

11-5-2010

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An Exploration of Synchronous Communication in an Online Preservice ESOL Course:

Community of Inquiry Perspective

by

Aylin Tekiner Tolu

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of World Languages
College of Arts and Sciences
and
Department of Secondary Education
College of Education
University of South Florida

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Date of Approval:
November 5, 2010

Keywords: distance education, computer mediated communication, synchronous web-based course system, higher education, English as a second language

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DEDICATION

To my parents Senay and Ali Tekiner

ACKNOWLEDGMENTS

I owe special thanks to several people who helped me conduct this dissertation. First and foremost, I would like to thank my major professor, Dr. Linda Evans for her outstanding mentoring, expert guidance, patience, and for always being available and supportive whenever I needed. I would also like to acknowledge my committee members, Dr. James White, Phil Smith, and Adam Schwartz for their, support, expertise, and invaluable ideas and challenges. In addition, I would like to extend my sincere appreciation to Dr. James Paul, who served in the committee and provided philosophical insights and wisdom during the proposal stage of the study.

Beyond my committee, I want to thank my ESOL-3 students who volunteered to participate in this study. I also want to thank my friends and colleagues in the Second Language Acquisition and Instructional Technology Ph.D. program for their support. A special thanks to Angela Cresswell, Muberra Sahin, Derya Kulavuz-Onal, Radhika Lothe, Victoria Russell, Jane Harvey, Maria Paul, and Shengrong Cai, who all helped with many different ways and always motivated me to finish. I am very grateful to Angela, who listened to my whining, encouraged me, and gave me strength when needed most.

Finally, I want to express my gratitude to my husband, parents, sister and brother for their nonstop love, care, support and patience. Without their support, I would not be able to finish this dissertation.

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ABSTRACT

Based on a collaborative and socio-constructivist approach to online education, the Community of Inquiry (CoI) model emphasizes creating an effective learning environment where students feel a connection with other learners and the instructor and engage in well-designed collaborative learning activities.

Following a naturalistic methodology, this qualitative case study investigated the use of synchronous communication for creating a community of inquiry and student satisfaction in an online ESOL (English Speakers of Other Languages) endorsement course for preservice teachers. Elluminate Live was used for class meetings while an instant messenger, Gmail Chat served the needs for impromptu interactions between a student and the teacher.

The study was guided by the CoI framework. Data sources included online recordings of live meetings, student written reflections, surveys, interviews, and teacher/researcher journal.

The findings indicate that synchronous communication enhances building and sustaining an online community of inquiry. Gmail Chat provided increase in teacher availability, social presence, and student satisfaction, however it did not contribute much

to creating cognitive presence simply because it was not planned to be used for content delivery. Moreover, Elluminate Live contributed effectively to the community of inquiry by enabling manifestations and interactions of its 3 elements; social, teaching, and cognitive presence. Participants perceived that live class meetings promoted their learning and helped them feel the instructor and other students in a more real sense. Class meetings via Elluminate Live promoted cognitive presence by affording the students opportunities for listening to the presentations by the teacher and other students, watching a teacher demonstration through a webcam, interacting actively through Whiteboard tools, text-based chat, microphone, and emoticons, and working with their groups in their private breakout rooms. Instant and audio communication among students created a sense of social presence with trust, comfort, and belonging, and enhanced group work efficiency.

The study highlights the critical role of synchronous communications to create effective online learning communities, however it also underlines that the implementation of synchronous communication tools requires robust pedagogical planning to enhance student learning.

CHAPTER ONE: INTRODUCTION

Overview

Online distance education has become an important strategy for higher education institutions. In 2000, Washington State's Higher Education Coordinating board asked the Legislature to provide more funds for online education (Camevale, 2000). Enormous growth in distance education and blended learning is forecasted (Kim & Bonk, 2006). Recently, the 2008 Sloan Survey of Online Learning has revealed that 3.94 million students were enrolled in at least one online course in fall 2007. For the past few years, surveys show that online student enrollment is on the rise faster than overall higher education enrollment (Allen & Seaman, 2008).

Distance learning has been shaped by technological developments especially, Internet and computer mediated communication (CMC) systems and by the shift from instructor-centered to learner-centered approaches (Benjamin, 2003; Palloff & Pratt, 1999). Several researchers have asserted that distance education is entering into a new era that might be termed postindustrial. At the core of this era is collaborative learning and frequent two-way communication (Garrison, 1997, 2000; Peters, 1993). CMC technologies, which can be either synchronous or asynchronous, have a profound impact on the quality of distance learning (Palloff & Pratt, 1999; Wang, 2008). Synchronous

communication provides real-time interaction and immediate feedback while asynchronous communication features delayed and generally text-based communication.

A challenge facing distance learners is feeling a sense of isolation and disengagement. Compared to their face-to-face section counterparts, online learners indicated a lower level of sense of community (Rovai & Lucking, 2003). Research also showed that online learners who do not feel a sense of belonging to a class or a connection with class members and the course instructor tend to drop the course or have a low level of satisfaction and learning success (Galusha, 1997; Hara & Khling, 1999; Kubala, 1998; Patton, 2008; Palloff & Pratt, 1999; Rovai & Ponton, 2005). Therefore, creating a community of learners, or in other words, a sense of togetherness in online courses is crucial for students to feel a connection with other learners and instructors for student satisfaction and knowledge acquisition (Dickey, 2004; Ellis, 2001; Ni & Aust, 2008; Palloff & Pratt, 1999; Powers & Mitchell, 1997; Stodel, Thompson, & MacDonald, 2006).

This study investigated the role of synchronous communication for community building and student satisfaction and learning in an online ESOL (English Speakers of Other Languages) endorsement course for preservice teachers at a large metropolitan university in the Southeast. Two types of synchronous communication tools were implemented and studied in the course: (a) instant messenger, Gmail chat for spontaneous one-on-one communication with the instructor in place of office hours; and (b) a synchronous web-based course system (SWBCS), Elluminate Live, for whole class meetings. Gmail chat has been in use in the research setting since fall 2008 when the

university started using Google Applications. Through the university administered email interface, students and teachers can now benefit from text-based, two-way audio or video chat for synchronous communication. Elluminate Live was incorporated at this same point into the course management system, Blackboard.

Theoretical Framework

Several theories and concepts play a significant role for the theoretical background of this study. I introduce four key terms here and discuss them in detail in subsequent chapters: Constructivism, sociocultural theory, computer-mediated communication/interaction (CMC/I) and online learning communities.

Constructivism

As a qualitative case study, this research study follows a naturalist approach (Guba and Lincoln, 2005). This approach is predicated on the idea that knowledge is constructed by people in a social context, whereas positivist approaches follow with the assumptions that knowledge is available quantitatively, to be measured objectively. In qualitative research, it is assumed that knowledge or data is not objective. We perceive everything from our point of view so that ultimate objectivity is not possible. According to Creswell (1998), our assumptions or beliefs are related to ontology; the nature of reality arguably guides the qualitative researcher. In this study, I (the researcher), my participants and you, the reader, will contribute and co-construction the multiple realities that shape this study. This collective ‘co-construction’ is paramount to establishing as a paradigm of research and instruction.

Constructivism has shaped distance education profoundly (Hannafin & Hill, 2002; Tam, 2000). Not only does it play an important role in the research setting for course

design and delivery, but it also frames the proposed study. Constructivism has emerged from the work of such theorists as Jerome Bruner, Jean Piaget, and Lev Vygotsky (Liaw, 2004). Two strands guide the discipline: cognitive constructivism and social constructivism (Liaw, 2004). Cognitive constructivism, drawing from Piaget, argues that “learners construct their own knowledge of the world through assimilation and accommodation” (Liaw, 2004, p. 313). While cognitive constructivism has an individualistic approach, the second strand, social constructivism, drawing from Vygotsky, emphasizes the role of the social context where learning is assumed to take place through interaction with others (Liaw, 2004; Mackinnon, 2004).

Sociocultural Theory

Sociocultural theory (SCT) was founded by Vygotsky approximately 80 years ago. It is “a theory of human development that unites the ontogeny of an individual with the cultural-historical milieu and the variable processes of participation in culturally organized activity” (Thorne, 2005). SCT’s most fundamental insight is that the human mind is always mediated (Lantolf, 1994; 2000; Mondada & Doehler, 2004). Mediation refers to human activities which are manifested by symbolic objects (Lantolf & Thorne, 2006). Mediation takes place by both physical and psychological (symbolic) tools that are created by human cultures over time and modified by each generation. Through using these tools, human beings can have indirect or mediated relationship with their surroundings. As physical tools (hammer, car, computer, and so on) help humans organize and change their environment, symbolic tools (numbers, music, art, language, and so on) help humans control cognitive/psychological processes. Physical tools are directed toward objects while symbolic tools are directed toward subjects.

SCT views learning and teaching as one whole activity (Vygotsky, 1978). SCT situates learning in the social activities. Learning is seen as a cyclical event within a zone of proximal development (ZPD), which is defined as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86).

SCT provides a strong framework for second language teacher education (Golembek & Johnson, 2004; Grubb & Hines, 2000; Davies 2002). Moreover, in the distance education field, SCT has been applied to curriculum design and research studies (Fisher, 2003; Gillani, 2000). Because social interactions are crucial for the learning process in an online environment, studies that focused on synchronous and asynchronous communication tools investigated teaching strategies that encourage interactions and facilitate learning (Schullo, 2005; Fisher, 2003).

Interaction and Computer-Mediated Communication

Interaction, considered one of the most important components of learning (Dewey, 1938; Vygotsky, 1978) is also a core construct in online learning and research (Swan, 2002; Vrasidas, & McIsaac, 1999; Moore, 1998; Rovai & Ponton, 2005; Johnson, 2006; McIsaac & Gunawardena, 1996; Davidson-Shivers, 2009; Anderson & Kuskis, 2007). One of the most cited definitions of interaction in literature is attributed to Wagner (1994) as:

reciprocal events that require at least two objects and two actions. Interactions occur 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. Its purpose is to respond to the learner in a way intended to change his or her behavior toward and educational goal. Instructional interactions have two purposes: to change learners and to move them toward achieving their goals. (p. 8)

In more dated distance education literature, three types of interactions were identified as: (a) learner-content; (b) learner-teacher; and (c) learner-learner (Moore, 1989). Later, Hillman, Willis, and Gunawardena (1994) added the fourth mode-- learner-interface interaction. Recently, as displayed in Figure 1, additional interaction types have been discussed: learner-institution, teacher-institution, and teacher-teacher interaction (Anderson & Kuskis, 2007).

Learner-centered approaches based on collaborative and constructivist learning models emphasize the critical role of communication and collaboration among students as well as between students and teachers for student satisfaction and effective learning (Anderson, 2008; Swan, 2002).

Community of Inquiry (CoI)

A learning community from a social learning perspective is defined as “a common place where people learn using group activity to define problems affecting them, to decide upon solutions, and to act together to achieve these solutions” (Tu & Corry, 2002,

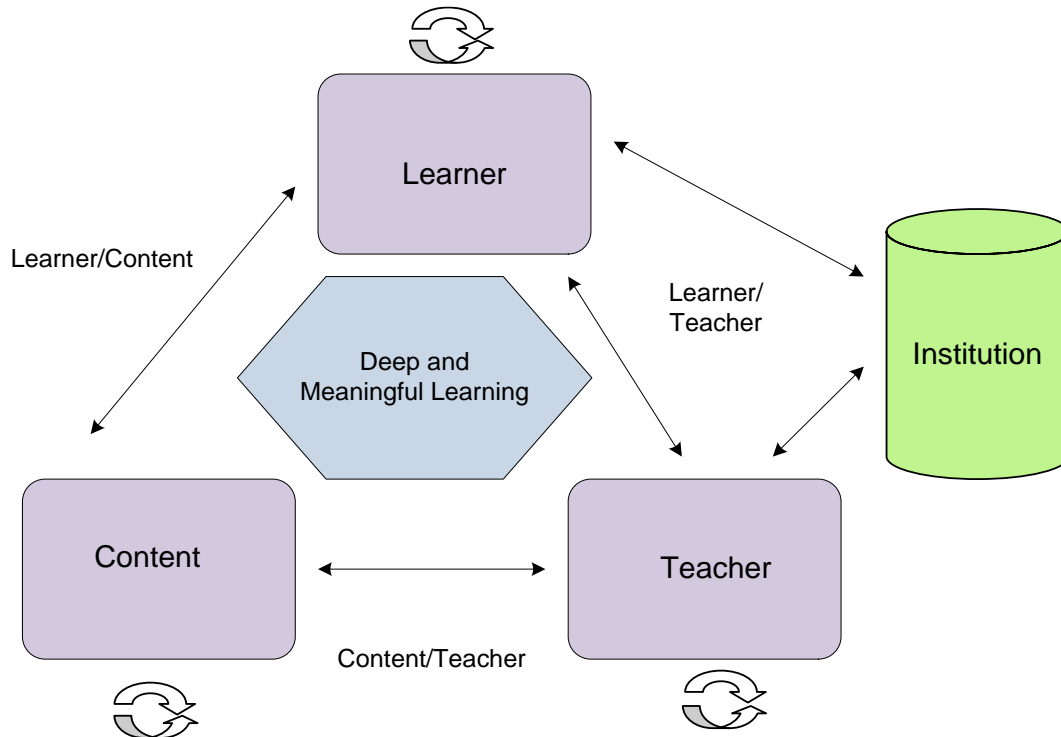


Figure 1. Types of interaction in distance education (Anderson & Kuskis, 2007, p. 297).

p. 207). In a web-based learning environment, such community may be called an online learning community, eLearning community, online learning network, or virtual learning community (Tu & Corry, 2002, 2003).

One of the theoretical frameworks for online learning communities is Garrison, Anderson, and Archer's (2000) Community of Inquiry (CoI) model. The CoI framework has been widely applied to research on asynchronous learning environments and proven to be a useful theoretical framework (Akyol & Garrison, 2008; Swan, 2004).

Displayed in Figure 2, this model emphasizes three kinds of overlapping interactions as necessary for online community building: cognitive presence, social presence, and teaching presence. The presences are operationally defined in terms of the constituting categories and indicators which guide the coding and analysis of transcript of a given

online course to measure the extent to which each category is represented (Akyol & Garrison, 2008; Garrison & Arbaugh, 2007).

Social presence refers to “[t]he ability of participants in a community of inquiry to project their personal characteristics into the community thereby presenting themselves to others as real people” (Garrison, Anderson, & Archer, 2000, p. 89). Operationally, social presence is defined by frequency counts of three types of communicative action in a computer conference: open communication, group cohesion, and affective expression, including indicators of risk-free expression, encouraging collaboration and emoticons.

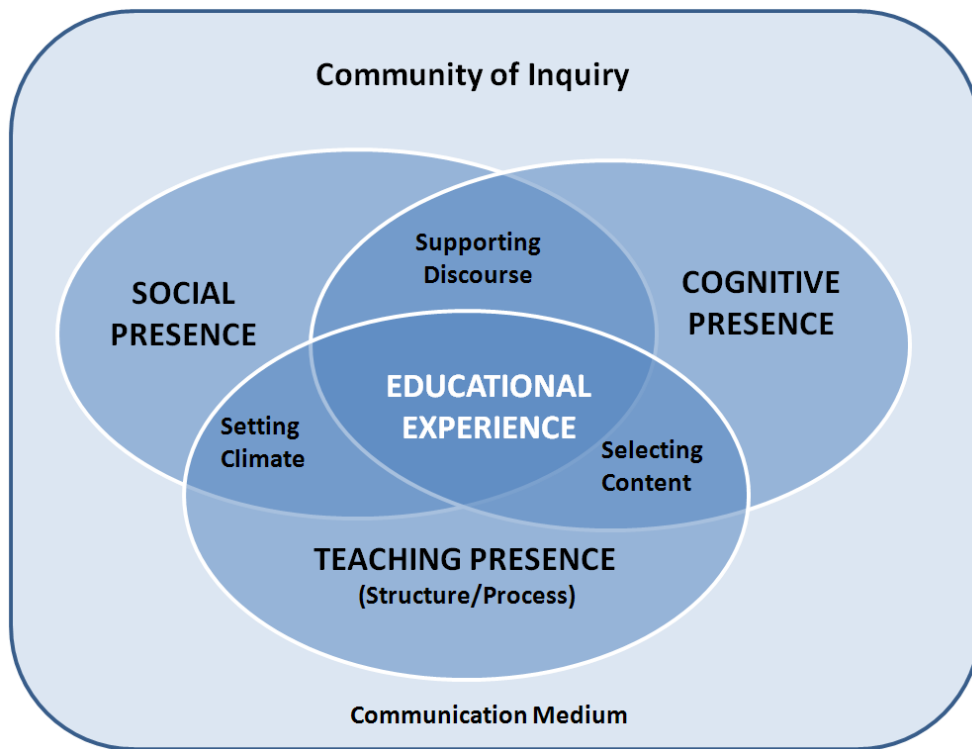


Figure 2. Elements of an educational experience in Community of Inquiry Model (Garrison, Anderson, & Archer, 2000, p. 88).

Grounded in foundational critical thinking scholarship, cognitive presence is defined as “the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse” (Garrison & Arbough, 2007, p. 161). Cognitive presence is operationalized “in terms of a cycle of practical inquiry, where participants move deliberately from understanding the problem or issue through to exploration, integration and application” (p. 162).

Teaching presence is defined in terms of design, facilitation and direct instruction. For the CoI to emerge, all three presences should be present. In addition, correlations have been found between perceived learning and student satisfaction and each of the presences of the CoI (Akyol & Garrison, 2008; Shea, 2006; Shea, Li, & Pickett, 2006).

A summary of the CoI elements and characteristics is displayed in Table 1.

Table 1

Operational Definitions of the Presences and Coding Template in CoI (Akyol & Garrison, 2008, p. 4)

ELEMENTS	CATEGORIES	INDICATORS (examples only)
Social Presence	Open Communication	Learning Climate/ Risk-Free
		Expression
	Group Cohesion	Group Identity/Collaboration
	Personal/Affective	Self-Projection/Expressing
		Emotions
	Triggering Event	Sense of Puzzlement

Cognitive Presence	Exploration	Information Exchange
	Integration	Connecting Ideas
	Resolution	Applying New Ideas
	Design & Organization	Setting Curriculum & Methods
Teaching Presence	Facilitating Discourse	Shaping Constructive Exchange
	Direct Instruction	Focusing and Resolving Issues

Statement of the Problem

As depicted in the introduction, online education faces the challenges in building a community of learning to promote effective communication and collaboration for better student satisfaction and learning. Another challenge is related to the implementation of new multi-faceted complex synchronous web-based course systems in already existing asynchronous learning environments. These factors become increasingly significant when considering an online ESOL education course as a research setting.

Although learning communities have been found to be effective for more than two decades, their adaptation to online learning is recent (Caverly & MacDonald, 2002; LaPointe. & Reisetter, 2008). At the very core of community building, effective online learning, and student satisfaction are teacher-student and student-student interactions (Johnson, 2006).

However, the majority of online courses are only based on asynchronous communication (Swan, 2002; Stein, Wanstreet, Glazer, Engle, Harris, Johnston, Simons, & Trinko, 2007). As expected, most research on community of learning, student

isolation, online learning, student satisfaction, and presence were carried out in the asynchronous learning environments (Swan, 2002; Wang, 2008; Wang & Hsu, 2008). Studies on synchronous systems mostly studied text-based chat. Moreover, very few studies investigated complex SWBCS and those focused on pedagogical strategies (Schullo, 2005; Stewart, 2008). It has been argued that the development of a sense of community where students feel supported, socially present and are engaged in collaborative and social learning can be enhanced by the use of synchronous communication tools (Schullo, 2005; Wang, 2008). However, it is still unknown how SWBCS affect the quality of online learning. No available research has been found investigating the full picture of social learning environment over a semester in a totally online teacher education course making use of both synchronous and asynchronous communications. Such a study needs to incorporate previous relationships among students and with the instructor, previous experiences with CMC tools, course design, assignments, formative assessment, and possible other factors that may be discovered through qualitative research design.

With the recent advancements in technology, higher broadband, lower cost, and greater opportunities for teachers to learn and use SWBCS, application of SWBCS is on the rise. As a result, there is a high need for studies investigating how these tools are implemented, how instructors and students perceive these tools, and most importantly how student learning and satisfaction as well as sense of learning community are affected by their implementation.

Teaching presence and teacher immediacy are crucial for community building and online learning (Garrison, Anderson, & Archer, 2000; Lavooy & Newlin, 2008; Shea, Li, & Pickett, 2006). Office hours are mandated in most universities including where this study took place. However, based on personal observation as well as published literature (Lavooy & Newlin, 2008), online instructors generally do not provide synchronous office hours but instead use asynchronous communication tools such as email and/or discussion board. Unfortunately, these approaches regularly fail to meet the needs of students who seek immediate help or feedback, which may lead to student frustration and disengagement. Further, synchronous office hours can help learners feel social presence and personal contact with their instructor (Lavooy & Newlin, 2008). Gmail chat is an automatic feature of the email account used in the research setting university. Instead of exchanging several emails or using different IM and email programs to solve a problem, users are able to see if their contact is online or not on the email screen and initiate a chat session immediately. Research is needed on how this application is valued and perceived by the students in terms of teacher and social presence, satisfaction, collaborative group work and learning, providing insights for best practices of virtual office hour implementations.

Elluminate Live provides several tools which make whole class meetings similar to face-to-face classes in many ways (see Figure 3). Some of the available tools are two-way video, Whiteboard, breakout rooms (for group work), audio and text-chat, and desktop application sharing. These features and their descriptions are shown in Table 2.



Figure 3. Illustrative screen capture of the Elluminate Live!™ synchronous environment.

Table 2

Features of Elluminate Live!™

Feature	Feature Description
Voice over the Internet protocol (VoIP)	Participants can listen to the instructor or presenter and speak to convey their messages. Elluminate allows up to 6 speakers at one time. The moderator can set the number of simultaneous speakers at any time during the session. It has audio wizard for testing audio settings before the session starts as well as a control panel for microphone and speaker settings during the session.
Instant Messaging (IM)	Text-based chat allows participants to communicate with each other with text-messaging. Participants can select the person to whom they want to send text-message privately. A transcript of chat conversations excluding private messages can be saved.
Breakout rooms	Breakout rooms are used to create small groups in a whole class meeting. Groups can be created automatically based on the number of participants and the group number set or the moderator can assign each participant to a certain group. Creating breakout rooms, moving members from one group to another, and taking all participants to the main classroom is quite simple. This feature allows: group cooperation to complete a task, brainstorm ideas, team competitions, and one-one meeting with individuals or groups.

Interactive Whiteboard	Whiteboards can be defined as “Roughly the synchronous equivalent of a traditional flip chart” (Hoffman, 2004, p. 17). All participants can use the whiteboard when allowed. Whiteboards enable instructors and students to post ideas, show images, and do PowerPoint presentations.
Multi-point video conferencing	Allowing up to six live video windows at a time, with a connection of a webcam, users are able to see each other as they talk.
Interactive quiz and survey manager	This tool enables the instructor to assess learners simultaneously. Multiple choice or true or false type questions can be displayed on the Whiteboard and students select among the buttons to indicate their answer. The instructor can see each student’s response immediately and get the statistical results as graphical display on the Whiteboard.
Application sharing	By this feature moderators can show any document or software saved on their own computer and that is not or cannot be uploaded in the whiteboard.
Hand raising/ Learner-instructor interaction tools	These tools allow students to interact with the instructor. Similar to “face-to-face classroom”, students can “raise their hand” by clicking on a button, which gives a signal to the instructor. When multiple hands are raised, the system puts them in a queue based on who raised his/her hand first. Other tools are like emoticons which allow emotional reaction such as smiling, applauding,

	confused, unhappy, ok or excellent (thumbs up), not ok or don't like it (thumbs down)..
(Guided) Web Surfing	This tool allows the moderator to show a website to the students. The instructor can decide either to let students surf the website as they like or make them follow him/her.

Elluminate Live was incorporated into Blackboard (the learning management system in use in this university) in fall 2008. It would not be wrong to assume that this application will increase the use of Elluminate Live in online courses in the ESOL department because creating synchronous meetings has become much more available and feasible to use for instructors and students. Students who register for an online section of this course rather than a face-to-face section, generally have distance learning experience. However, in my three-years of online teaching experience, I observed that none of the students had any synchronous CMC experience in their previous online courses. Therefore, I was particularly interested to investigate the role of implementing synchronous communication to build an online community of learning. More specifically, I intended to highlight how students feel about and perceive these synchronous tools in terms of social presence, cognitive presence, teacher presence, course satisfaction and learning. Additionally, I aimed to understand how these synchronous tools were implemented in this online ESOL course and what challenges and advantages were experienced during their implementation.

Furthermore, it was noteworthy to investigate what factors affected students' use of synchronous communication. Some students may perceive online learning as an

equivalent to asynchronous learning. That is to say, they may assume such epistemological stances that learning should be individual, flexible in terms of time, and the teacher should be in charge of direct teaching. Their epistemological position may affect their expectations, satisfaction and learning when they face a constructivist student-centered learning environment. Therefore, such questions carry great importance for the online education field: What emotions and perceptions do such students have when synchronous communication is used in their class? Once they are provided with necessary guidelines, what factors mediate their decision to use or not to use these tools for collaborative group assignments and discussions? Understanding how students feel about synchronous communication and what barriers they experience provides valuable insights into student characteristics and help online instructors teach more effectively by planning with informed decisions.

Lastly, there is paucity in literature related to CoI framework and ESOL teacher education from a SCT perspective. To begin with, although CoI was applied to 252 reports, 48 of which included data collection and analysis, only five of those investigated learning. However, those studies operationalized learning as self-reported, measuring perceived learning by means of mainly one closed-ended survey question (Rourke & Kanuka, 2009). It is necessary to overcome these deficiencies through further research with rigorous methods and triangulation. Second, according to sociocultural theory (SCT), learning takes place within collaborative, social and cultural activities where all participants have an active role, appropriate each other's understandings, and go through cognitive changes within their zone of proximal development (Johnson, 2004). There is need for proven pedagogical strategies used in online second language teacher and/or

ESOL education guided by SCT. In the last decades, SCT has received attention from SLA teachers and researchers for second language teaching (Johnson, 2004; Lantolf, 2001; Lantolf & Thorne, 2006; Warschauer, 2004). However, very limited research is available on online ESOL teacher education from a SCT point of view (Teemant, Smith, Pinnegar, & Egan, 2005).

Purpose

The overarching aim of the current research study was to investigate how synchronous CMC tools mediate community of inquiry as well as student satisfaction in a totally online preservice ESOL course. Specifically, this study aimed to understand the role and perceived effects of two types of synchronous CMC tools, Gmail Chat and Elluminate Live, on the student satisfaction and online community of inquiry that includes social presence, cognitive presence and teaching presence. Gmail chat is an instant messenger (IM) tool incorporated into the Gmail program, which is the official email program for the course participants. It allows text-based, audio, and video conferencing interactions and was used as a virtual office medium. The other tool is a complex and multi-faceted SWBCS, Elluminate Live, which served for planned group and whole class meetings.

Research Questions

The study was guided by the following questions:

Overarching Question: How does the use of synchronous communication tools mediate the community of inquiry in an online pre-service ESOL course?

1. How does the use of Instant Messenger (IM), Gmail Chat (for extended virtual office hour) mediate the community of inquiry?

- 1.1. How does the use of IM mediate social presence?
 - 1.2. How does the use of IM mediate cognitive presence?
 - 1.3. How does the use of IM mediate teacher presence?
 - 1.4. How do students perceive the value and effects of IM in terms of course satisfaction?
2. How does the use of a SWBCS (Elluminate Live) mediate the community of inquiry?
 - 2.1. How does the use of a SWBCS (Elluminate Live) mediate social presence?
 - 2.2. How does the use of a SWBCS (Elluminate Live) mediate cognitive presence?
 - 2.3. How does the use of a SWBCS (Elluminate Live) mediate teacher presence?
 - 2.4. How do students perceive the value and effects of a SWBCS in terms of course satisfaction?

Significance of the Study

This study is noteworthy for both its theoretical and pedagogical implications. With rapid developments in technology, distance learning is changing its face fast. New technologies are entering into the education field. As Blake (2007) stated, future studies need to investigate media attributes and contributions of each technology and media to quality teaching and learning. Because online ESOL programs and/or courses are on the rise, and with the given scarcity of research on synchronous CMC, particularly SWBCS, this study potentially fills in the gaps unaddressed in the literature.

The study is also significant for its theoretical approach. Very few studies examined the three elements of the CoI framework simultaneously (Garrison & Arbough, 2007). In addition, to date only one study has been found investigating their development over a semester (Akyol & Garrison, 2008). However, that particular study did not

investigate the nature and value of CMC tools implemented in the course. Neither did it use any data source rather than survey. Similarly, only five studies investigated learning, and, they used a very limited number of self-belief closed-ended survey questions. With its rigorous design, this study brings better understanding and application of the CoI framework.

