies on teacher "immediacy" behavior and the influence on learning in traditional and online environments have shown conflicted conclusions, some finding a causal relationship between immediacy and affective and cognitive learning (Arbaugh, 2001; Christophel, 1990; Gorham, 1988; Gorham & Christophel, 1990; Rodriguez, Plax, & Kearney, 1996). Other researchers did not find a causal relationship toward cognitive learning (Anderson, 1979; McDowell, McDowell, & Hyerdahl, 1980; Schutt, 2007).

In regards to online learning, there are indications that instructor immediacy behaviors can have a substantial effect on the social climate and sense of community in the course (Gunawardena, 1995). Instructional immediacy can help bridge Moore's (1973) theory of transactional distance: "With separation there is a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner. It is this psychological and communications space that is the

transactional distance" (Moore, 1993, p. 20). Increased transactional distance occurs when an educational program has decreased student-teacher dialogue and more intervening technologies, such as in the use of computer-mediated communication. Moore (1993) suggested a number of instructional processes to be structured in distance education that correlate to instructor immediacy behaviors, such as giving guidance and advice.

Social presence has shown to predicate student satisfaction in online learning environments (Crim, 2006; Fulford & Zhang, 1993; Gunawardena, 1995; Gunawardena & Zittle, 1997; Hostetter & Busch, 2006; Richardson & Swan, 2003; Swan & Shih, 2005). The relationship between student satisfaction and learning is not explicit. Student satisfaction may help remedy the conditions of dissatisfaction, such as isolation, disconnection or psychological distance, which may lead to poor performance and attrition (Aragon, 2003; Wolcott, 1996).

Social Presence and Interaction

Social presence has been found to influence online interaction (Lowenthal, 2010), though interaction is also found as a construct that underlies social presence definitions (Tu & McIsaac, 2002). The two terms are often used interchangeably in the literature, which may lead to confusion over terminology. Interaction is a complex pedagogical phenomenon (Picciano, 2002). Some studies will delineate a conceptual definition of interaction; many others will not by treating the meaning as self-evident (Walker, 2007). These two concepts are best understood as an interdependent reciprocal process where interaction builds social rapport and social rapport encourages greater interaction.

Ellen Wagner (1994) argues a need to operationalize interaction and move out of philosophical debates to better inform instructional design. Often, the literature reveals how researchers have various ways to conceptualize interaction in distance learning: definitions of interaction, outcomes of interaction, types of interaction, and the social significance of interaction to learning. The following are explanations to each of these areas.

Interaction has progressed in meaning from the transmission and receipt of reciprocal messages (through the use of media) to message loops with two outputs: content learning and affective benefits (Shannon & Weaver, 1949; Yacci, 2000). Yacci (2000) explains outputs: “Content learning is herein described as purposeful learning directed toward attaining an instructional goal. Affective benefits are described as emotions and values toward instructional artifacts that are dampened or amplified. Of the two, we find that content learning seems to be the better understood” (p. 8). One early technical definition of interaction is: “The learner actively or overtly responds to information presented by the technology, which in turn adapts to the learner, a process more commonly referred to as feedback” (1988). One frequently used definition in the literature is provided by Wagner (1994):

> Interactions are reciprocal events that require at least two objects and two actions. Interaction takes place when these objects and events mutually influence one another. An instructional interaction is an event that takes place between a learner and the learner’s environment. (p. 8)

Anderson (2003) believes interaction is a multifaceted concept that transgresses beyond the exchange between people to include inanimate objects, materials and technology. Picciano (2002) makes a distinction between interaction and presence in that a student can interact within an online learning environment, such as a discussion board, but not necessarily experience a sense of presence. If interaction and presence are different, they may affect student performance independently.

Sims (1999) listed several outcomes of interaction: allowing for learner control; facilitating program adaptation based on learner input; allowing various forms of participation and communication, and aiding the development of meaningful learning. Another function is the creation of learning communities (Lipman, 1991). Wagner (1997) suggests educational interaction should move learners toward specified “information age” outcomes that include learner participation in the assessment and performance process, self-motivation and the

management over learning needs. Interaction is either an interdependent or independent process (or some combination). There is the need to find the right interdependent-independent balance as interactive communication tools continue to advance (Anderson, 2003; Daniel & Marquis, 1979). Wagner (1997) identified various interactions with functional capability when built into a learning environment: interaction to increase participation; interaction to develop communication; interaction to receive feedback; interaction to enhance elaboration and retention; interaction to support learner controls/self regulation; interaction to increase motivation; interaction for negotiation of understanding; interaction for team building; interaction for discovery; interaction for exploration; interaction for clarification; interaction for clarification of understanding, and interaction for closure.

Interaction has been distinguished into different types in distance education. Moore (1989) applied the traditional modes of interaction in education to online education: student-teacher, student-student and student-content. It is surmised that without student-content interaction, learning may not occur. Both educators and students have widely concurred that student-teacher interaction is important to learning to stimulate interest, motivation, organize application of student learning, guidance and encouragement. The intensity of learning has shown to be much greater (Sharp & Huett, 2006). Learner-to-learner interaction is motivating and stimulating for students (Moore & Kearsley, 1996) and critical in learning (Richardson & Swan, 2003). Interaction is a concept closely linked to collaborative learning, such as in learner-to-learner peer groups, which has shown to be supportive of cognitive development (Glaser, 1990).

Anderson, Garrison, and Gibson (1998) expand upon Moore's idea to identify three modes of interaction: teacher-teacher, teacher-content and content-content. Teacher-teacher interaction includes professional development or social networks developed through distributed communities of practice. Teacher-content interaction includes sharing instructional content created by others to build new content. These authors state the content-content interaction might be

considered “science-fiction,” but consider today how learning management systems are able to monitor student assignment submissions and can send out text warning messages if the student misses a due date.

Hillman, Willis, Gunawardena, and Daniel (1994) propose a fourth type of interaction to Moore’s three: learner-interface. “The interaction that occurs when a learner must use these intervening technologies to communicate with the content, negotiate meaning and validate knowledge with the instructor and other learners” (p. 30-31). This indicates how a user’s level of literacy with the communication delivery interface would influence the degree of possible interaction with instructor, content and other students.

Interaction, as socially significant to learning outcomes, has wide agreement among researchers. Gilbert and Moore (1998) found “social interaction can directly foster instructional interaction” (p. 31). Vrasidas and McIsaac (1999) found that learner-learner interaction is an important component to online dialogue. Students found a lack of immediate feedback by instructors to be discouraging and would limit participation in online discussions.
Wolcott (1996) argues that building rapport in learning environments reduces psychological distance and creates a sense of community of learners.

Still, the pedagogical value of interaction has been difficult for researchers to assess (Anderson, 2003) . Social presence and interactivity are ubiquitous concepts in learning that are difficult to operationalize, measure or to understand their influence upon learning. The social exchange between persons is interrelated to a historical, familial and cultural context (Dewey, 1938; Piaget, 1971; Vygotsky, 1978). Researchers have found that social presence has a positive affect on how students perceive learning (Christophel, 1990; Picciano, 2002; Richardson & Swan, 2003; Swan & Shih, 2005; Vrasidas & McIsaac, 1999; Wegerif, 1998). Other authors found social presence to directly effect learning performance (Hwang & Arbaugh, 2006). As a whole, some found a correlation but no causal relationship (Wise, Chang, Duffy, & Del Valle, 2004). Others saw a statistically significant affect on student perceptions but not on learning outcomes

(Hostetter & Busch, 2006). The need to understand how social interactions contribute to learning is considerable, especially as distance learning takes a more prominent role in education with the accompaniment of transactional distance that can lead to greater psychological instructor-student distance and be disruptive to learning.

Background to Assessment

What is assessment and how learning is to be assessed are important questions covered in the literature and critical to this study.

Stiggins et al. (2006) wrote the reason for assessment is "to gather evidence of student learning that will inform instructional decisions in the ways that maximize learning" and to observe how "different assessments serve a variety of users and uses, centering on achievement defined at a variety of levels and requiring a variety of kinds of assessment information delivered at different times" (p. 4). The authors asserted that assessment that is without a clear focus will provide inaccurate information. Proper assessment methods are determined for each type of learning context. Student involvement in the assessment process is a critical aspect in reaching the learning targets, an important shift from conventional assessment practices. Stiggins et al. made a distinction between assessment *of* and *for* learning. Assessment *of* learning occurs after the learning has taken place (summative), while assessment *for* learning occurs while learning is under way (formative).

Erwin (1991) provided an assessment definition that is directed toward student learning: "Assessment is defined as the systematic basis for making inferences about the learning and development of students. More specifically, assessment is the process of defining, selecting, designing, collecting, analyzing, interpreting and using information to increase students' learning and development" (p. 19).

Black and Wiliam (1998) also emphasized formative assessment for learning: "We use the general term assessment to refer to all those activities undertaken by teachers–and by their students in assessing themselves–that

provide information to be used as feedback to modify teaching and learning activities. Such assessment becomes formative assessment when the evidence is actually used to adapt the teaching to meet student needs" (p. 140).

Other assessment definitions are less process oriented and more directed toward learning outcomes. For example, consider Taras' (2005) approach to assessment:

> Like Scriven, I take "assessment" to refer to a judgment which can be justified according to specific weighted set goals, yielding either comparative or numerical ratings. For him it is necessary to justify (a) the data-gathering instruments or criteria, (b) the weightings and (c) the selection of goals (Scriven, 1967, p. 40). I argue that it is necessary to add a further stage–that of justifying the judgment against the stated goals and criteria. (p. 467)

Each of these mentioned definitions includes summative-formative points of view. In concise terms, summative assessment evaluates whether a learning target is achieved, while formative assessment monitors the progress toward the target (Dunn & Mulvenon, 2009). Latent, or overt, assessment definitions often consist of a particular educational theoretical orientation accompanied by a certain assessment partiality. Swan et al. (2006) pointed out how student learning value is directly derived from the assessment itself: "Instructors signal what knowledge skills and behaviors they believe are most important by assessing them. Students quickly respond by focusing their learning accordingly" (p. 45).

Research suggests there is no one universal or national curriculum standard or assessment method. Standards come from an assortment of educational and subject-specific associations and organizations. Each school district, educational institution or educational resource company has an assessment vocabulary (learning targets, state standards, benchmarks, enduring understandings, essential questions) to describe achievement expectations and curriculum goals for students. A solid curriculum guide will provide clarity about

the learning targets, how they should be assessed and how they align to state standards (Stiggins et al., 2006).

Michael Scriven, during the 1960s, distinguished between the formative and summative roles in curriculum evaluation. He favored the summative approach with culminating evaluations but also acknowledged his colleague, Lee Cronbach, who found merit in the “swampy lowlands” of formative assessment. Scriven eventually felt that curriculum evaluation must make best use of both assessment orientations (Roos & Hamilton, 2005).

In theory, Scriven’s middle ground, where each approach could inform the other in reaching specified learning targets, is a reasonable supposition. But the literature indicates the two camps are often suspicious of each other, exclusive and compete for educational dollars. There is a jostling among educators to legitimize one approach over the other. For example, Taras (2005) couches formative within a summative framework: “It is possible for assessment to be uniquely summative where the assessment stops at the judgment. However, it is not possible for assessment to be uniquely formative without the summative judgment having preceded it” (p. 468). And he goes on to say that “most summative assessment for formal assessment purposes requires feedback, therefore the only real requirement in order to integrate formative assessment into practice is to engage the learners with using this feedback for learning in future work” (p. 475).

Black and Wiliam (1998) take a critical stance toward summative assessment, such as pointing out findings that show testing practices that provide no further student guidance toward improvement. The authors advocate formative assessment as an alternative and based on an extensive literature review, found that formative assessment in the classroom raised standards of achievement.

Stiggins (2006) argued that assessment is as much about outcomes as a process toward outcomes along with the need for students to be active in the assessment process:

> Profound achievement gains can be realized with effective, formative classroom assessments. Assessments must go beyond providing merely scores and corresponding judgments about student learning. Assessments must provide rich descriptions of the current state of student achievement. In other words, if assessments are to support improvements in student learning, their results must inform students how to do better the next time. This requires communicating results that transmit sufficient, understandable detail to guide the learners' actions.
>
> (p. 2)

Dunn and Mulvenon (2009) on the other hand found in their literature review a limited body of empirical evidence that formative assessment demonstrates any improvement toward learning outcomes. The authors give a critical analysis of the conclusions drawn in Black and Wiliam's 1998 study. They argue that the evidence from certain studies that showed formative assessment having a positive influence on educational outcomes was less conclusive than stated.

Stiggins et al. (2006) attempted to construct a classroom assessment model that has the potential to cross the assessment divide, or at least to better determine what assessment method is best for what learning target. The model follows a series of sequential questions: why assess (what's the purpose, who will use the results); assess what (what are the learning targets, are they clear, are they good); assess how (what method, written well, sampled how, avoid bias how); communicate how (how manage information, how report); and the inclusion of students so they understand the targets as well (p. 90).

By starting with the questions of why assess and assess what, a backward design approach (Wiggins & McTighe, 2005), Stiggins et al. (2006) provide a method that can better inform the type of assessment chosen: be it summative or formative; selected response; extended written response; performance assessment, or personal communication assessment .

This background to educational assessment gives a contextual overview to the following review of the use of rubrics as a performance assessment tool. There are myriad of cultural, historical, political, psychological and educational perspectives and biases laden within any assessment process. Identification and making explicit these orientations can help direct which assessment instrument is to be selected in response to the type of learning taking place.

Background to Rubrics

This section provides background knowledge uses in the design of the rubric used in this study. There is a section on rubric validity and reliability that is important in the design and eventual use of a rubric, but this study will maintain a focus on rubric construction considerations and not progress to the actual study of instrument validity and reliability.

What is a Rubric. Rubrics are an assessment instrument that use a scoring guide that is "qualitative and descriptive in nature and relies on criterion-referenced perspectives" (Simon & Forgette-Giroux, 2001, p. 2). Gronlund (1998) suggests a scoring rubric can extend beyond selected-response tests and "can obtain a high degree of realism and increase the complexity of the tasks we can assess" (p. 17).

Arter (2000) states there are essentially two uses for rubrics:

1. To gather information on students in order to plan instruction, track student progress toward important learning targets and report progress to others.
2. To help students become increasingly proficient on the very performances and products also being assessed. In other words, criteria used to enhance the quality of student performance, not simply to evaluate it. (p. 1)

Jonassen et al. (1999) outline three standards to achieve a well conceptualized and structured rubric: criteria categories are discrete from one another and directed toward specified tasks; performance level indicators are representative and distinct; and narrative descriptors are clear and concise.

Popham (1997) writes how “teachers need evaluative criteria that captures the essential ingredients of the skill being measured” (p. 73). Rubrics provide descriptive language (evaluative criterion) for each performance level. The scoring strategy can be either holistic or analytic. Holistic rubrics use a single descriptive scale to evaluate the overall process or product as a whole, without judging the component parts. Analytic rubrics divide performance into component parts separately and can be aggregated into scores. Using an analytic rubric does not preclude holistic judgments that can be built into the score (Mertler, 2001; Moskal, 2000; Moskal, 2003; Moskal & Leydens, 2000).

Simon and Forgette-Giroux (2001) give four advantages that a rubric can provide: (1) “a continuum of performance levels, defined in terms of selected criteria, toward full attainment or development of the targeted skills;” (2) “provides qualitative information regarding the observed performance in relation to a desired one;” (3) “its application, at regular intervals, tracks the student’s progress of his or her skill mastery;” (4) “the choice of rather broad universal criteria extends the application to several contexts” (p. 1).

How a rubric is structured can vary, depending on what is to be assessed and how the rubric will be scored. A widely used structure for an analytic rubric consists of a two-way table format with horizontal performance headings (anchors), such as good, very good, excellent and exceptional, or meets standard, exceeds standard, nearly meets the standard, emerging. On the left side are vertical criteria descriptors. Between the performance headings and the criteria descriptors is the descriptive language that “captures the essential ingredients of the skill being measured” (Simon & Forgette-Giroux, 2001; Wiggins, 1998).

Rubric determination. Performance assessment is based on observation and judgment. “Students engage in activity that requires them to apply performance skill or create a product and we judge its quality” (Stiggins et al., 2006, p. 191). Examples of performance assessment include science process skills, reasoning and persuasion, oral presentations, writing, collaborative

problem solving, or demonstration of work through an ePortfolio (Arter, 2000). Rubrics provide a scoring guide to determine performance criteria (observable indicators). The instructor must decide if the performance will be scored holistically or analytically. Holistic rubrics may provide summative assessment, while an analytic rubric is better suited to provide formative feedback to the student (Mertler, 2001).

Academic pressures often require a letter grade and provide a quantitative score to a rubric's descriptive scale. Shifting a rubric's formative emphasis on giving constructive feedback can be significantly marginalized when the focus of the assessment is shifted to a summative grade (Marielle Simon & Forgette-Giroux, 2001a). There is no one precise or accurate conversion method. The conversion process should be more a process of logic than a mathematical one, as the rubric scoring system does not accurately transfer into percentages. For example, if a rubric has four levels of proficiency, scoring within the middle range does not equate 50 percent or F. Instructors must find a conversion method that works best for them in reporting student performance (Mertler, 2001).

Rubric design. A number of resources are available on rubric construction that can help avoid some of the major flaws in rubric design. Design flaws can include performance criteria with descriptive language that is too vague or lacks specificity; performance anchors do not have meaningful differentiation, or descriptors that are ambiguous or too specific (Popham, 1997; Tierney & Simon, 2004). One helpful resource is a metarubric, or a rubric for rubrics. A comprehensive metarubric was developed by the Rhode Island Department of Education and Education Alliance at Brown University (2004) and specifies four criteria to judge the quality of a rubric: content/coverage (what counts/what they see is what one gets); clarity (does everyone understand the terms and criteria used); practicality (is it easy for teachers and students to use); and technical quality/fairness (is it reliable and valid).

There is a plethora of web-based rubric resources that any online search will discover. Dornisch and McLoughlin (2006) caution against the use of website

rubric banks that have a fixed “as is” format. Simply adopting these rubrics, while convenient, may have the design problems mentioned above or lack the necessary tailoring to specific course performance criteria or curriculum standards. Rubric generators, also available online, can allow more flexibility and creativity in design, but rubric formats adopted without foresight can lead to ineffectual results in capturing what is significant in performance (Dornisch & McLoughlin, 2006).

An effectual rubric design will address both content and composition considerations with clear, concise, representative-descriptive criteria, delineation of performance standards and accurate descriptors (Arter, 2000; Jonassen et al., 1999; Moskal, 2000; Popham, 1997; Simon & Forgette-Giroux, 2001). Tierney and Simon (2004), Dornisch and McLoughlin (2006), and Moskal (2003) provide guiding questions and focal areas for rubric development and design (see Appendix B).

Rubric validity and reliability. Historically the majority of rubric assessment use has come after 1997 (Jonsson & Svingby, 2007). Holistic scoring on writing assessment has placed a greater emphasis of importance on reliability, which has caused inaccurate assumptions and neglect of validity (Huot, 1990). Huot (1990) mentions how classical test theory holds that a positivist conception of a true score can perfectly reflect what a student knows (a perfect test/reliability), but in reality there is “no such score” and error is “inherent in any testing measurement” (p. 203). Reliability seeks consistency of assessment scores, and inter-rater reliability is the degree to which raters are able to agree on the score (Moskal & Leydens, 2000). Inter-rater reliability coefficients that could be proven to be 0.7 meant the scoring technique was viable. Huot (1990) wrote: “The importance of reliability is related to the need to generalize test outcomes. The more reliable a test, the more we can generalize about its outcomes” (p. 203). Reliability is often the only test consideration by educators. Validity is frequently relegated to “face validity” meaning that a test simply looks like what it claims to accomplish, while the American Psychological

Association has stated this is unacceptable for making interpretive inferences from test scores (Huot, 1990).

Validity is concerned with: Does the assessment measure what it was intended to measure (Jonsson & Svingby, 2007). Is the score valid? Does the rating actually represent what students can do (The Rhode Island Department of Education & The Education Alliance at Brown University, 2004). Messick (1990) wrote: “Broadly speaking, validity is an inductive summary of both the existing evidence for and the actual as well as potential consequences of score interpretation and use” (p. 2). In educational research, validity is concerned with evaluation of judgment, meaning and consequences of measurement, and not as a property of the test itself (Jonsson & Svingby, 2007). Messick (1990) added this “validity is a matter of degree, not all or none” and that validity can become “enhanced (or contravened)” by new findings and thus is an “evolving property and validation is a continuing process” (p. 2).

Another variation to the definition of validity states:

> Test validity refers to the degree with which the inferences based on test scores are meaningful, useful and appropriate. Thus test validity is a characteristic of a test when it is administered to a particular population. Validating a test refers to accumulating empirical data and logical arguments to show that the inferences are indeed appropriate. (Brualdi, 1999)

Traditionally, validity is grouped into three categories of evidences: content-related, criterion-related and construct-related. Content-related validity refers to the extent to which a measure represents all facets of a given subject area and adequately samples the content domain. Does the rubric accurately represent the identified performance criteria? “Content validity is based on expert judgment about the relevance of the test content to the content of a particular behavioral domain of interest and about the representativeness with which items or task content covers that domain” (Messick, 1990, p. 9). Criterion-related validity compares test scores with one or more external variables. A rubric score

can be compared to performances in other outside criteria, such as grades, class rank, other teacher ratings and other performance-based projects. Construct-related validity refers to the extent the test can measure internal processes (psychological constructs): motivation, satisfaction and self-esteem. “Evidence in support of construct-related validity can take many forms. One approach is to demonstrate that the items within a measure are inter-related and therefore measure a single construct. Inter-item correlation and factor analysis are often used to demonstrate relationships among the items” (Brualdi, 1999, p. 1).

Messick (1995) challenges the evaluative conception that validity could be devised into distinct types, but rather validity was a singular and unitary construct. “The validity issues of score meaning, relevance, utility and social consequences are many faceted and intertwined. They are difficult if not impossible to disentangle empirically, which is why validity has come to be viewed as a unified concept” (p. 6). Messick (1996) distinguished six “aspects” implicit in the construct of validity: content, substantive, structural, generalizability, external and consequential. These aspects are to be understood as “interdependent and complementary forms of validity evidence” (p. 7). The American Educational Research Association (1999) embraced Messick’s validity unification by the incorporation of five types of Messick’s aspects to validity and did not distinguish the classical model: content, criterion and construct validities. The six validity aspects:

1. The content aspect of construct validity includes evidence of content relevance, representativeness and technical quality (Lennon, 1956; Messick, 1989).
2. The substantive aspect refers to theoretical rationales for the observed consistencies in test responses, including process models of task performance (Embretson, 1983), along with empirical evidence that the theoretical processes are actually engaged by respondents in the assessment tasks.

> 3. The structural aspect appraises the fidelity of the scoring structure to the structure of the construct domain at issue (Loevinger, 1957).
> 4. The generalizability aspect examines the extent to which score properties and interpretations generalize to and across population groups, settings and tasks (Cook & Campbell, 1979; Shulman, 1970), including validity generalization of test-criterion relationships (Hunter, Schmidt & Jackson, 1982).
> 5. The external aspect includes convergent and discriminate evidence from multitrait-multimethod comparisons (Campbell & Fiske, 1959), as well as evidence of criterion relevance and applied utility (Cronbach & Gleser, 1965).
> 6. The consequential aspect appraises the value implications of score interpretation as a basis for action as well as the actual and potential consequences of test use, especially in regard to sources of invalidity related to issues of bias, fairness and distributive justice (Messick, 1980, 1989). (p. 7)

Accuracy in the content aspect of validity means the knowledge, skills and other attributes are relevant and representative of the construct. The substantive aspect of validity incorporates theories and process models that are relevant to what is being assessed. The structure of scoring is consistent with the structural relations existent in the performance of what is being assessed. Generalizability considers to what extent score interpretations are generalizable “across population groups, settings and tasks.” External aspects of validity refer to what extent other outside measures are consistent with the assessment score. Consequential aspects of validity consider the intended and unintended consequences of score interpretation (Brualdi, 2002).

Messick (1996) identifies two central sources of invalidity. Construct underrepresentation is when what is being measured does not include important dimensions of the construct being assessed–“the assessment is too narrow”. Construct-irrelevant variance means the test measures too many variables–“the

assessment is too broad." There are two types of construct-irrelevant variance. Construct-irrelevant easiness occurs when individuals respond correctly or appropriately in ways that are irrelevant to the construct being assessed. The scores would be inflated in this scenario. Or, there can be construct-irrelevant difficulty: "Aspects of the task extraneous to the focal construct make the task irrelevantly difficult for some individuals or groups. An example is the intrusion of undue reading-comprehension requirements in a test of subject-matter knowledge" (p. 5). The scores would be deflated in this scenario.

Taggart, Phifer, Nixon and Wood (1998) suggest improving validity by instructor participation in rubric design and reliability by training the raters in the use of the rubric.

Researchers have tested rubric validity and reliability by a variety of statistical and qualitative methods. Roblyer and Wiencke (2004) used Pearson correlations between rubric scores and course final evaluation scores that showed significant correlations. Roblyer and Wiencke (2003), in an earlier rubric study, tested validity by having instructors at two universities rate the rubric according to Jonassen et al. (1999) criteria:

- Had elements that are comprehensive in describing performance and are "unidimensional," or not able to be broken down further into component behaviors.
- Had ratings that represent clearly different categories that do not overlap and were comprehensive in covering the full range of performance.
- Was stated so that it communicated elements and ratings clearly and unambiguously.

The authors received responses from 42 instructors, and their feedback provided considerable improvements to the overall clarity and comprehension to the rubric's ratings.

Baker and Abedi (1996) tested rubric inter-rater reliability by Chronbach's alpha coefficients, and the results of their study indicated that the raters had reached agreement and satisfactory reliability. The alpha coefficient is useful in

obtaining a single consistency estimate in inter-rater reliability across multiple raters and has been used by researchers to test rubric inter-rater reliability (Roblyer & Wiencke, 2004; Stemler, 2004).

Rubric Studies. There is a growing body of research on the design and application of rubrics for assessment purposes in computer-mediated communication learning environments. A number of studies have focused on the use of rubrics in synchronous discussions.

In a thesis by Penny (2007) and an article by Penny and Murphy (2008), the authors identified performance criteria in rubrics designed for the evaluation of online asynchronous discussions. The authors used purposive sampling to reach saturation and selection of 50 rubrics. Using keyword analysis, the authors identified 153 performance criteria in 19 categories and 831 ratings in 40 categories that lead to the identification of four core categories: cognitive-thinking skills (44 percent of total performance criteria and ratings); mechanical–aspects of writing (19 percent); procedural/managerial–student participation in the forum (18.29 percent); and interactive-student interactions with others (17.17 percent). The authors found congruence in the literature with the rubric's emphasis on cognitive skills, no congruence with emphasis on mechanics, and found little evidence that the rubrics assess social presence. "We found that criteria and rating that look for indicators of social presence were not well represented in the rubrics. This finding contrasts with a review of the transcript analysis literature, which emphasizes the important link between social presence and the development of higher-level thinking skills" (Penny, 2007, pp. 42-43). The author found this lack of emphasis on social presence puzzling.

There are many examples of rubrics that cover a variety of online communications, such as asynchronous discussion boards, ePortofilios or the use Web 2.0 interactive tools, such as a wiki or blog. These rubrics are often specific to the type of computer-mediated communication being used, the subject content or a type of communication/interactivity that is sought. For example, Pugsley and Rulon's (2009b) development of a communication rubric identified

one descriptive communication element as, “demonstrates a concise response by constructing a clear purpose and through the use of succinct language.” In an analysis of an effective discussion rubric, Swan et al. (2006) critiques a discussion rubric designed by Pelz (2004), who identified knowledge construction as a central goal to the discussion. The descriptive language to achieve an excellent rating included: “The comment is accurate, original, relevant, teaches us something new and well written. Comments add substantial teaching presence to a course and stimulate additional thought about the issue under discussion” (p. 49). The authors point out how this rubric can help improve discussion performance but may not ensure collaborative performance. The authors look to the research by Chia-Huan Ho (2004), who linked rubric ratings to Grice’s (1989) cooperative principles for effective face-to-face discourse. This cooperative discussion rubric consists of four descriptors regarding student postings: quantity, quality, relevance and manner.

Roblyer and Wiencke (2003) designed and tested the validity and reliability to a rubric on interactive qualities in distance courses. The authors identified five descriptors (the authors labeled as “elements”) to be rated: social/rapport-building designs for interaction; instructional designs for interaction; interactivity of technology resources; evidence of learner engagement and evidence of instructor engagement. Under each of these descriptors, the authors provided descriptive language that rated interactive qualities: low, minimum, moderate, above average or high levels of two-way interactions between instructor and students. While the Roblyer and Wiencke rubric covers certain aspects of social presence, it does not entirely encapsulate the concept.

In summary of this chapter, this literature review found, since the introduction of the Internet, a number of revisions have taken place to the computer-mediated social presence definition. It is a difficult concept to understand and teach. Many interwoven factors contribute to social presence, such as culture, psychology, the affective domain and the recent advances in communication technology. Research has shown the occurrence of social

presence in online courses increases teacher-student satisfaction; however, the influence upon learning is less certain. The design of assessment instruments, such as scoring rubrics, can help identify and evaluate the commutative and interactive components that are operative in online courses. This study did not find a rubric in the literature designed to comprehensively assess online social presence. There does appear to be an emergence of new assessment tools directed at the social context of online education. For example, Roblyer and Ekhaml (2000) from the State University of West Georgia presented a conference paper on the Rubric for Assessing Interactive Qualities of Distance Learning Courses with the intention to “clarify the role of this important factor and encourage faculty to make their distance courses more interactive” (para. 2). What is missing in the literature, and important to this study, is an instrument for instructors to understand, teach and assess social presence that does not neglect the operative complex relational dynamics that are important to learning in online courses.

Chapter 3
Methodology

Introduction

This is a qualitative research study, which Creswell (1994) identifies as "an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants and conducted in a natural setting" (pp. 1-2). I am interested in the study's participants' point of view regarding how social presence is conceptualized and transferred to the existent instructional realities involved in teaching a high school online/blended course. The research was guided by the first four questions presented in Chapter I: (1) What do teachers identify as the central constructs to social presence; (2) How does the Online Social Presence Rubric affect teachers' understanding of social presence; (3) In what ways do teachers perceive, use or adopt the rubric as an instructional tool; (4) What other variables influence the teachers' perceptions and practices of social presence. The final and fifth question was resultant from the data analysis process itself: (5) What did teachers learn about social presence after teaching their first online course?

Previous research methods on social presence have been conducted primarily through questionnaires and text analysis. Garrison (2007), along with Rourke and Anderson, have critiqued their previous research as being "interpretivist" with the need to move toward a "quantitative content analysis technique" and "transition to a phase that utilizes both qualitative and quantitative approaches" (pp. 68-69).

I believe the field of education and social science can continue to benefit from in-depth qualitative studies specifically targeted at the online social presence phenomenon. While a mixed method research approach would be advantageous in providing new data, broadening analysis methods and strengthening the conclusions, there is also a need to continue to penetrate and

understand complex human psychological processes that qualitative research methods are well suited to accomplish.

Social presence is a complex relational phenomenon. How a teacher or student conceptualizes and acts upon social presence in an online course is largely a subjective cognitive-affective experience and a phenomenon “resultant of a multitude of factors” (Lewin, 1951, p. 44). The cultural studies mentioned in the literature review exemplify how people construct and value social meaning differently. Teachers perceive, value and teach social presence in a multitude of ways. A qualitative study’s exploratory approach, descriptive focus, emergent design and natural-setting data-collection methods can capture the inter-relational types of processes found in social and perceptual human encounters.

Qualitative research can add to the current relatively sparse body of research conducted to determine what constitutes social presence performance standards in an online course. The development of a valid and reliable teaching tool, such as scoring rubric, is dependent upon building a repository of knowledge that is in agreement with the constructs that make up the rubric’s central concept and the attributes of the performance behaviors. Developing this knowledge base is not necessarily a linear process but rather more a circuitous process of often differing and colliding perceptions. The inherent strengths found in each research methodology can help build this online social presence knowledge repository.

Technology has continued to advance with the introduction of new Internet synchronous communication tools used in online courses with increasing frequency. Some of the software tools and neologisms include webinar, synchronous conferencing/classroom, Voice over Internet Protocol (VoIP), text chat and microblogging, to name a few. There are a growing number of hybrid type asynchronous-synchronous text-based social networking communication tools where much of the text is being saved for short durations or stored with retrieval features. Two examples: Yammer and Status.Net, both of which are social networking and microblogging services.

Qualitative research is an effective method of studying both asynchronous and synchronous learning interactions from the perspectives of those who use them in the natural setting.

Research Site

The school district covered in this study is an urban one with an average yearly number of students of 90,000 in 139 schools. The number of fulltime teachers is near 6,000. In the summer of 2009, district reports of a 54 percent graduation rate caused a stir in the media. This rate was found to be incorrect and later revised to 68.8 percent. Student population demographics by ethnicity were: Hispanic 56.5 percent, Caucasian 32 percent, Native American 5 percent, African American 4 percent and Asian/Pacific Islander 2.5 percent. There are 13 high schools.

The high school of interest to this study traditionally provided credit recovery and remedial education to nearly 1,400 part-time students per semester during after-school and evening hours. Between 100 to 200 students attended full-time. The school employs 10 full-time teachers and 45 part-time teachers; many of the part-time teachers work full-time at other high schools in the district during daytime hours.

This high school, in the spring semester of 2010, offered online classes. This will be covered in more detail in Chapter 4 (“Analysis of the Data”).

Research Participants

The research participants were a group of nine volunteer teachers new to online instruction who were selected to teach an online class in the spring and summer of 2010. Previous to this study, I had contact with these teachers as a school-district online instructional designer and trainer. I facilitated an online pedagogy theory and practice training that these teachers participated in as students. This training introduced the Online Social Presence Rubric along with other authors, articles and resources on this topic.

When the university and school district Internal Review Boards approved the study, I contacted the teachers by email and asked if they would be willing to

participate, on a voluntary basis, with an explanation of the research design. Prior to starting the interviews, a consent form was verbally reviewed and signed by each interviewee.

Of the nine teachers interviewed, four were full-time and five were part-time. The five part-time teachers worked full-time during the day at other high schools in the district. This was a “seasoned” group of secondary-education teachers (see Table 1).

Table 1: *Teaching experience*

Combined number of classroom years teaching experience	190
Average number of teaching years	21
Lowest number of teaching years	3
Highest number of teaching years	36
Subjects taught: Algebra, English, world history, biology and chemistry	

I observed four of these teachers introduce their online courses in a face-to-face setting and witnessed well-honed facilitation skills in building rapport with students and establishing a class community.

The nine teachers were new to online instruction. Two had one previous semester experimenting with an online learning management system, while the other seven had no previous experience. To my knowledge, none of the teachers had any formal training in online education. Two of the teachers had previous experience as a student in a fully online class.

Research Design

The research design to this study was based primarily on the phenomenological qualitative research tradition. Social presence is a relational phenomenon and a lived experience by an individual or between individuals and exists within the domain of a particular person’s subjective experience and interpretations of the world. Social presence can involve a sense of personal identity, belonging to one or more communities, cultural values or norms, worth

or accomplishment, mutuality or connection with others. Understanding how a teacher within a particular educational framework understands social presence is an important focus of this study.

The research also included elements often associated with qualitative case studies. The subjects are a group of teachers from one particular high school. This is a bounded system. The school is a community of many distinctive factors: state/district initiatives, school history/traditions, occupational culture, student demographics and many other variables that might be generalized to other educational institutions, or might be unique to this particular institution. This bounded system of place and time had an influence on how social presence is conceptualized and practiced by the teachers.

In this study two interviews of each participant were conducted: one prior to teaching an online class and one after teaching or near completion of teaching an online class. This design allowed the research to explore pre- and post-perceptions and knowledge from teachers new to online instruction. The interviews were conducted to examine how teachers were initially conceptualizing the teaching of an online class compared to outcome discoveries by teachers engaged in instructional practice. This design allowed comparison between before- and after-teaching data, entrance into the psychological processes of perception, and knowledge change and formation. This gave an opportunity for teachers to share what they encountered, learned and what they planned to do in teaching future online classes.

The duration of interviews was generally one hour. There was one observational review at the end of the semester for each online class that each participant taught. This review covered instructional practices that took place that were recorded in the online class and learning management system. In addition, I observed four teachers who facilitated introductions to their online classes that were face-to-face with the students.

The interviews consisted of semi-structured and open questions that were recorded and transcribed. An outline of the research design is as follows (see Table 2):

Table 2: *Research Design*

Sequence of Academic Course Data Gathering					
Selection of nine teachers	First interview prior to teaching an online class	Introductory online class (face-to-face session) observation	Online class observation stored in LMS	Second interview after teaching an online class	Teacher review of study results and summary

The research methods followed a sequential structure over the course of one academic semester. The first interviews were scheduled for one-hour time periods prior to the start of the classes. Questions and answers took place following a semi-structured and open format and were digitally recorded (see Appendix D).

Observation of four teacher online class introductions to students (during the face-to-face introductory period) took place. In this study's proposal, I had not planned on attending the introductory period for the online classes. Work-related duties allowed me to attend four of these sessions. Notes were taken following these sessions.

Online class observation (stored in learning management system) occurred during the last weeks of the semester. The observation covered the instructional work accomplished by the participants, use of communication tools and instructional practices (see Appendix E).

Final interviews were scheduled for one-hour time periods at the end of the semester. Questions took place following a semi-structured and open format and were digitally recorded (see Appendix F).

Several emails and phone calls took place with several of the teachers following the second interview to clarify or elaborate on the meaning of the data.