Furthermore, since the CoI framework heavily depends on social learning, SCT needs to be detailed. Applications of SCT to SLA started decades ago and according to some leaders in the field, SLA has been experiencing a paradigm shift and aligning itself with a sociocultural approach (Hall, 1997; Johnson, 2004; Kramsch, 2000; Lantolf, 2006). Applications of SCT to online programs and courses for ESOL have only recently received attention. Moreover, recent national standards and accreditation policies have brought a pressure to teacher educators to meet the requirements and educate second language teachers in a better way. Thus, online educators and instructional designers are in need of a research-based, informed, and effective pedagogical model that can guide their online practices.

This study helps researchers and educators gain insights into how to build and foster a learner's sense of connectedness (social presence), cognitive presence, teacher presence and immediacy, and how to promote student satisfaction and learning. The study provides implications for online course design and pedagogy that are conducive to online learning communities. Such information is critical to enhance the quality of online teaching and learning environments. Therefore, this study is not only significant to online ESOL teacher education but also online educators in other fields such as K-12 and higher education as well as industry.

Delimitations and Limitations

The nature of the research questions and purpose of this study necessitated a qualitative research approach. This study aimed to provide a detailed view of the topic, observing it within its natural setting, which in this case was an online classroom. As the researcher, I assumed an interpretative and naturalistic approach to study the phenomena or lived experiences reflecting a holistic and complex picture of the participants' perspectives (Creswell, 1998; Gall, Gall, & Borg, 2007).

Delimitations

The delimitations in qualitative research are related to transferability as opposed to external validity (or generalizability) in quantitative inquiry (Anfara, Brown, Mangione, 2002; Creswell, 1998; Gall, Gall & Borg, 2007; Lincoln & Guba, 1985). In contrast to quantitative inquiry where the aim is to generalize from a sample to a population, in qualitative inquiry, “a single case or small nonrandom sample is selected precisely *because* the researcher wishes to understand the particular in depth, not to find out what is generally true of the many” (Merriam, 1998, p. 208, italics in original).

The qualitative researcher aims for transferability by providing rich and thick description of the participants, context, study design and methods so that readers can determine the applicability of the findings to their own situations. This is also referred to as reader or user generalizability by Wilson (1979). It is the reader's role to question and find out what is applicable from this case to their own situation and needs. Therefore, for the goal of this study, transferability was the concern.

Limitations

As the researcher, I played a significant role in data collection and analysis because I was the instructor as well. In a qualitative inquiry, the researcher becomes the primary instrument of data collection and analysis (Denzin & Lincoln, 2003; Lincoln & Guba, 1985; Merriam, 1998). The dual roles of the researcher may cause both advantages and disadvantages. In terms of limitation, some students may purposefully provide biased data to please their instructor. They may not be very reflective, and self-reported beliefs may not be completely accurate. In addition, dual roles and pro-longed engagement with the site and participants may obscure my view and lead to inadvertent biased assumptions (Yin, 2003). Therefore, data triangulation was implemented to alleviate this limitation by conducting follow-up interviews and observing students' participation, projects, and course achievement to gather in-depth and credible data.

The researcher/instructor role could be an advantage too. As an instructor, I was observing the research setting constantly and had a better understanding of the phenomenon, which provided deeper understanding of the setting and lived experiences or the participants.

With reference to theoretical limitations, the definitions of presences are far from unproblematic among the studies that applied CoI framework. Further qualitative studies may prove helpful to better understand and clarify categories and indicators of presences.

There are several strategies recommended by researchers to enhance the trustworthiness (including transferability, credibility, dependability, and conformability) of a qualitative case study. These procedures are specifically discussed in the following chapter.

Operational Definitions of Terms

The following terms are critical for the proposed study.

Participation: In this context, participation is defined as a person's taking part in CMC to initiate communication, or to respond to a message received.

Asynchronous communication takes place with delayed time. For instance, discussion forums, email, wikis or blogs serve as medium for asynchronous communication.

Community of Inquiry is a framework for online collaborative learning which highlights that learning occurs within a community through the interaction of three essential elements cognitive presence, social presence, and teaching presence (Garrison, Anderson & Archer, 2000).

Distance Education is defined by Moore and Kearsley (1996) as "planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements" (p. 2).

E-Learning refers to learning through electronic networks. It covers a wide range of applications and processes such as, computer-based learning, web-based learning, online learning, virtual classroom, and digital collaboration.

Cognitive presence is a component of Community of Inquiry framework and defined as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse" (Garrison & Arbough, 2007, p. 161).

Computer-Mediated Communication (CMC) refers to "the many ways in which computers are used to mediate the transfer of information between individuals. CMC can

be either asynchronous, e.g., discussion boards, or synchronous, e.g., real-time audio and video” (Rovai, Ponton, & Baker, 2008, p. 6)

Interaction is defined by Wagner as “reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events mutually influence one another” (Wagner, 1994, p. 8). Interaction is at the core of social constructivist learning; it is “a defining characteristic of education” (Moore, 1989, p. 2).

Sense of Community is “a feelings that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillan & Chavis, 1986, p. 9). Creating a sense of community in an online course alleviate s students’ feelings of loneliness and isolation that is impediment for learning. Building sense of community in online courses requires meticulous work and process.

Social presence was originally defined by Short, Williams, and Christie, (1976) as “the degree of awareness of another person in an interaction and the consequent appreciation of an interpersonal relationship” (p. 65). In Community of Inquiry framework, social presence refers to “[t]he ability of participants in a community of inquiry to project their personal characteristics into the community thereby presenting themselves to others as real people” (Garrison, Anderson, & Archer, 2000, p. 89). Social presence in terms of feeling others social presence refers to the feeling a sense of togetherness, thus feeling free to conduct social interactions.

Synchronous communication occurs in real time. For this study it refers to real time communication in completely web-based environment through CMC tools such as Instant Messaging (IM), two-way videoconferences and Elluminate Live.

A Synchronous Web-Based Course System (SWBCS) is a multi-faceted software application that manages real time interactions in an online learning environment. A SWBCS usually encompasses Whiteboard for content delivery, text-based chat, VOIP, videoconferencing, hand raising, breakout rooms, application sharing and polling. For this study, a system called Elluminate Live!TM will be in use.

Teaching presence is also one of the three elements of Community of Inquiry model. It is defined in terms of designing an online course, facilitating online learning and providing direct instruction when necessary.

Web-based Instruction (WBI) is instruction that is supported by the resources of the Internet and the World Wide Web for teaching and learning experiences.

CHAPTER TWO: LITERATURE REVIEW

Overview

Creating and sustaining an online community of learning is one of the most popular foci in previous studies of online education (Tu, 2004; Wegerif, 1998; Rovai & Ponton, 2005; Garrison, Anderson, & Archer, 2001). According to Palloff and Pratt, “without the support and participation of a learning community, there is no online course” (1999, p. 29). A learning community is the “first step for collaborative learning” (Wegerif, 1998, p. 48). Besides being a popular and critical subject, creating learning community is also the primary challenge to achieve higher-order and meaningful learning (Garrison & Vaughan, 2008; Palloff & Pratt, 2005). Online instructors who aim to build and sustain community of inquiry in their courses need to pay attention to several principles while designing and teaching the course. One of the critical points is related to implementing both asynchronous and synchronous technologies. This study is driven by this challenge, which is to explore the role and effect of synchronous communications in a totally online preservice ESOL teacher education course in which collaborative student-centered learning and community building is fundamental.

The purpose of this chapter is to lay a theoretical and research foundation for this proposed study. This chapter will study and explore the related literature on online learning, online teacher education, interaction, community of inquiry, and Web-based synchronous communication. I also intend to investigate and critique the previous

research findings, the methods applied in these studies, and find unidentified areas and unresolved problems, which aim to guide and inform the current study.

The chapter is divided into three major parts. Part one will explicate the theoretical framework, CoI and other theoretical constructs that guided the study. Part two will more generally discuss distance education and its connection to teacher education. Part three will focus on interaction and Computer Mediated communication (CMC). Finally, I synthesize the chapter as it relates to the focus of the study.

The Theoretical Framework

Theoretical framework is not only necessary to shape a research study, but it is also required to interpret the findings of the study (Merriam, 1998). This section is devoted to explaining and studying the major constructs, terms, and theories that are necessary to understand the theoretical background of the study.

Social Learning and Sociocultural Theory

Social learning theories have received attention from distance education researchers because not only a paradigmatic shift in education is taking place, but also the online distance education has changed the face of distance education and made collaborative learning feasible. Theories such as sociocultural theory, social constructivism, social development theory, and social learning theory underscore learning as a social process. Bandura's (1977) social learning theory stresses the importance of modeling the behaviors and attitudes to learners and providing them opportunity to practice these behaviors for retention.

Learning takes place during continuous reciprocal interaction between cognitive, behavioral, and environmental influences. According to Bandura (1977), this process of

observational learning is composed of four parts: (a) attention, (b) retention, (c) motor reproduction, and (d) motivation. Bandura's social learning theory overlaps with behaviorism and cognitive frameworks because it covers attention, memory, motivation and observation and modeling. However, it is also related to Vygotsky's sociocultural theory (SCT) and Lave's situated learning due to its focus on social learning. Lave (1988) believes that learning is a function of the activity, context and culture in which it occurs. According to Lave and Wenger (1991), learning is the process of "legitimate peripheral participation" in a community of practice. Through active participation in community, learners turn from novice to experts. Situated theory also relates to SCT, which takes mediation as the center for human mind development. SCT is discussed in the following section.

These social learning theories frame the majority of research discussed in this chapter. Distance education research shaped by social learning concepts focused on community building, social presence, collaborative learning, and interaction. All these areas of social learning interact with the use of synchronous communications in an online course, which is significant for this study.

Sociocultural Theory

Sociocultural theory (SCT) was founded by Russian psychologist Lev Vygotsky approximately 80 years ago. It is a theory of human development (Thorne, 2005). SCT has been gaining great popularity in several fields such as psychology, education, and language acquisition (Lantolf, 2001). In order to gain better understanding of the applications and implications of SCT in SLA, the fundamental principles of the theory need to be examined.

SCT's most fundamental insight is that human mind is always *mediated* (Lantolf, 1994; 2000; Mondada & Doehler, 2004). Mediation refers to human activities which are mediated by symbolic objects (Lantolf & Thorne, 2006). Mediation takes place by both physical and psychological (symbolic) tools that are created by human cultures over time and modified by each generation. Through using these tools, human beings can have indirect or mediated relationship with the world. As physical tools (hammer, car, computer, and so on) help humans organize and change their environment, symbolic tools (numbers, music, art, language, and so on) help humans control mental processes. Physical tools are directed toward objects while symbolic tools are directed toward subjects.

SCT can be summarized into three major tenets (Johnson, 2004, p. 105): (a) the developmental analysis of mental processes, (b) the social origin of human mental processes, and (c) the role of sign systems in the development of human higher mental functions.

Tenet 1: The first tenet is related to scientific method. Each new method of investigation and analysis leads to better understanding of the problem. By this tenet, Vygotsky's objection to introspective and objective methods of experimental psychology investigating human mind as an end product is made clear. Vygotsky (1978) argues that the focus needs to be on the process instead solely on the product of the development. Because higher mental abilities are inherited from ancestors, the research method to be used is the genetic method, which is historical and requires investigation of all major points in the history of human mental development. Four genetic domains or levels are identified (Lantolf, 2000; Johnson, 2004; Lantolf & Thorne, 2006): *Phylogenesis domain*

is concerned with how human mentation developed through mediations and became distinguished from other livings. Sociocultural domain focuses on the ability to use tools and symbolic systems by a society, more specifically, how different types of symbolic systems are developed and how they affect mediation and thinking. Ontogenesis domain is centered in the interaction of two forces, natural (biological) and cultural. It focuses on individual level of mental development. While natural force is responsible for lower-level mental abilities that are regulated by the environment, cultural force is responsible for higher level mental functions that are self-regulated. The fourth domain is microgenesis which is concerned for investigation of reorganization and development of higher mental functioning over a short period time. This allows observing mental processes while the most major links are set up. Although each domain can be studied separately for their analytical facility, they are interconnected.

Tenet 2: This tenet centers in the higher mental capacities that originate in social activity such as problem solving, learning, and rational thought. Cultural development takes place first on the social plain and then on the psychological plane. They originate on social plane as they are created collaboratively by the members of the culture. This is reflected in the general genetic law of cultural development. Individuals internalize the patterns of social activities they participate. In other words, internalization “assumes that the source of consciousness resides outside of the head and in fact anchored in social activity” (Lantolf, 2000, p. 13). Internalization process is complex and dynamic. There is a gradual movement from the initial stage which is object-regulated to the other-regulated and finally to the self-regulated stage. During this transition from interpersonal to intrapersonal plane, language has a very important role.

Zone of proximal development (ZPD) is also situated in the second tenet. ZPD is defined by Vygotsky as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (1978, p. 86). ZPD cannot “occur if too much assistance is provided or if a task is too easy” (Ohta, p. 52). Lantolf and Aljaafreh (1995) explain ZPD as an “act of negotiated discovery that is realized through dialogic interaction between learner and expert” (p. 620). The help between the expert and the learner is negotiated, graduated, and contingent. It transcends from more explicit to more implicit and help is only provided when necessary and withdrawn as the learner shows gains self-control. Cognitive development occurs within the ZPD and this takes place throughout life. Self-regulation is achieved through collaboration with others in one’s environment (Antón & Dicamilla, 1998).

Tenet 3: The third tenet of the SCT is related to the *mediated role of language* in the development of higher mental functions. Language in SCT is not only seen as a communication tool, instead as a regulator of mental functions. Language is the mediator between interpersonal and intrapersonal planes. McCafferty (1994) claims that private speech facilitates the transformation from interpersonal experience into intrapersonal. This function of language becomes apparent in private speech, which initially is egocentric speech/private speech and later becomes inner speech at the age of seven. Egocentric and inner speech become more apparent during the tasks that are above the developmental level. Egocentric speech guides the individual during problem solving and “reveals some insights about the structure of human higher mental functions” (Johnson,

2004, p. 112). Egocentric and inner speech show different characteristics. Egocentric speech includes minimal role of syntax and phonetics. Single words may stand out as a sentence or phrase. The subject of the sentence is dropped. The phonetic nature of words is reduced. Moreover, word is very important in inner speech. According to Vygotsky (1986), word has two meanings: the literary/dictionary meaning and the dominance of the sense of a word over its meaning. The latter meaning is concerned with the acquisition of the words, voices or utterances during internalization processes within the sociocultural context. In other words, inner speech has sense that is different from meaning. Sense is abstract, dynamic, fluid, complex, and context dependent. Before child has language, he/she uses gestures as mediators.

In summary, explaining these three tenets provides some insights into the SCT. SCT views human mental development as socially constructed. Language is not only a communication tool but it also has a crucial role in organization of mental activities. Mental development is a social activity taking place on an interpersonal plane through interactions with others. Over time through dynamic processes, the interpersonal plane turns into intrapersonal plane. Sign systems make this internalization process possible. SCT does not deny the biological constraints of mental development. However, it does not position the brain in the center of cognitive development because higher mental abilities are not the product of cognitive abilities but the product of transformation of these abilities through sociocultural interactions (Johnson, 2004). That is, higher mental abilities show how mediated symbolic and cultural means are internalized by the person. SCT emphasizes potential level of development, ZPD. Internal developmental processes

operate through assistance received from other individuals or from the environment. When these processes are internalized, learning takes place.

Sociocultural Theory and Distance Education

The impact of SCT on distance learning instructional design and technologies is great (Gillani, 2000). To begin with, SCT is assigned to learning goals, objectives, practices and materials. Individualized objectives for learners are designed. Objectives become broad, high-level and complex as individuals do not learn the same things from instruction. To engage learners in constructing knowledge, testing their hypotheses, technology can be used as a meditational tool to create authentic and meaningful tasks and activities. Assessment should involve authentic and challenging practices. It should focus on the process rather than the end state. It does not have to reveal the same accomplishments across learners.

SCT shifts attention from the instruction as the transmitting knowledge to the instruction as the guidance of socially-based exploration in intellectually rich settings. Computers are used in developing higher-order thinking skills like defining problems, judging, solving, and drawing conclusions as well as information seeking, inquiry, and collaboration. Multimedia/hypermedia, and the Internet allows non-linear learning, increased learner autonomy. E-mail technology can be an effective knowledge sharing communication tool for asynchronous discussion that promotes both personal and social construction of meaning (Mackinnon, 2004). Similarly, synchronous tools, such as ICQ, Skype, MSN Messenger, Elluminate Live™ bulletin boards, listservs, video conferencing, simulations, and virtual reality can promote instant feedback, collaboration, critical thinking, and construction of knowledge.

Gillani (2000), who postulates that SCT is “one of the most robust and original social theories, with tremendous implications for education and the Web as a social tool” developed a SCT model for online education (p. 163). The ZPD provides the theoretical framework for this Social Inquiry Teaching Model for online courses. For the framework, four major themes of ZPD are discussed: (1) internalization of external activities, (2) the role of language in cognitive development, (3) knowledge formation within the zone of ZPD, and (4) activities within the ZPD. These themes are explained under SCT section in this paper.

In this model, the learning progression follows four phases of ZPD. Figure 4 displays how the model is applied to the design of an online course website as a mediational tool for scaffolding activities of the learner through each phase.

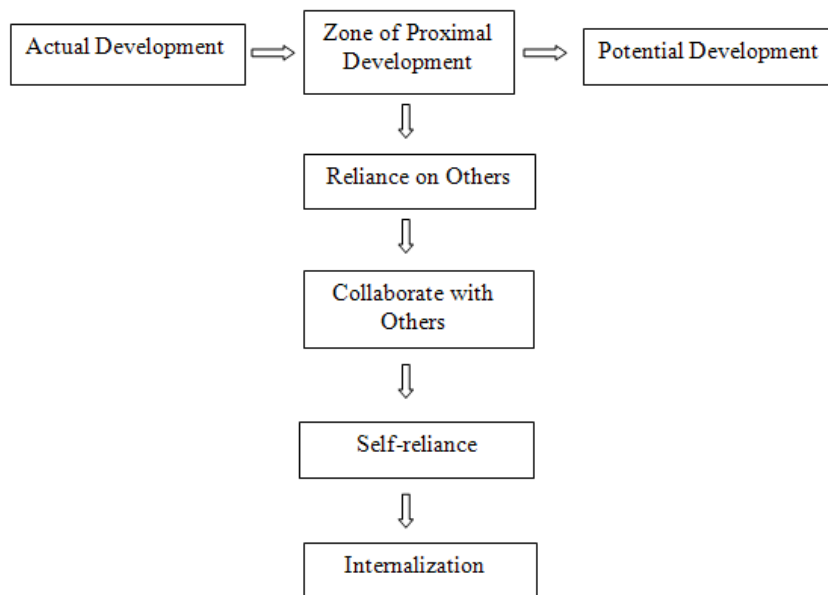


Figure 4. Progression through the four phases of the zone of proximal development (Gillani, 2000, p. 168).

During each phase, scaffolding helps students to pass to the next phase. Instruction begins with intellectual confrontation. Inquiry procedures (finding, gathering, organizing information) act as scaffolding. Phase 1 is the reliance on others. During this phase, learners are passive and they rely on teacher modeling. Motivational strategies are used to present and model the content.

During the second phase, collaboration with others, learners interact with other learners, the instructor, the Web to construct their potential development and to construct communities of learning by using mediational tools like internal and external speech and the Web and online communication tools. Learners enter a personalized community of learning centers where they “interact and collaborate with members of community of mentors to gain more information about the intellectual confrontation” (Gillani, 2000, p. 169).

In the third phase, self-reliance, students reflect on what they have learned and search for other ways for further learning. Search tools and the Web are the key tools for this phase. Instructors need to provide necessary learning strategies, guidance and resources.

The final phase is the internalization. Learners “internalize the concept underlying the original intellectual confrontation through repeated active application” (p. 170). Learners become creative in generalizing solutions to new intellectual confrontations. Instructors can expect learners to create their own web pages or online communities to develop new original ideas about what they have internalized.

Researchers at the Center for Research on Education, Diversity and Excellence (CREDE) at Brigham Young University have developed a model for sociocultural

pedagogy in their distance-learning program (Teemant, Smith, Pinnegar, & Egan, 2005).

Their model consists of five standards for effective pedagogy:

1. Joint productive activity (UJPA): Facilitate learning through joint productive activity among teacher and students.
2. Language and literacy development (LLD): Develop competence in the language and literacy of instruction across the curriculum.
3. Making meaning (MM): Connect teaching and curriculum with experiences and skills of students' home and community.
4. Complex thinking (CT): Challenge students toward cognitive complexity.
5. Instructional conversation (IC): Engage students through dialogue, especially the instructional conversation. (p. 1677)

Community

Community and communication share the same Latin root, *communicare*, which means to share and to be in relation with (The International Encyclopedia of Communication). Human nature seeks to communicate and connect with other humans. Sharing, communication, discourse, and community form the basis of all civilizational, scientific, intellectual, cultural, and artistic advances (Harasim, 2002; 2006).

Although its employment for empowering learning in educational settings can be considered recent, community has a long social-theoretical history. Community has been defined and studied in various ways by several disciplines including sociology, psychology, anthropology, political science, education, and instructional technology (Barab, 2003). Yet, there is not a consensus on one definition among disciplines. Based

on their interdisciplinary community research, Barab and Duffy (2000) identified four features that they believe are requisite of a community:

a common cultural and historical heritage, including shared goals, negotiated meanings, and practices; an interdependent system, in that individuals are becoming a part of something larger than themselves; and a reproduction cycle, through which newcomers can become old timers and through which the community can maintain itself. (p. 36)

Three years later, four characteristics were added to this list by Barab, MaKinster, and Scheckler (2003): a common practice and/or mutual enterprise; opportunities for interactions and participation; meaningful relationships; and respect for diverse perspectives and minority views.

Creating and maintaining a community is dynamic, complex and evolving. It is not generally possible to identify launching and dismissal time of a community.

Communities undergo constant change and evolution. Members of a community should possess a sense of trust, respect, support and commitment (Tu, 2002; 2004; Palloff & Pratt, 1999).

One of the influential community frameworks for educational settings, especially for professional development and corporate training, is Wenger's community of practice theory, which also has been applied to several disciplines. Wenger's (1998) perspective of community and learning are based on his social learning theory which he placed on the following four premises:

1. Humans are social beings. Learning is also a social endeavor.

2. Knowledge within a social setting means being competent at activities which are valued within the community.
3. Knowing is developed through active engagement in the community (or world) through participation in the community's enterprises or activities to which it is dedicated.
4. The goal of learning is to produce meaning or understanding of the world and our engagement within it. (p. 4)

According to Wenger (1998) learning results from practice. People constantly take part in many social practices as a member of different communities such as family, school, sports team, church and similar. They interact with other human beings and with the world. These social practices are a way of learning. Therefore, learning is not a separate process, but it is a collective transformative practice of communities. In his words, "Learning is the engine of practice, and practice is the history of that learning" (Wenger, 1998, p. 96).

Wenger's (1998) social theory of learning characterizes social participation as a process of learning and knowing by integrating four components of social participation: meaning, practice, community and identity. The relationship between these elements is displayed graphically in Figure 5.

In parallel to Wenger's community of practice framework, Harasim (2002) base learning in discursive activities of community. Citing Thomas Kuhn and Bruffee, she defines learning as "a social, negotiated, consensual process in which discourse plays a key role" (p. 182).

In *Thinking in Education*, Lipman (2003) emphasizes that education requires communities of inquiry. For him, communities of inquiry possess these features: inclusiveness, participation, shared cognition, face-to-face relationships (not necessary but advantageous), the quest for meaning, feelings of social solidarity, deliberation (considering alternatives), impartiality, modeling, thinking for oneself, challenging as a

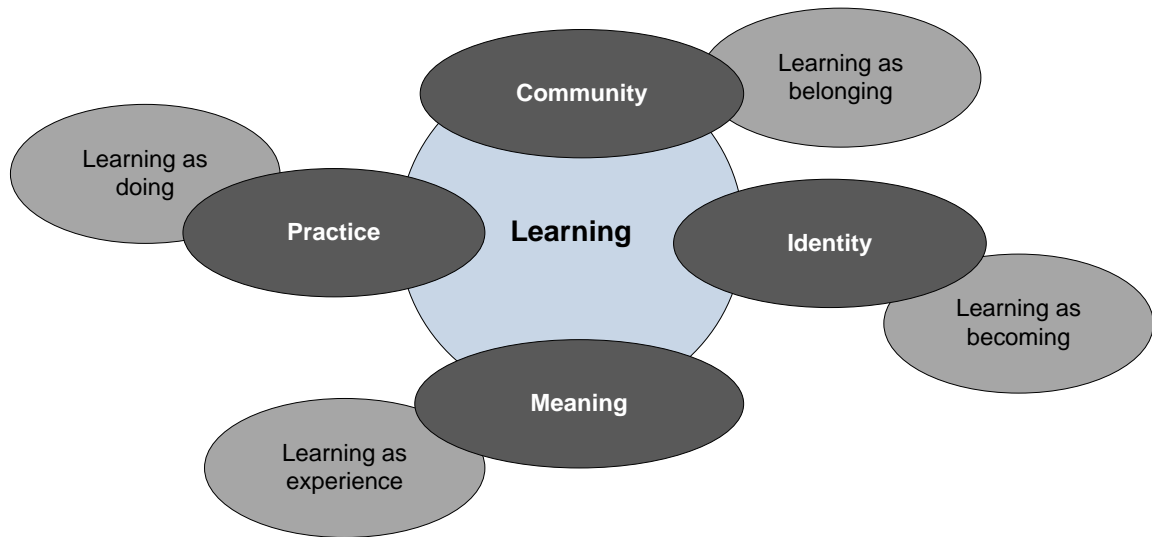


Figure 5. Components of a social theory of learning (Wenger, 1998, p. 5).

procedure, reasonableness (capacity to make rational judgment), reading, questioning, and discussion. Further, in his description of community of inquiry, he comments:

A community of inquiry attempts to follow the inquiry where it leads rather than be penned in by the boundary lines of existing disciplines. A dialogue that tries to conform to logic, it moves forward indirectly like a boat tacking into the wind, but in the process its progress comes to resemble that of thinking itself. Consequently, when this process is internalized or introjected by the participants, they come to think in *moves* that resemble its *procedures*. They come to think as the process thinks. (p. 20-21)

Online Learning Community

In the past, “differentiation and membership were relevant factors in the development of community” (Palloff & Pratt, 1999, p. 21). However, the Internet and CMC have shaped the concept of community. Community is not bounded with geography now. Actually, according to Harasim (2006) the Internet is like a community itself. Online communities started with professional development communities in 1986 by OISE Ontario Educators Online Course, and later followed by Global Lab, Lab Net and Star Schools, Educators Network of Ontario in 90s (Harasim, 2006).

Application of community concept to online learning can be linked to the paradigmatic shift in education, which reveals transformation in 3 areas: (a) knowledge transmission to knowledge building, (b) from teacher centered to learning centered, and (c) from passive to active learning (Harasim, 2006). In addition, 21st century has witnessed a socio-economic shift. Virtual learning has dominated the annual growth rate of traditional colleges by 4 times as it also had 25% rate of yearly increase (2006). Together with these paradigmatic and socio-economic shifts, social learning theories and innovations in technology played a significant role for the growth of interest in online community of learning. Distance education researchers either designed frameworks for online learning community or applied the frameworks created for F2F communities to online learning.

In their comparison of F2F community with online community, Palloff and Pratt (1999) point out that in both community types, members collaboratively negotiate norms. These negotiations become more significant for an online community because they set

the foundation of the community. All issues should be discussed openly such as how members will meet, how often, what the goals are, and so on.

According to Palloff and Pratt, (1999), the ultimate goal of online learning community in academic settings is to enhance student learning and satisfaction. Learning community “supports and encourages knowledge acquisition...creates a sense of excitement about learning together and renews the passion involved with exploring new realms in education....creates a sense of synergy...supports the intellectual as well as personal growth and development of its members” (Palloff & Pratt, 1999, p. 163). That must be why online learning community is referred as the essence of distance learning (Palloff & Pratt, 1999; 2005).

Researchers provide online instructors with practical guidelines and strategies for building online learning communities. Palloff and Pratt (1999) display a practical and illustrative approach. For them the keys to creation and effective maintenance of online community of learning cover the following 6 concepts:

Honesty: Learners should feel a sense of safety and trust. They should know who their classmates are and believe in that they receive honest feedback.