Teachers who participated in this study were given an opportunity to read, reflect upon and respond to this study's results and summary statement. This will take place during the spring of 2011.

Overview of the Online Social Presence Rubric's Design

The Online Social Presence Rubric used an analytic rubric method to measure the concept of social presence by differentiating categories of descriptors that could be used for formative learning/assessment purposes to assist students in reaching the performance standards (Pugsley & Rulon, 2009a). The rubric, prior to this study, had not been used for instructional purposes.

The design of this rubric was based on a review of the literature in the field to determine significant constructs that have been used to understand and measure the concept of social presence. These constructs were used to identify the five descriptors to the rubric. Three social presence categories from the research of Rourke et al. (1999) were chosen: (affective response, cohesive response, interactive response). The rubric descriptors were titled "Affective Expression," "Group Cohesion" and "Interactive Communication." Research by Gunawardena et al. (2006) and Gunawardena and LaPointe (2007) on culture was selected. This descriptor was titled "Diversity." One more descriptor, titled "Presentation of Self/Indentify," was selected. This descriptor originated from a number of online communication rubrics that emphasize appropriate etiquette and authenticity of self when posting information in a course. The rubric's overarching student-learning outcome was specified as: *The student demonstrates his or her presence through constructive interactions with others that generates a sense of belonging and improves our community's learning*. The performance standards were based on the rubric design work of Rulon and Nigidula (M. Rulon, personal communication, April 17, 2009). The four standards were extends standard, meets standard, nearly meets standards and emerging. The performance descriptive criteria for each descriptor were carefully composed based on the guiding rubric design principles of Tierney and Simon (2004), Dornisch and McLoughlin (2006) and Moskal (2003). Performance criteria were

aligned with the rubric's stated learning objective; criteria were explicitly stated (irreducible and observable) and the underlying characteristics known/understandable, and the criteria were consistently addressed and distinguishable from one standard to the next.

The design of the Online Social Presence Rubric took into consideration Messick's (1996) aspects of validity: selection of content relevance and representativeness; inclusion of theoretical rationales for performance criteria; and fidelity of the scoring structure to the structure of the rubric constructs (descriptors, standards and performance criteria).

Instrumentation

This study's instruments to gather data included semi-structured open interviews and direct observation of what transpired in the online courses. Two rounds of interviews took place with each participating teacher. A question guide was developed for each interview based on the research questions and participant data (see Appendixes D and F). As will be discussed in the forthcoming analysis chapter, the interview questions were responsive to participant answers and adjusted to better explore the data being presented. A course observation guide was used when reviewing the online classes (see Appendix E).

Data Collection

The interviews were digitally recorded using Mac GarageBand software and transcribed using Express Scribe software. Data was stored on a password-protected laptop hard drive, Mac Time Machine external hard drive and MobleMe external server. The data will be stored for the duration of data collection, analysis and the final writing stage of this study. Once the study was completed, all data was destroyed by deletion in all storage devices: hard drive, external hard drive and external server. Written notes were taken after observation of online class introductions and when observing the online classes in the learning management system. These notes were shredded following completion of this study.

Data Analysis

Typed notes were kept in the margins during the transcription process that were reflective and inquisitive in nature, highlighting teacher statements significant to the research questions. I noted my impressions while I linked the data to the research questions. When all the transcriptions were completed, a paper copy was printed and reviewed. My notes highlighted, scratched out or indicated new participant statements that directly related to the investigated phenomena. These notes were used to establish the initial identification codes. I was mindful of having begun the selection and organization of the data and jotted down notes where data affirmed my biases about social presence, as well as looked for and highlighted contrary statements.

The computer software TRAMSAnalyzer was then used to read through each transcribed interview and inserted codes with identifying titles. I began inputting notes on each code to assist in its definition and meaning. An inductive analysis of the data took place as the codes were continuously reorganized under new headings and several layers of subheadings. A number of categories (overarching headings) started to emerge: “rubric>application,” “meaning of social presence>prior to teaching online,” “learn>drop in attendance,” “solution>course design,” and so forth.

I continued the text analysis and linking statements to the growing list of codes and emerging category headings. This process continued until the categories were exhausted by the transcript data and saturation occurred. I used the qualitative analysis software to compare and contrast the emerging categories. These categories and coded information were printed. Emerging patterns were highlighted and new discoveries were found, such as the “disruption of social presence” or “teacher learning.” These results raised additional study questions. The qualitative software was used to further analyze the categories and generate descriptive statements that synthesized and organized these categories into larger units of meaning.

The final stage of data analysis included a deductive approach: Did the summarizing statements reflect what the teachers had reported? There were cases when a statement had more than one meaning or was suggestive of a meaning rather than an outright declarative statement. I noted these discrepancies and reviewed the coded data again. Did the teacher statements validate or refute the emergent themes? The data analysis spiral was traversed repeatedly to verify the relationships found and the categorical meanings derived.

Dependability and Trustworthiness

There are ongoing discussions, perspectives and definitions by researchers about the meaning of dependability and trustworthiness in qualitative research.

The conventional quantitative view of reliability (measurement replicability or repeatability) is widened to mean good quality research or “dependability” in qualitative research methods (Golafshani, 2003). A number of strategies were used in this study that included a detailed description of research methods and data analysis. My dissertation chair suggested the research method should be “transparent and replicable, like a cookbook recipe.”

The phenomenon of social presence was studied from multiple teacher perspectives. An observation of each online class took place that was taught by the participants in this study. An online class leaves a detailed digital trail of login records of teacher and students, what communication tools where used and what content was posted and accessed. This allowed for a comparison between teacher statements and what took place in the online classroom.

A number of salient research questions were referred to throughout the duration of this study that are based on Creswell’s (1998) standards of quality: Do the research questions drive the data collection and analysis? Are data collection and analysis techniques competently applied? Are researcher assumptions made explicit? Does reciprocity occur between researcher and those being researched? Does the study provide value to online education? Are

teachers given adequate opportunities to provide feedback regarding the credibility of the interpretations and findings?

Hammersley (1987) defined research validity as “the extent to which obtained measures approximate values of the ‘true’ state of nature….” (p.74). Descriptive validity is centrally concerned with data collection and factual accuracy covering the information of what is observed and recorded. Interpretative validity is the degree to which interpretation of the data accurately describes the phenomenon. This is related to the idea of “theoretical sensitivity” of the researcher possessing the “awareness of the subtleties of the meaning of the data” and the “attribute of having insight, the ability to give meaning to data, the capacity to understand and the capability to separate the pertinent from that which isn’t” (Strauss & Corbin, 1990, p. 42).

This study attempted to achieve validity, also understood in qualitative research as “rigor” or “trustworthiness” through a combination of research methods. They included data gathered over a semester, use of digitally recorded data, use of participant language, identification of discrepant data or exceptions to patterns found, observation of course content, and participant teacher review and reactions to this study’s analysis and results.

Chapter 4

Analysis of Data and Findings

Study Context

School setting. The participants in this study taught at a high school that initiated a significant change in the summer/fall of 2009. The school's administration pursued a transition to being a virtual high school offering online classes. The school name was changed to reflect a new mission: *to provide alternative education opportunities through a variety of electronic delivery methods that promote independence and excellence in learning*.

The school district Online Learning Technologies Department started an online teacher professional development program in the fall of 2009 and spring of 2010 that covered an introduction to online learning technologies and pedagogy. Teachers and administrators from the transitioning high school participated in the training. The first 10 online classes were taught in the spring semester of 2010. The participant teachers in this study completed this training and were the first teachers to teach online classes at the high school.

Online Training. The district's Online Learning Technologies Department created a professional development program to train teachers who wanted to become online learning instructors. Participation was voluntary, as the state had no teacher continuing-education requirements. However, pressures certainly existed to transition to online instruction as the school transitioned. The teachers in this study, to my knowledge, did not express resistance to this transition to online instruction.

This district training program had four components: (1) introduction to the technologies of a learning management system; (2) theory and practice of online learning; (3) instructional design and (4) professional community of practice program that was undeveloped at the time of the training. The duration of each stage of training was three weeks. The final component was planned to be a professional learning community for online teachers, which had not been developed at the time of this study.

The professional development training program had to be put together in a short time during the summer/fall of 2009, as the new online school was preparing to start online classes in the spring of 2010. My responsibilities covered the online pedagogy/theory and practice of online learning section. Each week of training covered a different theme: (1) overview of distance and blended learning; (2) theoretical constructs to online learning and application in the classroom; and (3) interactive communication with an emphasis on social presence. Over this training, the teachers were introduced to asynchronous tools (journal, blog, discussion board and wiki) with experiential opportunities to use them and weekly live presentation interactive sessions using a synchronous communication tool. The teachers joined four groups at the start of the training that later presented during the last synchronous session on the collaborative work they had accomplished on a top 10 best online instruction practice list. A talking avatar was used in the online training during each week to reduce the use of text, help clarify the learning objectives, as well as share my knowledge verbally via an auditory tool.

During the training, the Online Social Presence Rubric was introduced along with other resources, work and research of authors that included Anderson, Gunawardena, McIsaac, Evans and others, along with an Internet link to the “Model of a Community of Inquiry,” by Garrison, Anderson and Archer. The teachers had an opportunity to reflect upon and discuss the meaning of this body of work and instructional applications in both asynchronous and synchronous communication venues.

Researcher reflections and bias. I was first introduced to the participant teachers in this study as a district online trainer. There were advantages and disadvantages to this arrangement. On the one hand, the design and facilitation of the training along with introducing the social presence rubric exposed my thinking and biases to the study’s participants. The teachers experienced what I valued and emphasized in the training. In this sense, I had shown my cards. My values were out in the open.

On the other hand, I was a district employee and in the knowledge authority role of a trainer covering a subject area that was new to the teachers. I was not an entirely neutral or outside researcher to this group, although the schools and teachers operate with considerable autonomy in the district. During the opening interviews, I discussed with the participants our change in roles during this study and that our conversations would be confidential.

By and large, the teachers appeared to have an easier time than I did with the change of roles. I had to consciously relinquish my trainer role and turn over the knowledge construction process to the participants. There were several instances where teachers made associations between me and other district administrators who made policy and technology decisions. Though the teachers were new to online instruction, they were comfortable in their own “instructional skins” and I found their remarks to be generally honest and blunt. I did sense, during the second interviews, several instances of sensitivity about sharing student passing and failing information, as this information can easily be construed as a reflection of teacher performance. But even in this area, the majority of teachers were direct about the class outcomes and took responsibility for what they thought they could have done better.

My biases about social presence in online education were certainly operative throughout this study, and I found the best strategy was to keep them out front and notice instances when they were affirmed or rebuffed during the interviews and data analysis process. My perceptions about social presence have developed over time from a multitude of factors, and similar to what participants in this study found, the origin is “hard to put my finger on.” How easily one can read meaning into conversations, and data can be slippery indeed.

Transition to teaching online classes. After the training, I had little control or influence over how the first online classes were structured or taught. Teachers inherited online classes that had been developed in a state program that they had little time to review or redesign before the start of the semester. As

the semester transpired, teachers found many design and content problems with these courses: text heavy, no collaborative activities, dry content materials, use of videos linked to YouTube (school access was prevented by the district). The teachers taught one online class, while at the same time carried a regular face-to-face class load. One teacher said, “It is the only online class I have and I teach six classes. That is not going to work, because you tend to orphan them if it is the only one you have.”

The online class format was to begin with a two-week (four classes in total) face-to-face introduction period and then shift entirely to online instruction. I was not involved with the administrative decision-making process to transition to online instruction. Evidence given by a school district from another state was presented in the training that indicated a more blended educational approach works better with remedial students who often have trouble with motivational and time management issues. A number of factors might have contributed to this decision to go entirely online with the classes: The newness of online instruction; misconceptions about what online instruction can provide, and time convenience to all busy stakeholders (school administrators, teachers and students). Many of the students were young adults working daytime jobs and some were raising families; any scheduling flexibility was seen as a plus.

This semi-structured blended class format had a number of scheduling problems where only a few of the teachers actually had the two-week face-to-face orientation period with all their students; many of the teachers had only a partial number of their students attend, and some not at all. This was partly due to an arrangement with two other participating high schools in the online program. The online teachers had difficulty scheduling face-to-face time with these students.

From my conversations with the participants, and eventual observation of the online classes, I found teachers were largely given the autonomy to teach their classes with little administrative oversight. An orientation packet was given each online teacher to load into their online classes with introduction materials to

help students transition into their class. The school's instructional coach, also new to online learning, helped develop the orientation materials. The district Online Learning Technologies Department provided staff for teachers to contact if they had questions about technology or pedagogy. Other than these entry measures, the teachers were left on their own to teach their online classes and figure things out as they went along.

Presentation of data and results

Taped interviews of the nine teachers were transcribed. In eight cases, one interview took place before teaching an online class, and a second interview took place after the class was taught. One teacher, because of scheduling conflicts, could schedule only one interview at the end of the semester.

The ensuing presentation of the data and results were structured around the five research questions of this study. Analysis of the data that took place in this study was cyclic and a continuous process of referring to the original descriptive statements in the context in which they existed in order to validate the emerging themes, consider divergence themes or potential new meanings. This analysis spiral of investigating, classifying and interpreting was done until the point the emergent categories were saturated with the evidence this study provided.

The presentation of data is arranged slightly differently for each research question based on what the research question asked and the type of data and themes found. The results of each research question will be presented, followed by a discussion of the findings. I attempted to make the presentation of data transparent to show how categories were formed and what the findings were based on. Figures will be used to help convey the relationships found during the analysis work. However, analysis by its very nature is a selective process, and I found it impossible to share all the decisions made during the qualitative data analysis. Each section will include explanations if the presentation of data does not readily convey the organizational analysis decisions that took place.

Question I: What do instructors identify as the central constructs to social presence?

"Hard to put your finger on."

During the interviews, this question was couched in the context of online learning. Teachers were asked, before and after their teaching experience, what social presence meant to them in the context of teaching an online course. Since the majority of teachers had no prior online teaching experience when the first interview took place, answers to this question during the first interview were largely speculative. However, teachers easily referenced their perspectives about this question based on previous face-to-face teaching experiences. Six of the nine teachers described social presence as "interaction." Other descriptive words were also used, but often they were used to help define the type of interaction. The participant statements about "interaction" as a central construct to social presence were:

Human interaction, where you connect with the other person, so it is not depersonalized. So it is personalizing it.

A comfortable interaction where (they are) not too shy to say what they are really thinking.

A constructive interaction, the sense of belonging, is very, very important. Social presence means interaction between the student and teacher, both physical interaction, but also by (the use of) email.

Interactive, but make sure the students feel safe.

It means the teacher and student obviously are interacting whether through verbally, (via the) phone, through online, through emails and the work the students do.

Each teacher provided a slightly different perspective on the meaning of interaction, such as “personalization,” “comfortable,” “constructive” or “safe.” Interaction was described in broad terms: “We develop a class personality,” or “When you come into the classroom and have a classroom full of kids, the social presence is there all the time.” Interaction was described in more specific terms, as well: “It’s a rapport that you develop with your students, so the communication between you and them, back and forth, can be on a level that they can deal with.”

A number of responses emphasized interaction as a connecting process. One teacher succinctly put it as “human interaction, where you connect with the other person.” Interaction, as a “quality of contact,” was expressed through a number of descriptive terms: “the sense of belonging,” “feeling safe,” or “letting the kids know that you (the teacher) are there for them.”

Other categories arose with this research question. Several teachers emphasized how social presence can take place through different communication mediums, such as on the phone, through email and with asynchronous communication tools. Two teachers associated social presence as being part of an integral process to reach academic objectives: “The student will convey personal expressions in a professional manner and achieve their educational outcome” and “It means to have the degree of communication and the degree of ability to get done what you need to get done in an open and friendly socially comforting (and) supporting manner.”

An interesting contrary observation about the teacher responses was how little the recent training materials on social presence or the rubric specified in this study was mentioned, with the exception of one teacher who referenced the “Model of a Community of Inquiry,” by Garrison et al. (2000).

I found teachers shared concepts about social presence in an effortless manner that suggested the idea was a familiar one. Concepts were most often expressed in holistic terms or as a complete unified experience: “human interaction,” “comfortable interaction” or “constructive interaction.” At the same time, as teachers expressed answers to this question, language itself seemed

clumsy in its capacity to communicate the nuances, subtleties and depth of experience that teachers had acquired and how they worked this knowledge into instructional practices. As one teacher alluded, “Almost like mystical (social presence), you know, it’s something you establish in the classroom, you don't know really how you established it, but it is there. It’s there.”

It appeared difficult to dissect social presence into component parts, such as the descriptors in Online Social Presence Rubric. The teachers generally provided one main concept and often added a descriptive quality: “A constructive interaction, the sense of belonging is very, very important.”

After teaching an online class, there was a noticeable shift in what teachers emphasized when asked what social presence meant. Answers did not suggest a new meaning, but rather an emphasis was placed on how social presence did or did not happen and how it could be achieved. A sampling of responses:

> *Well, with adults it’s completely different than with kids, because the kids are like yeah and say the right things but the responsibility and irresponsibility, is (a) huge factor.*
>
> *Ummmm, interaction, all the tools you can use to interact with the students, whether it be the Wimba (synchronous communication tool) or the blogs, message boards, the face to face, all of them. You have to find that balance to make a personal connection to establish social presence. (It) becomes much like the face to face in a traditional classroom.*
>
> *Between those students and I, (it’s) just a connection (where they) feel comfortable with asking me questions. We just feel comfortable with each other.*
>
> *There has to be scaffolding. But you have to start right away with those kids (to achieve social presence).*

There has to be some kind of environment and activity where the kids don't have to be a little individual, work with other people, be with other people, which will happen when they have a career.

I found they (students) don't really want to contact each other, they want to get this done and they don't want to comment on other people's stuff.

Well, when in a face-to-face classroom, you develop a bond with your students because you physically see them, and to my surprise I have been able this semester to develop some kind of bond with a few of my students and it's different because it simply grew through our interactions, feedback (and) posting on the discussion board, (but it) has been a slow process.

(It) did not happen, but I still believe. I still believe that online courses can be designed in such a way as to build the social presence online.

The immediacy of the online teaching experience and what was encountered dominated the tone and content of the responses. Several responses were comparative between face-to-face and online social presence instruction, as teachers grappled with the differences. Teachers talked as much about the absence of social presence as they did about what it meant and were preoccupied about how to achieve social presence in an online environment.

The majority of teachers expressed a loss in social presence during the online classes and said establishing social presence was more difficult than they had anticipated. Teachers were frank and direct about this outcome. "It (social presence) did not happen" and "It was frustrating, because I kept thinking this is not what it was supposed to be like." At the same time, several teachers described situations where they developed "good rapport" with a number of

students. The word “interaction” was used only once in the answers, which was a change from the first interview responses. When the term “interaction” was used, the teacher put it in a pragmatic instructional context of needing to use different communication tools to increase social presence.

The meaning of social presence appeared largely unchanged after the online teaching experience. However, one teacher did indicate a slight change in perception.

> *When I first started (teaching online), I thought it was simply the interaction, but social presence is kind of more of your relationship. It is not just the interaction part, it is the relationship you build with the kids, because that is what builds the social presence.*

There is some ambiguity to this statement. How the teacher had understood interaction previously was not explained. The teacher suggested that social presence, after teaching online, is now understood as a deeper social dynamic that requires “building a relationship.”

No cohesive or unifying theme emerged from the second interview responses. On one hand, the data showed no changes in how teachers understood social presence after teaching an online class, but the answers were generally less intact when compared to the first interview responses. This appeared due to the disruptions in social presence indicated by the teachers.

Teachers did not, noticeably, blame the computer-mediated communication for the drop in social presence. The response was to use “all the (communication) tools” and a balanced or blended approach could support interaction. This view is aligned with what a number of researchers (Garrison et al., 2000; Gunawardena & Zittle, 1997; Picciano, 2002; Swan & Shih, 2005; Tu & McIsaac, 2002) have found to be true: that people find ways to connect and experience “presence” with other people through the use of communication technologies, despite the apparent limitations.

Question II: How does the Online Social Presence Rubric affect teachers' understanding of social presence?

"The big challenge is how to get the kids to this level."

The rubric was first introduced to the teachers in the online pedagogy training as one of several introductory resources to social presence. Training activities encouraged reflection and dialogue among the teachers on the meaning and use of interactive technologies in online classes. While the rubric was initially written to assess student performance, the training provided an introduction to online instruction, and as such, the rubric was used as an instructional design tool to help teachers understand the concept and promote dialogue.

During the first interview, teachers did not have a lot to say about how the rubric affected them on a perceptual level, other than in general terms. Instead, teachers gravitated toward sharing impressions about the rubric as an instructional tool. I was curious about these initial impressions, as this allowed teachers entrance into the knowledge-construction stage of the rubric. Teachers freely shared their ideas about what the rubric meant to accomplish, tool design considerations and how it could be applied in the classroom. Moving back and forth from the conceptual to the practicality of application appeared to help teachers better identify and construct meanings out of the rubric.

I formulated seven questions derived from the first interview conversations and from my literature knowledge (see Appendix D). These questions were explored during the first interview and not the second interview because of insufficient data, which will be discussed later. When the participants reviewed the rubric in the first interview, they were inclined toward pragmatic application considerations that led to a critique of the rubric design itself. I observed teachers constructing deeper understanding about the rubric and social presence through a process of bridging their instructional knowledge with the presented conceptual information.

Teacher responses were of a speculative and evaluative nature. Some of this data could be used in future validity and reliability studies concerning this rubric; however, the intention here is not to evaluate how valid or reliable the rubric is as an assessment tool. While this data is speculative, it can be used to help inform the knowledge base for future research in the field. Four categorizes emerged that are potentially significant to rubric design and application (shown in Figure 1).

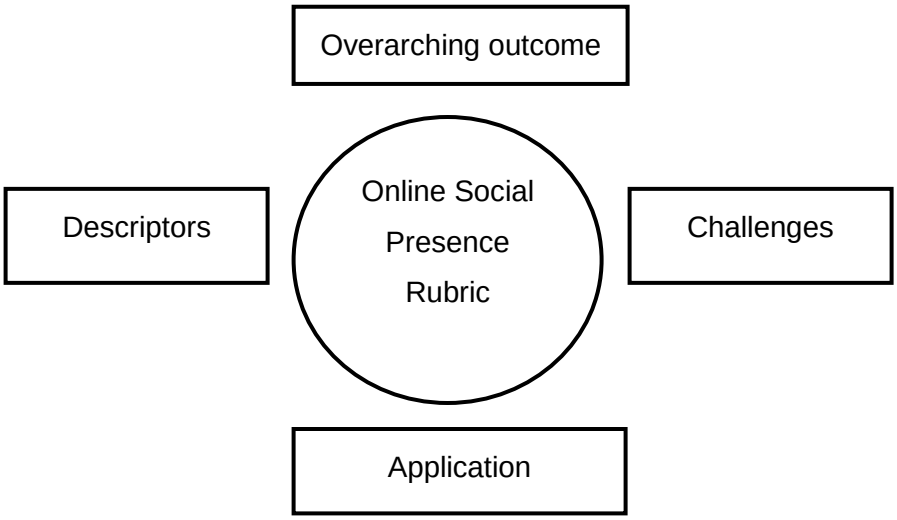

Figure 1. **Online Social Presence Rubric design and application assessment categories.**

In the following sampling of teacher responses, I select and infer meaning that I believed salient in each statement, which are in brackets. These rubric attributes are later compared and connected to each other and form a basis to four emergent themes relevant to the rubric's design, see Figure 2.

Statements about rubric overarching outcome

I like constructive reactions, because when you teach teenagers, a lot (of) times the interactions are not particularly constructive.
[constructive as a quality of interaction]

I definitely believe the interaction itself will improve the community; learn skills of teamwork they didn't know existed.
[value of interaction]

That is the thing I am struggling with, actually, (is) to get them through the math to be able to engage with each other. That way would definitely be my goal, for the challenge is getting there.
[rubric objective is worthwhile, goal]

It is a great academic objective, but you need to put in student language. The kid would go uhhhh. Goals are written for teachers, anyway.
[rubric is great academic objective, goal and change language for students]

I like the word constructive. You want them to interact cohesively, and (a) constructive community will get the job done.
[constructive as a quality of interaction]

I think that's vague. I understand it, but I don't think they (the students) would. They might question what you think was constructive interaction, you old lady, because you don't know us. What is our constructive interaction?
[constructive interaction vague, change language for students]

I think it is a good learning outcome, especially nowadays when students are kind of separate in their own little groups. They don't interact with other people; they will be interacting (by) texting them, but not interacting with the person sitting next to them.
[rubric objective is worthwhile, goal]

Statements about descriptors

I like the diversity one, because we have a global economy (and) globalization. Our state has always had a diverse culture.
[value of diversity as a descriptor]

I don't know if there is going to be some way to fill in a piece here where it says group cohesion, under extends standards.
[cohesion descriptor under extends standards needs language]

Diversity. I think we still have (a) hard time reaching our Native American students. (You'll) reach them more if, at (the) beginning, they see the goals, like you gave us the standards and so forth.
[value of diversity as a descriptor]

With the group cohesion, I think for the extended standard, a person needs to learn to be a facilitator. I would add performance language there.
[cohesion descriptor under extends standards needs language, with suggested language]

My ninth-grade math students are not going to know what affective expression means. I am going to give them another term for that.
[change language for students]

I don't know if I would want to add anything.
[no changes]

It is too much for me to process. Too much. I was thinking for a student it would have to be simplified. I have more of a problem with how much is underneath each of the standards for a particular descriptor. It is really

hard to break them out so they don't impinge on each other when you are trying to evaluate.
[too much language under descriptors, ambiguity between descriptors]

Statement about challenges

Well, the kid who registered for this course. (As the student), I am going to take care of everything the last minute. They just want to get the course work done.
[student time management]

I don't want to lose that connection with the students because I'm following a stricter rubric. I don't want to alienate them because (they) feel they did the best could do that day. I want the human element in it, which is part of the social, connecting with kids.
[rigid, not want to "force" social presence, contrary outcome]

Well, I think, on any rubric, some of the components can be a little bit subjective, you know. It is really hard to say when you really start how they convey their personal expression, what does that mean compared to how I view (it) vs. how someone else views it.
[subjective, ambiguity]

I would have to reword it so that (it's) at their level and not at my level.
[meet audience level, change language for students]

The big challenge is how to get the kids to this level. I think I have already said you need to scaffold them and it will have to be scaffolding online, so that's the biggest challenge.
[need to bridge, scaffold]

Some of the language is very academic and vague and I think the students would ask, "What do you mean by that?" The rubric needs to be test-driven. What works and doesn't.
[change language for students, need to deploy rubric]

I usually check my language after awhile and see if it makes sense to the student and, after using it, find out if each of the descriptors have under standards actually mean (what) you intended it to mean. Also, see how easy it is to use after awhile. My goal would be for the student to use the rubric to self-evaluate before they turn their work in.
[include student assessment, need to deploy rubric]

Statements about rubric application

Well, post it, during three-week period of face-to-face I'll go over it. I am going to steal it. We are going to talk about it in class and I will address cyber-bullying, and that's something in (the) classroom (that) you either ignored it or addressed it and I (am the) type of person that addresses it.
[introduce rubric early in course]

I would have to present (the) rubric (a) in way (that does) not alienate anyone. OK guys, these are guidelines. I know you had a hard night or whatever, but let us do our best to stick to these (standards) today. I would have to introduce (it) to them and not just after the fact. This is what I graded you on.
[not alienate]

No reason I can't set up a discussion board as a homework piece.
[use rubric asynchronously, student centered]

I would have a conversation with the kids, it would be a rubric activity.
[activity with students, student centered]

I would show it to them. I would post it, show it, and then I would come with some questions about it and have them answer the questions on it, on (the) discussion board.
[scaffold, use rubric asynchronously, student centered]

Maybe give them examples about a good community person. What does that mean? Maybe they give an example of one of these, give an example of how they could make that role happen, like take the initiative, maybe they could be the leader. Maybe have them interpret how it applies to them. I would focus on (how it) nearly meets standards or extends standards.
[scaffold, student centered]

You have to get their hearts before you can get their minds.
[student centered]

Well, I would never use the word rubric, or template, because the kids we have in this school and ones we are going to attract, like saying thesis, don't use the words failed at, because (it) causes fear and (you) can't learn anything if you are afraid.
[change title for students]

I would change it. I would do my little transformation; turn it into Likert scale with (a) brief description.
[teacher rubric revision]

Figure 2 illustrates rubric revision considerations that emerged from the teacher statements about the rubric's overarching outcome, descriptors, challenges and application. When the statements were compared across all four of the categories, similar meanings in statements were found that suggested particular revision areas to the rubric.

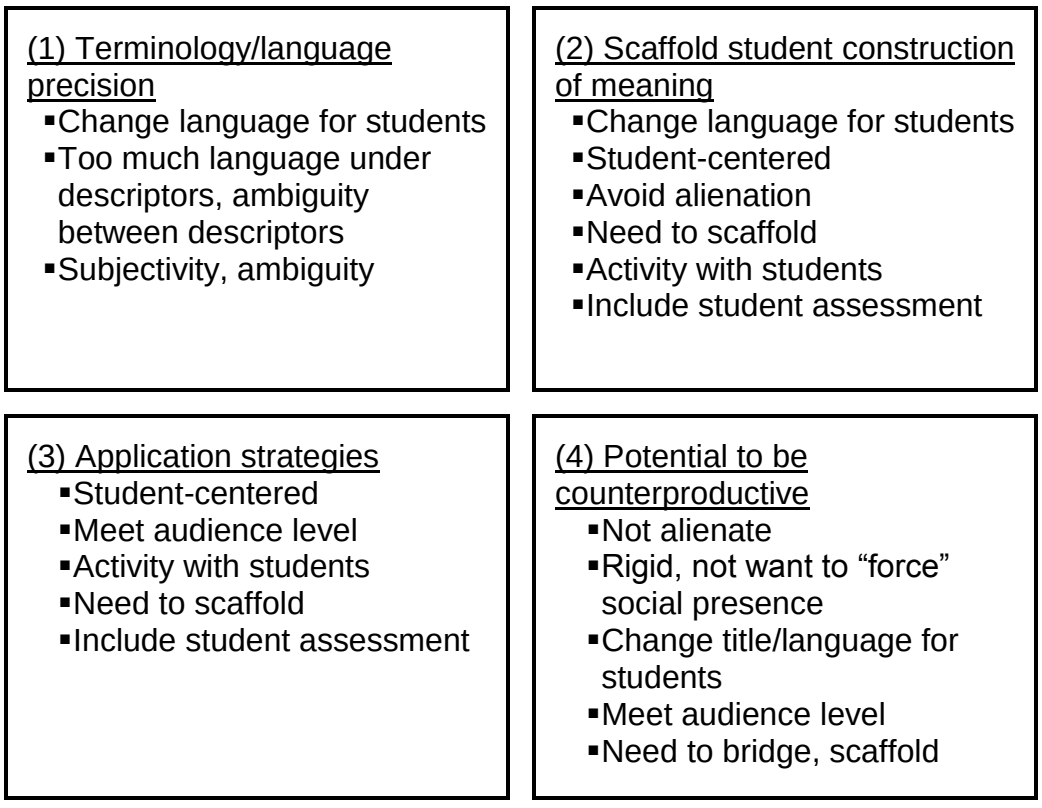

Figure 2. **Rubric revision considerations were identified in four areas that had to do with descriptive language precision, scaffold rubric meaning, application strategies, and identification of rubric potential to be counterproductive.**

Another emergent theme was alluded to in the first interview that was later picked up in the second interview. It suggests one way the rubric might be impacting teacher perceptions about social presence. In the first interview, teachers made several statements about how the rubric set forth some type of goal, objective or outcome to social presence:

Be able to engage with each other–that way would definitely be my goal.

It is a great academic objective.

I think it is a good learning outcome.

Reach them (students) more if at (the) beginning they (can) see the goals, like you gave us the standards and so forth.

The big challenge is how to get the kids to this level.

During the second interview, I asked if our conversations about the rubric had "influenced your understanding?" Responses:

Well, it has clarified that online social presence is very important, so I think (it) gives me a jumping-off point and point of focus to always try to keep that going.

I found it (the rubric) to be a very valuable tool, because it let me set my standards.

It helped me to realize that I am not the only one that feels this way.
Well, it (the rubric) makes me really think about (how) social presence needs to be a piece of the online learning environment and make sure that the tools are there to make that happen.

That is still an area that with this first semester we haven't got into very much.

It made me more aware of social presence and how important they (the researchers in the field) think it is. At first, I did not think–having not experienced it–that it would be that different, but is different than face to face. It makes us think.

Two of these responses suggested the rubric provided a standard, or at least a place to begin: “It let me set my standards” and “jumping-off point." When compared to the first interview, the rubric sets a “standard” or “outcome” that conceivably would make contributions to an online course, such as a clarified social presence course objective or an identified standard from which teachers and students can access social presence performance.

Identifying how the rubric affected understanding about social presence was not easy to determine from the data, as many different influences were active in addition to the rubric, including exposure to other resources on the topic. At a minimum, teachers indicated, through different statements throughout the interviews, that the rubric affected awareness: “(It) made me more aware of social presence.”

Question III: In what ways do teachers perceive, use or adopt the rubric as an instructional tool?

“I wanted to set a tone for how we interact.”

After reviewing each teacher’s online class that used a learning management system, I found evidence from class observation and inquiry during the second interview that three teachers used the rubric and six did not attempt. The data on the three teachers who used the rubric during instruction is organized into four thematic headings that cover: (1) perceptual information; (2) intentions about using the rubric; (3) what took place during instruction; (4) outcome of using the rubric in an online class.

Teacher one

Perception: The teacher stated that “social presence is very important to me” and saw value in using the rubric, if certain modifications were made.

They included, “some of language is very academic and vague and I think the students would ask, ‘What do you mean by that?’” The teacher conveyed a number of ideas about how to scaffold the rubric to help students generate understanding and achieve greater ownership of the concepts that make up social presence.

Intend to use: “I would do a conversation with the kids; it would be a rubric activity.”

What happened: The teacher discovered the online class she received was “totally asynchronous (text-based instructional content without use of asynchronous communication tools)–there is no interaction going on, everything is just read the material and answer the questions and submit (them) to me. So right off the bat, I am going, OK, so I need to get this into a more collaborative format, even just a group project, then come and submit to me.” The teacher had little time to work on the design prior to starting the course, so an interactive course design structure was not in place. In addition, this teacher met only five of her 25 students face-to-face during the first two weeks of the course. The teacher attributed this lack of initial contact to be detrimental to the class social presence. “I lost them from day one.”

Outcome: Teacher posted rubric on an asynchronous blog tool at the start of the semester and asked (the students) to read and post comments about the rubric. “The rubric was really good, very well done, and if it had been introduced perhaps a little better, backed up, got to be backed up by something. It had to be backed up, the kids have to practice it, which is not what happened with my course.” Participation in the blog was by a few students and if one was to assess “interactive communication,” using the

rubric's own standards, the result would find students at an emerging/nearly meets the standards level.

Teacher two

Perception: "I think it is a good overall rubric. I think if you could add anything to it–I'm thinking in terms of element of responsibility and recognizing a student for being responsible and being mature. I don't know how you would phrase it, but (it would) just be work ethic and might be an interesting addition. Internalizing that locus of control through taking responsibility."

Intent to use: "Post it during the three-week period of face-to-face. I will go over it. We are going to talk about it in class and I might even talk about (student first name) response, (as an) example of cyber bullying."

What happened: "Well, kids disappear! I've spent a lot of time tracking them down." Interesting to note, this teacher had indicated the rubric could improve with language regarding responsibility, and one of the problems she found with her students was an irresponsibility that caused class participation problems and the necessary time to track students down.

Outcome: The rubric was presented to the class using a blended approach at the beginning of the class. The teacher's intention: "I wanted to set a tone of how we interact." The rubric was first presented to the students during the face-to-face period with the class and then moved to a discussion board activity. The teacher stated she wanted students to think about and discuss through posts and comments about communication through writing. Student participation in the discussion board was low, and the teacher felt the "cohesiveness I wanted was not achieved." The teacher felt the rubric was straightforward and could be understood by her students, "even students who have low reading levels."

Teacher three

Perception: The teacher found significant value in the rubric in helping her achieve quality social presence in her online course: “(The rubric) provides the words to do it. I did not have the words previously.”

Intent to use: The teacher would like to share the rubric with students at the beginning of the class during the face-to-face time: “If they can see what their goals are at the beginning, the specific standards you gave us (in the rubric)–if the kids could see that–maybe they could reach them or know what to work toward.” The teacher discussed any activity where students are given the rubric with “blank spaces” to fill in and include their own language.

What happened: “At the beginning I hated it (the online class given by the state), because it was so much work, because I had to change everything. I had to change my lessons.” This teacher did not meet with half her students during the face-to-face period, and the teacher said she spent a lot of her time calling students and parents.

Outcome: The teacher presented the rubric during the beginning face-to-face period: “We spent three days talking in the room (about the rubric)” and conducted several socially interactive activities with the students. “To them, it’s a chart. It doesn’t mean anything. There are no blanks for them to fill in.” The teacher did not indicate that she followed through with her “blank spaces” activity. The teacher stated she noticed the students who participated in the rubric discussions and social activities preformed at a more mature level during the discussion-board activities.

Each of the teachers who used the rubric did so at the beginning of the class. There is no evidence from class observation or teacher responses that the rubric was used or referred to again during the class with the students. In both

groups of teachers (used rubric/did not use rubric), none of the initial intentions or plans about how to bridge and scaffold the rubric to their students was fully actualized. A host of challenges, many of them not known until encountered, took place that possibly contributed to this outcome. Many of the challenges were articulated by the three teachers who introduced the rubric in their online classes: problems with course design, time restraints, low student participation, inconsistent participation in the face-to-face period, or issues about student maturity/motivational level.