Responsiveness: Collaborative group learning needs to be applied. Interactions among learners and between learners and instructor should be in a timely manner and thorough. The instructor should respond to student needs and concerns.

Relevance: The content and tasks need to be relevant to learners. Seeking and sharing real-life experiences can promote learning.

Respect: Learners need to feel respected as people. Respect can be indicated by welcome messages, self-introductions, immediate and through feedback , self and group

evaluations by learners, confidentiality among group members, giving consent to group work, and maintaining a code of ethics.

Openness: In an open atmosphere, learners feel free to share their thoughts and feelings without fear retribution. Openness relates to respect and honesty. Learners who feel respected and a sense of honesty can be open to learning community.

Empowerment: “A sense of empowerment is both a crucial element and a desired outcome of participation in an online learning community” (p. 162). In student-centered collaborative learning environment, learners have new roles and responsibilities. They are in control of their learning process as they become experts of their learning, by knowing how to pursue and reconstruct knowledge.

Online learning community frameworks emphasize interaction (CMC), collaborative and social learning. Tu and Corry (2002), for instance, proposed 3 major dimensions for online learning communities: instruction, social interaction, and technology. These dimensions need to be maximized consistently to build a community. Tu (2004) emphasizes collaborative group learning to build a learning community in an online courses. In the same book, he discusses 21 designs and guidelines to build online learning community. Among these include communication and preparation, team goals, objectives setting, peer support assignments, interactive project presentation, online moderation, online debate, virtual experts, guest moderators, selecting appropriate online communication tools, social collegial, collaborative evaluation and reflections for student learning and collaborative evaluation of teaching. These guidelines and strategies are very valuable to online instructors, not only to build a community of inquiry, but to enhance student learning and satisfaction in general. I, as the instructor of the online

course the setting for the proposed study pay attention to these guidelines and strategies during course design and delivery.

The Community of inquiry framework, which is chosen as the theoretical background of the proposed study is explicated in detail next.

Community of Inquiry (CoI)

CoI was created by Garrison, Anderson, and Archer in 2000 “to provide conceptual order and a tool for the use of computer mediated communication (CMC) and computer conferencing in supporting an educational experience” (p. 87). A community of inquiry is defined as “a cohesive and interactive community of learners whose purpose is to critically analyze, construct, and confirm worthwhile knowledge” (Garrison & Vaughan, 2008, p.9).

CoI combines two critical constructs for learning: community, which explicates social dynamics, social interaction and collaboration to create an environment to support the second construct, inquiry. Inquiry reflects intellectual academic interaction that includes “the process of constructing meaning through personal responsibility and choice” (Garrison & Vaughan, 2008, p. 9). Therefore, an online community of learning differs from other communities by inquiry.

CoI was driven from extensive analysis and comparison of spoken and text-based CMC, as well as their effects on thinking, research on social-learning, community, social-constructivism, collaborative learning, instructional design, and distance education. The aim of this chapter is also to define and explain these constructs as in their relation to CoI.

This framework encompasses 3 overlapping key elements--social presence, cognitive presence, and teacher presence (see Figure-2). Deep and meaningful learning in online courses takes place within the community through interaction of these three core elements. The structure of the CoI framework has been confirmed through factor analyses by Garrison, Cleveland-Innes, and Fung (2004), Arbaugh and Hwang (2006), and Arbaugh (2007). CoI framework proves to be a well-structured model for building an effective learning community (Arbaugh, 2008). Although research has shown the CoI to be “a parsimonious and coherent theory of online learning, this work needs to be supported by additional study” (Garrison & Arbaugh, 2007, p. 159). In literature, the majority of the research studied the three elements separately, that is why there is a need for further research to focus on community of inquiry with its 3 elements.

Social Presence

The concept of presence is important for many fields such as communication, technology, art, psychology, and distance learning. Short, Williams, and Christie's (1976) Social Presence Theory is often cited as the primary source for various ways of presence operationalized today. Short, et al. (1976) studied presence as social richness found in communication medium. Intimacy and immediacy are two important concepts for this conceptualization of presence. In face-to face communication, people always convey and perceive positive, neutral, or negative levels of intimacy and immediacy through culturally shared signs and codes such as language choice, voice, tone, body orientation, eye contact, and physical proximity.

Immediacy refers to a measure of the psychological distance between interlocutors. Affected by non-verbal clues, it is also related to the temporal dimension-

time lag between message and response- and to the instrumental dimension, which is linked to the quality of the message. In face-to-face communication, immediacy is mainly expressed by verbal cues. High immediacy makes the people feel that his/her addressee is responsive, sociable, warm, sensitive, personal or intimate, receptive, or engaged.

In the CoI framework, social presence is defined 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’ (Garrison, Anderson, & Archer, 2000, p. 95). Social presence in this framework differs from Short, et al.’s (1976) static approach. In CoI, the effect of media by itself is not the most significant factor in shaping the degree of social presence. Instead, the communication context, which includes factors such as motivation, familiarity, skills, commitment, activities, and length of time in using the media, influences the development of social presence. Research identified that social presence can be strongly felt in CMC (Richardson & Swan, 2003; Tu & McIsaac, 2002; Tu, 2004). In text-based CMC, it requires certain strategies and techniques that pertain to those factors in order to enhance immediacy indicators (Rourke, Anderson, Garrison & Archer, 2001; Swan, 2002; 2004).

Social presence includes 3 progressive categories: open communication, affective expression, and group cohesion (see Figure 2). Open communication is related to creating an environment for risk-free expression. For social presence to prosper, learners need to feel free and secure to express themselves openly. They need to engage in reciprocal and respectful exchanges, projecting themselves personally and academically, so that they can “develop personal relationships necessary to commit to, and pursue, intended academic goals and gain a sense of belonging to the community” (Garrison & Vaughan, 2008, p.

19). Interpersonal communication is very important for creating a sense of trust among learners. These are prerequisites for learners to work collaboratively. A community of inquiry is “inherently collaborative” (Garrison & Vaughan, 2008, p. 20). As learners interact and feel respected, they also should feel responsibility to the community of inquiry.

Affective expression refers to expressing emotions and camaraderie. Once open communication is secured, interpersonal relations can start having emotional expression which in this model is” indicated by the ability and confidence to express feelings related to the educational experience” (Garrison, Anderson, & Archer, 2000). In an online learning environment, it takes longer time to achieve camaraderie. Humor and self-disclosure are two examples of emotional expression in a community. Humor contributes to social presence. It serves as an invitation to conversation and decreases social distance. Self-disclosure help learners get to know each other, subsequently establish trust, respect, and support. Self-disclosure involves sharing feelings, experiences, attitudes, and interests. Therefore, in an online course, self-introduction or personal web-pages are very important.

Among the 3 presences, social presence has been “the most extensively studied, both in online and face-to-face course settings” (Arbaugh, 2007, p. 73). Recent studies on social presence in online learning environment focused on causal or correlational relationships between social presence and student learning and satisfaction in addition to its role in facilitating cognitive presence (Swan, & Shih, 2005; Shea, 2008; Richardson & Swan, 2000). It has been argued that collaborative learning activities lead to increase in social presence and online community building (Richardson, & Swan, 2003; Rovai,

2002). Group cohesion and interaction also relates to social presence and learning (Arbaugh, 2005). Though extensively studied, further research is required to better understand how social presence evolves in an online learning community (Garrison & Arbaugh, 2007).

It should be emphasized that social presence without cognitive presence does not lead to an establishment of community of inquiry. However, it is also difficult to develop critical discourse without establishing social presence first (Arbaugh, 2007; Garrison & Arbaugh, 2007; Garrison & Cleveland-Innes, 2005). Garrison and Vaughan (2008) shed light on this:

Establishing social presence is a primary concern at the outset of creating a community of inquiry. Social relationships create a sense of belonging, support freedom of expression, and sustain cohesiveness, but they do not structure and focus academic interests among students. Social interaction is insufficient to sustain a community of inquiry and achieve educational goals...higher levels of learning inevitably require purposeful discourse to collaboratively construct, critically reflect, and confirm understanding. This is what is referred to as cognitive presence. (p. 21)

Cognitive Presence

Founded in Dewey's work on reflective thinking and practical inquiry as well as the research on critical thinking and postmodernist paradigm, cognitive presence is defined as the extent to which learners are able to critically reflect, (re)construct, and confirm meaning, through and engaging in reflective and sustained discourse for sharing meaning and confirming understanding (Garrison & Arbaugh, 2007; Ice, et al., 2007).

Cognitive presence is the central element in “critical thinking, a process and outcome that is frequently presented as the ostensible goal of all higher education” (Garrison & Arbaugh, 2007, p. 89). Below cognitive presence is mapped on the cyclical inquiry model of learning that has two dimensions and four phases (see Figure 6). The vertical axis defines the deliberation-action dimension, which refers the recursive nature of inquiry incorporating collaborative activities. The horizontal axis defines the perception-conception dimension, which refers to the process of meaning construction from experience. While dimensions are abstract processes, the four phases are more like representation of educational experience. These phases of critical thinking are explained below and shown with their indicators in Table 3:

1. Triggering event: In this phase, participants recognize a problem, have a sense of puzzlement, or intrigued by the question or task. They feel motivated to explore content.
2. Exploration: Learners utilize a variety of information sources to explore problems, brainstorm ideas, exchange information with others and discuss ambiguities.
3. Integration: Here learners participating in learning activities connect ideas and create solutions, and reflect on content.
4. Resolution: In this phase, learners describe the ways to test and apply knowledge created; apply ideas, knowledge or solutions to new situations.

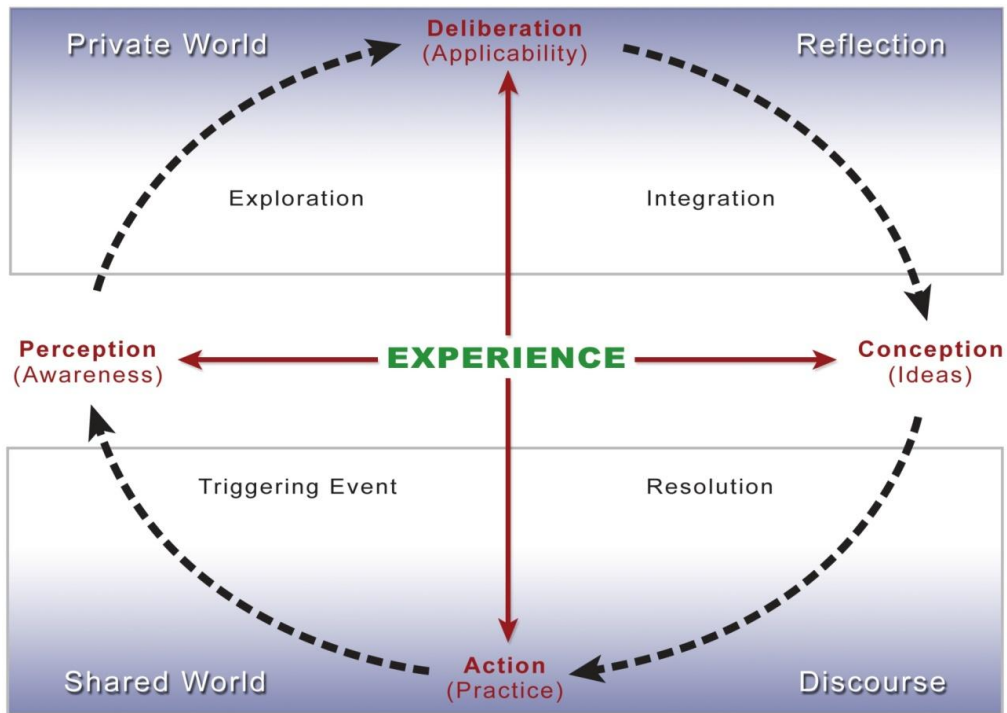


Figure 6. Practical Inquiry Model (Ice, et al., 2007).

Table 3

Critical Thinking Categories (Garrison et al., 2001, p. 15–16)

Category	Indicators	Socio-cognitive Processes
Triggering	Recognizing the problem	Presenting background information that culminates in a question
	Sense of puzzlement	Asking questions
		Messages that take discussion in a different direction
Exploration	Divergence within online community	Unsubstantiated contradiction of previous ideas

	Divergence within single message	Many different ideas/themes presented in one message
	Information exchange	Personal narratives/descriptions/facts (not used as evidence)
	Suggestions for consideration	Author explicitly characterizes message as exploration-e.g. Does that seem right?
	Brainstorming Leaps to conclusions	Adds to established points, but does not systematically defend/justify/develop Offers unsupported opinions
Integration	Convergence among group members	Reference to previous message followed by substantiated agreement, e.g. I agree because...
	Convergence within a single message	Building on, adding to other's ideas Justified, developed, defensive, yet tentative hypotheses
	Connecting ideas, synthesis	Integrating information from various sources: textbook, articles, personal experience
	Creating solutions	Explicit characterization of message as a solution
Resolution	Vicarious application to real	(No examples provided)

world

Testing solutions

Defending solutions

Research on community only recently focused on the role of community in formal online courses and its effect on cognitive presence (Garrison & Archer, 2007). Compared to F2F in class discussions, asynchronous online discussions provide more chance for cognitively rich input because they are open to all learners – students have equal chance to contribute- and learners have flexible time and resources to process information and construct meaning. In addition, text-based asynchronous communication “reduces the student cognitive load and the need to rely on memory to process large numbers of facts and ideas” (Garrison & Vaughan, 2008, p. 23).

A community of inquiry is found to be less threatening and positively related to perceived learning (Shea, 2006; Shea, Li, & Pickett, 2006; Rovai, 2002). The development of cognitive presence is identified to be the most challenging of the three types of presences (Arbaugh, 2007). Moreover, cultivating higher phases of cognitive presence is quite difficult. Previous research found that most of the time inquiry did not move beyond the information exchange or exploration phases (Garrison et al., 2001; Meyer, 2004). Garrison and Arbaugh (2007) discuss the possible reasons for this challenge and conclude that it is mostly due to teaching presence and group cohesion (social presence) as cognitive presence is strongly related to social presence and the role of teacher. Social presence lays the foundation for critical discourse while teaching presence creates the environment for cognitive presence to develop (Arbaugh, 2007). To

proceed along four phases of cognitive presence, learners need to progress from open communication, to cohesion, and then to personal connections to be able connect to their group and then participate in collaborative and reflective processes where teacher role is paramount. It has been shown that teaching presence categories had a significant impact on the level of learner engagement in course content in a deep and meaningful manner (Garrison & Cleveland-Innes, 2005). Another study on the effect of task nature revealed that Webquest and debate activities which were well structured led the highest phases of cognitive presence (Kanuka, Liam, & Laflamme, 2007). Even the formulation of questions for discussions influenced student participation (Meyer, 2004). Analyzing the online asynchronous discussions in graduate level educational leadership classes, Meyer (2004) found that only a small percentage of the discussions reached resolution level. To move beyond exploration phase and reach higher levels of thinking, she suggested setting the discussion's agenda, actively moderating the discussion, or modeling how to operate at higher level and maybe rewarding students. Therefore, sustained development of cognitive presence requires well designed learning tasks, facilitation and direction of inquiry, which brings the discussion to teaching presence.

Teaching Presence

In CoI, teaching presence is the essential element to bring all elements together to form and sustain the community. Research revealed that teaching presence is a strong predictor of student satisfaction, perceived learning, and sense of community (Akyol & Garrison, 2008; Arbaugh, 2008; Ice, et al, 2007; Shea et al., 2004; 2005; Shea & Bidjerano, 2009).

Teaching presence is defined as “the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison, & Archer, 2001, p. 5). Teaching presence begins before the course starts when the instructor plans and designs the course of study and continues throughout the course with facilitation and direct instruction roles.

Teaching presence encompasses three categories: design and organization, facilitating discourse, and direct instruction.

Design and Organization

Anderson and colleagues (2001) argue that the process of designing an online course is generally more laborious and time-consuming than planning an equivalent course for F2F teaching. Before the course becomes available to students, the teacher needs to make a thorough planning for the process, evaluation, structure, and interaction aspects of the online course. Because online learning sets new expectations and norms for students, everything needs to be more explicit and transparent. This whole process is conceptualized as the design and organization aspect of teaching presence (Anderson et al., 2001).

Some of the activities in this category of teaching presence comprise creating curriculum materials like Power Point presentations, lecture notes, audio and/or video mini-lectures, providing commentaries, and personal insights. This category also involves designing a desirable mix of group and individual activities and creating a schedule for assignments, individual and group activities. Providing guidelines on how to use the medium effectively and appropriately is involved in this category too. Students need to be

aware of learning goals and how to accomplish them. These factors are very significant for achieving successful online learning environment as shown in previous research (Swan, 2002; Kanuka, et al., 2007). Table 4 displays the indicators and examples for coding scheme of design and organization component of teaching presence.

Table 4

Coding Scheme for Instructional Design and Organization (Anderson, et al., 2001, p. 6)

Indicators	Examples
Setting curriculum	"This week we will be discussing. . ."
Designing methods	"I am going to divide you into groups, and you will debate. . ."
Establishing time parameters	"Please post a message by Friday. . ."
Utilizing medium effectively	"Try to address issues that others have raised when you post"
Establishing netiquette	"Keep your messages short"

This component of teaching presence is the one mostly performed exclusively by the course instructor. The design and organization of the course is completed before the course begins and is adjusted when necessary during the course (Anderson et al., 2001).

Facilitating Discourse

Anderson and colleagues (2001) describe facilitating discourse as a critical element to “maintaining interest, motivation and engagement of students in effective learning” (p. 7). The teacher facilitates discourse building, and encourages participation

by modeling, commenting on posts, identifying areas of agreement and disagreement, keeping the discourse focused on learning objectives, and trying to draw in inactive students.

The significant role of facilitating discourse is in agreement with research findings showing the importance of active teacher participation for online learning effectiveness (Arbaugh, 2005, 2008). Facilitating discourse also includes assessing the efficacy of the learning process and the effective use of time. Anderson, et al. (2001) provided a list of indicators and examples to analyze facilitating discourse in online discussions as seen in Table 5.

Table 5

Coding Scheme for Facilitating Discourse (Anderson, et al., 2001, p. 8)

Indicators	Examples
Identifying areas of agreement/ disagreement	"Joe, Mary has provided a compelling counter-example to your hypothesis. Would you care to respond?"
Seeking to reach consensus/ understanding	"I think Joe and Mary are saying essentially the same thing"
Encouraging, acknowledging, or reinforcing student contributions	"Thank you for your insightful comments"
Setting climate for learning	"Don't feel self-conscious about 'thinking out loud' on the forum. This is a place to try out ideas after all."

Drawing in participants, prompting discussion	"Any thoughts on this issue?" "Anyone care to comment?"
Assessing the efficacy of the process	"I think we're getting a little off track here"

Direct Instruction

The final category of teaching presence, direct instruction, refers to teachers providing intellectual and scholarly leadership through in-depth understanding of their subject matter knowledge (Anderson et al., 2001). This role is similar to that of a subject-matter expert. Using subject and pedagogical expertise, the instructor directs learners, provides feedback, and injects knowledge from several resources (Anderson, et al., 2001). Even in a student-centered learning environment, strong leadership is necessary for discussions to stay on track through direct teaching when needed.

Table 6 illustrates the indicators of direct instruction. As true for traditional role of the teacher, in an online course, instructors also should present the content. To retain the focus, instructors need to question, diagnose misconceptions and provide explanations in discussions. Providing a summary of discussions is critical in that it “serves to develop and explicitly delineate the context in which knowledge growth has taken place” (Anderson, et al., 2001, p. 9).

Table 6

Coding Scheme for Direct Instruction (Anderson, et al., 2001, p. 10)

Indicators	Examples
Presenting content/questions	"Bates says...what do you think"

Focusing the discussion on specific issues	"I think that's a dead end. I would ask you to consider..."
Summarizing the discussion	"The original question was ...Joe said ... Mary said ... we concluded that ... We still haven't addressed..."
Confirming understanding through assessment and explanatory feedback.	"You're close, but you didn't account for... ...this is important because..."
Diagnosing misconceptions	"Remember, Bates is speaking from an administrative perspective, so be careful when you say..."
Injecting knowledge from diverse sources, e.g., textbook, articles, internet, personal experiences (includes pointers to resources)	"I was at a conference with Bates once, and he said... You can find the proceedings from the conference at http://www.... "
Responding to technical concerns	"If you want to include a hyperlink in your message, you have to . . .

It is important to provide timely scaffolding in order not to let students become frustrated, because frustration leads to disengagement and is detrimental to learning. In addition, confirmation of understanding necessitates direct intervention through various assessment and explanatory feedback. Research shows that feedback is the most frequently cited reason for perceiving activities as beneficial (Richardson & Swan, 2003).

Finally, direct instruction also takes the form of responding to technical concerns, providing clear instructions on how to access and operate tools or resources. Instructors need to provide clear instructions and if necessary training before students are asked to utilize the tools so that students feel comfortable with using them and can focus on learning the content.

Research has highlighted the importance of direct teaching for effective online learning. Students who indicated high levels of effective instructor direct instruction also showed high levels of satisfaction and perceived learning (Shea, Pickett, & Pelz, 2003).

Distance Education

Distance learning – or distance education has been defined in different ways. Distance education is generally used to refer to the pedagogical practice while distance learning is used to refer to student learning. However, they are often used interchangeably including other recent terms such as online learning, e-learning, and web-based instruction. The United States Distance Learning Association: Distance Education (USDLA) provides the following definition for distance education: "The acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance." In addition, distance education is defined by Schlosser and Simonson (2002) as "institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (p. 1). In a more simple way, Keegan (1995) relates distance education to not having an obligation to go to "a fixed place, at a fixed time, to meet a fixed person, in order to be trained" (p. 7). When other definitions are reviewed, it appears that recurring themes in

distance education include (a) place referring to physical distance between learner and teacher and it can take place anywhere when necessary hardware/software is available, (b) time (synchronous or asynchronous), (c) path (wide range of paths to reach objectives), and (d) pace (students are flexible in deciding their own pace to some extent).

History of Distance Education

Distance education has evolved with the technological developments and their impact on instructional technology. The history of distance education is generally categorized according to the media or medium used. For example, Anglin and Morrison (2002) describe the evolution of distance education through five general categories of education delivery modes: correspondence, radio, television, two-way audio/video, and web-based. Using a more broad approach, both Garrison (1985; 1993) and Moore and Kearsley (1996) divide distance education history into three generations. Yet, recently a number of researchers have suggested that a fourth generation (or to some classification, it is the fifth) of distance education has emerged (Garrison & Anderson, 2003; Taylor, 2001; Wang & Sun, 2001). Table 7 displays an example of five generation model with the characteristics of delivery technologies.

Table 7

Five Generations of Distance Education (Taylor, 2001)

Models of Distance Education and	Characteristics of Delivery Technologies	Institutional Variable Costs
----------------------------------	--	------------------------------

Associated Delivery Technologies	Flexibility			Advanced Interactive Delivery	Approaching Zero
	Time	Place	Pace		
First Generation - The Correspondence Model <ul style="list-style-type: none"> • Print 	Yes	Yes	Yes	No	No
Second Generation - The Multi-media Model <ul style="list-style-type: none"> • Print • Audiotape • Videotape • Computer-based learning (eg CML/CAL) • Interactive video (disk and tape) 	Yes	Yes	Yes	No	No
Third Generation - The Telelearning Model <ul style="list-style-type: none"> • Audio teleconferencing • Videoconferencing • Audiographic Communication 	No	No	No	Yes	No

• Broadcast TV/Radio and Audio teleconferencing	No	No	No	Yes	No
Fourth Generation - The Flexible Learning Model					
Interactive multimedia (IMM)	Yes	Yes	Yes	Yes	Yes
Internet-based access to WWW resources	Yes	Yes	Yes	Yes	Yes
Computer mediated communication	Yes	Yes	Yes	Yes	No
Fifth Generation - The Intelligent Flexible Learning Model					
Interactive multimedia (IMM)	Yes	Yes	Yes	Yes	Yes
Internet-based access to WWW resources	Yes	Yes	Yes	Yes	Yes
Computer mediated communication, using automated response systems.	Yes	Yes	Yes	Yes	Yes

It should be noted that there is not a linear progression in this order of phases of distance education history. Each new generation improved the quality of the means for two fundamental elements of distance education: subject matter presentation and student-instructor interaction. A proceeding generation does not eliminate the previous generation systems. There are still many examples of first and second generation systems and technologies in use (Garrison & Anderson, 2003). Garrison (1985) explains, "The development of the generations of distance education represents, in systems terminology, a hierarchical structure with an increasing differentiation of technological capacity for integrating unique delivery systems" (p.236). Dating back to 19th century, the first generation is marked by correspondence and independent study. In Europe, in 1833 distance education was through delivery of text-based materials by using postal service, and therefore referred as correspondence courses. One of the pioneers, Isaac Pitman started a correspondence shorthand course in England in 1840 (Baker, 2006). In 1856, Charles Toussaint and Gustav Langenscheidt began correspondence written language courses for adults throughout Europe, which also set the date for distance foreign language education. Students received content materials in the form of textbook chapters and received self-exercises and worksheets, which made this model self-learning, self-teaching or home study program (Peters, 2001; Baker, 1999). In the U.S., correspondence courses began in 1890 by the Colliery Engineer School of Mines in Pennsylvania. The course was on mine safety and received so much attention that it turned into the International Correspondence Schools. The world's first college-level correspondence courses were offered in 1892 by the University of Chicago. In the 1930s CBS launched the American School of the Air a biweekly series for elementary and secondary schools.

It was noted that by 1930 there were thirty nine universities offering correspondence courses in the U.S. Although these correspondence courses lacked student to student interaction and frequent and spontaneous interaction between the student and teacher, they set the stage for more sophisticated, effective and complex distance education (Baker, 1999).

The first generation pedagogy was influenced by behaviorist learning. Based on a positivistic approach, learning was assumed to be objective, and therefore transferrable from ‘knower’ to the ‘learner’. Course teams worked towards simplifying content using graphics and chunking it into sub-parts as well as established a kind of relationship between learners and instructor by the use of didactic tone in the written language. In this generation, distance education brought freedom and education opportunity to thousands of people with self-study opportunity.

Referred as telecommunications generation by Garrison (1985), the second generation evolved during the middle of the twentieth century when new technologies appeared including radio, television and video broadcasting via satellites. This is why it is. By the late 1940s film became popular and colleges and universities began developing educational film. In 1950 the Ford Foundation offered grants to develop televised distance education courses (Baker, 2006). Charles Wedemeyer, who is often considered to be the father of American distance education, moved correspondence study concept to independent learning (Gunawardena, & McIsaac, 2004). Principles of humanism played a role for this conceptual movement. Wedemeyer’s pioneering and visionary works made his university, the University of Wisconsin the largest distance education university in the world at that time. In 1965, the University of Wisconsin launched a statewide telephone-

based distance education program for physicians. Four years later, the British Open University was established and became a model to the many other universities worldwide by initializing the structuring program by course teams and founding the instructional technology institute. The British Open University also popularized the use of broadcast television courses for college level in the 1970s. Although, radio added voice and television added both voice and visual media to the learning systems, they still lacked immediate 2-way communication. Besides, student to student interactions, though not the aim of the system then, were restricted with a group of students who gathered around at a certain place to watch televised courses together. Besides, it was too expensive and laborious to set up teleconferences and design and distribute effective materials. Actually, even though several multimedia systems such as audio cassettes, videotext, Super-8mm film, video cassettes, telephone, electronic blackboards and computer terminals, were researched and discussed by Bates, a professor at the Open University, in 1977, only the cheapest medium, the audio cassettes were applied largely, which eventually caused a decrease in the number of televised courses (Peters, 2001).

According to Garrison and Anderson (2003), interactive, computer-assisted instruction courses delivered on a CD-ROM or DVD disks are new additions to the second generation distance education. Nonetheless, the production of these materials is expensive and requires high qualified professionals while distribution is again problematic. Interaction between learners and instructor was again limited by mail and telephone. In this era, the emphasis on self-study (or independent study) continued. Due to high, front-end costs, larger student populations were targeted.

The pedagogy of second generation was under the influence cognitive learning theory, which “led to the use of advanced organizers, role models, summary reflections and simulated peers to draw the user into a sophisticated media world” (Garrison & Anderson, 2003, p. 37). Audio cassettes and telephone conferences became very popular and significant especially for distance language education. They enabled teaching and assessment of listening and speaking skills (Wang & Sun, 2001).