The data regarding how teachers perceive, use or adopt the rubric as an instructional tool is limited in this study. There are many unanswered questions to this section of the study that will be addressed in the “Summary and Implications” chapter.

Question IV: What other variables influence the teachers’ perceptions and practices of social presence?

“No, my perception did not change, other than it was more difficult than I thought it would be.”

This research question took a circuitous route from the first interview to the second. Each teacher made statements in the first interview that indicated social presence in the face-to-face classroom was a familiar concept, but at the same time, difficult to accurately articulate the accumulated background experience and knowledge that went into the formation of perception. In the second interview, a disruption in social presence had taken place in the online classes. All the teachers in the study made reference to this occurrence. This disruption provided an opportunity to study perception re-evaluation and formation. Figure 3 provides an overview to this section’s data analysis.

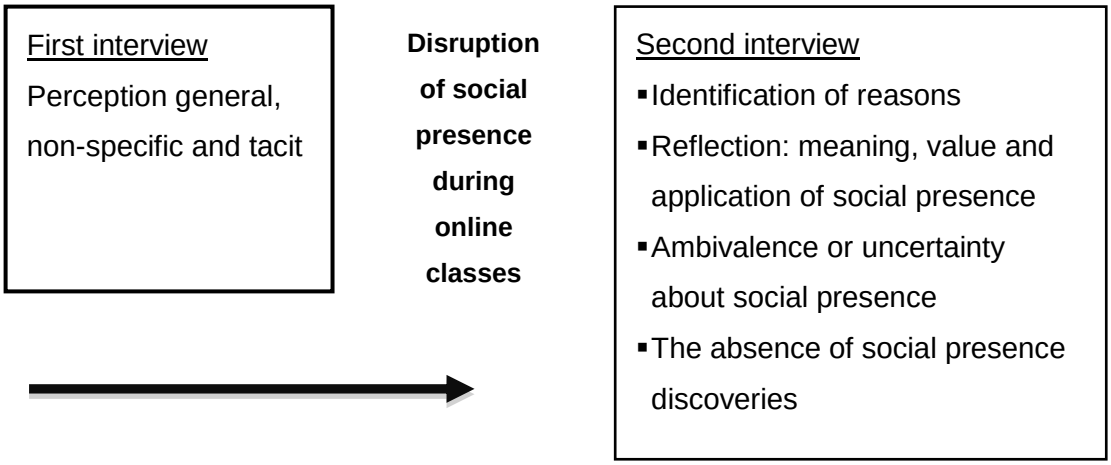

Figure 3. **There was a significant change in topic and scope between the first and second interviews caused by the disruption in social presence that took place during the online classes. The disruption resulted in teacher re-evaluation of the variables that influence perception and practices of social presence.**

I found it difficult from the first interview data to track and identify what specifically influenced perception about social presence. There was never one definitive variable, but many. As we discussed different topics related to face-to-face instruction and preparation to teach online, I had a sense of the existence of a vast reservoir of knowledge about social presence that was mostly unseen and unstated in the room. A rich background of experiences seemed to float below the surface of perceptual formation. My overall impression from the interview conversations was that the concept of social presence was firmly established in a tacit knowledge base, had been accumulated over time and was now assimilated into the “bedrock of psyche.”

During the first interview, teachers generally responded to Question 4 in broad terms. As one teacher succinctly put it: “formed over the past 14 years of classroom experience.” When explored further, responses varied widely and encompassed influences that occurred over many years. Five categories emerged, shown in Figure 4.

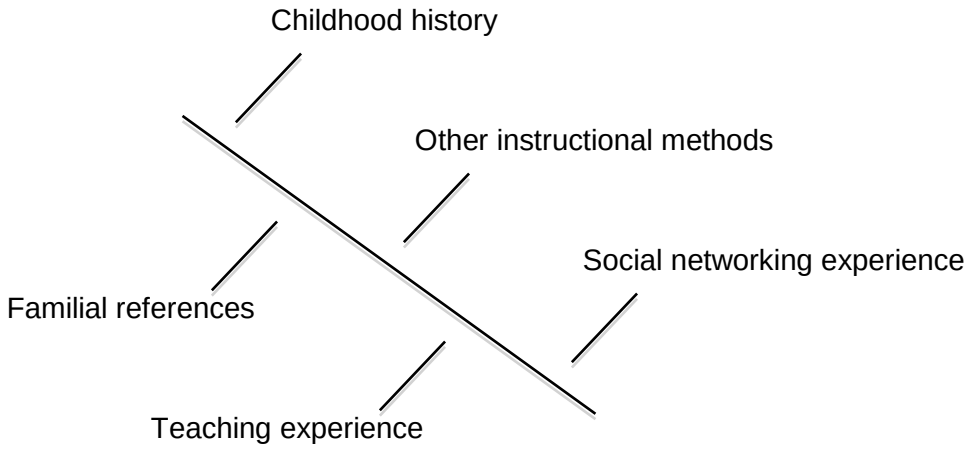

Figure 4. **The five broad variables that teachers identified as influencing perceptions about social presence during the first interview are provided in the figure. Seven of the nine participants identified each of these categories.**

A sampling of teacher statements on these five variables is provided below. In several instances, I summarize longer conversations related to a particular variable:

Childhood history and previous student school experiences

I like them and I am not nervous around them and I understand what they are feeling when they first meet someone, because I was (a) very shy teenager until I got married. But, as a little kid I was very shy, my nickname was "Iceberg." I was perfectly frozen, so I understand.

One teacher discussed how past student experiences in assigned group activities had been a frustrating experience for her. She discussed often carrying the burden of the group workload, and this experience had left her wary about class group activities that did not necessarily equate student collaboration and she was cautious about using this communication tool.

Familial references

Why they connect to me? I don't know, maybe I remind them of their grandmother." Another teacher stated, "So you know my population (remedial students). In my night school face-to-face classes, I don't feel like just a teacher, I feel like a mother. I am counselor, I call CYFD, I call ambulances.

It was interesting to note how many of the teachers referred to their students as "kids," a term with broad associations, and appeared to be often used as a personal or connective description in place of "students" or to delineate the adult-teacher and youth-student separation, as well.

Use of other instructional methods/rubrics

Is having them use ACE writing rubrics, where it forces them to cite their information and expand on what they are thinking. Even in face-to-face everyday classes, that is a very difficult level of functioning for kids; it is very difficult.

Well, I really like the ACE or RACE writing rubric format because it's very condensed, it's quick and easy, but it forces the students to support–take a position, answer the question, cite the information they have to defend their answering and expand on that.

Teaching experiences through trial and error and experimentation in the classroom

When I first started to teach, I had these lovely lectures, college was so much fun, and I am looking at these kids, what do I do, what do I do, and I learn over time I did lots of different stuff, so now I can teach effectively.

A teacher described a previous experience of introducing a discussion board to her face-to-face students and, in a text format, having one student “basically attack another girl” using “text speak–she spells want ‘wanna’ and so I addressed it early.

You do a few exercises with them and you joke with them, wear crazy socks, you tell them you know how to rope cattle and ride horses, castrate calves, you say things like that, shock them, all of sudden you see them start to relax and get them together, they are at first stiff, but before the night’s over, they are talking, they are really sweet, even the little gang kids.

Experience of other online social networking software

A teacher discussed participation in social communication tools: Facebook, phone texting, Skype, YouTube. “We can’t use the YouTube stuff, can’t use some of the stuff that was great (blocked by the district).” This teacher discussed wanting to use phone texting with her students but had not structured it into her online class.

One noticeable absence of an influential variable mentioned about social presence was how not one teacher included his or her formal higher educational experience.

In the second interview, the majority of teachers opened the conversation by acknowledging that their online course had not met their usual class social presence expectations. An apparent disruption in social presence teaching norms had taken place. This disruption opened a window of opportunity to study social presence knowledge construction, as teachers were now in a position of evaluating what happened. In our conversation, teachers first identified what had caused the disruption to occur:

Student maturity: *There is a maturity level here that is altering the way I will do my next course.*

Language/text barriers: *I have a lot of ESL (English as a second language) students too embarrassed to post it.*

Student disengagement: *My biggest challenge this semester was nothing I thought it would be. It was simply keeping kids engaged.*

Instructional practices: *A process of juggling everything because we (were) learning as we went this semester and trying to pull kids in at the same time, so partly that's my fault.*

Course design: *So I got this course that is tonally asynchronous. There is no interaction going on, everything is just read the material and answer the questions and submit (them) to me.*

Decrease in face-to-face contact, lack of blended structure: *I never met half my students. So right off the bat I was very upset. I don't know these kids.*

Students not logging in: *It was a lot more difficult to keep track of the students, to make sure they were logging on.*

Student not using email: *Students did not send Gmail (the email that was setup for the online students). They would not check their messages in Gmail… I think the communication was the hardest thing for me.*

Not enough contact with students at the start of the course: *We didn't spend enough time with the kids at the beginning of the course.*

Student time management: *So, two of them got started right away and the other nine kind of waited to get started, they kind of just trickled.*

Out of these disruptions, teachers made reflective statements about the meaning, value and application of social presence in the online environment:

Social presence is important: *Well, it has clarified that online social presence is very important, so I think it gives me a jumping-off point of focus to always try to keep that going.*

The translation of social presence theory into practice: *I really did not understand what this was all about, until I saw the diagram ("Model of a Community of Inquiry" by Garrison, D. R., Anderson, T., and Archer, W.) you had one time (in district pedagogy training). You have got to have all three of them. To me, online school is not going to work if they don't have social presence built in. I think I can do it in science. I think I can do it. Because I got a hunch, I got the labs and I think with the labs (face to face) I can establish social presence with the kids online.*

Social presence should be infused in the course design: *Well, it make(s) me really think about social presence. It needs to be a piece of the online learning environment and make sure that the tools are there to make that happen.*

Social presence is difficult to establish with students: *I found they (students) don't really want to contact each other, if they are taking day school and this (online class), they want to get this done and they don't want to comment on other people's stuff. They have not exhibited a desire to socialize with each other.*

Social presence online is different than face to face*: It made me more aware of social presence and how important the people who have studying online, the theories and stuff, how important they think it is. First, I did not think so, having not experienced it, that it would be that different, but it's different than face to face. It makes us think.*

Social presence extends student learning: *I gave the kids something like that rubric (online social presence rubric), they may not completely understand it, but seeing it, it helps them get past their old-fashioned paradigms.*

I found it interesting to note how the participants, when faced with a new environment and disruptions to certain social classroom norms, sought ways to re-establish social presence in their online classes. This raised a question: Why not do away with the social presence altogether or minimize significantly? Why was social presence still valued for instructional purposes? While the desire to re-establish the familiar is certainly a reasonable consideration, the reflections indicated social presence had instructional value as well. I re-examined the data asking the question: Did any of the teachers indicate social presence was not important? Did the disruptions to interactivity that occurred during online instruction give grounds for social presence not being seen as important or less important to teaching and learning? One teacher, of the nine, when I asked, "Do you think the social interactivity piece is important or not important in the online class," said, "You know, in math, I'm not sure that (it) is important." The teacher expressed some reservations about the value of social presence during the first and second interviews.

At the same time, the teacher discussed how "most of these students do not know how to explain their thinking. The vocabulary of math." During another

point in the dialogue I inquired, “Do you feel you lost anything moving from the face to face to the online?” The teacher responded:

> *Where kids (online students) were left behind is when I explain things to kids on the board and we go through examples, there is this interaction when we are going through things, going through examples: What is this, where did this number come from, why did we do this. So, I have that, and they have to think, this is why we are doing it, why did we choose. I will ask them: We did this, why did we decide to do that. Why didn’t we do something different, could we have done something different. Even in the (a tutorial math software program) right now for Algebra One for the basic course that’s not in there. I think that is one of the weaknesses of (a tutorial math software program), you don't have that–they will tell you why. The extended response stuff is not there.*

I asked, “You don’t have that back-and-forth exchange of interaction with students?”

> *Yes, and you don’t have the questions, the little questions. They will explain the process and what is going on, but there is not this little question as to exactly one little piece of it (the problem).*

I continued, “How did that affect your online class?”

> *Well, I think they don’t have a really deep understanding of what is going on and I found that in math. I had a face-to-face test that I had them come in and take and covered, because I went (and) actually took problems from all the reviews. I went and took problems and put together this face-to-face test and they couldn’t do it. Some of them couldn’t do it. The students that were already good at math could do it and they were the ones going through it like lightning, because they already know the stuff,*

and the students that are struggling couldn't do it at all. They had no concept.

What I took away from this conversation was a degree of ambivalence on the teacher's part about the value of social presence for instructional purposes. The online environment raised new questions and choices about how much social interactivity was needed in their online class. The teacher was in the process of re-evaluating the need for social presence and thus gave a mixture of answers, some conflicting. Many of the responses indicated to me, despite the misgivings, a strong emphasis on social learning between teacher and student. Our dialogue highlighted the difficulty that occurs in understanding the value and purpose of social presence for instructional practice. The data provided in the interviews, similar to the conversation given above, indicated there might be a necessary and purposeful grappling process for teachers to determine what social interaction means in the online environment and what value it has upon learning.

As will be discussed in greater detail in the next analysis section, 100 percent of the teachers in this study advocated the need for greater social presence through a variety of means; the most suggested was a blended class format with increased face-to-face time with students.

Five of the nine participants made direct statements about what happened when social presence was absent in their online classes (shown in Figure 5), and the other four alluded to problems such as student attrition and poor performance, but did not specifically associate with decreased social presence.

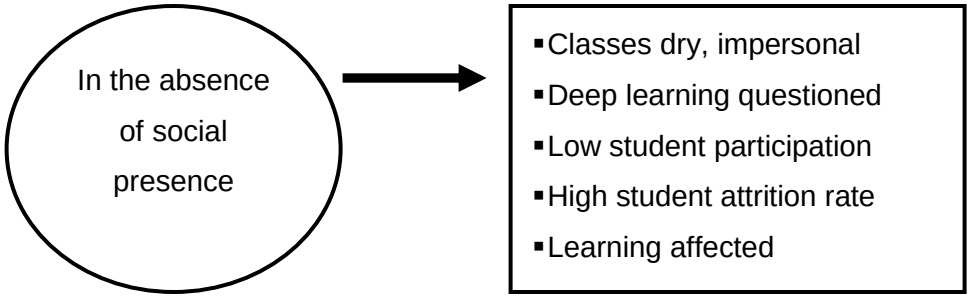

Figure 5. **In the absence of social presence in the online classes, more than half of the participants made statements regarding how this circumstance affected the class in detrimental ways.**

The five participant statements are provided below. I highlight in bold a summarizing phrase regarding each of the quoted statements:

The classes were dry and impersonal: *Because what happened was very impersonal, as far as students doing their lessons and submitting them to me. You know an attention-getter would draw them in, instead of the dry lessons they are now reading.*

Deep learning questioned: *I need (a) once-a-week meeting with my kids… What kind of depth of learning do you want for the high school student? I don't want it to be little nothing assignments. There should be teaching to the standards so that you cover each of the areas of reading and writing and oral discussion-type things and group work.*

Low student participation: *Well, kids disappear. I've spent a lot of time tracking them down, calling them, contacting their counselors, contacting their parents, different things like that. There is a maturity level here that is altering the way I will do my next course and run it by (principal), but I really believe I need once-a-week meetings with my kids.*

High student attrition rate: *In my face-to-face night-school classes, I don't lose 50 percent of the class. I will lose maybe like 5 percent, possibly.*

Learning affected: *That (social presence) affects their learning very much. I almost have 100 percent attendance at my face-to-face class. I do have excellent attendance and yes, anytime (they are) having fun, they learn more. You got to get their hearts before their minds and got to make it fun and interesting. Got to have some fun.*

In summary to research question IV, teachers' perceptions about social presence and its value to instruction appeared to strengthen when they encountered its disruption or absence. The teachers held onto conceptions about social presence, despite its loss, and instead of choosing to diminish its requirement, a possibly easier option, teachers sought new routes to recapture it: "No, my perception did not change other than it was more difficult than I thought it would be (to establish online)."

Question V: What did teachers learn about social presence after teaching their first online course?

"I don't want to get them typing to each other, I want to get them talking to each other."

This study question emerged out of the data. A cyclic learning process of old perceptions encountering new experiences that either re-enforced, rejected or transformed teaching perceptions was intertwined throughout the second interview data. A shared experience among all the teachers was how their expectations about online social presence that existed prior to teaching the online course were not achieved in the online classes they taught:

Well, here's what happened: I went into teaching this course fresh out of doing the training and had all these idealist conceptions about the students and (what) was going to happen.

All the fantastic ideas I had when we met in January, well, I have come up with some new fantastic ideas for next semester.

Well, the first one (online class) I was pumped, I hadn't actually any experience yet. I had that idealistic halo effect, you know, and I even put the rubric on and asked the students to comment about it. Maybe two kids did first of all, OK, and said it looks good to me. And then I am thinking we will have social presence throughout this course, and of course that did not happen. Did not happen. But I still believe, I still believe that these online courses can be designed in such a way as to build the social presence online. I believe that.

This sobering outcome sparked inquiry into what happened and what could be done to better bridge instructional intention with outcome. The data revealed how teachers had learned from the experience of teaching an online course.

In the second interview, I found 26 different teacher "learned" categories that were substantiated by identification codes. These "learning" categories were substantiated by a minimum of at least three supporting coded statements, other than two categories: (1) "online is not for every student" (that was noted by one teacher), which I thought a significant statement that other teachers seemed to allude to as well; and (2) "include additional support," which was an interesting omission that more teachers did not mention the need for additional infrastructure/personnel support to teach online.

I found a number of these categories could be grouped together to substantiate three overarching themes: reasons for social presence disruption;

instructional design, and practice adjustment and solutions to the social presence problems (see Figures 6, 7 and 8).

- General disruptions in social presence
- Drop in attendance and participation
- Problems with Gmail, email, and messaging
- Student level of maturity
- Student resistance to student-to-student interactivity
- Online is not for every student
- Student problems with time management
- Student technology confusion

Figure 6. **Eight categories were identified as reasons to why social presence was disrupted and why teacher social expectations about their online classes were not achieved.**

The eight categories/reasons are provided below with substantiating teacher statements:

Reasons for Social Presence Disruption

1. General statements about disruptions in social presence

Because what happened was very impersonal, as far as students doing their lessons and submitting them to me. I think the most personal thing was my little notes back to them and they would not re-do their work. I will just leave it the way it is.

And so there isn't really social presence going on between the kids that I know of, OK, and what that caused, I am pretty sure of this, because I so believe in the social presence idea. But I think it caused kids not going online as often, kids not been online in 20 days, behind. And I have quite a few F's. Kind of sitting here and trying to figure out how to reverse that. You know what it has done for me, what this teaching has done for me, kind of a disservice to the kids taking it, but I suppose it is necessary, but what (it has) done for me is at least see what needs to have changed.