The second generation impacted the distance education history with the inception of influential theories of distance education. First, Otto Peters’ (1971) theory of industrialization is considered to be the most influential on development of Open universities (cited in Gunawardena, & McIsaac, 2004). The industrial model of distance education approached distance education as an industrial form of teaching and learning for economies of scale, thus emphasized the organization of the educational process and mass production to reach large groups of learners. Next, in 1985, Börje Holmberg presented a theory of guided didactic conversation which focused on providing simulated friendly conversation style in pre-produced course documents to bring empathy between learner and instructor. This theory valued emotional involvement of learners and motivation as they facilitate learning. Holmberg modified this theory a decade later (Holmberg, 1995). Lastly, Moore (1993) combined Peters’ and Holmberg’s works and created transactional distance theory by moving the attention to pedagogical theory. Moore’s theory has been so seminal that recently it is proposed to be considered as a global, unifying theory of distance education (Gokool-Ramdoos, 2008). Moore and Kearsley (1996) define transactional distance pedagogically rather than geographically as “psychological space of potential misunderstandings between the behaviors of the

instructors and those of the learners” (p. 200). That is, transactional distance can also occur in face-to-face courses because the amount of dialog and the amount of structure of the course determines distance. Dialog is defined as 2 way interaction between the learner and the instructor while structure refers to the flexibility and design of the course. When a learning program has more structure and less opportunity for dialog, greater transactional distance arises. However, when dialog is more and structure is less, low transactional distance is observed. The theory also encompasses a third construct: learner autonomy, which refers to a personal characteristic of the learner. It can vary in degrees based on the learner’s self-directed learning. The highest degree of learner autonomy is found when a program let learners participate in three areas of the instruction: planning, implementation and evaluation. Nonetheless, not all learners are self-directed. Those learners need more structure and more dialogue in distance learning environment. To provide a better learning environment frequency and immediacy of communication between learners and the learner and instructor play a crucial role. These pedagogical guidelines pertain to the current study too. As a synchronous web-based course system, Elluminate Live offers several tools for student-student and student-instructor communication that can increase immediacy and feedback. Similarly, synchronous chat will be used to enhance teacher immediacy and feedback in place of virtual office hour.

The third generation is shaped by the twenty-first century breakthrough improvements in the computer and the Internet technologies. While Taylor (2001) suggests that the difference between asynchronous and synchronous CMC requires a fourth generation, Garrison and Anderson find this argument too narrow because CMC innovations continue in both asynchronous and synchronous modes.

While computer technology started in mid-1960s, even by mid 1980s it played a limited role in educational settings (Wang & Sun, 2001). By the 1990s many schools were still offering distance education via telecourses and video. After the availability of the World Wide Web (WWW) in 1991, distance-learning courses via the web appeared and opened the doors to groundbreaking innovations. In 1993, International University College founded by Glenn Jones was launched as a true virtual university offering only online courses and degrees. In the early stages of this period, online distance educators used the web to publicize course content. By use of email and other web-based tools, student and teacher interaction as well as interaction among students have increased, leading to more interactive and cost and time-efficient distance learning. Constructivist learning theories have a profound effect on the third generation distance education systems (Garrison & Anderson, 2003). Learners have become active in constructing and re-constructing knowledge as they participate in collaborative and social learning environments.

In present, distance education is constantly and profoundly impacted by interactive computer mediated communication technologies and the Internet (Sherry, 1996; Wang & Sun, 2001; Rudestam & Schoenholtz-Read, 2002; Garrison& Anderson, 2003). The use of learning management systems (or course management systems)such as Blackboard and Moodle, web-based synchronous systems, social networks, and virtual communities are on the rise and this is why some scholars believe that distance education is embarking on a new generation (Garrison& Anderson, 2003; Taylor, 2001; Wang & Sun, 2001). The fourth generation embraces “the first three major attributes of the Net: information retrieval of vast amounts of content; the interactive capacity of computer

mediated communications (CMC); and the processing power of locally distributed processing via computer-assisted programming, usually written in Java” (Garrison & Anderson, 2003, p. 38).

According to Taylor’s model (see Table 3) the current generation makes up the fifth one. Based on this model, the fifth generation, called as Intelligent Flexible Learning Model, is marked by intelligent functions, intelligent object databases, or in other words automated systems such as automated responses to frequently asked questions and customizable interface of campus portals. Basically, the fifth generation incorporates artificial intelligence with the Web. It stands out to be an integrated system of administrative, student support services and instructional content. CMC carries high importance as it “provides a rich source of thoughtful interactions, which can be structured, tagged and stored in a database and subsequently exploited for tuition purposes on a recurring basis through the application of automated response systems” (Taylor, 2001, p. 5). This makes the system cost effective by enabling the management of larger learner population who otherwise cannot afford high tuition prices. The fifth generation also is likely to be more effective in terms of pedagogical and administrative support services.

Many universities and institutions are yet to implement fourth generation distance education systems. It is obvious that Taylor’s fifth generation automated and advanced systems will need more years to be adopted widely. The review of distance education through so-called generations highlights the fact that interaction is the vital component of distance education. As Garrison and Anderson (2003) highlight “the type, extent, and

integration of various types and modes of interaction is the defining component of each generation” (p. 39). Interaction will be discussed in detail in the following sections.

Further, there appears to be a mapping between learning theories and the use of different types of media and distance education systems in generations. From the 1920s to 1960s, behaviorism was very influential as linear media, such as radio, film, and TV were being implemented. It was believed that “a wide variety of behaviors can be observed, measured, planned for, and evaluated in ways that are reasonably reliable and valid” (Gustafson, 2002, p. 17). In the 1960s, cognitive science led a shift from behaviorism to cognitivism, from the perspective of information processing. Cognitivism was complemented by a new generation of desktop and personal computing (Whelan, 2005). The influence of cognitivism led “the use of advance organizers, mnemonic devices, metaphors, chunking into meaningful parts and the careful organization of instructional materials from simple to complex” (Mergel, 1998). Since the mid-1990s, *constructivism* has become influential. It is accompanied by media and technologies that promote interaction, learner autonomy, knowledge construction, collaboration, scaffolding, and reflection, and offer learners multiple perspectives. Since 1995, new technologies such as the Internet, World Wide Web, microcomputer, interactive video, CD-ROM, and other networked and interactive environments have offered “functionality that goes beyond behaviorist or cognitivist worldviews, and recasts learning as a ubiquitous, experiential, self-driven activity” (Whelan, 2005).

In the present generation, the impact of social learning theories such as SCT on distance learning instructional design and technologies is noteworthy (Gillani, 2000). To engage learners in constructing knowledge, testing their hypotheses, technology is used

as a meditational tool to create authentic and meaningful tasks and activities by creating a community of inquiry where learners feel membership. Frequent and quality of interactions between learners and the instructor as well as among learners receive high attention. In addition, assessment involves authentic and challenging practices and focuses on the process rather than the end state.

SCT shifts attention from the instruction as the transmitting knowledge to the instruction as the guidance of socially-based exploration in intellectually rich settings. Computers are used in developing higher-order thinking skills like defining problems, judging, solving, and drawing conclusions as well as information seeking, inquiry, and collaboration. Multimedia/hypermedia, and the Internet allows non-linear learning, increased learner autonomy. E-mail and discussion board technology can be an effective knowledge sharing communication tool for asynchronous discussion that promotes both personal and social construction of meaning (Mackinnon, 2004). Similarly, synchronous tools, such as ICQ, Skype, and MSN Messenger, video conferencing can promote instant feedback, collaboration, critical thinking, and construction of knowledge.

This section has traced the history of distance education. To understand and carry out research in distance education, knowing the history and context of distance education is necessary (Gunawardena, & McIsaac, 2004). Each generation is influenced by the leading learning theory of its era and the available media. In the past, research on distance education centered on comparisons of delivery methods, that is comparison of the student success rates in face-to-face courses with that of distance education, which resulted in “no difference phenomenon” (Russell, 1999). Other research topics included media comparison, student attrition rates, the design of instructional materials for mass

production, analysis of technologies for delivery of instruction, and the cost effectiveness of programs (Gunawardena, & McIsaac, 2004). The recent research concerns include facilitation and effect of interactions, student satisfaction, learner support systems, learner needs and characteristics, pedagogical use of new technologies, global networking, virtual communities, design and implementation of courses with course management systems, issues of access, social and cultural contexts of distance learning, faculty training, workload and changing roles of online instructors, knowledge construction in mediated learning environment, and online collaborative learning (Sherry, 1996; Gunawardena, & McIsaac, 2004; Harasim, 2001; Rovai, Ponton, & Baker, 2008; Rudestam & Schoenholtz-Read, 2002; Rogers, Berg, Boettcher, Howard, Justice, & Schenk, 2009).

Although early generations emphasized individualized learning with self-study methods, new generations value collaborative and social learning, which recognizes that individual meaning making cannot be separated from social influence as associated with Vygotsky's and Dewey's philosophy of learning (Garrison & Anderson 2003). Moreover, with the explosion of information in the Internet age, the sole issue in distance education is not to deliver content to learners anymore, but to teach learners e-learning strategies to manage overwhelming resources and become an effective global learner in culturally diverse learning networks. The current generation enforces a post-modernist and post-industrial approach to distance education (Garrison, 2000).

Distance Education for Teacher Education

Web-based distance education is an important strategy for higher education institutions. Distance learning has the ability to “reach nontraditional students” because

among the common characteristics of online learners are being full-time workers, married and over 25 years old (Murray, 2000, p. 415). Distance learning and hybrid (web-enhanced) courses provide students with flexibility and practicality they need to pursue a degree. They do not have to sacrifice their jobs for their education. In addition to financial benefits, if students are already in a teaching position, online degree programs can facilitate “the development of connections between the theory and principles taught through the courses and the realities of the workplace” (Nunan, 1999, p. 70). Recent research on online teacher education covered various topics such as intercultural competence, reflective learning and teaching, virtual field experience, community of practice, e-mentoring, attitudes and perceptions.

With the rapid globalization of the world and available technology increasing communication among cultures, intercultural competence has become the focus of research in distance teacher education. Davis, Cho, and Hagenon, (2005) define intercultural competency as “transformation of learning and a growth process where an individual’s existing, often implicit, knowledge is diversified to intercultural knowledge, attitude, and behavior” (p. 385). To possess intercultural or multicultural competency, “preservice teachers need to be aware of the importance of changing demographics and multicultural educational theories to teaching and learning; furthermore, they need to have experiences observing and instructing in diverse settings” (Malewski, Phillion, & Lehman, 2005, p. 410). Accreditation agencies such as The National Council for the Accreditation of Teacher Education (NCATE, 2001) and the Teacher Education Accreditation Council (TEAC, 2001) also mandate experience in diverse settings.

The project carried out by Davis, Cho, and Hagenson, (2005) involved six universities' doctoral programs to examine intercultural education and the role of technology to facilitate it. It investigated how asynchronous discussion forums (ADFs) as a medium can facilitate reflective thinking among preservice teachers. The structure of the ADF, the focus of the ADF, and group dynamics were observed. Although online reading groups provided an opportunity for virtual study-abroad, the online community reflected dominant white US culture, because of the influence of US on software tools. Study showed increase in participants' awareness of international perspectives, some possible increase in sensitivity to other cultures, and minimal evidence of the development of intercultural adaptation.

Asynchronous discussion forums have become an important tool in teacher education to promote reflective thinking and teaching. Lee-Baldwin (2005) investigated the potential of asynchronous discussion forums (ADFs) as a medium to facilitate reflective thinking among preservice teachers with the focus of "the extent and manner in which this potential varies with respect to (a) the structure of the ADF, (b) the focus of the ADF, and (c) group dynamics" (p. 93). Participants were 32 preservice teachers at an urban university in the southwestern United States. Quantitative and qualitative research methods were used to analyze data collected during 14-week semester. The study examined 3 forums structured differently: practicum forum, readings forum, and methods forum. The practicum forum showed that unstructured ADFs may not facilitate in-depth levels of cognitive processing, but provide a resource for seek social-emotional support among peers. Although the readings forum prompted in-depth levels of cognitive processing, it did not lead to reflective thought due to its highly structured form. The

methods forum prompted in-depth levels of cognitive processing with peer scaffolding. In short, the results revealed that ADFs facilitate reflective thinking over time depending on the structure and focus of the forum and dynamics of the groups. The study underlines the group formation to facilitate higher levels of learning and relationships between social dialogue, group membership, and learning.

Barnett and Hill (2006) examined pre- and in-service teachers' perceptions about using the Inquiry Learning Forum (ILF) and how their participation in the ILF improved their teaching. Participants watched teacher practices through videos and discussed them with inservice teachers via asynchronous forums. Through these interactions they acknowledged that “different learning theories and reform-based teaching practice used in a classroom” (p. 701). Barnett and Hill (2006) suggest that web-based technologies bring solution to the difficulty of providing preservice teachers with opportunities to examine authentic classroom practices and interact with classroom teachers. They highlight that web based technology gives opportunities for teacher educators to eliminate the gap between theory and practice in addition to “revitalize and reform teacher education courses and to support both pre- and inservice teachers to critically thinking about their own beliefs and practice” (724). Finally, they demand that there should be more examples of online professional development programs.

Distance learning has made mentoring and community of practice available for pre and inservice teachers. Herrington, Herrington, Kervin, and Ferry (2006) describe a Web site designed for specifically for beginning teachers to overcome their problems. The Faculty of Education at the University of Wollongong (Australia) developed the online community of practice Web site called the BEST (Beginning and Establishing

Successful Teachers) in 2005 (Herrington, et. al., 2006). The site has been developed for primary and early childhood teachers, and later included physical and health education teachers. It provides dynamically updated curriculum resources, e-mentoring by expert teachers through discussion boards, and reflective teaching through weblogs. In this paper, Herrington et al. discuss “the theoretical foundations of the approach, the features of the site in detail, and the plan for evaluation of the site” (p. 120). In the design of BEST, nine principles of authentic learning environments were used and these principles were found effective for teachers in the evaluation of the site: authentic contexts (via metaphorical interface), authentic activities (via discussion forums and FAQ), access to expert performances, multiple roles and perspectives (via digital newsletters), collaborative construction of knowledge, opportunities for reflection (via weblogs), opportunities for articulation, coaching and scaffolding (via mentoring by experienced teachers), authentic assessment (via assessment of the website to assess teachers’ learning).

National Technology Leadership Coalition (NTLC) and editors of six educational technology journals established an Early Career Mentoring Network to invite all teacher educators, doctoral students, new tenure-track faculty members and anyone interested in technology and teacher education (Bull, Bell, Thompson, Schrum, Sprague, Maddux, Dawson, & Knezek, 2006). The network uses a blended approach with physical and virtual activities among interactions between the NTLC editors and other educational leaders and researchers at the beginning stages of their careers.

Preservice teachers have limited chance to get experience in diverse settings because of having practicum or attending schools in predominantly white and rural

settings (Malewski, Phillion, and Lehman, 2005). Distance learning technologies can give those teachers the opportunity to enter different classrooms in any “available” place in the world. Two-way videoconferencing is a perfect technology for this activity. One example of this has been conducted at Purdue University for virtual field experiences in preservice teacher education programs in a four year long project. The study showed many advantages of virtual field experience. Preservice teachers expressed positive attitudes toward the experience, benefited a lot from experienced host teachers, engaged in reflective journal writing, tested “their own understanding of the world against the cultural styles and intellects of cultural minorities who are often misunderstood,” and learned that “teacher practices involve ethical considerations and moral questions that impact students in ways that might not be immediately understood.” (p. 425).

Distance Education and Second Language Teacher Education

Similar to distance education for teachers in general, second language teacher education via online education and blended learning has begun to receive attention from institutions and researchers.

The importance of computer technologies for second language teaching and teacher education has been emphasized profoundly in literature (Altun, 2005; Blake, 2000; Chapelle, 1998 & 2001; Kamhi-Stein, 2000; Ortega, 1997; Salaberry, 2001; Warschauer, 1997 & 2001). Moreover, teachers are expected to be competent with using technology in their classrooms. The National Council for Accreditation of Teacher Education (NCATE Task Force on Technology and Teacher Education, 1997) and the International Society for Technology in Education (ISTE) recognize that technology in teacher preparation is essential for all teacher education programs. Research suggests that

preservice teachers should learn how to apply technology to teach foreign languages through using technology in situated contexts (Erben, 1999; Egbert, Paulus & Nakamichi, 2002; Son, 2002). Distance learning courses offer a valuable solution to this issue. In a well-designed online course, preservice teachers learn the content knowledge through using various technological tools, which provides them with “practical experience of CMC for its eventual implementation in their teaching situations as well as a collaborative communication channel with their fellow teachers” (Son, 2002, p. 140).

Further, online education offers a student-centered, self-paced, “powerful mechanism for activating contextualized, experiential learning” (Nunan, 1999, p. 70). Compared to face-to-face discussions, they are less threatening and provide more opportunities for student participation, student-student interactions, collaborative learning, evolution of a shared culture and virtual community, developing of a sense of belonging to a larger community of scholars, experts, and learners (Grubb & Hines, 2000; Nunan, 1999). Inservice and preservice teachers generally show positive attitudes towards the online education and the outcomes of the programs are encouraging (Henrichsen, 2001; Uzunboylu, 2007).

Altun (2005) investigated 52 preservice English as a Foreign Language (EFL) teachers’ attitudes toward the use of computer-mediated communication (CMC) tools, particularly message boards. Participants enrolled in two different courses (Computer Assisted Language Learning and Methods in Language Teaching). Data were collected over a semester through multiple sources: attitude survey, participants’ self-reflective journals, and students’ posting to discussion board. Data were analyzed both quantitatively and qualitatively. Results indicated initial attitudes were highly positive

toward using CMC tools, but no significant differences were found between students' pre and post test results with regards to their attitudes. Initially, participants thought CMC was time consuming and not necessary to use in face-to-face classroom. However, after the course, the attitudes were positive. In addition, students posited that they would like to use CMC tools in their professional development, but "they were cautious about the need of using such tools where face to face communication is more convenient". Altun (2005) asserted that asynchronous communication systems would definitely contribute to train future teachers to be reflective practitioners and active learners.

To investigate foreign language teachers' use and perceptions of asynchronous online discussions on CALL related topics, Son (2002) examined student-student interaction via electronic communication in a distance learning course. Participants were 19 ESL (English as a Second Language) and three LOTE (Language Other Than English – in the study-French and Chinese) in-service teachers enrolling in the class from seven different countries. Data were gathered from online discussions and an online survey with closed ended and open ended questions. The findings contributed to the evidence of the effectiveness of CMC interactions for language teacher education (93% student-student interactions and 7% student-instructor interactions; also 47% task-forced, 43% partially task-forced, 10% off-task). Students' participation was mostly affected by time and personal interest. The majority of the students showed positive attitudes and mentioned several strengths of online discussions for learning and communication including collaborative learning, group interaction, speed, convenience, and the content relevance. Some suggestions made by students included use of group discussions and group projects, forcing commenting to at least to one other's posting, and assigning different

questions to different people. The study showed that “the use of CMC in language teacher education is important because it provides teachers with practical experience of CMC for its eventual implementation in their teaching situations as well as a collaborative communication channel with their fellow teachers” (p. 141).

In 1998, Brigham Young University Education faculty decided to base their Bilingual/ESL Endorsement through Distance Education (BEEDE) program on sociocultural theory. The program has partnerships with the schools in the district. Both pre- and inservice teachers registered for the courses. In her evaluation of sociocultural theory in teacher education, Teemant (2005) posits:

Most practicing teachers have little systematic education in or experience with socio-cultural theory or pedagogy ...The demand for diversity teacher preparation programs is high, yet there are relatively few bilingual/ESL teacher educators available to provide teachers with meaningful content and experience in implementing a socio-cultural model of education. (pp. 49-50)

In her study aiming program evaluation, Teemant (2005) analyzed the qualitative and quantitative data collected between fall 1999 and fall 2002 from students and course facilitators via surveys and questionnaires. The findings supported that “a distance teacher education program can be designed to teach and model socio-cultural perspectives and yield reflective participants who have increased knowledge, skills, and dispositions to innovate in their own teaching” (p. 61). This study is significant for the current research proposal because it shows evidence for application of SCT to distance learning teacher education. However, they differ in their research purpose and framework.

Interaction (CMC) as a Core Element in Distance Education

Interaction has been an important concept for learning for decades. John Dewey (1938) considered interaction and the continuity of interaction as two key requirements for an effective learning experience. In distance education interaction is the core constituent for many models, theories and frameworks (Sherry, 1996; Garrison & Anderson, 2003). Several researchers have argued that distance education is emerging onto a new era which might be called postindustrial. At the core of this era are educational transaction based on collaborative learning, and frequent two-way communication (Garrison, 1997; Garrison, 2000; Peters, 1993).

The impact of the Internet and the ever changing Web on the distance education has been highlighted previously. These technologies also defined and modified interaction. CMC enriched interaction types and modes. Although the majority of interactions still heavily depend on text-based asynchronous applications, multimedia technologies can now accompany the text-based content with voice and visual elements as seen in podcasting and discussion boards. Furthermore, CMC eliminates the time and geographic constraints of face-to-face communications. Thanks to this technology, community concept does not have to be defined with geographical locations any longer (Palloff & Pratt, 1999). Regardless of where they reside, people with common interest and goals can communicate efficiently, sustain relationships with remote friends, and even create or sign into existing social or learning communities. Moreover, CMC has brought equity and more academic and social opportunities for disabled people. Due to lack of necessity to disclose “social cues and social distinctions like gender, age, disability, race, and physical appearance” those people can feel more confident to interact

with other people, which attenuates the feeling of isolation (Burgstahler, & Cronheim, 2001).

In addition, interaction has been the defining element for so-called generations of distance education. During first and second generations of distance education the original concept of interaction included only learner-instructor interactions. By generation third, the definition and forms of interaction has expanded. Moore (1989) identified three types of instructional interaction: (a) learner-learner interaction, (b) learner-instructor interaction and (c) learner-content interaction. By Hillman, Willis, and Gunawardena (1994) a fourth type of interaction was introduced to this model: learner-interface interaction which takes place between the learner and the technology. In Moore's transactional distance theory, learner-interface interaction pertains to structure while first three types fall under the category of dialog which was defined as interpersonal interaction. Learner-interface interaction is generally not considered as a separate interaction type, but as a distributed form of interaction taking place in 3 main n types of interaction. Because online distance education utilizes technology for all 3 types of interactions, learner-interface interaction becomes a part of them (Anderson, 2003). Basically, it refers to the "process of manipulating tools to accomplish a task" (Hillman, Willis & Gunawardena, 1994, p. 34). To elaborate this process, we can think of learner's ability to navigate on course site to reach content, take assessment, or use tools to interact with other learners and instructor.

Other types of interaction explicated in literature such as teacher-teacher, teacher-content, and content-content (Anderson, 2003) or learner-environment interactions (Burnham & Walden, 1997) are beyond the scope of this study. Therefore, only 3 main

interaction types in literature will be discussed here, which will be followed by synchronous and asynchronous distinction and research on interaction.

Learner-learner interaction

Interactions between the learner and other classmates to contribute to course discussions, debates, group projects, assignments and social communication are considered learner-learner interaction. In early forms of distance education, this type of interaction was not feasible and was not the focus of research. With the technological improvements, as well as emphasis on social learning theories, learner-learner interaction has become both possible and popular.

This type of interaction is at the heart of collaborative and social learning. Sustained interaction among students based on collaborative learning lead to connections among students and ultimately a learning community (Boettcher & Conrad, 1999; Tu, 2004; Tu & Corry, 2003).

Student-student interactions depend on many issues such as the course design, course content, tasks, assessment, learner characteristics, availability of CMC tools and support systems, learners' technology skills and attitudes.

For the purpose of this study, learner-learner interactions are critical because for immediate two-way interactions between learners, synchronous tools will be introduced to the students and will be incorporated into course design. During Elluminate Live meetings, different forms of interactions will take place including text-based chat, two-way audio and video. Gmail chat will be used for instructor-learner interaction, however, its use will be promoted for learner-learner interactions. Although it is not feasible to

observer these interactions, students will be inquired to report and reflect on their experience if they have any.

Learner-instructor interaction

Learner-instructor interaction occurs between the instructor and learner(s) as in the form of one-to-one or one-to-many. The purpose of this interaction is to present content, reinforce student understanding, elucidate meanings, provide feedback, and motivate.

During first generation of distance education, this type of interaction occurred through the postal service, and later, by means of telephone, radio and television broadcasting. In online learning environment, asynchronous learner-instructor interaction utilizes email, blog, wiki and discussion board where instructor participates in group or class discussions or course management systems which incorporate all of the previous means. The recent concern for this interaction type is timely interaction (Shearer, 2003). To meet the needs of this interaction type effectively and timely, synchronous web-based course systems can provide a solution. The instructor can present content, direct question and answer sessions, and hold virtual office hours, in addition to provide opportunities for learner-learner interactions. Therefore, such strategies may enrich the development of a community of inquiry, which this study aims to investigate.

Learner-content interaction

As discussed by Holmberg (1985) interaction between learner and content takes a form of didactic dialogue. This interaction can take place whether the content is in the form a print, audio or computer based multimedia which can combine sound, text, graphics, and video. In an asynchronous distance education course, learner-content

interaction is “the primary voice they hear through their studies” (Shearer, 2003, p. 278). That is why, learner-content becomes primary interaction type in those contexts.

Learner-content interaction is affected by what is presented, how it is presented, and in what tone the author speaks to the reader. Selection media and design of course has been the focus of research for more than 30 years (Anderson, 2003). Especially with the advanced technologies such as simulations and second life give learners flexibility to customize the content as they wish. As a result, learner-content interaction becomes customized according to learner’s’ needs and skills with adaptive systems, which steals from teacher-learner interaction (2003). However, automated systems are expensive to design and not very common in online education yet.

Synchronous and Asynchronous Modes of Interaction

In 1995, Kearsley made a distinction between real time (synchronous) and delayed time (asynchronous) interaction. This distinction for interactions is important as ‘it determines the logistic and “feel” of the distance learning experience’ (Gunawardena, & McIsaac, 2004, p. 362).

Asynchronous interaction is mostly text-based. Some examples of asynchronous CMC tools may include listserv, blog, wiki, email, and discussion board. With new improvements on these technologies, users can record their voice or a short video to attach a in their posts (e.g. voice mail in Gmail and Blackboard discussion board).

Kearsley (1995) emphasized that the concept of interaction in distance education is more complicated than it is in face-to-face learning environment because online interaction has to be distinguished according to content versus teacher versus learner, synchronous versus asynchronous, and according to learner characteristics. Learner

differences such as age, personality, and learning styles may interfere with the type and mode of interaction they prefer and feel more comfortable (Gunawardena & McIsaac, 2004).

Asynchronous interaction is the most common type of interaction in distance education as well as the mostly studied in research (Swan, 2002; Stein, Wanstreet,, Glazer, Engle, Harris, Johnston, Simons,. & Trinko, 2007; Wang, 2008; Wang & Hsu, 2008). The asynchronous mode affords learners time for flexibility and control. Students have time to reflect on what they read and then respond accordingly, which may augment critical thinking. However, when other students do not participate in a timely manner, or learners do not get immediate feedback, they may get frustrated and loss their motivation (Branon & Essex, 2001).

Synchronous interaction, on the other hand, is immediate. It is especially significant with providing “a sense of excitement and spontaneity that is not present with delayed interaction” (Gunawardena, & McIsaac, 2004, p. 362). Researchers often suggest synchronous communication for promoting social interaction and community building while asynchronous interaction for content delivery and enrichment (Park & Bonk, 2007; Ellis & Romano, 2008; Im & Lee, 2003; Haythornthwaite, Kazmer, Robins, & Shoemaker, 2004; Wang & Newlin, 2002). However, asynchronous and synchronous interaction uses are not limited with these. A well designed course with proper selection of both synchronous and asynchronous interaction s is necessary for effective distance education (Branon & Essex, 2001; Wang & Newlin, 2002, Hegngi, 1998; Schullo, 2005; McInnerney, & Roberts, 2004). Advocators of synchronous interactions, Wang and Newlin (2002) ‘think of asynchronous communication as the "backbone and muscle" for

course content, online chats are the "heart and hustle" of our Web-based classes'. In a similar way, O'Sullivan (2000) commented that 'synchronous element of courses can be seen as the essence of what it means to "take a class" or "be in school". It is experiencing a greater sense of others' presence that generates a personal connection between instructor and students and among students' (p. 60). Indeed, feelings of isolation from instructor and classmates, which results in a lack of sense of community or belonging to a class is one of the major problems facing distance educators and learners (Rovai & Lucking, 2003; Galusha, 1997; Hara & Khling 1999; Kubala, 1998; Patton, 2008; Palloff & Pratt, 1999; Rovai & Ponton, 2005). Research revealed that in an online course where only asynchronous communication was used, learners could not feel their classmates as "real person" and developed a feeling of isolation (Tu & McIsaac, 2002; Branon & Essex, 2001; Stodel, MacDonald & Thompson, 2006). Further research is needed to investigate how synchronous interactions are implemented in online courses and how they are perceived by students in terms of community of inquiry and satisfaction. This study aims to focus on these areas.

In an online survey of distance educators from around the world, instructors' use of asynchronous and synchronous communication tools were investigated (Branon & Essex, 2001). Findings suggested that instructors prefer asynchronous discussions for "encouraging in-depth, more thoughtful discussion; communicating with temporally diverse students; holding ongoing discussions where archiving is required; and allowing all students to respond to a topic" and synchronous communication for "holding virtual office hours, team decision-making, brainstorming, community building, and dealing with technical issues" (p. 36).

The survey also identified limitations of both types of communication.

Asynchronous discussion is associated with lack of immediate feedback, the infrequency of student participation, necessity for longer period of time for discussion to grow, and feeling a sense of isolation. Similarly, limitations associated with synchronous discussion consist of difficulty in scheduling the meeting for all students, moderating large-scale interactions, lack of reflection time for students to participate, and pressure of typing text-messages for poor typists. Based on the findings, researchers recommended the following strategies for online instructors:

While using synchronous tools:

- meet with smaller groups of students online
- provide frequent and multiple chat times
- allow a limited amount of "lurking" by students
- choose tools and procedures that facilitate moderation of online chats
- provide a specific protocol for online chats.

While using asynchronous tools:

- have students work in teams
- provide feedback in summary form, rather than trying to respond to each individual posting
- provide students with a clear communication protocol
- have students provide peer feedback
- choose tools that provide posting notification
- provide clear requirements for posting and reading discussion entries.

Interactions in a blended format graduate course, Telecommunications for Instruction, involving seven students and one instructor were studied by Vrasidas and McIssac (1999). The first five weeks of the course was held face-to-face and the remaining of the semester included online format for 7 weeks and face-to-face meetings for 4 weeks. During the last three weeks of the course, the researchers interviewed the instructor and participants regarding their perceptions of interaction during the course. The researchers also analyzed participants' online chats and email exchanges between the instructor and students. Several factors influencing interactions in the online course were identified. First, structural elements influenced interaction. For instance, required aspects of the course led to more interactions while heavy course load led to less interaction. Students also complained about asynchronous discussions for being busywork and for not getting enough feedback from the instructor. Second, small class size (2 facilitators and 5 participants) appeared to reduce interactions, particularly asynchronous online discussions. Third, students indicated that more feedback from the instructor would have increased interaction. Finally, students who had no previous experience in CMC were uncomfortable participating in the online synchronous discussions. These students were more comfortable with the asynchronous discussions because they were able to reflect upon their ideas and responses. The researchers concluded that students needed training on the use of Internet customs, such as emoticons and netiquette. They recommended that, at the beginning of an online course, a survey of the students should be conducted to ascertain those students who will require more technical training and support. Moreover, class size and instructor feedback need to be carefully planned. Face-to-face interactions can be organized at the beginning of the semester to meet the needs of socializing.

Although the course format was blended, the implications of the study are still insightful in terms of previous experience with CMC and immediate instructor feedback.

A case study on online teaching and learning with the emphasis on synchronous and asynchronous interaction was conducted by Hegngi (1998). The study took place in one undergraduate and one graduate level online course offered in 5-week time period in summer session. Participants included three undergraduate and eight graduate students, two teachers and two teaching assistants. Three face-to-face and 2 synchronous text-based chat meetings were scheduled in addition to asynchronous discussion forum. Electronic discourse was analyzed. Data were collected by interviews, field notes, course artifacts, online chat and e-mail archives, and student Web pages. The study results revealed that instructor initiated synchronous interactions encouraged greater participation than asynchronous discussions while asynchronous discussions were more open with a greater number of perspectives. Therefore, the study recommends the combination of synchronous and asynchronous communication in an online course. Other findings led some insights into online teaching and learning as it: (a) facilitates writing and discussion assignments, (b) reshapes the roles of teachers and some students, (c) involves very labor intensive course design and development, and (d) allows emergence of new types of interactions.

A comparative study on the effect of asynchronous audio communication (AAC) on student satisfaction, learning outcomes, student engagement, and perceived instructor presence was conducted across a 9-month period including a sample of 156 graduate and undergraduate students from reading, health education, and family studies courses (Oomen-Early, Bold, Wiginton, Gallien, Anderson, 2008). Instructors participated in the

study used AAC to send at least 5 collective and two individual feedback to students throughout the semester. At the end of the semester, an online survey was administered to collect both qualitative and quantitative data. Descriptive, inferential, and qualitative data analyses were implemented. The results were promising in that AAC was perceived as effective for improving students' perceptions of instructor presence, student engagement, course content knowledge, and the interaction between instructor and student. Students were able to get nuances in the audio feedback which was difficult to catch in text-based communication. 80.2% of the students acknowledged that the audio feedback kept them engaged in the course content. 82.4% (129) of the students stated that the audio communication enhanced the instructor-student relationship. In parallel to previous research by Richardson and Swan (2003), audio communication was effective for online social presence.

Research on Synchronous Interaction

Park and Bonk (2007) investigated the synchronous learning experiences in an educational technology graduate course in a Midwest university. Twenty-two distance learning students and 11 residential students from face-to-face section of the course participated in the study. Students of both sections were asked to use synchronous communication system Breeze (Adobe Connect Pro) for constructive peer feedback sessions at least for 4 times during the semester. Data came from open ended questionnaire, individual interviews with 4 distance and 4 residential students, course observations, course evaluations, and analyses of documents. Data analysis revealed the following categories and themes related to perceived advantages and disadvantages of synchronous critique interactions:

Perceived benefits:

- Immediate support and receiving diverse perspectives
- Feeling sense of social presence and connectivity
- Structural support and feedback from the instructor
- Learning strategies

Perceived disadvantages:

- Time constraints and lack of reflection time
- Network connection problems
- Breeze and audio tool related problems

Approximately 85% of both groups found synchronous communication beneficial. Immediate support, which is the most common discussed advantage of synchronous communication in literature, was apparent in this study as well. During the early weeks of the semester students complained about feeling isolated and not as a member of a learning community, but these complaints disappeared when they were involved in synchronous discussions. They indicated that synchronous meetings provided verbal and tonal clues to clarify issues immediately, enhanced discussions, and mutual understanding and sense of community, which was important for their satisfaction and motivation. In addition, the instructor's support, guidelines, and scaffolding received positive critiques.

Despite these benefits, some disadvantages were reported too. Fixed one-hour time constraint was a drawback for successful discussions and schedule problems. Students commented that it would be beneficial for reflection to receive some knowledge

about the other team's project before the synchronous meeting. Besides, network related problems included delays in file download, failing to display shared screen elements, noise and echo, and voice quality. For non-native speakers, language barrier was more challenging than face-to-face communication because of absence of non-verbal cues and technical audio problems.

With an action research approach, Ellis and Romano (2008) investigated students' perceptions of synchronous and asynchronous interaction. More specifically, research focused on

- Quality and quantity of student-student and student-instructor interactions
- Quality and quantity of synchronous sessions during the course
- Quality of asynchronous sessions during the course
- Whether the learning community established between peers and the instructor had met students' expectations.

Data was collected through a survey over 3 semesters in 2 online educational technology course sections. Twenty-three undergraduate and 24 graduate students participated in the study. A minimum of two synchronous sessions (university mandated) between peers had been used during course delivery via Horizon Wimba (LiveClassroom), chat, and instant messaging. The majority (80.4%, n=37) believed that this number of synchronous sessions were sufficient. Moreover, instructors were available to students via chat, telephone and texting. All students benefited from one type of synchronous meetings at least once while the majority contacted the instructor synchronously at least 3 times. Results indicated that 89.4% (n=42) felt that the number of synchronous sessions with the instructor was sufficient while 10.6% (n=5) disagreed

and found it challenging. Finally, 82.9% (n=29) believed that a learning community had been established and it had met their expectation, either partially or totally.

Pearson correlations showed significant positive correlations. Those who were satisfied with the quality of interaction with instructor also believed that a learning community during the course was established. Similarly those who were satisfied with the quality of interactions with peers stated that their expectation regarding the establishment of a learning community was met.

This study highlighted that quality interaction with peers and the instructor is crucial for building an online learning community. Type of interaction has to be determined based on student needs and course objectives. According to the authors “the establishment of a learning community has more to do with the quality of interaction with peers and instructor than does quantity or frequency of interactions” (p. 2619).

Although study provided valuable information on interaction and online community of learning, the qualitative data was not detailed and rich enough to respond the research questions. More open ended questions and interviews would enhance the findings. The information about the setting, design and content of the course is lacking. It would be valuable to know what type of medium and how often it was used for synchronous sessions, and which modality was preferred most and for what purposes they were used.

In another study on synchronous communication, Yamada and Akahori (2007) investigated the effect of different types of synchronous communications on “perceived consciousness of social presence; perceived consciousness of language learning in communication; productive performance; and consciousness of learning objectives” (p.

37). An experimental study design was conducted with 9 female and 31 male university students who were non-native English speakers and had approximately the same language proficiency level participated in the study. Participants did not have any previous relationship and were randomly divided into four groups according to the tool used: (1) video conferencing, (2) audio conferencing, (3) text-chat with image, and (4) text-chat without image. Each participant was placed in a separate room for a 15 minute task-based discussions on the same topic. Participants took a six-point rating scale questionnaire at the end of the experiment. The results revealed that for promoting perceived presence of the interlocutor, the interlocutor's image was the most effective. The voice without the image revealed no significant effect on consciousness of presence, yet there was an interaction effect between the use of voice and the presence of the partner's image. Participants felt more comfortable to converse in their second language within the video chat rather than audio chat because the non-verbal clues present in the video format helped their understanding. They also were more comfortable in text-based chat rather than audio chat because of listening and speaking skills required in audio format. In text-chat they had time to think and formulate their sentences. In addition, video conferencing was the most effective medium in terms of language productive performance. It was discussed that seeing the partner's image promoted affective nature of communication enabling the use of non-verbal communication devices such as laughing and nodding, which might have led to increase in motivation and communication.

These findings provide valuable insights to online instructors to implement certain pedagogical strategies. For example, instructors would better post their photos to course

site and provide a welcoming atmosphere. Studies highlighted the importance of developing a sense of connection and feeling of the instructor and other students as “real” people to have successful online learning. Furthermore, we can infer from this study that implementing different communication tools and balancing asynchronous and synchronous communication are important strategies because different media have different effects on students and learning. However, it should be underlined that effective online learning is not only influenced by what tools are used, but rather how these tools are implemented effectively to serve the needs of the learners and course objectives.

In her dissertation, Schullo (2005) investigated instructor strategies pedagogical strategies of instructors using Elluminate Live and perspectives of instructors and students towards this medium. Because the same tool is also the focus of this proposed study and because strategies are important for teaching presence, I will elaborate on this study. Framed within Transactional Distance theory, social learning theories, tool use and pedagogical strategy success, the research design was a multiple qualitative case study with a total of five graduate level classrooms in the departments of nursing, education, engineering, and library and information science. One of the cases was a blended course while another case involved a mixture of on-campus and distance students. The other three cases were totally online courses. The data were collected through surveys, interviews, focus groups, analysis of archival documents and observations of live or archived three synchronous sessions in each course. The overall results highlighted that instructors used familiar strategies based on their experience and teaching styles. The most successful strategies were identified as follow (p. 242):

- Mini lectures combined with interactive exercises

- Structured group work
- Case study discussions
- Polling, quizzing and student interactions
- Dissemination of electronic content for immediate discussion, feedback or problem solving
- Reinforcement of ideas, concepts and knowledge
- Collaborative exercises
- Question and answer sessions

Instructors implemented the collaborative tools of the Elluminate Live which made the sessions active. They valued VoIP and text-based chat tools which improved student to student and instructor-student interactions. Three of the 5 instructors used Elluminate only 3 or 4 times during the semester while the other 2 used it regularly. However, they all implemented the similar strategies throughout the semester including VOIP, textual chat, whiteboard, hand raising, emoticons, and breakout rooms. Because the observation instrument did not have enough parameters, differences between classes were not identified in this study. The following list demonstrates the tools of Elluminate Live that the instructors used to enhance their current asynchronous courses (p. 242-243):

- Increase interaction using audio and interactive tools such as hand raising, polling and emoticons
- Increase two-way dialog using both two-way audio and textual chat
- Add immediacy and feedback channels using tools such as emoticons and hand raising in conjunction with audio and chat

- Increase student comprehension using planned exercises, web content, questions and answer sessions and often breakout rooms
- Conduct more natural discussion using the audio feature of the system over the use of textual chat
- Connect to students and have students connect to each other by offering multiple channels for communication in real time
- Group work using breakout rooms and the communication tools available in the system

The end of the semester survey revealed that instructors were satisfied (n=2) or strongly satisfied (n=3) with Elluminate Live experience. All of the instructors stated that they planned to continue to use a SWBCS in the future. One of the survey items is particular interest to the current study is that “The sense of community felt between the students as a result of using Elluminate Live! TM” (p. 230). For this statement, one instructor chose dissatisfied, one satisfied and 2 strongly satisfied. A significant comment was made by one of the instructors: “I think that the synchronous sessions were more valuable than I had anticipated to student feeling of connectedness and content exposure” (p. 233). Such a glimpse of finding supports further analysis of synchronous communications through the lens of community of inquiry framework.

The majority of the students were satisfied with their Elluminate Live experience. They had positive perceptions about the effect of the SWBCS on academic and social interactions in the class. They believed it was high quality and very useful, and provided more opportunities for connections. Some of the challenges faced by instructors and students included technical problems with downloading the software, issues with

microphone, and scheduling the live sessions. However, since 2005, Elluminate Live has been updated and some of these technical challenges are no longer felt. I have not observed any software downloading or microphone issues since Elluminate Live was incorporated into Blackboard. Thus, further studies on Elluminate Live will yield new interesting results.

In 2008, Stewart replicated Schullo's (2005) study by conducting a multiple case study to investigate instructional strategies that promote learning-centered synchronous interactions in Elluminate Live. Guided by transactional distance theory, this study used qualitative approach and data were collected including interviews, observation, researcher's reflective journal, surveys, and Delphi method.

The Delphi consensus results (with 13 instructors) for the instructional strategies to promote online learning-centered, synchronous dialogue matched those discussed in literature. These strategies, which mediate the effects of transactional distance, are as follows:

- Building social presence (casual language, humor, rapport-building and/or greetings)
- Respect diverse talents and perspectives
- Facilitate discussion
- Assign group work
- Emphasize time on task
- Provide feedback

Three instructors and their courses were chosen for the case study. Instructors and selected students were interviewed for further data. Results indicated that the main tools

used in Elluminate Live were VoIp, text chat, and whiteboard. The selection of tools to use was related to several reasons: (a) they were relatively simple to use by instructors and students, (b) they met the presentation needs, and (c) they allowed for immediate dialogue. All 3 instructors used these strategies:

- Establishment of social presence by use of casual language and humor
- Provision of opportunities for discussion
- Respect for diverse talents and ways of learning
- Reinforcement of ideas, concepts,& knowledge
- Communication of high expectations
- Provision of feedback

Instructors' use of particular strategies was linked to: (a) teacher's experience, (b) educational philosophy/ style, and (c) providing an additional option for both instructor-student and student-student dialogue. Two of the three instructors participated in the study perceived SWBCS effective for implementing instructional strategies to promote dialogue. The instructor who did not perceive SWBCS effective had technical problems.

This study was significant in that it provided detailed insight into the use of strategies and explains why and how instructors use them. Using strategies on Elluminate Live to establish social presence by all three instructors adds emphasis onto the significance of social presence and how Elluminate may promote this goal. However, because the focus of the study was not on community building and social presence, the proposed study is significant with its purpose and approach.

Summary of Research on Synchronous Interaction

Although none of the studies reviewed here focused on synchronous communications and community of inquiry, this review of literature has provided valuable information on interactions, types and modes of interaction, how they relate to student learning, satisfaction, a sense of presence, and effective pedagogical strategies to implement asynchronous and synchronous interactions. In addition, the review of literature displays a handful of research methods, instruments, and most significantly insightful findings, which eventually helped me find the gap I planned to pursue in this study. Moreover, as an instructor, I think I have been influenced by this review of literature. The pedagogical recommendations and findings in the literature guide my teaching, which directly has an influence on the study as teaching presence is one of the elements of the Community of Inquiry framework.

In short, to provide opportunities for high quality of learning, distance education programs need to incorporate all of the four types of interactions as well as both asynchronous and synchronous modes.

Research on Online Community of Learning

Online community building and community of learning issues have drawn considerable attention from researchers (Kerr, 2004). Studies have focused on various topics using different approaches. Among them are such examples as instructor's role; (Mandernach, Gonzales, & Garrett, 2006; Rovai, 2001), the effect of anonymity of the members (Turkle, 1995), peer interaction (Burgstahler & Cronheim, 2001; Moisey, Neu, & Cleveland-Innes, 2008; Stodel, MacDonald & Thompson, 2006), student and teacher interaction (Bloomberg, 2007), student satisfaction and perceived learning (Akyol &

Garrison, 2008), creating instruments for measurement of sense of community (Ice, Arbaugh, Diaz, Garrison, Richardson, Shea, & Swan, 2007; Rovai, 2002), use of new technologies (Bloomberg, 2007; Dickey, 2004; Stein, et al., 2007), strategies to build community of inquiry (Dickey, 2004).

In the Department of Teacher Education at Miami University, over a span of two years, 30-40% of the end-of semester course evaluation surveys included students' comments of feelings of alienation, isolation and frustration in the online course, entitled Integrating Technology and Education Practicum (Dickey, 2004). Several strategies were implemented to prevent such negative feelings, including discussion groups for small group learning communities, optional email list, and blogs. However, creating a learning community and eliminating the sense of isolation was not successful. In the fall 2003 semester, the use of blogs was implemented for small group learning communities. An exploratory case study was conducted to investigate the impact of blogs on K-12 preservice teacher education students' perceptions of isolation and alienation. Previous to this course, students had taken two technology related courses. This course was also offered as face-to-face. Student who enrolled in the online section had a chance to attend a face-to-face orientation if they wanted. The course design was based on constructivist learning theories. The instructor grouped learners according to their academic programs in order to promote a sense of community. Learning communities varied in size, from 2 to 6 students. Each group had their own communal blog where they could express their feelings and thoughts and communicate and collaborate with each other. They were asked to post reflections to course content each week. No additional discussion board or email list was used, but instructor infrequently sent emails to the class. A total of 111 preservice

teachers from 12 programs took the end of course evaluation survey. Fifteen students volunteered for informal interviews and 36 students responded email interviews. To support trustworthiness, additional data came from observation of groups' blog activities and negative case samples. Analysis of blog posts showed that students not only used the blog to meet assignment reflections, but also they used to socialize with their group members. Towards the due dates, students expressed their problems, frustrations, nervousness, time constraints, and work overload. After the project was submitted, expressions of satisfaction, pleasure and excitement were observed in the posts. Interviews reinforced that blogs reduced the feeling of isolation. Some sample statements included, "It helped knowing I wasn't alone"; "I only had one other person in mine, but we became friends and helped each other a lot"; and "I definitely felt like I was part of a community" (p. 287). Although in the course evaluations, feelings of isolation and alienation were not sought, unlike in previous semesters, there was not any student comment related to such feelings. Two negative cases were reported. One student stated that she believed that the friendliness in the blog was not real. She felt ignored by other members. Another student had similar points. She thought her group members did not support her. Her request for help went unnoticed. In summary, the study revealed:

The use of blogs as a discourse tool for small group learning communities supported the emergence of community by affording students opportunities to socialize, interact and enter into dialogue, seek support and assistance, and express feelings and emotions. This in turn helped bridge or prevent feelings of isolation. (p. 279)

Although a similar course design and tools were used in previous semesters, expected building of community learning did not take place. Dickey argued that it might be because blogs are relatively new and very popular tool for the students. In addition to its novelty effect, some students may already maintain their own personal blogs for social communication. Informal nature of blog might have influenced learners' attitudes. Also, discussion boards and email lists were commonly used in other courses students take. Therefore, they might have lost their novelty effect. Media do not have a direct impact on the dynamics of an online learning community, but "dynamics are the result of the interplay between content, the instructor and the learners" (Dickey, 2004, p. 289). This study highlights that there is a need for further studies investigating the use of and impact of the affordances of new technological tools on discourse and interaction in online learning environments.

In a recent study of 2036 participants from the SUNY Learning Network, Shea (2006) focused on empirical verification of the dimensionality of the teaching presence (design and organization, facilitating discourse, and direct instruction) and its relation with students' sense of learning community. The factorial analysis to measure the three dimensions of teaching presence produced a two factor solution which he termed as instructional design and organization and directed facilitation. Direct instruction was merged with facilitation of discourse to form Directed Facilitation. In relation to teaching presence, regression analysis yielded that 'when students reported effective instructional design and organization and "directed facilitation" of discourse, as defined by the teaching presence section of the instrument, they were more likely to report higher levels of learning community, as measured by the Classroom Community Scale' (p. 41). The

results revealed that directed facilitation contributed more to the regression equation than effective instructional design and organization. In other words, active presence of the instructor in terms of facilitating and guiding the discourse is valued more by students for sense of connectedness and learning.

Unlike Shea's (2006) two dimensions of teaching presence, a number of studies gave support to 3 dimensions of teaching presence (Arbaugh & Hwang, 2006; LaPointe & Gunawardena, 2004; Stein, Wanstreet, Calvin, Overtom, & Wheaton, 2005). Using essentially the same instrument as Shea (2006), Arbaugh and Hwang (2006) assessed the construct validity of the 3 dimensions of teaching presence in a study with a sample of 191 MBA students. The confirmatory factor analysis validated these 3 constructs. In his analysis of the discrepancy in the dimensions of teaching presence, Garrison and Arbaugh (2007) argued that because the data came from student survey, it might be because undergraduate students in Shea's (2006) study were not able to differentiate between direct instruction and facilitation of discourse. Another explanation includes the possibility of high correlations among the components of teaching presence as well as the effect of the student's perceptions of social and cognitive presences in their CoI context.

Very recently, the final addition to these arguments has been made by Shea and Bidjerano (2009). Basically, in their study they proved 3 categories of teaching presence and provided recommendations for instrument modification. In order to validate an instrument designed to measure 3 elements of CoI framework and assess its value in online educational settings, a sample of 2159 students were selected randomly from a multi-institutional fully online learning network. The factorial analysis pointed out that the items fit into interpretable factors that represent the intended constructs. In addition,

structural equation modeling revealed that 70% of the variation in students' levels of cognitive presence can be predicted based on their perceptions of their instructors' fostering teaching and social presence skills. Students who strongly agreed with the item, 'I felt comfortable participating in the course discussions' also had significantly higher levels of cognitive presence. The second social presence item as a strong predictor of cognitive presence was related to sense of belonging: 'Getting to know other course participants gave me a sense of belonging in the course'. Moreover, it was observed that the social presence development depends on the establishment of teaching presence. The findings are congruent with the CoI framework predictions. For future research, it is recommended to make modification in the study instrument to distinguish direct instruction from the other components of teaching presence. Based on their study of direct instruction description by Shulman (1986; 1987) and Mishra and Koehler (2006), Shea and Bidjerano (2009, p. 552) suggest that direct instruction items are defined in regards to the instructor's ability to:

1. Provide valuable analogies.
2. Offer useful illustrations.
3. Present helpful examples.
4. Conduct supportive demonstrations.
5. Supply clarifying explanations.

Further strong empirical support for the CoI framework and its ability to predict both perceived learning and delivery medium satisfaction came from Arbaugh (2008). Using a sample of 656 students from 55 online MBA courses, Arbaugh found that both teaching presence and cognitive presence are significantly and positively correlated with

perceived learning, which supports the previous research and CoI framework (Arbaugh, 2007; Garrison & Arbaugh, 2007; Garrison & Cleveland-Innes, 2005). Social presence was also positively correlated with perceived student learning, however it was more associated with delivery medium satisfaction. Compared to delivery medium satisfaction, teaching presence was a much stronger predictor of perceived learning. Cognitive presence was a strong predictor of perceived learning, but it was not a significant predictor of delivery medium satisfaction.

The study emphasized the critical role of the instructor once again. By focusing on student characteristics as well, the study acknowledged the significant role of delivery medium. The simplicity of the delivery medium and students' familiarity with it are critical factors for online course designs. Otherwise, it would cause a lot of time to learn how to use it, and less experienced students may get frustrated. In the study, a new course management system was in use during the data collection semester. This might have affected the correlational results dealing with medium satisfaction and other elements. Another factor that needs attention is that although participants were from online MBA courses, the program was blended, that is students were also taking courses on campus. Arbaugh listed this factor as one of the limitations, however, we can suggest that further research should also investigate if CoI is influenced by students' current or previous face-to-face relationships. This has been missing in CoI literature. Therefore, through qualitative inquiry, in this proposed study, students' previous relationships as well as any face-to-face meetings will be considered.

Bloomberg (2007) investigated students' perceptions of building community of learning and the use of videoconferencing (to connect with a partner course). Qualitative

case study methods were applied for data collection and analysis in an online course within the Jewish distance education environment. Archived documents of student assignments, self-reflection paper, and documents of contextual information pertaining to the distance learning program and the site were obtained. The survey administered to the whole population. Based on the survey results, a purposeful sample was selected for further data collection. A semi-structured telephone interview was conducted with the faculty (10 out of 16) and the students (22 out of 110). A focus group of 6 students and 2 faculty members was selected for further exploration of emergent findings via videoconferencing. Findings revealed that even though not all students enter the program expecting to be a member of a learning community, by experience they all believed to be a member of a learning community where faculty and students have a role in creating and developing the learning community. Faculty displayed different understandings of the term “learning community” while 80% “understood the idea of a learning community as a shared learning experience” (p. 48). More than half of the faculty perceived themselves as essential members of the learning community. Only 30% acknowledge the possibility of learning community without faculty intervention. Both students and faculty identified challenges and strengths for creating learning community in distance education environment. Most significant factors included peer support, diversity of the student, instructors, technology, monthly colloquium seminars, small group study, and face-to-face interaction with faculty. All the students acknowledged some changes in their knowledge, skills, attitudes, and belief such as being open to new perspectives, appreciating collaborative learning and critical and reflective thinking. The results on the use of videoconferencing showed that students did not perceive the students at the other

sites as members of their learning community. Although they were able to see and hear each other, perceived presence of others was missing. Because the researcher did not explain the context in detail, it is difficult to speculate the reason, however, one can assume that if the students in different sites had no previous contact before videoconferencing, it is highly probable that they could not connect with each other. Community building needs time and effort. In addition, the purpose and the design of these meetings could have affected students' perceptions. In short, although the theoretical framework and the design of the study were described clearly, the research context was not explained in detail. The researcher did not discuss what technologies were used in that particular course and how often the video-conference meetings were established. These factors would be effective for the understanding and transferability of the findings.

Fourteen instructors and 48 graduate level students participated in a survey study asking their perceptions about the challenges and critical elements of community in online classes (Vesely, Bloom, & Sherlock, 2007). The results showed that both the students (85%) and instructors (100%) believe that community is very essential for performing well and learning the course material. It was perceived that learning communities helped students achieve more through collaborative group work. In addition, having a structured, purposeful and supportive environment where members respect, trust and support each other is critical for the learning community. Although both the students and instructors listed the same critical elements of for building online community, there were ranking differences. While students ranked the instructor modeling as the most important element, instructors ranked it fourth. Instructors ranked

the interaction and dialogue with colleagues as first while students ranked it fourth. To form a learning community, a student's desire and need to be a member of the learning community, being self-disciplined and having self-initiative for participation were perceived as the second most important factor by both students and instructors. The third factor ranked by faculty and students was the importance of sufficient time for discussion and interaction because it takes more time to communicate in an online course.

Instructors noted the importance of ensuring all students consistently interact with one another and support each other through shared learning activities and collaborative group projects. Building community in online classes was perceived by the majority of participants as harder than in traditional classes due to 3 themes: communication, time and participation. Communication theme involved lack of verbal and nonverbal cues and immediate feedback in online communication. Time spent on reading and responding did not give chance for informal sharing. Third, participation requires self-discipline in online courses. Only 11% of students and 21% of instructors perceived that building an online learning community could be less challenging because (a) ease of communicating with the whole class and instructor simultaneously, (b) flexible time schedule, (c) time for more thought and deliberation leading to in-depth discussions, and (d) chance for more equal participation among students.