With each other, that's what they miss: that interaction with each other, because they are their own support system. I am there as their support, but I am just one piece, in a face-to-face classroom they all support each other, they learn from each other. Another kid will get through to another kid where I was not able to do it for whatever the reason was. So how do we foster that in an online course?

2. Student drop in attendance and participation

Kids are just not logging in.

I had some students who were not logging in and, um, hard to get some students to log in, really.

It was a lot more difficult to keep track of the students, to make sure they were logging on.

The other surprising thing to me, while a lot of them did show up, they (had) fallen off the radar. They have not logged in since January. I also think of that in terms of social presence. What happened? How can we fix that? Or is it fixable?

Well, kids disappear. There is a whole thing: I've spent a lot of time tracking them down, calling them, contacting their counselors, contacting their parents. Different things like that. There is a maturity level here that is altering the way I will do my next course.

He never did a lick of work.

The new venue (online class), learning how to read students, especially if they won't sign in–they don't sign in.

I had no contact with those four kids for a couple of weeks and weren't signing in. I was going crazy.

Discussion board, the other problem I had at the beginning was some kids wouldn't do anything.

Not only did they not participate, I would call them and have them come in and showed them how to do it and so forth. They were the students that dropped out. They were the students that eventually dropped out.

I learned the kids are not even reading them (online class announcements).

They are not looking at the message board, because they are not logging in, they are not looking at announcements because they go in they–I mean even though I have that as the homepage they login–they don't look at it. They go straight to the assignment.

3. Student problems with Gmail, email and messaging

And I have found the Gmail address that we established for them, if they don't get on their course, they don't access their Gmail either. You can use the messaging, they don't access (the) course (and) they don't access their messaging. I think we must get some valid telephone numbers and their normal everyday average email contact.

Specifically, those special Gmail addresses we set up. Because you set them up for the students, the parents–they don't use them.

Yes. They are not checking their emails, their log-on is very sporadic, they aren't keeping the discipline enough, so as far as all this collaboration, you go to do it from day one. That is what I found.

The other thing that I saw throughout the thing that I think was important is the Gmail accounts don't work. I will be honest with you, they don't. I think they should be required to go in (login) and just use that mail (messaging tool) that you have right there where they can post and send massages to the students. That worked much better. The other problem I had is when kids did not go in (login), I finally called their parents.

But as far as communicating with them better, I'm going have to use real email addresses, that's what they are checking.

4. Student level of maturity

I've spent a lot of time tracking them down, calling them, contacting their counselors, contacting their parents, different things like that. There is a maturity level here that is altering the way I will do my next course.

Well, with adults it's completely different than with kids, cause the kids are like yeah and say the right things and they do say the right things but the responsibility and irresponsibility, is (a) huge factor.

Well, the kid who registered for this course. I am going to take care of everything at the last minute, all right, and so there they are not part of the conversation. They have effectively isolated themselves and they just want to get the course work done, but they have not had the feedback for it.

I think having meeting(s) with the kids, so they could see that some of their frustration wasn't individualized. Kids' self-esteem in high school is very low. And so when they have to present something, remember where the kids have to reply to some of those blogs, they were very controlled, but still I didn't think about how sensitive kids would be to someone replying to their post. That part wasn't good.

Right, I think at our level we're are used to talking and comfortable enough saying what is on their mind. Most students are still very hesitant, still questioning their own opinions, so they are having a hard time giving them to others and they are so afraid–"What if my answer is not right." Where, as they mature and get older they relax, they give an answer that is not right, they are going to learn something, they (are) going to learn what the right answer is. So I think students are not at that point of maturity yet.

I don't see anything about the maturity level, such as their responses. I do see that they have difficulty knowing what to say back to another person. So a lot of the time it doesn't–not anything immature, it is just they don't quite know what to say back, because I don't just want to hear you agree with their answer, tell me why.

You have to word your feedback in such way as to not discourage them.

I have maybe three who are self-motivated learners, who want to get ahead. The rest of them are in credit recovery. If they did not succeed in a face-to-face class, where you have somebody to help you on a daily basis, I find it very hard to see how they're going to succeed on an online class where you need a tremendous amount of discipline.

5. Student resistance to student-to-student interactivity

I found they don't really want to contact each other, if they are taking day school and this, they want to get this done and they don't want to comment on other people's stuff, although they will, because they have to, they have not exhibited to this point a desire to socialize with each other.

They really did not want anything to do with each other. That is not unusual for a math class, even in class. Eventually you get a few kids working together, they will pair up and (a) couple of them will work together.

I don't know with the age of these students if that would happen. I think their main motivating factor is–let me do the work, give me a grade for it.

6. Online is not for every student

There is another thing I have learned, there has to be a screening process with these students that are going to do this course, because several of my conversations I had with kids, when they stopped logging in and kind of disappeared on me, I started calling parents and the kids themselves. They just flat right out said it was not for me.

7. Student problems with time management

I have this one girl in my face-to-face class and I tell her you're really falling behind in the online course. And I see her from 3 to 5, "Why don't you just stay and work during the regular class hours from 5:15 to 7. I will even let you go at 7." "Oh, I got other things I want to do." Yeah, but class time, this is when you are supposed to be in class, so you should go home and log on during this time period. She doesn't. She doesn't. Not at all.

I think adults can function separately and then come into the venue. The kids can't maintain very much. I only have one student whom I have not (had) to nag.

They (students) are not doing that well. You know, I hate to go, oh, I am sorry, you missed the deadline, (it) is a zero. I don't want (to) give up (on) them because, you know, what I mean. I don't want to give up. When they keep digging their hole deeper, stay up with the units you are on and then if you missed an assignment, go back.

It didn't work (social presence). Part of it was the way I structured it. The other part of it was that it took the students… I have such a small class, I only had 11 students, so two of them got started right away and the other nine kind of waited to get started. They kind of just trickled.

8. Students' technology confusion

The bad thing was not having them in a group (face-to-face introduction to the course), because like when it said create a thread, there were many kids with no idea what a thread was. "Miss, I don't know what to do. Do you see where it says create a thread–what is that?" Kind of like (learning management system) came up with some fancy words.

I also think (there) need(s) to be a video in the beginning showing the kids how (to) download Firefox or when they sign up, have the application on there, say what type of machine do you have, and do you have Windows XP. It's amazing; many of them did not download it.

They were going on the discussion board, answering their homework questions on the discussion board, so when I asked them at the end of the

unit, "Where is your work?" "It is on the discussion board." So I looked on the discussion board and they all had their homework on it.

This is the first time I am teaching an online class, so you are trying to make sure they know how to use the tools, where to send their work and everything and I think actually doing a discussion board or something inside the classroom, walking them through it.

I had some kids who (were) working on their cell phones, working on their course on their Blackberry. I have some kids who don't have any access to a computer at home, their connection is real slow, so they will do their lessons on Word and put (it) on (a) Flash Drive and he will bring it in and I will upload it for him or I will show him (how) to load it at school. So we have all kinds of kids, who don't have the type of access we would like for them to have, who are making do that way, it's a pity, too. But they are, because they want to graduate and want to do this course.

Or the kids that sign on but don't have a computer. We did not do a good enough job of bringing home the point that you have to (have) access to technology to do this.

I think that some students did not have a computer.

I found that most students are accessing computers from school.

When these categories are reviewed together ("Statements about Disruptions in Social Presence," "Student Drop in Attendance and Participation," "Student Problem with Gmail," "Email and Messaging," "Student Level of Maturity," "Student Resistance," "Student-to-Student Interactivity," "Online Is Not For Every Student," "Student Problems with Time Management" and "Students'

Technology Confusion"), a picture of the multiplicity of contributing factors is given about what caused the disruptions in social presence in the online classes and the reasons why teacher expectations were not achieved. There was not one causal event, but many.

In response, teachers generated ideas about how they needed to revise instructional practices and practices to solve the social presence problem. The following analysis will give the categories that substantiate two emergent themes: Revised instructional design and solutions to the social presence problem.

A number of teachers recognized the need to gain entry into the students' world of communication technology and social network to improve connectivity with their students:

> *The big ahah is better communication, better ways of getting in their world, we have to intrude in their world.*

> *You know, if there was a way to text it to their phone, that would be even better. But, you know, they are limiting us, how we interact with students, right now because of other issues with (school district), with other teachers being inappropriate, some of those rules kind of tie our hands and limit our access to these online students.*

> *Right. We need to be part of their social network. Otherwise, we can be over there and ignored very carefully. I found that out.*

> *Specifically, the texting, using their (student) own personal emails vs. what we setup for them, that they are not going to check and parents are not going to check.*

However, teachers learned the disruptions to online social presence were not simply at the students' end but also at their own end. They include a number of categories related to instructional design and practices shown in Figure 7.

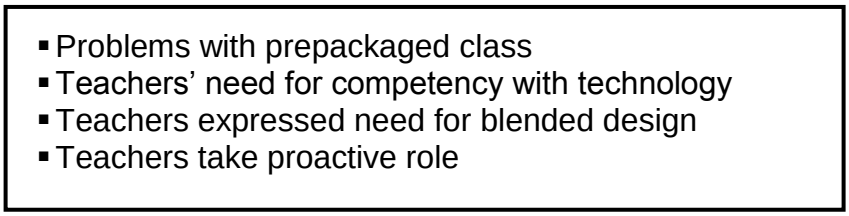

Figure 7. **The participants identified four categories that related to instructional design and teacher practices that influenced online social presence.**

The categories below substantiate the theme of instructional design being an important part to building and sustaining online social presence:

Instructional design and practice adjustment

1. Problems with prepackaged class

I found myself innovating new stuff, you know when 70 percent of kids can't get it, it doesn't mean you're a good teacher, like in the olden days when everybody flunked a test. That is nothing to brag about. So when everyone didn't complete the assignment and only the topical three or four did, I did it wrong. So I deleted a lot of stuff (state online class) and adding little things, because at the beginning, what I thought would be so perfect did not work.

At the beginning, I hated it because it was so much work. Because I had to change everything. I had to change my lessons.

I am going to have to take the curriculum that was pre-packaged and given to me and put in more of the real-world connections.

Then I ended up getting a course uploaded to me, of course we learned late in the year we would even be doing this. Well, I have not had time to create a course, so I got this course that is totally asynchronous. There is no interaction going on, everything is just: Read the material and answer

the questions and submit to me. So right off the bat, I am going, OK, so, I need to get this into a more collaborative format, even just a project where I could put the kids in a group and let them do a group project then come in and submit it.

I have to redesign that whole course. I really have to redesign that whole course.

So, I really haven't developed social presence in the course I have right now. I am using the (state) course and it doesn't have a lot in it now. I haven't gone back and added anything. I am just trying to get to know how it is working and what is not working. It has got some things that are wrong with it.

It (state course) is pretty dry and it's still teaching at them, instead of teaching with them, learning with them. So that's the way I see it.

The actual course that is sent to us from (state course), there are some things that need to be changed and fixed. We do that as we go along.

I think we are finding out we don't like to import classes from other people, we want to create our own. It is real hard to work with somebody else's framework.

I have been going through that course (state course). I am supposed to teach going oh my god, oh by god. Some of these kids are going to be lost.

2. Teachers need competency with technology

Well, the only one I got right now is the discussion board. That's why I would like to learn how to do the wiki and the Wimba sessions. I would love to learn how to do that when you are sitting there talking.

Yeah, and next year I am certainly going to change it. Take a shot at it and see how it works. It is all brand new to me and, I mean, I understand how to use the software now and things.

And this is my learning curve: Learn how use the software and see how it works.

I would love to be able to know how to get kids grouped. I need to learn the group tool. I need to learn the Wimba stuff. I need to learn how to do the wiki.

I loved the Wimba sessions, even though I had trouble with technologies.

3. Teachers expressed need for blended design

Well, that was another problem we had. At the beginning, the biggest problem we had (online school) was a lot of kids were told if they worked at it (another high school), they could work with those people working the lab up there. I told (principal) one of the things I will not agree to next time, when I do the class, I want the kids to come in and meet with me first. So we have some one-on-one time.

I did this (face-to-face class introduction) with them at the beginning because that was important to me. I worried about kids texting (in an online course) and the kids I didn't see face-to-face, they were texting with the lower case and I made them rewrite at the beginning.

What really sabotaged our program was that (other high school), I think (I) thought they were being nice by helping us by allowing their students to come to orientation session at 3 o'clock in the afternoon and work with a teacher until 5 and I never met half of my students because they took over this whole process of even getting to know the kids in the first place. So, right off the bat, I was very upset saying I don't know these kids, I don't know who they are. I never got to talk with them. I don't know who they are.

I began the course with 25 students and I only met, during the first week, maybe five. So there has to be–I think (other high school) realized this, I don't think it will happen next year, but it is really very important that the teacher meets with the kids right up front and sets some expectations, talks about the collaboration, gets the kids pumped up and excited because right off the bat I lost them, they weren't mine, they weren't mine.

What I have learned is that we didn't spend enough time with the kids at the beginning of the course to get them in a habit of going to the course and getting through the really tedious part of learning about (the) learning management system.

We met for (the) first three weeks face to face. Two times a week. Six times. That gave them a real good grounding in understanding, those who attended, mind you, there were some, though required, didn't do it. Those students experienced many more problems: "How do I configure my computer," "How do I submit an assignment." I could tell, the stress: "It's not working," "How do I do it."

Specifically, with my course we are doing blended, I will bring them in on occasion, so we can have that face-to-face time, whether individually or as a group.

4. Teachers take proactive role

My impression is that this is collaborative on my part with my students as well as them with me and with each other.

Probably about the fourth week, I admit I waited (until) kind of late (calling students). The fifth week, the week before grades, so that was a little too late on my part.

I have a little printout of their attendance sheet and that their cell phone (numbers) next to it in my wallet. I pull it out like a calling card. I will call their cell phone and leave a message. I always say to them, call me within 24 hours or (I'll) need to call your parents.

I think it is related to the instructor, you just got to avail yourself of all the tools that are available to you, all the social tools. As we instructors become more knowledgeable and comfortable, we'll do that. I understand now some of the fear and trepidations that students feel having now recently been in the role of a student.

When these categories are reviewed together ("Problems with Prepackaged Class," "Teachers Need Competency with Technology," "Teachers Expressed Need for Blended Design," "Teachers Take Proactive Role"), a perspective is given on the importance to a teacher's instructional design decisions that will shape and guide what direction social presence will take in the online class.

The third theme that emerged was suggested solutions, or in many cases, a more realistic understanding of the problems faced online and what steps are necessary to start to address them. Teachers provided an array of significant problem-solving statements shown in Figure 8.

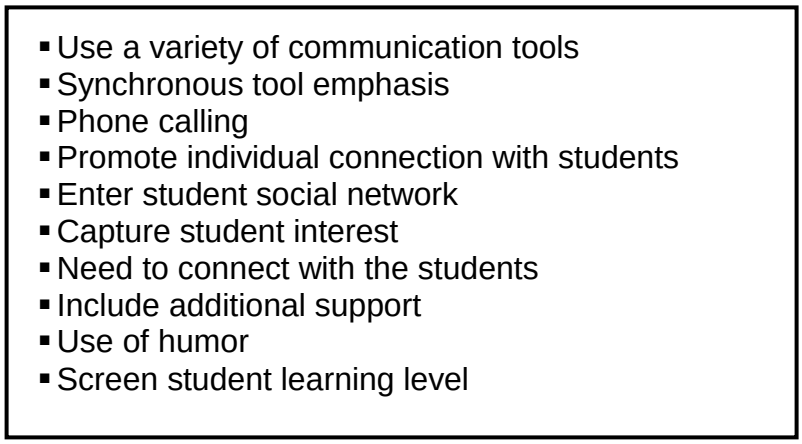

Figure 8. **All of the participants, after teaching their online course, had many ideas about how to solve the social presence problems encountered. These statements supported 10 different solution categories.**

The following categories where derived from teacher statements about how to fix the problems they encountered teaching their online classes:

Solutions to Social Presence Problems

1. Use a variety of communication tools

Journal tool*: Journaling, so they can respond to (the) requirement(s) for weekly writing.*

Group tool*: "My intention is to put them in groups. I want them to work together in (a) group and I am going to look at how they get along," and "I would love to be able to know how to get kids grouped. I need to learn the group tool," and "Something I haven't done, but putting them into groups. Have them work in little group projects, they can collaborate together. They are islands unto themselves the way it is set up now.*

Rubric tool*: No reason I can't set up a discussion board as a homework piece (covering the rubric).*

Podcast audio tool*: "I would like to be able to incorporate my voice in giving some welcome instruction," and "the podcasts, maybe if I did online lectures (webcam), talk to them, podcasts, or if we had them all sign on."*

Avatar software*: I want to be able to use the avatar.*

Synchronous communication tool*: I really like the Wimba sessions. I hope we have the ability to do that.*

Discussion board tool*: And of course the discussion boards (to support social presence).*

Blog tool*: I would like to get kids started out blogging, because that would get them to feel safe about just talking to each other.*

Email tool*: It means the teacher and the student obviously are interacting, whether verbally, (by) phone, through online, through emails, and the work the student(s) do.*

Note: The teachers, in their first online class, did not use many of the mentioned tools, such as the group tool, podcast tool or avatar software. The synchronous communication tool, Wimba, was never used during the teacher's online class instruction. The asynchronous communications tools (discussion board, blog, journal tool) were used minimally. The largest student participation using the discussion board and blog tool occurred in most classes during the opening iceberg activities with 40 or more posts. Participation in the following class discussion boards and

blogs dropped off considerably, in many cases to zero to 10 posts. One teacher used the journal tool consistently throughout the semester, with adequate participation. The majority of teachers recognized the need to better learn how to use these communication tools and to deploy them more effectively with students as a means to improve social presence in the class.

2. Synchronous tool emphasis

Like Skype, if (there's) something like that–Wimba. I have a camera, but I don't know if my kids have access to it. And some of my kids are in poverty-stricken areas so their only access is the computer labs.

In the classroom, you steer the conversation when they get off track. Umm, I have not found a way to do that online, yet, because, well, I have not done the Wimba sessions like we did.

This is when you need to log on to do this, to do a Wimba session, this is the expectation, this is what is coming up. I will be doing a group project.

That's why I want to do Wimba first, because they will talk to each other. I don't want to get them typing to each other. I want to get them talking to each other.

I loved the Wimba sessions, even though I had trouble with technologies, but it was so cool to come in and talk about the readings we had done and just about course design and I think that was what was most inspirational: that you really can design that, can create this online social presence thing and that is why I still believe. I still believe.

I was going see which was going to be the best time for us to meet online and I was going to put them in groups if somebody said Saturdays and then I would just be online (using a synchronous communication tool) those three times during that week to meet with the group.

I think, use the tools, discussion tools and the Wimba. And (with) all of those, making sure they are ready to go and they have an exact time when things are going to be done.

3. Phone calling

When kids did not go in (login), I finally called their parents.