Implications of the study highlight critical strategies for instructors and course design. In alignment with previous research (Garrison, Anderson, & Archer, 2000; Mandernach, Gonzales, & Garrett, 2006), even in collaborative environment, students still want to experience teacher presence. As previously suggested by researchers, this study also recommends that instructor should provide leadership, guidance, and timely

feedback, model participation in class discussions, facilitate sharing and participation, and be available for course and personal concerns via email, chat-rooms, and discussion board. Finally, the significance of 3 immediacy types (interaction types) were enunciated; “Incorporating these features into the online classroom serve as incentives for class members to both feel and act as members of a community” (Vesely, et al., 2007, p. 243)

A quantitative study involving 40 graduate level students was also conducted to investigate the relationship between community building and computer-mediated communication (CMC) which was particularly asynchronous discussion groups (Moisey, Neu, & Cleveland-Innes, 2008). Rovai's (2002) Classroom Cohesion Scale (CCS) questionnaire was administered to the students at the end of the course in 4 semesters. CCS consists of two subscales: Connectedness subscale and Learning community subscale. Connectedness subscale covers sense of trust, interdependence, and social presence. Learning community subscale indicates students' feelings of shared values, beliefs, learning goals and expectations, and the sense of collaboratively constructing knowledge. The sum of the Connectedness and the Learning Community subscale scores provided the Classroom Community score.

Results showed significant positive correlations between community cohesion (both scales) and passive involvement such as reading discussion postings. Surprisingly, there was not a correlation between community cohesion and active CMC involvement such as making posts and commenting on others' posts. Other significant positive correlations were found between course satisfaction and community cohesion and both subscales and between program satisfaction and community cohesion (only the Connectedness subscale). No significant difference was observed between the learners'

sense of Learning Community or Connectedness subscales among the four classes. While number of classmates known prior to the course correlated with the both subscales, number of courses completed in the students' program of studies did not correlate with any of the variables. Program satisfaction was found to be significantly correlated with Classroom Community and Connectedness, but not with Learning Community. Finally, there was no significant correlation between participating in a collaborative group project and any other variables. It is noteworthy that none of the students did the project as a group in fall 2003 and fall 2004 while in winter 2004, 3 out of 11 students chose to do the project as a group and in spring 2004 all of the 8 students chose to the project as a group. The study could have investigated the effect of instructors and the course designs because 4 sections were taught by 3 different instructors and this might have affected the students' preferences.

Considering its correlational quantitative research design, the study is limited in terms of its small sample size (40 students from 4 classes over 4 academic semesters). In addition, the only data source was self-reported end-of semester questionnaire. Some students might have not been successful to recollect their all CMC activities accurately.

Social presence was the focus of another study conducted by Swan and Shih (2005) in four online graduate classes in an educational technology program. Using a mixed-method approach, Swan and Shih investigated how social presence developed in asynchronous course discussions, students' perceptions of social presence (of the instructor and of peers), and relationships between social presence and course satisfaction, perceived learning, and satisfaction with the instructor. Fifty-one (out of 91) students took the end-of questionnaire, which included 19 Likert-type and 3 open-ended

questions. Based on questionnaire analysis, 5 participants with the highest ratings and the five respondents with the lowest ratings of perceived social presence (combining social presence of peers and the instructor) were interviewed. In addition, the discussion postings of these students were coded for social presence indicators.

Quantitative results showed strong correlations between social presence and satisfaction with online discussions, supporting the previous findings of strong relationships among social presence and course satisfaction and perceived learning (Richardson & Swan, 2003). The findings revealed that perceived social presence of the instructor might be more dominant factor in determining satisfaction than the perceived presence of peers. Correlations also indicated that course design (design of discussion questions and tasks) might be significant for the development of social presence (Garrison & Cleveland-Innes, 2005; Kanuka, Liam, & Laflamme, 2007; Meyer, 2004; Tu & McIsaac, 2002).

Qualitative findings, supporting the quantitative results, indicated that students with the highest social presence used more social presence indicators to project their own social presence to their peers in the discussions. Interview data showed that students with low social presence ratings adopted more formal style in their postings, and they did not value their classmates' responses while students with high social presence ratings valued peer interactions.

This study implies that students' perceptions toward online learning may be an important factor how they perceive online collaborative learning tasks, which finally affect their satisfaction with the instructor and course, and perceived learning. Research

on the community of inquiry, therefore, should use qualitative methods to depict insights into student epistemological approaches and preferences.

Akyol and Garrison (2008) investigated the development of community of inquiry including all 3 elements and their relationship with students' perceived learning and satisfaction. Fifteen out of 16 students in a graduate level online course participated in this mixed method study which mostly quantitatively oriented with only qualitative analysis of 4 open ended survey question s.

For social presence, a 3X3 ANOVA with repeated measures analysis was done with the factors being time "(first 3 weeks, second 3 weeks and last 3 weeks) and categories of social presence (affective expression, open communication and group cohesion)" (p. 8). The results did not show a significant change in social presence over time. However, there was a significant change in terms of categories of social presence. There was an increase in the percentage of group cohesion indicators while a decrease in the affective expression category over time. The explicit personal recognition dropped by time as students' comfort level with the online discussions increased. Researchers discussed two possible reasons for this finding. First, collaboration depends more on identity with a group and its objectives and less on individuals. Second, the nature of the online discussion board might have positive effect on group cohesion as previous research showed the effect of different technology on social presence (Lomicka, & Lord, 2007; Nippard, & Murphy, 2007)

For transcript analysis of cognitive presence, coding categories were the triggering event, exploration, integration and resolution. Resolution category was observed the least, which was explained by the fact that students were not required to

apply their final project and share the results with the class. Postings related to resolution category were also noted as few in previous studies (Meyer, 2004; Murphy, 2004; Vaughan, & Garrison, 2005). The integration phase was found to be the most common coded category of messages. The results revealed that categories of cognitive presence were significantly different from each other, but there was neither any significant time effect nor time by category interaction effect.

Teaching presence analysis results did not show a significant time effect, but categories (design and organization, facilitating discourse, and direct instruction) significantly varied from each other. Direct instruction was the only category that changed significantly over time. It seemed reasonable to observe that the design and organization category was the least of all because these activities generally take place before a course begins. In addition, the simple effect analysis also showed a significant variation among categories across the three time phases. Facilitation was the highest during first and second time segments and dropped in the last time frame. This drop in facilitating discourse category was tentatively explained by that “students needed more encouragement and support during the first three weeks to express their ideas and then as they began to understand the expectations of online discussion, the need decreased and then stabilized” (p. 17). Because every week each group was assigned with facilitating discussions, by time students became more confident in providing direct instruction, which refers to for example, “focusing the discussion on specific issues, diagnosing misconceptions, confirming understanding or injecting knowledge from diverse sources” (p. 17).

No significant time effect on community of inquiry as a whole was observed. There was a significant category effect and a significant time and element effect. Each three presence was significantly distinct from each other for each 3 time segments. However, they did not differ over time.

Both teaching presence and cognitive presence correlated positively with perceived learning and satisfaction while social presence correlated with only satisfaction. In addition, there was a positive correlation between teaching presence and cognitive presence. Students believed “they learn more when they perceive sufficient levels of teaching and cognitive presence” (p. 15). Qualitative analysis of 4 open-ended survey questions supported the quantitative results. Most of the students stressed the effect of teaching and cognitive presence on their learning. Only two students emphasized the importance of all three presences for meaningful learning. Most students found sense of community effective for their learning.

Results signify that teaching presence has an important role (Garrison, & Arbaugh, 2007; Shea, Pickett & Pelz, 2003; Shea, Li & Pickett, 2006). However, “cognitive presence was found to be more influential factor on students’ learning” and said to be “the heart of the CoI framework” (Akyol, & Garrison, 2008. p. 17) Unlike Swan and Shih’s (2005) study, this study did not find a relationship between social presence and perceived learning.

The study only included one closed-ended survey item to measure perceived learning and satisfaction. This affects the credibility and transferability of the study. The study is also limited with its number of participants (n=15) for statistical correlational analyses. Another point that takes attention is the analysis of teaching presence. Because

researchers did not separate the instructor postings from students, it does not shed light on the role of teacher. For example, for direct instruction category, one would expect to learn how much of the postings were made by the instructor and how this affected the students.

Face-to-face (F2F) meetings are not always possible in a totally online course because of the geographical distribution of the instructor and the learners. However, as an online instructor, I have observed that if geographically and strategically available, some students prefer to meet F2F as a group even though they are equipped with necessary tools and skills for synchronous meetings. Sometimes these groups are successful, but sometimes they encounter group dynamics problems. When a member's schedule is not compatible with the other members' for F2F meeting, this member may end up with being isolated. This disturbs group cohesion and success. In addition, F2F meetings prevent the teacher from observing actual group discussions though students submit a detailed meeting log.

Similar to my experience, Stodel, MacDonald and Thompson (2006) observed that some of their students stated that they missed F2F contact. In order to understand student's perceptions of what was missing in a successful online course in M.Ed. program, they conducted a qualitative study. The class had F2F three-hour meeting for the first of the 13 units in the course. F2F meeting was also available during the second unit for those who wanted it. During the rest of the units F2F meeting was not available. The course implemented discussion board and text-based chat sessions.

At the end of the semester, students reflected on their experience and course in the discussion board. Eleven out of 23 students stated they missed and/or preferred more F2F

contact. In-depth semi-structured interviews were conducted with 10 of these students. Five themes emerged from the data analysis: (a) robustness of online dialogue, (b) spontaneity and improvisation, (c) perceiving and being perceived by the other, (d) getting to know others, and (e) learning to be an online learner. Participants reported that compared to F2F meeting, their online meeting lacked non-verbal cues and spontaneity. In addition, they reported poor quality of some of the discussions, difficulty of typing instead of speaking their ideas, missing humor and emotion. Some liked the self-paced flow of discussion boards which they believed led more reflective discussions and the ability to review anytime they needed. Some learners stated they would prefer more synchronous communications for spontaneous feedback and collaboration. One learner complained that the chat program did not have audio option. About how they perceived other learners and how they felt to be perceived by others, students commented the lack of real person picture in the discussions. Although they created learner pages where they introduce themselves, some did not post their picture and this comment shows how important for some to visualize the owner of the posts. Students had different thoughts about getting to know others and feeling a sense of community. One learner stated that her group members met F2F only a few times, which she believed was not enough to develop a social relationship. However, another learner who never met the group F2F developed a very close friendship with one of the group members. All participants felt a sense of community between and among the learners and professors. Feelings of cared, supported and encouraged in their learning were reported. Regarding the relationship between learners and the professors, mixed feelings were observed. Some thought they could not benefit from professor's expertise while one learner stated the lack of informal

conversations generally available in F2F courses. Finally, some participants reported that they felt insecure with regards to their learning. Participation in discussion board was scary for one learner as he was afraid of being misunderstood.

Findings were interpreted by using Garrison, Anderson, and Archer's (2000) community of inquiry framework. Cognitive presence which reflects acquisition of higher-level knowledge and critical thinking was present in some of the discussions. Learners also engaged in critical thinking with their group members, within their reflections, assignments and in dialogue with colleagues outside the course. It was argued that cognitive presence may not be always assessed by what is present in the discussion forums because although students may be cognitively present, they may refrain from posting due to other reasons such as being afraid of offending others, constructing texts that do not reflect their messages clearly, and exposing personal beliefs.

Social presence was felt greater in the groups than for the whole class. It could be the result of more frequent interactions within the groups. Findings supported the social presence in Garrison et al.'s (2000) four categories of social presence: emotional expression, open communication, and group cohesion. Self-disclosure on learners' pages was observed, however, there was little evidence of other emotional expressions including humor and emoticons. Open communication was evident in the discussions with students' asking and answering questions, agreeing, and commenting. Frequent positive comments such as "Good point" were not enjoyed by some learners because they did not feel that added to discussions. The researchers commented on the link between cognitive and social presence and recommended that promoting social presence initially might be the precursor for cognitive presence, but challenging learners for high-level

critical thinking is very critical to sustain cognitive presence. Regardless of the evidence some social presence in the course, some learners missed F2F contact while some complained that could not develop a connection with some learners because they were faceless as they did not post their photo. Authors reported that to enhance social presence in this course multiple strategies were used: “learner pages, welcoming postings, learning triads, chat sessions, discussion forums, a F2F orientation class, small class size, collaborative activities, promptly responding to emails and postings, sharing personal stories and experiences, and being funny” (p. 14).

Teaching presence involves three indicators: design and organization, facilitating discourse, and direct instruction, which all were followed in the course. Regarding the facilitation of discourse, it was noted that in each unit, one triad group was responsible to facilitate and summarize the discussions. The instructors participated only when there was a need for clarification. Findings showed that learners expect to see more instructor facilitation and presence for the discussions. In addition, although instructors provided detailed feedback on learners’ assignments, some felt that they were not benefiting from the instructors’ expertise enough. This led researchers question the possible conflict within students’ perceptions. Some learners may expect to learn more in online course than they do in F2F class.

Finally, the following pedagogical strategies for enhancing presence in online learning communities were suggested:

1. Create opportunities to enhance spontaneity and emergent design which is flexible and facilitative, and which involves the use of synchronous communication tools.

2. Coach learners how to learn online by being a role model, supportive, and facilitative, and providing constructive feedback.
3. Explore the use of diverse technologies for enhancing communication and social presence. Audio and video-conferencing may be more effective to establish social presence and foster communications. Learners may be encouraged to interact F2F and/or synchronously online in an informal format.
4. Articulate and manage the expectations of the online community with the students.
5. Understand all learners in online learning environments. Provide coping and adaptation strategies to those whose preferred learning medium is not online.

The reported limitations of the communications in this course might be a result of the fact that the communications were mostly asynchronous on discussion board and the synchronous communication was via only written chat. Students might have felt differently if SWBCS had been used. The importance of using advanced technologies to enhance communication and collaboration was discussed by the researchers in their implications part of the article. The importance of these findings for the proposed study lies in the fact that some participants may prefer F2F meetings with their group members during the semester. This needs to be included in data collection because it may influence their sense of community and it is also interesting to investigate what makes them prefer to meet F2F while they can use audio and/or video tools of Gmail Chat or Elluminate Live, which provide spontaneous interactions, archived documentation, document sharing and many other options.

One of the drawbacks of the study is that it did not investigate which students had F2F meetings with their groups and which did not, and how this factor affected their perceptions. Another improvement needed in the data collection, which was based on solely the end-of semester interview. Data triangulation would enrich the study findings as well as increase its trustworthiness.

A follow-up study to a preliminary investigation of teaching presence in the State University of New York Learning Network (SLN) was conducted by Shea, Pickett, and Pelz in 2003. Previously faculty went through a five-month faculty development cycles. Recently, the faculty had training on teaching presence, therefore the study focused on teaching presence and its relation to student satisfaction and learning.

A web-based end of semester survey was created to instigate students' perceptions of teaching presence. The survey included a five point Likert-type scale that asked students their level of agreement or disagreement to statements related to teaching presence. A total of 6088 students, about 31% of students enrolled in that semester, participated in the study.

Survey results revealed that 85% of the students showed high ratings for the instructional design and organization. In addition, "students who reported high levels of instructional design and organization in their courses also tended to report high levels of satisfaction and learning. Approximately, 75% of respondents preferred effective discourse facilitation by the instructor while 69% agreed or strongly agreed with statements related to effective discourse facilitation by classmates. There was a significant correlation between instructor discourse facilitation and satisfaction and learning ratings. Although similar correlation was found between discourse facilitation by

classmates and satisfaction and learning, this was not as high. Regarding direct instruction, approximately 78% indicated that the instructor provided effective direct instruction while 65% agreed with this statement for the classmate direct instruction. Similarly, students who indicated high levels of effective instructor direct instruction also showed high levels of satisfaction and learning. However, the correlation between effective classmate direct instruction and satisfaction and learning was lower.

The results were very similar to what found in previous studies, which supports the importance of instructional design and organization for effective online learning. The higher ratings for facilitation of discourse by instructor than classmates might be because traditionally students expect their instructor play the central role in teaching. Therefore, their expectations are higher for the instructor than for their classmates. However, students' high ratings for classmates show that they perceive that their classmates also play a role in teaching presence.

Another significant study was conducted by Nippard and Murphy (2007) to investigate how social presence was manifested on Elluminate Live class sessions by online high school students and instructors in Canada. Recordings of 12 Elluminate Live sessions from six distance education courses were analyzed according to social presence categories and indicators. Findings revealed that social presence was manifested as means of choice of specific tools, choice of communication conventions and digressions from the curriculum. In terms of choice of tools, it was found that students mainly used direct messaging tool of the Elluminate Live while instructors almost always relied on duplex audio. In addition, language conventions showed differences as well. Students' messages were more informal, including symbols, abbreviations, letter combinations representing

specific words, and emoticons. On the other hand, teachers often used standard communication conventions. To express their emotion they changed their tone or volume of their voice. Researchers asserted: “While use of audio required a more formalized approach such as turn-taking or prompting by the teacher, the use of DM [direct messaging] allowed for more immediate responses conducive to immediate and spontaneous expressions of emotion” (p.7). Finally, social presence prospered when there was digression from the curriculum as students displayed much of their affective, cohesive and interactive responses in that context. Digression was spontaneous, but not planned by the instructors except for those at the beginning of the sessions.

This study is particularly significant for the current research because it has been the only study identified applying a part of the CoI framework to synchronous class meetings. However, it is limited with relying only recording observations and not including students’ and instructors’ perspectives and not covering teaching and cognitive presences.

Summary of Research on CoI

This section has reviewed the previous research framed within the CoI. These studies identified correlations among 3 elements of the CoI, teaching, cognitive and social presence as well as correlations among them and perceived learning and satisfaction. Studies also focused on how these presences evolve over time and how students and faculty perceive them differently. One of the common drawbacks of the previous research is that they only had one source of data, which are closed-ended end-of-semester questionnaires. Moreover, learning was operationalized as perceived learning and was investigated in only a few studies. Both learning and satisfaction are assessed

with only one or two self-report survey items (Rourke & Kanuka, 2009). Therefore, data triangulation and robust qualitative study methodology are needed in further study. Furthermore, none of the studies investigated the use of synchronous systems and their relation to building and sustaining a community of inquiry with the focus on all three presences.

Conclusion to Chapter 2

This chapter has reviewed literature pertaining to the Community of Inquiry framework, which bases the theoretical foundation of this study. In order to provide a better understanding of the Community of Inquiry, this chapter also explicated several other key constructs which are interrelated and carry great importance for online learning. Figure 7 displays these constructs visually. It should be noted that the figure does not imply any causal and/or gradation relationships among these constructs.

A short history of distance education has been discussed, touching on influential learning theories of each era. As the CoI framework is rooted in social learning theories and social-constructivism, the chapter also elucidated these theories and how they have influenced online distance learning.

Interaction has been the core concept in reviewed literature. Both theories and research studies reviewed in this chapter focus on interaction because learning occurs through dialogic interactions among learners, between instructor and learners, between learners and content and interface. It has been emphasized that the majority of online courses solely use asynchronous interactions. It is suggested that synchronous communication tools, especially SWBCS, such as Elluminate Live, can provide tools that are effective to enhance an online community of inquiry. Being a fairly recent theoretical

framework, the CoI has not been used to study synchronous interactions in an online community of learning. Therefore, this study investigated how two types of synchronous communication tools were implemented in an online course and how these pedagogies influenced perceived satisfaction and community of inquiry that encompasses social, cognitive and teaching presences.

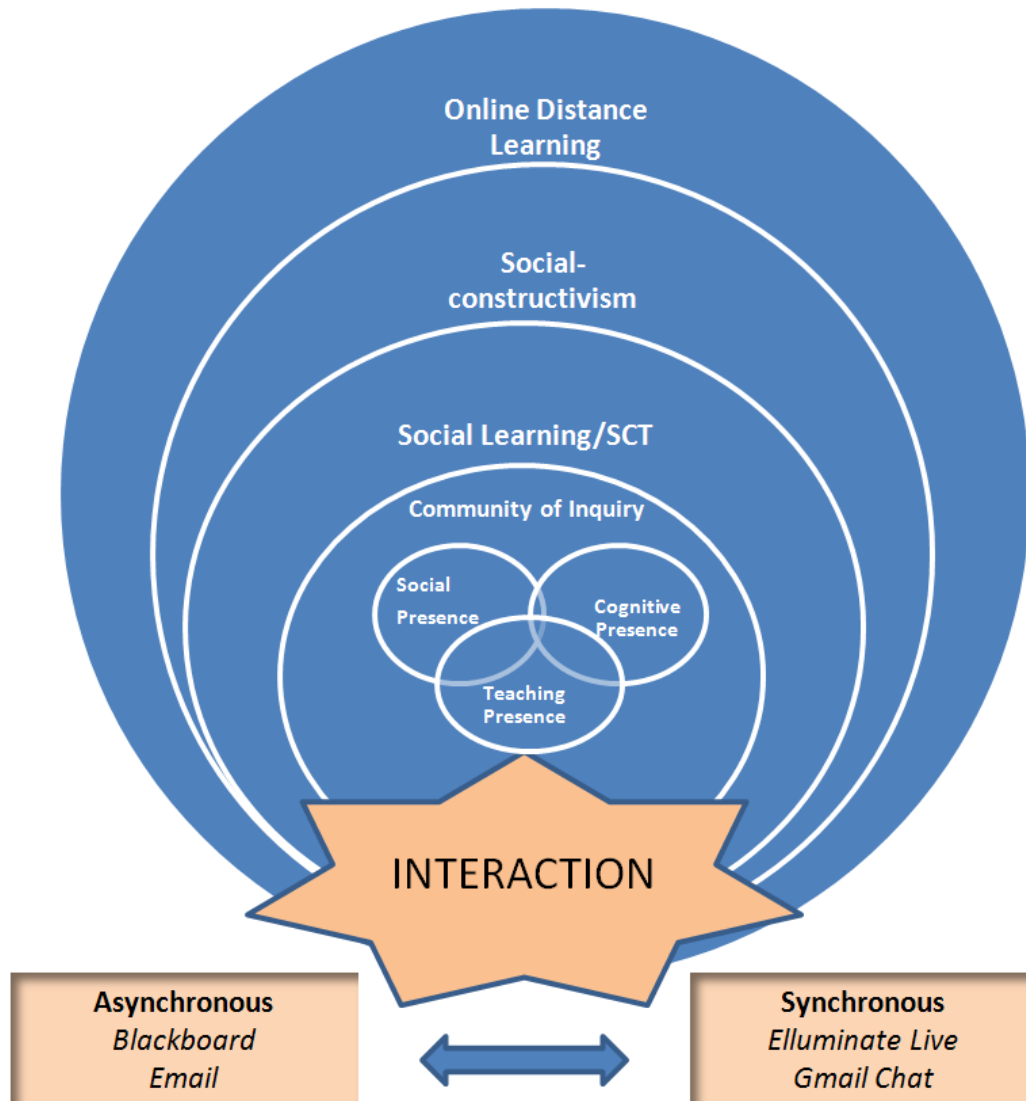


Figure 7. A visual display of theoretical constructs for the study.

This chapter provided a theoretical background for the study and highlighted research findings and gaps in literature. In the next chapter, the study design and method will be fully detailed.

CHAPTER THREE: METHODOLOGY

Overview

This chapter discusses the methodology of the inquiry used in this study. The study setting, data collection procedures and instruments as well as data analysis plan and strategies will be explained in detail.

Framed within the Community of Inquiry (CoI) framework, the study sought to answer the following questions:

Overarching question: How does the use of synchronous communication tools mediate the community of inquiry in an online pre-service ESOL course?

1. How does the use of Instant Messenger (IM), Gmail Chat (for extended virtual office hour) mediate the community of inquiry?
 - 1.1. How does the use of IM mediate social presence?
 - 1.2. How does the use of IM mediate cognitive presence?
 - 1.3. How does the use of IM mediate teacher presence?
 - 1.4. How do students perceive the value and effects of IM in terms of course satisfaction?
2. How does the use of a SWBCS (Elluminate Live) mediate the community of inquiry?
 - 2.1. How does the use of a SWBCS (Elluminate Live) mediate social presence?
 - 2.2. How does the use of a SWBCS (Elluminate Live) mediate cognitive presence?
 - 2.3. How does the use of a SWBCS (Elluminate Live) mediate teacher presence?

2.4. How do students perceive the value and effects of a SWBCS in terms of course satisfaction?)

The Setting and Participants of the Study

The Setting

ESOL teacher education has gained increased attention from the policy makers and teacher educators because of the outgrowth in English language learner (ELL) numbers and their unique needs (Walker, Ranney, & Fortune, 2005). Florida is the third leading state in ELL population. 2006-2007 AALA (Office of Academic Achievement through Language Acquisition) statistics report the number of English learners in Florida as 230,890, which equals 11% of the current K-12 student population in the public schools in Florida. The increasing number of ELL students has implications for public school teaching and teacher education. To protect the ELL students' rights and provide them equal access to all educational programs, in 1990, the Florida Consent Decree was signed between META (Multicultural Education and Training Advocacy), and the Florida State Board of Education (SBE), resulting from a proposed law suit, LULAC (League of United Latin American Citizens) et al. v. United States Court of the Southern District. The Consent Decree mandates all Florida teachers who have ELL in their class receive ESOL training and details the requirements and standards for personnel delivering ESOL instruction. Elementary school teachers, secondary language arts teachers, and special education classroom teachers are required to take 300 in-service hours of ESOL training, or 15 college credits of ESOL education courses. A state approved-ESOL endorsement program should cover these areas: (a) methods of teaching English to speakers of other languages (ESOL), (b) ESOL curriculum and materials

development, (c) crosscultural communication and understanding, (d) testing and evaluation of ESOL, and (e) applied linguistics. Secondary teachers are required to take 60 in-service hours of ESOL training, or three college credits of ESOL education courses.

This research study took place at a metropolitan, public, research-oriented university in southeastern U.S. At this university, the ESOL endorsement is provided by infusion method, which consists of three ESOL courses, infusion of ESOL methodology in students' teacher education courses, one early and one late field experience and completion of an ESOL portfolio by each student. In the spring 2009 semester, 21 ESOL courses were offered at the College of Education on the main campus, 12 of which were offered face-to-face and 9 were online. The demand for online sections has been great in the ESOL endorsement program. Each semester online sections fill up very quickly as soon as registration starts. It is stated on the university website that over 70,000 enrollments in over 1,700 distance learning course sections annually are served. Statistical trends of our university show a steady increase in the number of online courses offered each year as depicted in Figure 8. Both undergraduate and graduate enrollment increased by 2.4 times in 5 academic years.

In 2007, two new online programs for ESOL teacher education opened: M.Ed. in Curriculum and Instruction with Specialization in TESOL Education and ESOL Endorsement Specialization Courses for pre and inservice teachers, which can lead to a Graduate Certificate in ESOL and/or credit toward this M.Ed. degree. The demand and interest for these online programs has been high.

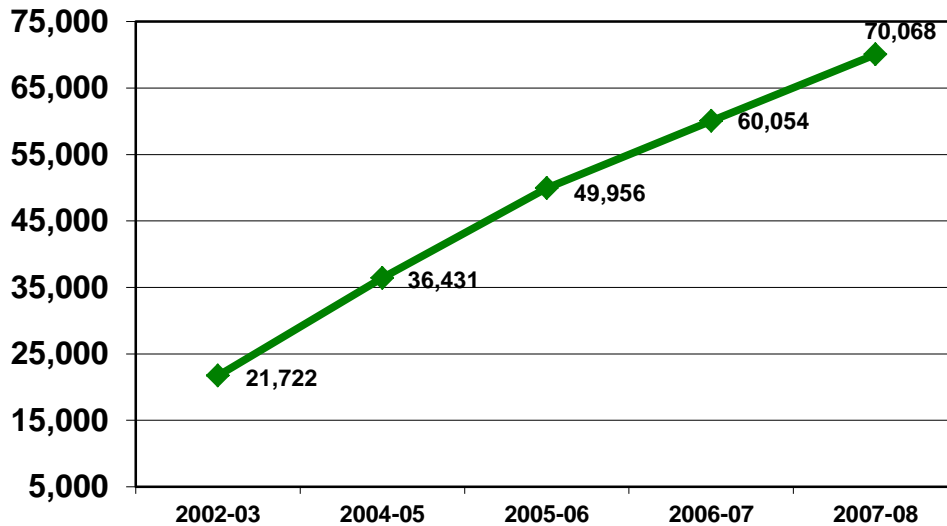


Figure 8. Five Year Distance Learning Enrollment Trend (USF Educational Outreach Distance Learning Trends PowerPoint Presentation, 2008, p.2).

Language Principles and Acquisition Course

The Language Principles and Acquisition course is the capstone course in the ESOL endorsement sequence for preservice English Education, Foreign Language Education/ESOL and Special Education majors. In fall and spring semesters, it is offered both on campus and online. The course section that I was teaching and therefore was the research setting for this study was offered as a totally online course via the Blackboard course management system including Elluminate Live. Blackboard provides synchronous communication through text-based chat, plus asynchronous tools such as email, class and group discussion board, file sharing, wiki, blog, content presentation area, grade center, group management and collaboration tools, survey, test, quiz, and exam builder.

Except for the midterm exam day, the class did not meet on campus. All interactions were via the Internet mostly asynchronously (email, discussion board, and other tools available on Blackboard) and 5 whole class synchronous meetings via

Elluminate Live as well as student-instructor chat meetings which were mostly student initiated via Gmail Chat. Instead of setting aside an office hour, I use Gmail Chat to make myself available to my students for extended hours including evening hours and weekends. As a heavy computer user, I am generally online for 6 to 10 hours daily. Last semester, many students contacted me frequently through Gmail Chat. Compared to having no attendee at the scheduled office hours via Elluminate Live in earlier semester, using Gmail Chat was a better strategy. In addition, students were free to make an appointment to meet me on Gmail Chat or Elluminate Live anytime they wanted.

The aim of the Language Principles and Acquisition course is to introduce the components of language, and link them to methods and techniques of providing comprehensible instruction to English language learners in Florida (see Appendix A for the course syllabus). More specifically, the course objectives include the following:

1. Students will demonstrate basic comprehension of the sub-fields of Linguistics by defining, describing and applying to social and classroom context the disciplines of: (a) Phonology & Phonetics, (b) Morphology, (c) Semantics, (d) Syntax, (e) Discourse, Pragmatics, & Nonverbal Communication.
2. Students will apply their comprehension of the subfields of linguistics through:
 - Analyzing authentic oral and written language of English language learners (from videotaped and/or audio-taped oral samples and samples of student writing) in class.
 - Developing a case study describing an English language learner's linguistic competence.

3. Students will apply their knowledge of linguistics and the second language acquisition process to developing, implementing, and evaluating appropriate instruction through:

- Developing lesson plans and assessment measures for a variety of topics with appropriate instructional modifications for English language learners
- Developing a case study describing an LEP student's literacy development.

The course design supports collaborative learning, socio-cultural theory and a socio-constructivist approach. During the first week of the semester, social presence begins to be established by the means of an online welcome message from the instructor, self-introductions with photographs, and getting to know classmates in the e-Café open discussion forum built at Blackboard. As an instructor, I take an active role in posting messages and my photos. These social interactions help students form their groups (of 4 or 5 people). Sometimes some students already know each other because they are also on-campus and/or cohort students. Such pre-existing relationships promote bonding in online learning. Therefore, in survey-1, I asked students if they knew any of their classmates because it is important to understand if students started feeling social presence with their classmates or if they already had it for some members. This was one of the factors that I paid attention to during data collection.

The course requirements cover numerous varied evaluation activities to support mastery of the knowledge and skills needed for effective teaching of ELL students. Course assignments included group and class discussions on given questions, quizzes, exercises, reflection papers on live meetings, ESOL modified lesson plans, Limited English Proficiency (LEP) Analysis case project, and a midterm exam. The major

assignments on which students need to get at least 70% to pass are ESOL modified lesson plans, LEP Analysis case project, and the midterm exam.

LEP Analysis, which constituted 30% of the course grade, was a case study requiring a field trip to a school, finding an English language learner (ESL), interviewing the student and the classroom teacher, observing the class and the student at least for a day, and collecting data on background information on the student's language experience, academic performance, and language skills (writing samples and audio recordings of the interview and reading). This assignment involved analyses of developmental language patterns of their ESL student in phonology, morphology, semantic, syntax, discourse, non-verbal communication, pragmatics, and literacy. Students also needed to report on what opportunities their student receive (and do not receive) to develop these language skills in their classrooms, and what teaching activities and strategies they recommend to support their students' second language acquisition, specifically in each of these language areas. Furthermore, students presented their projects at the last Elluminate meeting. They created PowerPoint documents and orally summarized their case study in an interactive way as the students and I were asking questions, discussing certain topics in detail and commenting on the findings and teaching ideas. This live meeting provided students a great chance to gain immediate feedback on their projects and receive multiple perspectives through learning different case studies on different ESL students at various grade and language levels. The LEP Analysis can be considered to be at the resolution stage of the cognitive presence because students apply all the content studied in the course on analysis of a real case.

Group and whole class discussion participation was a very critical component of the course, making up the 25% of the final grade. Student participation was graded in each section both qualitatively and quantitatively based on a comprehensive rubric which aims for timely, ongoing, inclusive, collaborative, meaningful and deep learning (see Appendix B). In each section of the course, there were class discussions on assigned questions based on section readings which covered both course documents and external links on Blackboard and textbook chapters. Starting from with section-2, discussions first took place within student groups first. Groups mostly used their group discussion board and only two groups used Gmail Chat and Elluminate Live twice. In each section, a new member was the group summarizer who had to post their discussion summary to class discussion board by the given deadline. Then, for class discussions, each student needed to read other groups' summaries, comment on them and respond any questions addressed to their own group summary. The majority of the class discussions took place asynchronously on Blackboard discussion board forums. However, Elluminate Live was used for whole class discussion in section-6 for SLA theories. Groups were assigned with different SLA theories. They had two weeks to study given course materials and do external search if necessary and prepare a PowerPoint to present their theory to the class during the live meeting. They were required to make their presentations interactive by asking questions to the class and responding to any questions or comments.

Other synchronous meetings were conducted for teacher content presentation, question-answer sessions, group discussions, group's presentations, and review. These meetings are described in the following section. Students who had to miss the scheduled meeting were required to watch the recorded session and if the meeting involved active

student discussion and presentation, they needed to accomplish them asynchronously on the discussion board.

For each assignment, detailed rubrics, instructions, and samples were posted on the course site. Scaffolding was encouraged with group work and formative and summative teacher feedback. Students were advised to complete course projects (LEP analysis and ESOL modified lesson plans) in groups. If any student had a condition affecting his/her group participation and preferred to work individually, accommodations were provided ensuring that the same objectives were met by him/her.

To motivate participation in group discussions and projects and to ensure fair grading, students completed a self and group evaluation form during the final section (see Appendix C). The average grade they received from these evaluations took up ¼ of their participation grade. I have observed that students always show very positive attitude towards self and group evaluation as reflected on the written comments in the form.

The course content was divided into 7 sections, each of which was covered in approximately two weeks. Table 8 depicts the course schedule with each section topics, activities, and assessment tasks by due dates.

Table 8

Course Schedule

Sections	Assignments and Deadlines
	<i>Mandatory Orientation:</i> August 29 th , 9-11am via Elluminate Live.
August 24-	Read online materials under Section-1 and the textbook Why TESOL? Pages 4-40.

September 11	September 7:
	Post your answers to discussion questions (given in Section -1
Section-1	Introduction Letter). Read the discussion rubric before you submit
Why TESOL?	discussion posts!
Human	Introduce yourself on e-Cafe and comment on others' introduction to
Language,	get to know each other and form groups.
ESOL Binder,	Form your groups and liaisons should email the name of the group,
Lesson Plan,	names of members and the names for summarizers in each section
LEP Analysis	September 11:
	Class discussion participation: Comment on other posts in a way that
	leads a discussion and referencing reading materials or other sources.
	Quiz- 1
	Modify the practice Lesson Plan and submit it to your group
	discussion board.
	Start planning your LEP Analysis Plan of Attack.
	Read Online Materials and Why TESOL? (New P 41-60, old 49-69);
	do exercises; work on your Lesson Plan 1 and LEP Plan of Attack
	September 21:
September 12-25	Group discussion summary postings
	September 25:
Section 2	Class discussion participation
Phonology and	LEP Plan of Attack
Morphology	Submit original Lesson Plans that you plan to modify for approval

	Quiz 2
	Practice exercises. Discuss with your group if you need
September 26-	Read online materials under section-3 and Why TESOL? (P 61-76)
October 9	October 5: Group Discussion summary postings
Section 3	October 9: Class discussion participation.
Syntax & Semantics	Quiz 3 Modified Lesson Plan-1 Practice exercises. Discuss with your group if you need.
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	Read online materials under section-4 and Why TESOL? (P 77-118)
October 10- 23	October 16: Elluminate Meeting-2- Midterm Review –
Section 4	Submit Elluminate Reflection-2 within 24 hours after the meeting
Discourse and Pragmatics	October 19: Group discussion summaries October 23: Class discussion participation Quiz 4 Submit LEP analysis Part I
<hr/>	
	No assigned chapter from the book. Online Materials only!
	October 31:
October 24-	Midterm Exam, EDU 417; 9AM-12PM
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November 6	November 2:
Section 5	Group discussion summaries should be posted to Class Discussion by midnight
Literacy	November 6:
	Comment on other groups' summaries in a way that leads a discussion and referencing reading materials or other sources.
	Discussion and participation ends by midnight.
	Submit modified Lesson plan 2
<hr/>	
	Read Why TESOL? (New P 121-187 Old P 146-226)
	November 16:
	Deadline for binder check. Make sure you check ESOL office hours
November 7- 20	before you go to the office.
	November 19:
Section 6	Quiz 5
First and Second	Modified Lesson Plan-3
Language	November 20:
Acquisition	Elluminate Meeting-3- Groups present their SLA Theories-Class discussions live &
	Submit your reflection-3 within 24 hours after the meeting
<hr/>	
	Read online materials under section-7 and Why TESOL? (P 189-223)
	Happy Thanksgiving ☺
November 21-	December 1:
December 4	Group discussion summaries should be posted to Class Discussion by

	midnight
Section 7	December 4:
Assessment	Reply to other groups' summaries in a way that leads a discussion and referencing reading materials or other sources. Discussion and participation ends by midnight.

	December 6:
	The LEP Analysis- whole paper & LEP Analysis Presentation
Final week	PowerPoint
	December 8:
	Illuminate Meeting-4 –LEP Analysis presentations
	Submit Reflection-4 within 24 hours after the live meeting
	December 11:
	Submit Self and group-evaluation form
	Take the Survey-2
	Chalk & Wire (Upload LEP and Lesson Plans)
	Check your grade center. Make sure you accomplish all major requirements for ESOL (at least 70% on midterm, lesson plans, LEP Analysis)

My Role as a Researcher and Instructor

I have been teaching online ESOL courses for four years now. My journey to becoming an online instructor started with my doctoral study. I have taken instructional technology courses some of which were delivered totally online. Being an online student

in those courses has given me the opportunity to understand student perspectives and needs and how course design and technology are important for enhancing learning. In comparison of these courses, I have realized what factors have affected my learning and motivation. To begin with, I was most frustrated when the teacher provided little or no feedback and did not respond to my emails in a timely manner. When course objectives, assignments, and expectations were not clearly defined, I felt confused. Some courses were exceptionally well designed with clear and detailed course schedule, organized content, well defined objectives, and assignments as well as incorporating collaborative learning via group projects and class discussions, online tests, and Elluminate Live. Although I enjoyed being able to study on my own when and where I wanted, collaborative groups made me feel connected with other students and enhanced my learning. My motivation and feeling belongingness increased with the instructors' availability and student-instructor and student-student interactions. I have learned so much valuable information to improve my online teaching and realized that technology tools can certainly enhance learning when used effectively, however, I must place instructional objectives foremost. Because I was fascinated with Elluminate Live, I decided to learn this tool to implement it effectively in my own online course. I attended the university workshops and studied online demonstrations. Within a year, I added Elluminate Live class meetings to my course design.

In fall 2008, Elluminate Live was incorporated into the Blackboard Academic Suite™, which is the online course management system being used for online courses at the setting. In previous versions of Blackboard, only a written chat tool was available for synchronous meetings, which was not appealing for use. Elluminate Live integrated into

the course site offers a lot of flexibility and greater chance of use both by the students and the instructor at any time they wish. Before this update, instructors had to fill out an online form to request Elluminate Live sessions. A session link and password for students to enroll in the session then had to be created and announced to students. The teacher did not have a timely opportunity for any modifications of the sessions. It had to be through the technology support department. However, now instructors can create sessions anytime, see all sessions created on its calendar, and they can modify the session when needed. I believe these features will motivate more instructors and students to use Elluminate Live to add real-time communication and collaboration to their asynchronous online learning.

My research interest comes from both finding little information in the related literature and from my teaching experience as having some informal observation of students initial and post reactions toward Elluminate Live. During mandatory orientations, as an instructor I introduce Elluminate Live to my students. So far, very few of my students have had previous experience with Elluminate Live. In terms of students' pre-perceptions towards synchronous communication, I have observed three types of student groups. The first group involves only a few students who show negative attitudes towards synchronous communication in an online course. I recall a student saying that "synchronous meetings do not make this course online". What she meant was that for her an online course needs to be only asynchronous so that it is flexible and does not require her to study at a certain time. The second group is made of the students who are very eager to learn and use synchronous communication tools and they are few in number as well. The third group is the largest of all and includes those who are neutral and do not

show any particular initial reaction. At the end of their first Elluminate Live session, generally a few students send very positive comments about their experience. However, as an instructor who has a philosophy of teaching and learning grounded in a socio-constructivist, student-centered, and collaborative learning and who believes in the value of creating an online learning community, I decided to pursue this study in order to find an answer to how synchronous communication may promote a community of inquiry. This also made me wonder how students feel about synchronous communications and how it influences their satisfaction with the course.

Being the course instructor, I was deeply and passionately involved with the setting and participants. From a qualitative researcher perspective, I was aware of what advantages and disadvantages these dual roles of the researcher might have caused. In terms of limitation, I was aware that some students might purposefully provide biased data to please me. However, during data analysis, I came to the conclusion that students provided their genuine feelings and thoughts because thoughts and feelings they reported were not only positive. They openly shared their negative thoughts or feelings, critiqued the tasks and methodology and provided suggestions for improvement.

In addition, I was conscious that dual roles and pro-longed engagement with the site and participants might obscure my view and lead to inadvertent biased assumptions (Yin, 2003). Therefore, to alleviate this limitation and to gather in-depth and credible data, I implemented data triangulation, peer debriefing, member checks, thick description of the setting and participants, and a self-reflection protocol. Moreover, I did not conceal any pedagogical shortcomings and problems we had experienced during the course. I believe as an instructor I always learn something new and find ways to improve

my teaching in every semester. Conducting this research gave me a greater chance to improve my pedagogy especially related to using synchronous tools. Thus, I don't believe that my instructor role affected my data analysis and interpretations. On the contrary, I do believe that my researcher/instructor role provided more benefits than limitations.

Teaching presence (one of the three elements in the Community of Inquiry framework) begins before a course starts. As I designed and taught the course, I was able to observe the research setting and participants constantly and take reflective notes systematically, which provided me with a better understanding of the phenomenon, of the setting and of the lived experiences of the participants.

Research Design

Investigating synchronous interactions and establishment of a community of inquiry in an online class over a semester requires an in-depth study of the process and setting using multiple methods and sources of data. Qualitative study methods, particularly case study design, serve best for this study because case studies are used to examine a specific unit such as an event, a program, an organization, and a time period in depth and detail, in context, and holistically (Merriam, 1988; Patton, 1990; Stake, 1995; Creswell, 1998). In addition, the context or place is an integral part of learning from sociocultural theory and community of inquiry framework perspectives, therefore qualitative case study design is well-suited to the study.

Hoepfl (1997) synthesized a list of characteristics of a qualitative study based on the resources by Patton (1990), Eisner (1991), Bogdan and Biklen (1998), and Lincoln and Guba (1985). These interconnected and mutually reinforcing characteristics are as follow:

1. The natural setting is the source of data. The researcher's job is to observe, describe and interpret settings as they are.
2. The researcher becomes the "human instrument" of data collection.
3. Inductive data analysis is predominant.
4. Reports are descriptive and reflect expressive language and first person pronouns.
5. Qualitative research is interpretive and descriptive in nature, and aims for discovering the meaning from the participants' perspective.
6. Qualitative researcher focuses on to "the idiosyncratic as well as the pervasive, seeking the uniqueness of each case" (p. 49).
7. The design of the study is emergent, focus is both on process and the outcomes.
8. Quality and rigor of the qualitative research is assessed by special criteria for trustworthiness (which will be discussed later in this chapter).

These characteristics match well with the nature of this study. The source of the data came from a natural setting, an online classroom. I was the "human instrument" of data collection as data were mediated by me as I observed the classroom and participants, read their reflections and listened to what they reported. Although I had a preexisting framework, data analysis was inductive to involve emerging categories. Having an existing theoretical framework did not restrict the study, instead it provided a direction and boundary for the study. I used a descriptive and reflective style to report the study. Because they add voice and reflect the phenomenon naturally, direct quotations from the participants and use of first person pronouns were commonly used.

Stake (1995; 2005) identified three types of case studies:

- *Intrinsic*: It is undertaken because “first, and last, one wants better understanding of this particular case ...because this case itself is of interest” (2005; p. 445).
- *Instrumental*: The focus is to” provide insight into an issue or to redraw a generalization” or to improve a theory. Understanding the complexities of the case is of secondary interest, “it plays a supportive role, and it facilitates our understanding of something else” (p. 445).
- *Collective*: A number of cases are studied jointly in order to investigate a phenomenon, population or general condition. This type is often referred to as multiple case study as opposed to single case study. In multiple case studies, each case is studied in depth individually and they are compared and contrasted to look for similarities and differences across them.

According to Stake (2005), “there is no hard-and-fast line distinguishing intrinsic case study from instrumental, but rather a zone of combined purpose” (p. 449). Therefore, this study falls into both first and second type. It is an intrinsic case study in that I am the course instructor and I am fascinated by the implementation of synchronous communication tools, and I want to investigate how they affect the community of inquiry. It is also instrumental because it is designed to provide insights into the use of these fairly new technologies and their influence on online learning environment.

Research Method

The research method of this study is built on naturalistic inquiry (Lincoln & Guba, 1985). The qualitative researcher follows a constructivist/ naturalist/ interpretive approach (Guba & Lincoln, 2005). He or she believes that knowledge is constructed by

people in a social context, whereas in quantitative research generally positivist approach is followed with the assumption that knowledge is out there ready to be measured objectively and reliably. In qualitative research, it is assumed that knowledge or data are not objective. People perceive everything from their own point of view so that ultimate objectivity is not possible. Qualitative study results build on tacit knowledge of both the researcher and participants. As an online instructor and doctoral candidate, I am a passionate researcher in this study. I am aware of the fact that I will be influenced by my teaching experience, perspectives and ideas. However, to ensure trustworthiness, I will take certain steps which are discussed later in this chapter.

The study design is within a constructivist research paradigm. More specifically, it is defined within a social constructivist paradigm. The constructivist paradigm presupposes “a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and subject create understandings), and a naturalistic (in the natural world) set of methodological procedures” (Denzin & Lincoln, 2005, p. 24). As discussed by Guba and Lincoln (2005), the inquiry aim in constructivist paradigm is to understand and reconstruct the phenomenon under investigation assuming multiple realities. According to Creswell (1998), our assumptions or beliefs related to ontology, in other words the nature of reality, guide the qualitative researcher. In this study, I believe I, as a researcher, and my participants and the reader of the study contribute to the multiple realities related to the study.

Windschitl (1998) encourages qualitative study methodologies to “investigate and document the real changes that are occurring as a result of Internet-based teaching and learning...Novel learning environments require researchers to describe at various levels

of what is happening to the participants” (p. 31). As previously noted, Elluminate Live is a new tool for the majority of my students.

In literature, researchers using CoI implemented both qualitative and quantitative methods. Studies with qualitative methodology analyzed text-based asynchronous interaction transcripts of discussion boards and very few implemented open-ended survey items and interviews. Asynchronous interaction transcripts were analyzed by using content analysis technique to identify the categories and indicators of the presences defined in the CoI framework. To assign data to categories, researchers generally relied on the unit of analysis (e.g., sentence, paragraph, theme, or message), and a message-level unit, which refers “to what one participant posted into one thread of the conference on one occasion,” has been found reliable and practical (Garrison-Anderson, Archer, 2001, p. 15). In the case of this study, the focus was on synchronous interactions via the means of audio, video, emoticons, and text-based messages. Therefore, a message-level unit of analysis in this study was in either of these forms. However, relying solely on analysis of discussion board transcripts provides only a snapshot of elements of CoI because interactions between learners and learner and instructor are not limited with discussion boards (Anderson, et al, 2001). For example, teaching presence begins even before the course launches and this can be analyzed more effectively by teacher reflections and interviews. Moreover, cognitive presence may not be captured fully in the discussion board transcripts. Although students might reach higher levels of thinking, if the tasks or discussion questions do not require that high level, the researcher cannot capture cognitive presence fully. According to Arbaugh (2008, p. 15):

learners might need time to complete the higher-order phases of the critical inquiry process. Therefore, techniques typically used to assess cognitive presence such as transcript analysis (Garrison & Cleveland-Innes, 2005; Heckman & Annabi, 2005) may not completely capture the cognitive inquiry process and therefore should be supplemented with some sort of data collection at the end of the course.

Therefore, in addition to content analysis, I also used data triangulation to uncover community of inquiry elements as perceived by learners and the instructor through interviews, surveys, observation, and reflections.

Overall, qualitative research methodology was suitable for this study to uncover educational insights in an online learning environment from participants' perspectives.

Recruitment and Sampling of Participants

The accessible population for the study was 18 undergraduate (preservice) students registered in the online Language Principles and Acquisition course that I taught in the fall 2009 semester. Out of 18, 10 students were English Education majors and 8 of them were Special Education majors. There were 17 female and 1 male students.

For this study, purposive sampling was used to select among 13 students who indicated their voluntary participation in their survey-1 response. Because “the logic and power of purposive sampling lies in selecting information-rich cases for study in depth” (Patton, 1990, p. 169), I planned to use maximum variation sampling, one of 16 purposeful sampling strategies discussed by Patton. For Lincoln and Guba (1985), maximum variation sampling is the most useful strategy for the naturalistic research. According to Patton (1990), maximum variation sampling:

aims at capturing and describing the central themes or principal outcomes that cut across a great deal of participant or program variation. For small samples a great deal of heterogeneity can be a problem because individual cases are so different from each other. The maximum variation sampling strategy turns that apparent weakness into a strength by applying the following logic: Any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared aspects or impacts of a program. (p. 172)

The study was briefly explained to the class during the course orientation via Elluminate Live on August 29, 2009. All explanations outlining the study, participation requirement and the major benefits as well as informed consent forms were made available in a folder at the course site.

As the course instructor, I always ask my students to take a survey in the beginning and at the end of the semester. I use the Blackboard Survey tool which is easy to use and effective in terms of managing and analyzing data as it downloads the survey in a Microsoft Excel sheet. The purpose of the first survey is to learn about students' backgrounds, technology skills, expectations regarding the course, previous experiences with synchronous communication tools, perceptions toward online learning, collaborative learning, and synchronous communication so that I can learn my students better, plan for individualized help to those who may need, and enhance my teaching. The end-of-semester survey serves as a tool for me to receive feedback on the course and my teaching. For the purpose of this study, these surveys were modified based on the research questions and literature review (discussed in more detail in the forthcoming

section). Not only the first survey, but all instruments went through modifications based on the feedback from the dissertation committee.

All of the eighteen students took the survey-1 in the beginning of the semester as a part of the course requirements (September 7-September 18). The final item in the survey sought their voluntary participation for this study, which was explained on the course site as well as during the orientation. There were 13 students who accepted to participate in this study. In the proposal of this study, I planned to select six participants using the maximum variation sampling strategy based on the following factors:

1. Previous experience with online distance learning: extensive versus none or limited
2. Previous experience with a SWBCS (like Elluminate Live): extensive versus none or limited
3. Previous experience with Gmail Chat or other IM tools: extensive versus none or limited
4. Motivation to use synchronous communication systems in this course: high versus neutral or low
5. Group members: selecting participants from different student groups
6. Major area of study: English Education versus Special Education
7. Age: young adult or mature adult
8. Gender: female versus male

However, as the semester proceeded, I realized that I had to consider student's attendance to Elluminate Live meetings as a qualifying factor for selecting the participants. Three students who indicated that they would not be able to attend live meetings due their work schedule were not selected. Among 10 students left, to

increase the response rate, I selected 8 of them instead of 6 based on the factors listed above. Two unique factors happened to be gender and previous experience with Elluminate Live. There was only one male student who was also the oldest in the class and had the lowest technical skills. There was only one student who had previous experience with Elluminate Live and her age, 35 was also in the older column with the male student (43) while the age range for the rest of the class was between 20 and 24. Two students whose characteristics did not add to the maximum variation sampling were not selected.

During the midterm, after we completed the second whole class meeting, an email invitation was sent to the selected eight participants for first interview to be conducted via Elluminate Live. Selecting eight participants instead of six proved to be effective because only five of them were available. One of the students decided to opt out from the study due to health complications while the other two apologized for not being available for an interview due to their hectic schedule. I conducted the first interviews with these selected five participants during the first week of the November. At the end of the semester, one of the students did not complete the survey-2 and two students apologized for not being available for the second interview. Therefore, among the selected eight students initially, three students who provided the complete data set were chosen as study participants. Pseudonyms of Tom, Kristina and April were used to refer to these participants. Their experiences and perspectives are described in-depth in data analysis sections of Chapter-4. The rest of the students who did not provide complete data set still provided insights and affirmations for some of the findings.

Data Collection

Data collection and analysis was iterative over the fall 2009 semester (though much of the data analysis continued after the semester ended). I used multiple data sources to provide a comprehensive picture of the phenomenon and to strengthen the trustworthiness of the study (see Figure 9). Each of the instruments is described in more detail in the following sections.

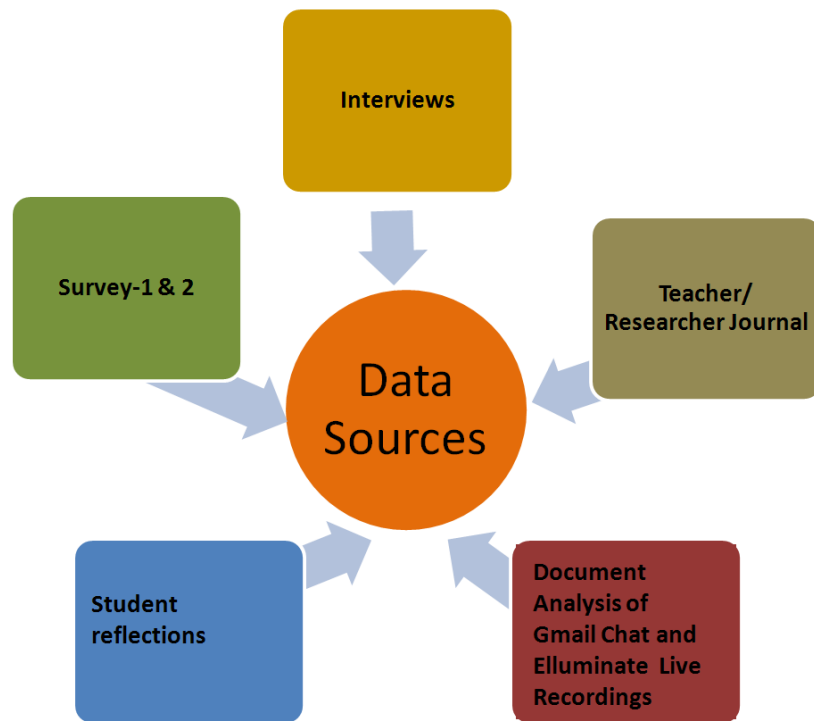


Figure 9. Data Sources.

The semester prior to the study, as I was teaching an online ESOL course, I piloted some of the data collection techniques, which provided me with valuable insights to improve the methodology of the study. To begin with, I had a technical problem with the Blackboard survey tool when I tried to download the survey results. I received feedback from the Blackboard help desk. The problem occurred because I copied the

each question from a Microsoft word document instead of directly typing them on the Blackboard screen. After retyping each question (or copying from Notepad also works), the results were available. There was not any issue with the clarity of the survey questions, but only 70% of the students took the surveys and only 2 two students submitted a reflection. Therefore, because reflecting on learning experience is critical for learning (Kolb, 1984), I have decided to incorporate writing reflections into the course design.

Piloting the use of Elluminate Live and Gmail Chat has afforded me with useful and practical insights for course design and study methodology too. To begin with positive reflections, I did not encounter any problems with Elluminate Live in terms of recording the session or reaching the archives, which is critical for data collection. The quality of both the live session and archive was high. Second, I began to feel more confident in using many strategies and different tools available in the system. Through experience, I have also learned that I need to provide more time on any content presentation since students often ask for repetition and clarification, and each meeting should not last longer than 2 hours. I believe such experiences hopefully lead me to have better time management for synchronous teaching.

It is not an efficient way to do a polling to schedule a whole class meeting because students cannot reach consensus. I picked the dates before the semester began based on the Academic Calendar (not selecting Holiday or around Holiday days). It seemed Friday night would work well for almost all students as the university does not schedule on-campus courses Friday nights. Since students knew the dates of live meetings ahead of time, they were able to make necessary plans to attend the meeting or

if not, they were given alternative assignment and asked to watch the meeting recording. However, the majority of the class wanted to change the date of the last meeting, and through a polling, it was decided on a Tuesday morning.