When they stopped logging in and kind of disappeared on me, I started calling, parents and the kids themselves.

I have been on the phone with (their) mom and they keep saying (their children have told them they completed the work). The parents have been very supportive, but they are getting frustrated, too, because they're telling their child, well, you need (to) log on (to) do the work, and still, it is not getting done.

Yes, I called them, not so much the first nine weeks or 10 weeks or so but I have been calling them a lot lately, reminding them that if they are seniors, they need to finish this week (end of semester).

4. Promote individual connection with students

You can set up for all of your students individually. Well, I think that is a priceless tool (journal tool) that needs to be done definitely because you are going to have those kids out there going, holy moly, I don't know how to do this.

I saw the kids doing some plagiarizing. They probably hadn't read the article or anything, but they went ahead and posted. So I think I would make it private at the very beginning, so I could get some real data from the kids, rather than them copying this sentence or that sentence.

Something, at the beginning, where I would not use (the) discussion board where they cannot see other people's comments. I would learn a lot more about the student immediately if I saw they had some writing disabilities or if they didn't understand the topic.

5. Enter student social network

I don't know if I would want to invite them as a friend (in Facebook). I don't think you can send someone a message in Facebook if you are not a friend. I don't know if that would be a wise thing to do? I certainly don't want some kid doing drugs and (posting) all kinds of pictures on my Facebook as a friend. I will be honest with you on that.

Facebook, something more like that (a tool similar to Facebook), something were they can interact. The message boards are specifically supposed to be academic and they are monitored and recorded. They need a little more freedom to talk with their peers online and discuss things and talk about whatever they need to talk about.

6. Capture student interest

I think getting them to read announcements–there needs to be some incentive with all kids–if you respond that you read this announcement you get a free homework pass or something so that, you know, it encourages them. Is there something hidden or missing or I don't have to do that chapter for this week–there's got to be a reason for them to read it,

because… I guess, like the headlines in a newspaper, you read the headline and you are not interested in the story.

If (I) mention global warming to them, they would all have (an) opinion. So you could find things like that, put in there, instead of trying to have the first discussion about vocabulary. I left it up there and see how it worked and what ended up happening was, instead, I think a lack of interest.

So, you know the topic's discussion board has, the blogs and Wikis and things the topics that you do, I think have to be a little bit more interesting, not about the content. That is what I think (needs to be) put in discussion board and Wikis and things. When you talk, you talk about a lot of things.

Instead of putting the discussion board about vocabulary Unit 1, I will wait until Unit 2 then I will put a discussion board in there about global warming or I will put a discussion board in there, or maybe I will wait until Unit 3 you know, but I will wait a little while before I start. I will get it going in here first, OK, then it will show up online.

7. Need to connect with the students

I have a student I see she logs in every single day, but she has not submitted a single lesson the entire semester. Like I said (there) needs to be more contact, I think that's the way, it can't be, "Here's your online class, go get it done." It has to be more and more contact, like a face-to-face. Continuous contact through text, through their email, through the parents.

You can't engage them on their level; administration wants to engage on that higher level. You lose them.

8. Include additional support

I kept calling them on (the) phone and talked with their parents. We actually called one student's counselor and said she is going to flunk this class and not walk the line. I talked to her mother, you know what, she is not going to make it, she's not going to walk the line, she has got to get it done, and it really took practically threatening. I think that is why I decided to change the design, so they feel the consequences earlier.

9. Use of humor

I am a relatively good writer and I know my personality can come through in my writing–so if you look at my announcements, I try to make those user-friendly. I think I might have thrown some humor in but my humor is a little whacky.

The thing is with an online posting, or even letter writing or whatever note writing, the power of the written word is… like a hammer. Much more so than a conversation, because I can say something sarcastic in face-to-face class and my kids are used to that, sometimes grumpy, sometimes sarcastic, sometimes funny, whatever, and all cues that go along with it, they get it. But, if I were to say the exact some thing in a post, it would (be) like wow, you know? You have to (be) careful with language.

I think possibly having some of my assignments a little bit lighter, more humor, instead it was you need to do this and do that and I needed to approach it (in) more of a light manner.

Yes. Humor. The humorous things that happened in a classroom. How I can cajole them, or motivate them, or whatever, through humor. Well, if you do that online, they are going to go bye-bye.

10. Screen student learning level

As (an) English teacher, I don't know what their reading level is and I can kind of gauge little bit from their writing, but if I had access to their scores from their day schools, I don't want to re-test them, because we are tested like crazy and if I test anymore, those kids are going to drop out, so I need access to data to know, OK, this kid (is) reading at a fifth-grade level. Are they reading in grade level, are they reading beyond grade level just as a rule of thumb type of thing. If I had access to previous grade information, that could be a jumping-off point to understand that, so, it's such (a) multilevel onion. I think I have used that metaphor before, I use it a lot.

In addition to these categories regarding suggested solutions, teachers mention the three categories that were included in the instructional practices section above: blended instruction, instructional design and taking a proactive role. When these categories are reviewed together ("Use a Variety of Communication Tools," "Synchronous Tool Emphasis," "Phone Calling," "Promote Individual Connection with Students," "Enter Student Social Network," "Capture Student Interest," "Need to Connect with Students," "Include Additional Support," "Use of Humor," "Screen Student Learning Level") you gain a perspective on how teachers from one semester of teaching an online class are able to adapt their previous teaching knowledge to the circumstances at hand and provide a number of salient suggestions to realign and achieve their teaching expectations about social presence.

Chapter 5

Summary and Implications

Introduction

The purpose of this study was to investigate the human relational phenomena of social presence in the context of computer mediated communication and online instruction. The introduction of an online social presence rubric took place at an entry-level professional development training program for high school teachers new to online teaching. Nine teachers who participated in this training with considerable background instructional experience in the face-to-face classroom were the focus of this study. This was a qualitative study that included two in-depth interviews that took place pre and post the online classes. Observation of four teachers during a face-to-face introductory class to the online class took place. One review of each teacher's online class took place during the final weeks of the semester.

This study explored a number of entry points that surrounded a complex and multifaceted teacher-students relational phenomenon that often takes place behind the closed doors of the classroom with no reference given in the syllabus or class learning objectives.

My observation of the four teachers conducting a face-to-face introduction to their online courses indicated they were skilled facilitators able to leverage their social interactions with students to build rapport and start an inroad to forming a sense of class community among the students. I observed a rich background of instructional knowledge being drawn upon to inform decisions of a social nature with an instructional purpose.

This study explored how a group of teachers understood social presence in a teaching context and what perceptions were active to underpin this phenomenon. The introduction of an online social presence rubric and the resulting influences on perceptions and practices were investigated. Finally, what teachers learned about social presence after teaching on online class was explored.

Strauss and Corbin's "spatial metaphor" for a study, such as walking around a sculpture or circling the wagons, as well as reaching the center point, is one qualitative strategy applied in this study (Creswell, 1998). The emphasis that Lev Vygotsky (1986) made to analyze not only the component pieces of social phenomena, but to consider the "properties of the whole" as well, is another consideration in this study.

There are, at times, murky waters in the field of education between theoretical debate and what takes place in the classroom. One impression left after my many hours of interviews with high school teachers was how the emphasis of statements were on the application of knowledge: what works. Good teachers build from theories every day and invent new ones.

Social presence (in the face-to-face classroom or in the online classroom) is the type of phenomenon that Strauss and Corbin, Creswell and Vygotsky caution about in research methods, because finding a piece of the puzzle can easily be misconstrued. What does social presence actually mean in the context of teaching and learning? Understanding is gained through two seemingly different directions; one circles the wagons, while the other penetrates toward the center. Teachers in this study emphasized how individual conceptual constructs about social presence must be known to teach them, while at the same time, the "big picture" of all the intertwined constructs derived from innumerable experiences and "whole" units of forthcoming knowledge are acted upon by teachers in their thinking and practices. As one teacher said in this study, "Teaching is an art. It's multileveled and it's not a singular thing."

Summary of Research Findings

Question I. *What do teachers identify as the central constructs to social presence?*

Since 1976 and the research of Short et al. (1976), the meaning of social presence in the context of communication technology as "salience," the degree to which person is perceived as a real person and "immediacy," the degree of psychological distance has continued to evolve as more researchers have

scrutinized and studied this concept. There is now a better understanding of how cognitive, affective and identity attributes can be transmitted and reciprocally exchanged through communication mediums between persons (Garrison et al., 2000; Gunawardena & Zittle, 1997; Picciano, 2002; Swan & Shih, 2005; Tu & McIsaac, 2002).

Definitions in the literature tend to be broad; for example, a definition by Swan and Shih (2005) is “the degree to which participants in computer medicated communication feel affectively connected to another” (p. 115). For instructional purposes, both in terms of teaching the concept as well as evaluation, more specificity is required. Teachers in this study identified interaction as the main construct to social presence. In the literature, social presence and interaction are terms that are often used interchangeably with conflicting information about who influences who. In one example, social presence was found to influence online interaction (Lowenthal, 2010), and in another, interaction was understood as a construct that underlies social presence (Tu & McIsaac, 2002).

The data from the teachers in this study indicated interaction was a construct of social presence, and different qualities of interaction existed. These qualities were described in general terms and more specific terms, such as “human interaction, where you connect with the other person” or “it’s a rapport that you develop with your students, so communication between you and them, back and forth, can be on a level that they can deal with.” A variety of interactive qualities were identified: safety, connection, level of comfort, constructiveness and belonging.

The data suggests that interaction, as a central construct to social presence for teaching purposes, requires additional specification: Which interactive qualities are being taught? This outcome concurs with Anderson’s (2003) belief that interaction is a multifaceted concept and is supportive of Wagner’s (1994) contention that interaction needs to operationalize. This also expands on Picciano’s (2002) notion that interaction does not necessarily mean

experiencing “presence” with another person. Interaction, as one teacher in the study suggested, is about “the relationship you build with the kids.”

After teaching the online classes, when the level of interaction between teacher and students and among students was acknowledged as having declined, the participants noticeably did not blame the computer-mediated communication. Interaction was still thought possible with better use of communication tools and balance of face-to-face and online contact. This evidence is aligned with what a number of researchers (Garrison et al., 2000; Gunawardena & Zittle, 1997; Picciano, 2002; Swan & Shih, 2005; Tu & McIsaac, 2002) have indicated: People find ways to connect and experience “presence” with each other through the use of different communication technologies.

In summary, teachers identified interaction as a central construct to social presence and, for this relational concept to be used for instructional purposes, it requires further specificity of what type of interactive quality is to be sought. The evidence of this study also suggests that the interactive quality should not be concretized into only one quality, but rather teachers should be given the latitude to decide which quality to emphasize.

Question II. *How does the Online Social Presence Rubric affect teachers’ understanding of social presence?*

The Online Social Presence Rubric was introduced in an online pedagogy professional development training to high school teachers. I initially developed the rubric with the intention that it be used by teachers as a formative/descriptive teaching/scoring guide (Arter, 2000; Jonassen et al., 1999; Simon & Forgette-Giroux, 2001) to assist in student performance evaluation of online social presence.

How the rubric was actually used during the beginning of this study was as an instructional design tool to help introduce, along with other resources, the concept of online social presence. A number of factors contributed to the rubric not being used as originally intended during this study: teacher newness to online

learning; no course design time prior to teaching, and low student participation levels during the online class.

However, what took place was a robust dialogue and critique of the rubric by teachers during the first interview and prior to teaching an online course. The teachers were familiar with rubrics as an assessment instrument. Teachers freely shared their impressions about the rubric, which I organized into four questions and categories: (1) overarching objectives; (2) descriptors; (3) challenges, and (4) application. These conversations resembled an initial brainstorming session with many more voices and insights than just myself and colleagues working on the rubric design. This data is valuable to the design of the rubric presented in this study and future designs as well. Teachers suggested a need for word/language precision, focus on the student (end user) understanding, application strategies and potential pitfalls.

This process of critique and suggestion engaged teachers in conceptual aspects to the rubric and spurred ideas about how it could be used in the classroom. From the data, it was difficult to determine how the rubric influenced teachers' perceptions about social presence. There were preliminary indications that the rubric influenced teacher identification social presence goals, standards, outcomes and objectives.

Question III. *In what ways do teachers perceive, use or adopt the rubric as an instructional tool?*

Three teachers of the nine used the rubric in their online classes. The reasons more teachers did not implement the rubric were a host of converging factors, which the teachers in the second interview readily identified. In most classes, social presence dropped off a precipice. If the social presence rubric had been used to gauge the overall student performance in social presence in the online classes, teachers would first have little observational data to go on, and second, the majority of students would likely be at the emerging standard for each of the descriptors. There were several instances where teachers reported the development of good rapport with some of their students.

I did not find fault due to a lack of effort by the teachers; on the contrary, their efforts, under the circumstances, were often a testimony to perseverance, adaptability and forbearance.

The three teachers who deployed the rubric used it at the beginning of the course in face-to-face approach, blended approach, as well as entirely online, using an asynchronous discussion board. They expressed a desire to influence the construction of social presence in their class though the use of the rubric. “I wanted to set a tone of how we interact” and “cohesiveness that I wanted was not achieved.”

There was insufficient data to explore this research question further.

Question IV. *What other variables influence the teachers’ perceptions and practices of social presence?*

The data from the first interview provided a backdrop of the many types of variables existent in the formation of social presence perception: family, playground experiences, teacher discoveries in the classroom, recent experimentation with online social networking–all the experiences that have come to inform perceptions. These perceptions were familiar, came naturally and provided the backdrop to the social norms, expectation and routines of what an “interactive” classroom looks like and how it should run. At the same time, as one teacher put it, “It’s hard to narrow down, hard to put your finger on it.”

In the second interview, it became apparent that things had not gone as planned. Attaining “normalcy” in social presence was, as each teacher in this study indicated in various terms, “more difficult than I thought it would be.” When the disruption of social presence occurred during the online classes, intact, tacit and familiar social instructional norms were jarred. This offered a window into social perception formation.

Each teacher relied upon past instructional experience as reference to the phenomena they encountered online. Eight of the nine teachers emphasized the value of social presence had to instruction. As one teacher put it: “It (online teaching) has clarified that online social presence is very important.” In the

absence of social presence in the classroom, participants discovered an environment that was not conducive to either teaching or learning. They found instances where the online classes were dry and impersonal, deeper learning could not take place, low student participation, high student attrition rate and learning being adversely affected.

The teachers responded to the social interruption by seeking to establish perceptual connections between the “new” and the “old” learning environments and to re-establish classroom interaction normalcy. This perceptual process did not resolve itself during the duration of teaching the online course. In the second interview, there was a fervor of speculative ideas and creative adjustment to how to improve connection with and among students. Perception was in a state of adjustment: to learn and to develop new conceptual formations. The teachers could not simply go back and re-establish previous social instructional practices in the online environment but required adaptation of new computer-mediated communication tools and practices. What is interesting to note is the concept of social presence held steady for each teacher in this study. The question was not how to reduce social interaction to improve learning outcome, but how can social presence be recaptured, leveraged and be taken advantage of by the new communication technologies.

The identified variable that influenced social presence the most in this study was its absence. Social presence appears intertwined with our humanity, identity and reciprocal exchange with the environment. The teachers wanted it back and wanted to improve upon how online interaction could enhance learning outcomes.

One reason the literature might give such a fragmented picture concerning social presence and learning is its pervasive nature and ubiquity when people get together and learn from each other. It is hard to quantify this phenomenon into parts, when the object of study has been assembled out of lifelong experiences. For most of educational history, we have learned in relational situations and group classroom environments. Online education, with communication pitfalls as

well as potentials, offers a new opportunity to evaluate the social phenomenon in teaching and learning: What needs to be re-established, let go or be discovered?

Question V. *What did teachers learn about social presence after teaching their first online course?*

Out of the experience of teaching a first online class, participants drew on their past knowledge to confront the new situation, which in turn spurred knowledge creation about how to better teach online and ways to re-establish social presence. Teachers were quick to identify what had gone amiss and what needed to be done to get back on track.

A general “loss of connect” with students was reported by all the teachers in this study, when compared to the face-to-face classroom. Teachers attributed this not only to students “not logging in” but acknowledged how they had done a poor job of gaining entrance to the students’ communication networks that were already established. They found that the new external email accounts that had been set up for the students were simply not used. The remedy was to gain access to the email addresses the students used on a regular basis, cell phone numbers and other ways students were communicating online. None of the teachers used text messaging with their students during the semester. As one teacher summarized, “We need to be part of their social network, otherwise we can be over there and ignored very carefully.” Teachers also considered how privacy and boundaries would need further review.

At the student end, teachers found the student maturity level to present new problems in the online environment: Motivation, self-regulation, time management and life organizational skills were identified as contributing factors to why students were not participating sufficiently in the online classes. This resulted in teachers having to spend a lot of time tracking down students and calling parents. One teacher acknowledged how the calling was perceived more as a negative interaction vs. an affirming one by the students. Several teachers acknowledged or alluded to how online is not the right approach for every student

and that a screening process would be helpful to direct students to the appropriate type of educational environment that suits them best.

Participants quickly found they had to change the design of the prepackaged classes contributed by a state online program. “I think we are finding out we don’t like to import classes from other people, we want to create our own. It is really hard to work with somebody else’s framework.” Teachers said they wanted control over the design of their courses for a number of reasons: instructional effectiveness; the desire for greater interactivity with students and among students; a need to make the courses more interesting to students, and a design that better represents the teachers’ personality and instructional style.

The participants acknowledged they needed to improve their overall competency in the use of technology and communication tools to better utilize them and to reach their full social and learning potential.

The need for an improved blended/hybrid class structure was mentioned by each of the participants. However, what teachers meant by blended instruction varied considerably, such as having a face-to-face class at least once a week, every three weeks, during science labs, twice a semester or only when students were not participating online. Teachers indicated that the absence of having more face-to-face time affected their online classes adversely in building rapport with their students, the establishment of class expectations and being able to show students how to use the learning-management system.

Teachers indicated they needed to take the initiative to facilitate and direct social presence in their online classes through engaging students early in the class and incorporating a variety of communication tools, with an emphasis on the use of synchronous tools, to gain better access to communication tools that students are using and to embed social presence activities throughout the course design.

This study’s data provided suggestions for how instructional practices could be revised or improved in a number of areas. Teachers found they needed

to project their own personality more into the classes themselves to better connect with students. The importance and use of humor was suggested as one possibility, but teachers were also mindful of how humor is difficult to convey online without the occurrence of misunderstanding.

In summary, teachers learned about what disrupted social presence in their online classes and identified possible instructional solutions that they felt would best resolve the “loss of interaction” that took place in their online classes.

Limitations of the Study

Participant size is a limitation to this study. While the size was advantageous for in-depth interviews to take place, participants shared information that covered a variety of experiential topics on social presence and online instruction. A larger sample size would provide more data, better saturation of categories and help to strengthen the study’s validity and the inferences and conclusions made. The results of this study are exploratory and provide suggestions and directions to consider for future research.

The generalizability of this study is a limitation as well. The results are specific to the context of this school district, school and group of teachers. A number of circumstances are unique and difficult if not impossible to replicate, such as the formation of the new district online training program; the particular circumstances of a high school’s endeavor to become a virtual school and provide online classes; the student demographics, as well as a particular teacher’s moment of time and place to begin online instruction.

The participants’ general newness to online instruction provided assets as well as detriments to this study. Confronted with the degree of change, new technologies and unanticipated disruptions, a teacher’s attention to social learning was not possible under these circumstances. A more experienced online instructor might have possibly taken the rubric further in instructional application. However, the rubric is in its infancy and participants’ impressions about the rubric can assist in further development prior to deployment during actual instruction.

This study also lacks the research strength of a mixed-method approach and qualitative data could strengthen research validity and reliability. Consistency of measurement could be enhanced by the development of a questionnaire that addresses the research questions posed in the study. Additional measurement tools would help triangulate the accuracy of analysis. More research data and different types of data would obviously strengthen the propositions made in this study.

There are also other operating variables in the study that cannot be ruled out as influential on the data and results. For example, the student population was predominately remedial students, and the disruptions of social presence experienced online may be because high dropout rates exist with this population regardless of the online circumstances.

Implications

Social presence is a little-understood concept in teaching practices, yet it is operational to some extent in almost any class and often carries implications concerning student satisfaction and learning. As one teacher stated in this study, “Social presence is there all the time, and I think it is you working with the kids and interaction with the kids that it is the social presence, really what it is all about.” The teacher goes on to explain the “it” as reaching a social place where the learning is supported: “You can learn better in that kind of environment than when on edge and don’t know anybody or feel like a little individual.” The literature has emphasized how social presence is not simply a product of communication technology capability but an extension of a person’s capacity to mutually project and receive psychological and emotional meaning, such as a sense of affective connection, identity of self, co-awareness or sense of belonging (Garrison et al., 2000; Gunawardena & Zittle, 1997; Picciano, 2002; Swan & Shih, 2005; Tu & McIsaac, 2002).

Although this study cannot be generalized, it does provide a number of implications that may, with further research, prove to be significant to online education and how to better utilize social presence for instructional purposes.

Teachers in this study identified “interaction” as a central construct to social presence that is consistent with research in the field. For this concept to be meaningful for practical instructional purposes, the participants suggest that different qualities of interaction need to be specified. This has possible ramifications in teacher education and professional development: that the idea of social presence be presented in a more malleable state where teachers take the concept of interaction and decide which interactive qualities are relevant to teaching their online class. This suggests that the presentation of a social presence rubric to train teachers may not be the best instructional practice. An alternative strategy would be to first allow teachers to construct their own social presence rubric based on their own instructional knowledge. This might offer higher learning efficacy.

This study also provides implications for teaching high school students online. Teachers stressed how a more blended design would improve rapport with students and depth of student learning. This raises questions about student development as social/communicative cognitive skills are shaping. Is an entirely online class an appropriate instructional method? In other words, a teenager’s capacity to project social-emotional meaning has not entirely evolved yet. The “connective” function is not entirely matured, and a certain level of face-to-face connectivity and social scaffolding is necessary. An entirely online learning environment, particularly one with diminished social interaction, may be disruptive to symbolic interactionism (the mind develops through dialectal relationships) espoused by James, Baldwin, Cooley, Thomas, Dewey and Mead. How does a student develop a self-concept “through how others view us” in an online class? Can online support this type of relational learning, which often is not explicitly part of the learning objectives but goes on nevertheless.

Many questions like this one are worthy of further consideration as online education filters down to secondary education. How online education is being designed and practiced may need re-evaluation and may need considerable revision based on age groups and development levels.

Each teacher in this study had certain criticisms of the online class they had inherited. As many of the teachers indicated, the redesign of their course took a lot of work. With extremely busy schedules, I had expected there would be more of an acceptance of teaching from a prepackaged class, but this was not the case. Teachers pointed out a variety of design problems that interfered with the teaching and learning process in their online class. Teachers wanted and had control to change or modify the online class, as they deemed instructionally appropriate. A number of teachers made significant changes to the class design, mostly as they were teaching. Several teachers discussed significant revisions for next semester. This is an important aspect of online education that needs further consideration and study. Control over the learning environment has new implications with the online environment–where external authority can be much more easily imposed on the course design itself than it can be in the face-to-face classroom. This has far-reaching ramifications for secondary education, which in general has more external standards imposed on the educational process than higher education.

Overall, this study found the participants used their autonomy and expertise effectively, as they started to respond to the circumstances they were encountering in the online environment. Teachers in this study, through trial and error, took substantial steps toward understanding how to direct the available communication technologies to influence student learning experiences vs. the technology controlling the instructional methods and student-learning outcomes. Teaching online did not appear to diminish the teacher's wide instructional knowledge base, but rather called for this knowledge to be applied to improve student learning.

Finally, this study offers suggestions about teacher education and professional practice training programs regarding the topic of online social presence. The evidence provided in this study suggests that teachers learn better from the application of knowledge and the actual hands-on process of teaching students, as opposed to the traditional structure of feeding teachers

informational content. A number of teachers alluded to how they did not fully understand the content of the online pedagogy training until they had actually had the experience of teaching online. This suggests that online training programs for teachers require a strong practicum component along with the transfer of knowledge resources.

Future Research

The possible future directions of research from this study are many. The findings from this study on how teachers defined the meaning of interaction as a construct of social presence for instructional purposes could certainly benefit from further study. Further understanding of how teachers perceive and teach “interactive qualities” and “presence” in online courses would be a worthwhile investigation.

The formation of teacher perceptions about social presence and how these perceptions translate into teaching practices is a complex psychological process that warrants further research. Other influential variables could be studied in more detail, such as looking at the importance of cultural influences on social presence or prior educational experiences.

While there is much debate in the literature about the degree to which social presence has an influence on student satisfaction and learning, this study found when the absence of social presence was encountered in online classes, a significant downturn occurred in educational environment that adversely affected the teacher-student relationship. Further research to confirm or refute this finding is needed.

This study introduced an online learning rubric that was only minimally used or tested during actual instruction time. This study offers initial data that can be used in the revision of the rubric’s design. Introducing this rubric to different teacher populations, such as experienced online instructors who teach adult learners or an educational culture that promotes inquiry or project-based learning could assess design strengths and weaknesses. Future studies could continue to explore the use of this social presence rubric as training tool, such as in teacher

professional development programs. Further research could continue to explore and test the rubric's validity and reliability as a performance assessment instrument.

Future research questions, as online instruction takes on more prominence in K-12 education, include to what extent the use of computer-mediated communication elevates or diminishes "social connectivity" and what are the implications on student learning and cognitive-social development.

Other research questions could investigate how blended design differs in influence regarding online social presence vs. an entirely online class; how to access and leverage established student social networks for educational purposes, and how to better translate teacher social knowledge and experience from the classroom into the online environment.

Closing Remarks

After spending many months working on this study, from proposal to data collection to analysis to writing the narrative and nearing a final draft, I took a walk outside a friend's trailer home in Embudo, New Mexico (where I had spent important writing points on this dissertation) and meandered past cottonwoods down to the Rio Grande. I asked myself what I had learned from conducting this research, if I could give synthesis to the outcomes and many parts?

I learned a lot of what goes on concerning social presence in any given communication interaction at a tacit level is continually influenced by a rich background and storehouse of experiences. The nature of social presence itself among the teachers in this study was a shared experience. There are, of course, differing flavors and manifestations, but they seem to stem from someplace that is less of an individualized enterprise or learned experience, and more a part of the hardware of being human, while the meaning and practice of social presence can be influenced by a multitude of factors such as culture, upbringing and influential moments of being present with another person.

I contemplated to what extent social presence, from the perspective of its psychological embeddings, has driven the creation of communication tools

throughout human history. Computer-mediated communication is the latest in a long list of inventions. Of course, learning and new knowledge comes out of the use of these inventions, but there is always a reciprocal process under way between a person and the tool they use to communicate. The person is an active agent on the communication device itself who will infuse, construct and extend social meaning.

This study did not refute a contention of mine that continues to evolve, dissolve and reform: Just as we are made of physical and psychological elements, we are, as well, made of social elements–the subtle yet common part of the human mind that can be present to and interrelate with another. In more cases than not, it is this social “quality of presence” that sustains development and enables learning to take place between teacher and student.

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Appendixes

Appendix A: Model and Template for Assessment of Social Presence

Affective responses	The adjectives attributed to both social presence and teacher immediacy. For example, closeness, warmth, affiliation, attraction, openness (p. 57).
Cohesive responses	This category is exemplified by activities that build and sustain a sense of group commitment. It is defined in our analysis by three indicators: phatics and salutations, vocatives, and addressing the group as ‘we,’ ‘our,’ or ‘us’ (p. 59).
Interactive responses	“They build and sustain relationships, express a willingness to maintain and prolong contact, and tacitly indicate interpersonal support, encouragement and acceptance of the initiator” (p. 58).

Affective Category

Expression of emotions	Conventional expressions of emotion or unconventional expressions of emotion.
Use of humor	Teasing, cajoling, irony, understatements, sarcasm.
Self-disclosure	Presents details of life outside of class or expresses vulnerability (p. 61).

Interactive Category	
Continuing a thread	Using reply feature of software, rather than starting a new thread.
Quoting from others' messages	Using software features to quote others' entire message of cutting and pasting selections of others' messages.
Referring explicitly to others' messages	Direct references to contents of others' posts.
Asking questions	Students ask questions of other students or the moderator.
Complimenting or expressing appreciation	Complimenting others or contents of others' messages.
Expressing agreement	Expressing agreement with others or content of others' messages (p. 61).
Cohesive Category	
Vocatives	Addressing or referring to participants by name.
Addresses or refers to group using inclusive pronouns	Addresses the group as 'we,' 'us,' or 'our.'
Phatics, salutations	Communication that serves a purely social function: greetings, closures (p. 61).

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (1999). Assessing Social Presence in Asynchronous Text-based Computer Conferencing. *Journal of Distance Education, 14*(2).

Appendix B: Tierney & Simon Three Guiding Questions

1. Are all the performance criteria explicitly stated? Are the performance criteria present in the rubric those intended? Is there anything that is implicitly expected in the students' products or performances that is not stated in the rubric?

2. Are the attributes explicitly stated for each performance criterion? Are the underlying characteristics of the performance criteria known? Are these attributes clearly articulated within the rubric?

3. Are the attributes consistently addressed from one level to the next on the progression scale? Is the rubric addressing the same attributes for each student's product or performance across the levels? Does the value of the attribute vary in each level descriptor, while the attribute itself remains consistent across the scale levels? (p. 8-9)

Tierney, R., & Simon, M. (2004). What's still wrong with rubrics: focusing on the consistency of performance criteria across scale levels. *9*(2).

Dornisch & McLoughlin, Eight questions:

1. Does this rubric match the knowledge and skills embedded in the purpose of my instructional activities and the goals and objectives of the unit?

2. Is this type of rubric the best one for my current need?

3. Is each criterion understandable, irreducible, and important? Can I, and can the students, work easily with the number of criteria in the rubric?

4. Are the number and type of performance levels used in the rubric appropriate for these criteria? Are the performance levels clearly understood by the students?

5. Does the language used in the descriptors clearly and descriptively distinguish between different levels of performance on each criterion? Is the text appropriate for the ages, reading levels and cultural context of my students? Is the rubric written using positive (rather than negative or deficit-oriented) language?

6. Is the overall layout efficient, clear and useful? Is there room for additional teacher comments on student work, should that be desired?

7. Have examples been created (or found among student work) that anchor the meaning of the descriptors so that readers clearly understand what work looks like at different levels of performance?

8. Have users read through the rubric–or better, tried it out–and been given feedback on the rubric's clarity? If multiple educators will use the rubric, has it been tested for consistency across scorers? (p. 6)

Dornisch, M. M., & McLoughlin, A. S. (2006). Limitations of web-based rubric resources: Addressing the challenges. *Practical Assessment, Research & Evaluation, 11*(3), 1-8.

Moskal Six Focal Areas:

1. The criteria set forth within a scoring rubric should be clearly aligned with the requirements of the task and the stated goals and objectives. As was discussed earlier, a list can be compiled that describes how the elements of the task map into the goals and objectives. This list can be extended to include how the criteria that is set forth in the scoring rubric maps into both the elements of the task and the goals and objectives. Criteria that cannot be mapped directly back to both the task and the purpose should not be included in the scoring rubric.

2. The criteria set forth in scoring rubrics should be expressed in terms of observable behaviors or product characteristics. A teacher cannot evaluate an internal process unless this process is displayed in an external manner. For example, a teacher cannot look into students' heads and see their reasoning process. Instead, examining reasoning requires that the students explain their reasoning in written or oral form. The scoring criteria should be focused upon evaluating the written or oral display of the reasoning process.

3. Scoring rubrics should be written in specific and clear language that the students understand. One benefit of using scoring rubrics is that they provide students with clear description of what is expected before they complete the assessment activity. If the language employed in a scoring rubric is too complex for the given students, this benefit is lost. Students should be able to understand the scoring criteria.

4. The number of points that are used in the scoring rubric should make sense. The points that are assigned to either an analytic or holistic scoring rubric should clearly reflect the value of the activity. On an analytic scoring rubric, if different facets are weighted differently than other facets of the rubric, there should be a clear reason for these differences.

5. The separation between score levels should be clear. The scale used for a scoring rubric should reflect clear differences between the achievement levels. A scale that requires fine distinctions is likely to result in inconsistent scoring. A scoring rubric that has fewer categories and clear distinctions between these

categories is preferable over a scoring rubric that has many categories and unclear distinctions between the categories.

6. The statement of the criteria should be fair and free from bias. As was the case with the statement of the performance activity, the phrasing used in the description of the performance criteria should be carefully constructed in a manner that eliminates gender and ethnic stereotypes. Additionally, the criteria should not give an unfair advantage to a particular subset of students that is unrelated to the purpose of the task. (para. 18)

Moskal, B. M. (2003). Recommendations for Developing Classroom Performance Assessments and Scoring Rubrics. *Practical Assessment, Research & Evaluation, 8*(14), 1-10.

Appendix C: Online Social Presence Rubric

Student learning outcome is:

The student demonstrates his or her presence through constructive interactions with others that generate a sense of belonging and improve our community's learning

Descriptors	Extends standards	Meets standards	Nearly Meets standards	Emerging
Presentation of self/identity	The student: extends his/her demonstration through one or more of the following: ▪ Taking the initiative to create learning opportunities ▪ Facilitating our group's learning altruistic actions for the group benefit	The student: ▪ Conveys overall positive tone through appropriate ▪ And authentic interactions with others and use of acceptable (online) social conventions	The student is inconsistent: ▪ In conveying overall positive tone and/or ▪ May also be inconsistent through the use of acceptable (online) social conventions	The student: Is not able to have constructive interactions with others, and therefore this detracts our community from learning
Affective expression	Utilizes emotion to build trust, cohesion and sense of diversity	The student conveys personal expressions of emotion, feelings, beliefs and values (such as use of paralanguage, statement of values, use of humor, self disclosure) that are appropriate within the context of the communication	The student conveys personal expressions of emotion that may be lacking appropriateness for the context of the communication	The student demonstrates minimal or inappropriate use of emotional expression

Descriptors	Extends standards	Meets standards	Nearly Meets standards	Emerging
Diversity	The student can demonstrate both of the following: ▪ Inclusivity toward those with differing perspectives and norms ▪ Negotiate divergent perceptions between self and other, or others to resolve conflict	The student demonstrates at least one the following: ▪ Inclusivity toward those with differing perspectives and norms ▪ Negotiate divergent perceptions between self and other, or others to resolve conflict	The student can identify personal differences and can explain how these differences influence interactions with others (which maybe cultural perceptions)	The student lacks sufficient insight about personal differences and how they influence interactions with others (which maybe cultural perceptions)
Interactive communication	The student acknowledges diverse perspectives and consolidates multiple points of view into a decision that otherwise would not have been possible	The student asserts his/her personal point of view, values and emotions while: ▪ Demonstrating respect of others' perspective ▪ Awareness of and recognition of each other's contribution which supports a decision or group's point of view	The student can respectfully assert point of view but may not acknowledge others' perspectives and/or not able to recognize others' contributions	The student cannot appropriately assert his/her own point of view and is unable to acknowledge other perspectives
Group cohesion		The student demonstrates a commitment to group by extending a sense of belonging to other group members and makes relevant connections to improve group functionality	The student: ▪ Is inconsistent in his or her personal connection within a group ▪ Makes only partial connection with members of the group	The student is not able to become a member of the group

Appendix D: First Interview Questions

1. What do you identify as the central constructs to social presence?
    a. Based on your teaching background, training and experience, how do you understand the meaning of social presence in the context of online instruction?
    b. What specific constructs (central concepts) do you think make up online social presence?

2. How has the Online Social Presence Rubric affected you understanding of social presence?
    a. How did our initial interview affect your understanding?
    b. Rubric design questions:
        i. What are your initial impressions of the Online Social Presence Rubric?
        ii. What is your impression of the rubric's overarching learning outcome?
        iii. Do the rubric descriptors (major categories or constructs) sufficiently cover the areas of online social presence performance?
        iv. Are there any other major descriptor/constructs areas that are missing and should be included?
        v. How might you introduce and use this rubric in your online course?
        vi. What instructional challenge(s) do you perceive you would find if you were to use this rubric in your online course?
        vii. If you could tweak or adjust the rubric instrument, what would you refine or change?
        viii. Are there other instructional methods or practices that you plan to use to address social presence considerations in your course?

3. What other variables have influenced your perceptions and practices of social presence prior to teaching an online course?

4. Do you have any questions about what has been asked or any additional comments to add to this interview?

Appendix E Course Observation Guide

Course name:

Instructor initials:

Date examined:

Evidence of Online Social Presence Rubric Use:

[ ] No

[ ] Yes

Location/name where used in course:

At what stage of course is the rubric introduced:

Other evidence of social presence in the course:

Amount of instructor involvement/participation/interaction:

[ ] High [ ] Adequate [ ] Low

Examples:

Amount of student involvement/participation/interaction:

[ ] High [ ] Adequate [ ] Low

Examples:

Types / amount of use of communication tools used in course:

Discussion Board:

Blog:

Wiki:

Other:

Journal:

Synchronous:

Other observations:

Number of enrolled students:

Number of students not passing:

Number of passing students:

Appendix F: Second Interview Questions

1. What do you identify as the central constructs to online social presence?
    a. Based on your teaching background and experience after teaching an online course, how do you understand the meaning of online social presence?
    b. What specific constructs (central concepts) do you think make up online social presence?
2. How did the Online Social Presence Rubric affect your understanding of online social presence?
    a. How did our interview(s) affect your understanding?
3. In what ways did you use or adopt the rubric as an instructional tool?
4. What other variables influenced your perceptions and practices of social presence while teaching an online course?
5. What did you learn about social presence after teaching an online course?
6. Do you have any questions about what has been asked or any additional comments to add to this interview?