Before the orientation meeting, students were given written instructions, a PowerPoint document introducing the Elluminate Live, and they were asked to test their computer's compatibility with Elluminate Live technology either by running a recorded orientation session or asking for a live meeting on the Elluminate Live's support service. I also provided a Word document listing possible technical problems and solutions as well as live chat and phone number of the help desk in case students needed it. On the day of live meetings, I reminded students of the help desk contact information via Blackboard announcement and email and I was available to them on Gmail chat in case they had a question.

In terms of piloting the use of Gmail Chat to be available to students for extended e-office hours, from the technical standpoint I knew Gmail Chat was a reliable tool, but video chat might not work sometimes. If this was the case, I planned to use Elluminate Live to meet the student, but there was no occasion of this. Although video/audio provides means for richer information sharing, the downside of using it is that Gmail Chat does not record those sessions. It only saves text-based chat. Therefore, whenever I had an instantaneous audio or video chat session with a student, I kept a reflective log.

Having reflected on the results of piloting some techniques, I will discuss data collection procedures. The course under investigation was offered totally online in fall 2009, beginning on August 24th and ending on December 5th (the final exam week ended by December 11th). On August 29th, we had our online course orientation via Elluminate

Live for a two-hour session to show how to use certain tools at Elluminate Live, introduce course objectives, review major assignments, answer student questions, and briefly mention this study.

From August 24th to the orientation day, students were asked to explore the course site, become familiar with the Blackboard tools, and participate in an e-Café discussion forum to introduce themselves and meet other class members. This forum was created to serve for initiation of social interactions to build a sense of presence and belonging to the class. During the semester, although this forum was open to social interactions considering that students and the instructor might wish to share non-academic issues with the learning community, it was not used after introductions and get to know each other messages in section-1.

An outline of data collection procedures together with the course schedule is provided in Table 9. Gmail Chat sessions between the instructor and student do not appear in the Table 9 as they were impromptu and initiated by students. However, I recorded written chat sessions and reported them in my researcher/teacher journal.

In this study, all data were collected electronically through Blackboard course site and Gmail. Surveys were created by using the Blackboard survey tool. Students submitted their reflections via Assignments and Elluminate Live recordings were also available on the Blackboard course site. Except for the phonology and morphology meeting session when I had problems with uploading documents and forgot to click on record button, all other Elluminate Live sessions were recorded for later retrieval for students to review and for data analysis. Three class meetings were transcribed covering all verbal, written and graphical communications that took place during the session.

Table 9

Data Collection Timeline and Procedures (Gmail Chat sessions are student initiated and impromptu, thus they are not noted here)

When	Procedures	Outcomes
Section-1: Why ESOL? Lesson Planning, ESOL Binder, LEP Analysis		
August 24-27	<ul style="list-style-type: none"> • Students and the instructor introduced themselves at the e-café forum on BB • Students got familiar with the course site and requirements 	<ul style="list-style-type: none"> • Created a welcoming atmosphere to establish social presence
August 29	<ul style="list-style-type: none"> • Online course orientation via Elluminate Live 	<ul style="list-style-type: none"> • Wrote reflection on researcher journal • The session recorded
September 17	<ul style="list-style-type: none"> • The proposal defended 	
By September 18	<ul style="list-style-type: none"> • Students took the Survey-1 • Students formed their groups 	
Section-2: Phonology and Morphology		
September 18	<ul style="list-style-type: none"> • Phonology & Morphology Elluminate Live session 	<ul style="list-style-type: none"> • Recording the session failed • Wrote reflection on

		researcher journal
September 19	<ul style="list-style-type: none"> • Students submitted their first reflections • Recorded a session with a colleague on phonology and morphology to provide students with an archive 	<ul style="list-style-type: none"> • Read student reflections and sent feedback
September 21	<ul style="list-style-type: none"> • Group X used Elluminate Live for group discussions 	<ul style="list-style-type: none"> • Noted down in researcher journal
Section-3: Syntax and Semantics		
September 26	<ul style="list-style-type: none"> • Downloaded survey-1 results 	<ul style="list-style-type: none"> • Identified volunteers for the study in survey-1 results
September 30	<ul style="list-style-type: none"> • Group Y used Elluminate Live for group discussions 	<ul style="list-style-type: none"> • Noted down in researcher journal
October 10	<ul style="list-style-type: none"> • IRB approval received • 8 student participants selected based on Survey-1 results and maximum variation 	<ul style="list-style-type: none"> • Contacted participants and posted informed consent forms on Blackboard
Section-4: Pragmatics, Nonverbal Communication, Discourse		
October 16	<ul style="list-style-type: none"> • Midterm review session via Elluminate Live 	<ul style="list-style-type: none"> • Recorded the session and reflected on researcher

		journal.
October 17	<ul style="list-style-type: none"> • Students submitted their second reflections on Elluminate Live experience 	<ul style="list-style-type: none"> • Reviewed all reflections and sent feedback
October 18	<ul style="list-style-type: none"> • Voluntary second midterm review session via Elluminate Live (5 students attended) 	<ul style="list-style-type: none"> • Preliminary analysis of survey-1 and student reflections to get prepared for first interviews with participants • Emailed 8 selected students to coordinate the first interviews
Section-5: Literacy		
November 1-6	<ul style="list-style-type: none"> • 5 participants accepted the interview • Conducted first interviews with 5 participants individually via Elluminate Live 	<ul style="list-style-type: none"> • Recorded the interviews
Section-6: Second Language Acquisition (SLA)		
November 20	<ul style="list-style-type: none"> • Group presentations and whole class discussion on SLA Theories via Elluminate Live 	<ul style="list-style-type: none"> • Recorded the session and reflected on researcher journal

November 21	<ul style="list-style-type: none"> • Students submitted their third reflections on Elluminate Live experience 	
Section-7: Assessment		
November 21- December 1	<ul style="list-style-type: none"> • Students watched a prerecorded Elluminate Live presentation on assessment 	
December 4 December 8	<ul style="list-style-type: none"> • One of the groups presented their LEP Projects via Elluminate Live (group members and the instructor attended) • All groups (and 2 individuals) presented their LEP Analysis Projects and whole class discussion via Elluminate Live 	<ul style="list-style-type: none"> • Recorded the sessions and reflected on researcher journal
December 5-9	<ul style="list-style-type: none"> • Students submitted their fourth reflections on Elluminate experience 	<ul style="list-style-type: none"> • Reviewed all reflections and sent feedback to students.
December 5-11	<ul style="list-style-type: none"> • 4 participants took Survey-2 • 3 participants were available for interview 	<ul style="list-style-type: none"> • Invited 5 participants for interview • Preliminary data analysis

		of reflections and survey- 2 to get prepared for second interviews
December 15-16	<ul style="list-style-type: none"> • Interviewed 3 participants individually via Elluminate Live 	<ul style="list-style-type: none"> • Recorded the interviews

Surveys

As previously explained, all students took Survey-1(see Appendix D) in the beginning of the semester. This survey provided a means for selecting participants for the study. It also provided valuable information on students’ backgrounds and attitudes toward synchronous communication tools, online learning and collaborative learning.

Survey-2 (see Appendix E) was administered during the final week of the semester. Directions for completing the survey was given on the course site and announced once it was available. The purpose of this instrument was to collect data on students’ lived experiences and perspectives related to use of synchronous communications from the CoI framework. Certain terms related to the CoI were explained or modified for students to be able to understand the questions better. For example, social presence was followed by a parenthesis stating “projecting oneself socially and emotionally, thus being perceived as real people and feeling a sense of togetherness”. Likewise, teacher presence was explained as “direct teaching, presenting content, providing clarification and feedback, and facilitating student learning”. Moreover, instead of cognitive presence term, “learning” was used.

Student Reflections

As a course assignment, students submitted four written reflections after each whole class Elluminate Live meeting. The purpose of this assignment was to promote reflective learning as students in their reflections consciously focused on how they felt during the meetings, what they learned, how they learned, what worked well for them and what needed to be improved for their learning enhancement. Students were asked to submit their reflections within a day following each Elluminate Live meeting so that at the time of reflection, their memory of the experience would be fresh. Guidelines for reflections were posted on the course portal (see Appendix F). As soon as each set of reflections were received, they were read and comments and feedback were sent to the students. If students expressed any social presence concerns and problems with technology or content, they were contacted immediately through email and offered help.

These reflections provided me both as the instructor and researcher with ongoing feedback on students' needs, learning process, and my teaching presence. As a researcher, reflections also shaped the interview questions and strengthened the study serving for data triangulation. Compared to interviews and survey data, reflections were more immediate perceptions, thoughts and feelings of students since they were submitted within a day following the experience.

Researcher/Teacher Reflective Journal

As an online instructor, I have been using a reflective journal to improve my teaching and enhance student learning. Similarly during the fall semester, I used a Word document and Excel spreadsheet to reflect on the students' participation, grades, particular observations, what worked well and what needed to be modified in the course.

My dual role made me focus on research methodology and, thereby included necessary comments related to my participants and incidents. My researcher journal or in other words, *field notes*, provided a tool to maintain consistency and flow through data collection, allowed recording immediate inferences and emotions, and served as a resource for further data collection (e.g. interviews) and data analysis. Lincoln and Guba (1985) name the reflective journal as one of the methods to establish credibility of the study. Three types of journals are described by Lincoln and Guba. The first type is used to keep a schedule or calendar to determine the logistics and events related to the study. The second type is like a personal diary where researchers note their emotions, thoughts, and values throughout data collection. The third type pertains to recording methodological issues. In this study, my researcher journal incorporated all three types. I used an observation log (Appendix G) to reflect on each Elluminate Live and Gmail Chat sessions. I recorded my reflections and notes as soon as I did observation and data collection. Especially before interviews, I reviewed my journal to do some addition and/or modification to interview questions. Furthermore, because of my participant researcher role and close relationship to the setting, I used a self-reflection protocol which poses critical and reflective questions that I needed to be conscious about prior and during the data collection procedures (see Appendix H).

Interviews

Semi-structured and informal interviews with participants were carried out on two separate occasions, at the middle and end of the semester. The first interviews that lasted approximately one hour took place in the first week of November, the week after we completed the second Elluminate Live class meeting and second written reflections. The

second interviews took almost 40 minutes and were conducted once the semester was over. Semi-structured interviews were chosen to use because they allow researchers more flexibility to adjust their questions based on responses they get during the interview and based on the data they have observed previously from other sources.

Interviews were conducted via Elluminate Live because of its high quality recording capacity (audio, visual and textual) and its familiarity to the participants. I used a webcam to make myself as social and real as possible to the participant. Participants were not required to have a webcam, but most occasions they opened their webcam. Only Tom's webcam never worked. For all interviews, we used a headset for verbal communication.

Interviews were scheduled at a convenient time for the participants. I made sure that participants felt comfortable and secure before we actually started the interview by having some initial social conversation. We talked about Thanksgiving Holiday, cooking, cold weather, and health.

The interview questions (for a sample of interview questions, see Appendix I) were mostly open-ended, focusing students' lived experiences with Gmail Chat and Elluminate Live, their feelings, and beliefs related to the role of synchronous tools in terms of the community of inquiry in the class. Based on students' reflections and my observations, I created additional questions in order to tap into certain areas of interest and to clarify specific incidences. Therefore, the interview questions varied slightly for each participant. A sample of the probing questions from one of the first interviews is as follows:

- In your survey-1, you wrote about Elluminate Live that “It gives the next best thing to face-to-face,” but you also indicated that you don’t feel motivated to use. Has your motivation changed so far?
- You wrote in your reflection that “I can’t put a face with a voice, which is what I consider face-to-face”. Do you think if we all use webcam, you will feel better?
- How do you feel about having a community in this class? Have we achieved creating an online learning community where students feel comfortable to contact the instructor and other students, feel connected with other students and instructor?
- What other aspects do you think help us feel more connected?
- What do you think about your learning in this class?
- Without Elluminate Live meetings, how do you think your learning would be affected?

Synchronous Session Recordings

Elluminate Live recordings

Elluminate Live was used for the purposes of content presentation (direct teaching), clarification of assignments, question and answer session to provide students a chance to get immediate response from other students and/or the instructor, and group presentations, therefore, enhancing student-student interactions and collaborative learning. Five Elluminate Live meetings were scheduled during the course design. These were planned for orientation, phonology and morphology section, midterm review, SLA theories, and LEP Analysis case project presentations. Only one additional live class session was held for midterm review. Two pre-recorded content presentations via

Elluminate Live were provided to students as well. The recordings of the presentation of section-2 (phonology and morphology) and section-7 (assessment) were prepared by a colleague who also shared them with her own students. In addition, some of the student groups used Elluminate Live for their group communication and collaboration.

Prior to the semester I was planning to use auto record option for all Elluminate Live synchronous class meetings when sessions were being created. However, I decided not to use auto record option because uploading documents prior to the meeting took much longer time than it did last semester. For Phonology and Morphology class meeting because I had to upload two PowerPoint documents with big sizes, I knew it would take a long time. If the recording had been started automatically, it would have recorded the time I was uploading the documents, which would cause students difficulty to find the beginning of the session when they needed to review the recording. I started uploading the documents one hour fifteen minutes before the session hour. During uploading the second document, it failed and the whole procedure took too slow that I felt stressed about the time. Another drawback was that during upload period, the system does not allow the moderator to use any other tool (including microphone or chat to respond student questions). Once they were uploaded, I had to immediately start interacting with the students. In such panic, I forgot to click on the record button. It was towards the end of the session when one student asked about the availability of the recording that I realized that I had forgotten it. In order to provide students with a recording of the content presentation of phonology and morphology, my colleague and I did a presentation together and shared the recording with our students. This experience taught me to be more cautious about recording for next sessions so that I started using my cell

phone alarm, post-it notes, and Outlook reminders, which were helpful indeed or I was very cautious of it anyway that I did not have any other problem.

Illuminate Live provided a high quality recording for archival purposes. Recordings served for pedagogical and research purposes in the course. First, students who missed the live meetings or needed a review were able to watch the recording and as the instructor I reviewed the recordings to grade student participation. For research purposes, while all recordings were analyzed holistically based on researcher reflective journal and student written reflections, only the last three recordings (Midterm review, SLA theories, and LEP Analysis presentations) were transcribed and analyzed in terms of how community of inquiry was projected. The phonology and morphology session recording was not available and the orientation meeting was not selected because it was teacher-centered and covered only introduction of the tool and the course. While reviewing the recordings, researcher observation logs (explained in researcher journal section) guided me (see Appendix G).

Gmail Chat recordings

Gmail Chat was used for student-instructor interactions and recommended for group communication and collaboration. It served as a means of “virtual office hour” as I was available to my students in real-time for extended hours. Gmail Chat records only text-based interactions. Therefore, I relied on text-based records, student reflections and my own reflections in the journal during data analysis. Although I encouraged audio and video chat and used it myself a few times, students preferred to use text-based chat because these sessions were instantaneous and very short in duration, and some students had technical problems with the audio/video application.

Additional Data Sources

Due to my participant researcher role and close relationship with the setting and participants, I was afforded with unplanned but valuable data. The course management system, Blackboard, tracked students' participation, discussion posts, grades, and assignments. Moreover, as I was grading students' asynchronous group and class discussion participations, I was able to receive more information about my participants. For example, if their group was using Elluminate Live and/or Gmail Chat, and if they reflected on these tools, their learning and satisfaction on their discussion posts, I was able to ask about these incidents during our interviews. Finally, data sources and how they correspond to research questions are displayed in Figure 10.

Ethical Aspects of Data Collection Procedures

Qualitative researchers face “many ethical issues that surface during data collection in the field and in analysis and dissemination of qualitative reports” (Creswell, 1998, p. 132). No instances of ethical violations were encountered during this research study. The approval from the Institutional Review Board in the university was pursued before data collection. All participants signed an informed consent form (Appendix J), in which the purpose of the study, the procedures, the strict nature of privacy and confidentiality of data collection and dissemination procedures, and protection from harm were clearly explained to the participants. They were informed that they might discontinue their participation at any time of the study.

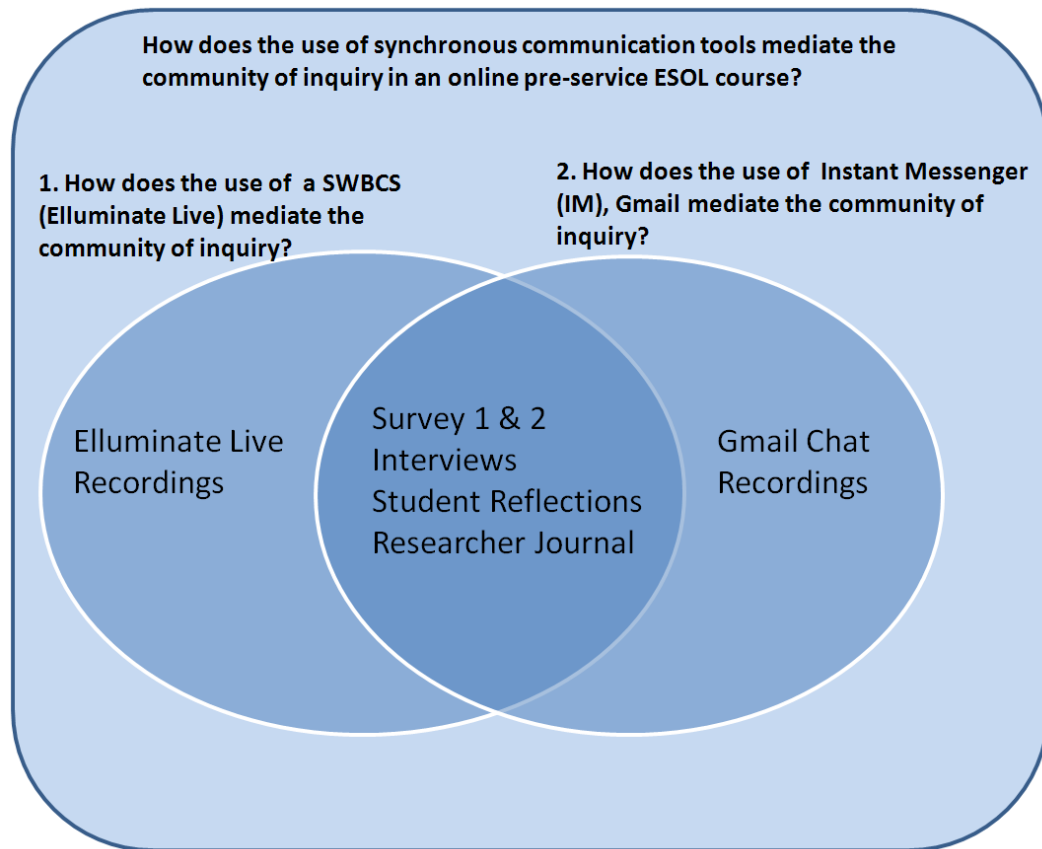


Figure 10. Matching the research questions to data sources.

Due to my dual role of being the instructor of my participants and a researcher, I paid special attention to balance the dynamics of student-instructor interactions and participant-researcher interactions. The participants were aware of my relation to them. Throughout the data collection procedures, I was always respectful towards my participants by being careful with my language and attitude. I made sure the participants felt comfortable and secure. In data analysis and reporting the results, I was careful to reflect my participants' understanding and experience, in other words, their voice, but I was also aware that as a qualitative researcher I was representing my own interpretation (Stake, 1995). As noted by Creswell (1998), I paid attention not to share my experiences or thoughts in a way that would minimize "bracketing," that is, reducing information

shared by the participant. Finally, I deleted personal and “off the record” information shared by my participants.

Data Analysis

By studying three well-known qualitative authors, Creswell (1998) created a list of common analytic strategies for qualitative studies which will serve as a guideline for data analysis in this study. Having investigated Creswell’s and other qualitative authors’ data analysis techniques and strategies (e.g. Leech & Onwuegbuzie, 2005; Lincoln & Guba 1985; Patton, 1990; Anfara, Brown, & Mangione, 2002; Merriam, 1998; Bogdan & Biklen, 1998) and the CoI research in literature, I developed the following data analysis plan, which is presented in Figure 11.

Data analysis was emergent during the semester and initiated as soon as the first data set were received (Gall, Gall, & Borg, 2007). Once the whole class had taken survey-1, the first step in data analysis was to download results for the purpose of recruitment of participants. The students who indicated their voluntary participation in the study were identified. A table was created in an Excel sheet to compare the volunteers according to the criteria for the maximum variation sampling strategy, which is discussed in Recruitment and Sampling of Participants section above. Once participants were identified, they received an email requesting the submission of their informed consent form that was uploaded on the course site.

Preliminary data analysis during data collection was necessary to generate interview questions and to confirm my understanding through member checks.

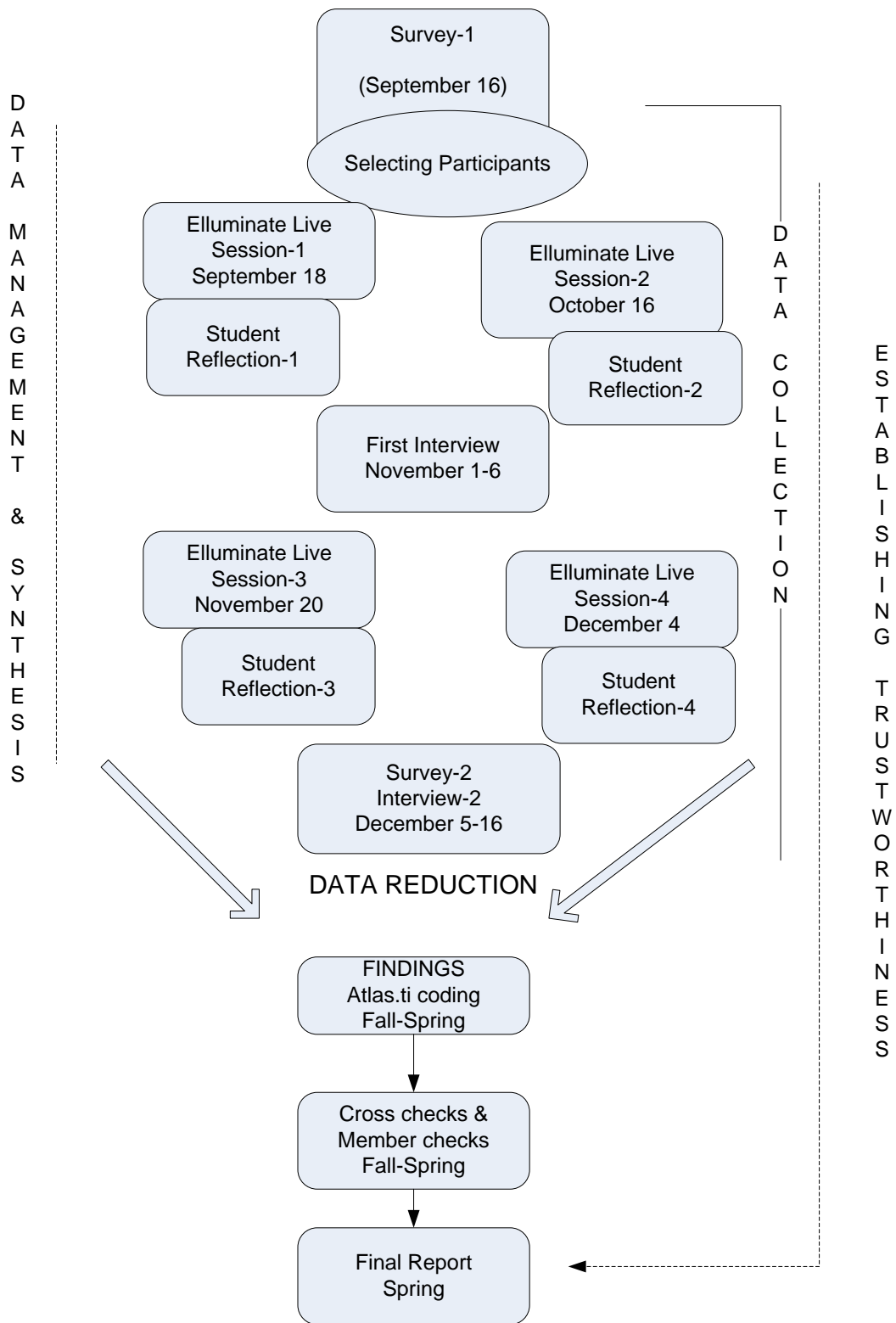


Figure 11. Research Plan.

Each participant's survey-1 data were saved as rtf documents and uploaded to the qualitative analysis software program, ATLAS.ti for further data analysis purpose. At the proposed design of the study, I was not sure if I would use ATLAS.ti, however, based on the recommendation of my dissertation committee, I used ATLAS.ti, and I found it efficient and user friendly for data storage, coding and analysis. All data (transcriptions of interviews and live class meetings, surveys, student reflections, and researcher journal) were saved as .rtf documents and uploaded to ATLAS.ti. For each participant and one for the whole class meetings, a new hermeneutic unit (like a folder) was created and preliminary coding was carried out during the semester. The majority of coding was done after the semester was over. The teacher/researcher reflective journal where I kept records of my observations, comments, and feelings was a starting point for ongoing data analysis as it helped me identify missing information, promising directions, and recurring themes.

After organizing the data in ATLAS.ti, the next step was getting familiar with the data by reading them again and again by highlighting certain information, adding comments to codes and files, adding memos (using the Memo tool), identifying quotations and coding. The Memo tool was like the researcher journal in ATLAS.ti where I commented on some parts, wrote reminders to check certain things, jotted down questions that would be asked in the interview. Upon reviewing the data several times during the ongoing data reduction process, the memos and comment logs were reviewed to refine my interpretations and coding.

During data analysis, Merriam's (1998) step-by-step process suggestions were applied, which meant following the order in data sets such as reading the first interview

transcript, the first student reflection and similar before starting the second data set of interviews and other data. In addition, constant comparison among data sets was ongoing during data reduction and classification to interpret the data and to drive naturalistic generalizations. Any changes in participants' reflections over the semester in terms of community of inquiry and synchronous communications were noted. Analyses of the Elluminate Live class meeting transcriptions were compared and contrasted among each other as well as being triangulated with the data from the participants written reflections and researcher/instructor journal. During triangulation, no discrepancies occurred among data.

At the proposal stage of the study, a data matrix for data organization was created to make sense of the whole data, and to retrieve and compare data sources easily, but that matrix was not used because ATLAS.ti met all the needs of data management and analysis.

At the final stage of data analysis, the data were sorted into categories (called families in ATLAS.ti). The data were again screened for any information left out or not coded. Various reports were generated from ATLAS.ti including lists and frequency counts of codes with and without illustrative quotations from the text. Together with the memos, these reports helped me identify patterns and themes that would answer research questions (Patton, 1990). The CoI framework provided an a priori template for identifying categories of social presence, cognitive presence, and teaching presence. However, it was not complete list to answer the research questions of the current. Additional categories included perceived learning, perceived social presence, course satisfaction, and teacher availability, all of which were inquired in terms of Elluminate

Live and Gmail Chat use. Furthermore, there were emerging sub-categories. Teaching presence' direct teaching and facilitation of discourse elements were needed to be differentiated based on by whom they were provided: by students or by the teacher. Because this course was student-centered where students had an active role to teach and learn from each other through collaborative tasks, teaching presence was not performed only by the instructor. Therefore, these sub-categories emerged in the data. Table 10 lists the categories and elements that guided data analysis.

Data triangulation and using both the voice of students and the instructor (researcher's reflective journal and observations) in addition to recording transcriptions enhanced trustworthiness of the study, which will be addressed in the following section.

Table 10

Data Analysis Template

ELEMENTS	CATEGORIES	INDICATORS (examples only)
Social Presence	Personal/Affective Expression	Self-Projection/Expressing Emotions Sense of belonging
	Open Communication	Forming distinct impressions of some peers
		Enjoying CMC for social interaction
		Learning Climate/ Risk-Free Expression Feeling comfortable conversing through CMC

		Feeling comfortable participating in class discussions
		Feeling comfortable interacting with other course participants and the instructor
	Group Cohesion	Group Identity/Collaboration
		Feeling comfortable disagreeing with other course participants while maintaining a sense of trust
		Feeling that his/her point of view is acknowledged by other course participants
		Phatics; salutation, greetings, closures
	Perceived Social Presence:	Related comments in written reflections
	Of other course participants	Response to related survey-2 items &
	Of the instructor	interview questions
	Of him/herself as projected	
	Triggering Event	Recognizing the problem
		Sense of puzzlement
Cognitive	Exploration	Divergence within online community
Presence		Divergence within single message
		Information exchange
		Suggestions for consideration

		Brainstorming Leaps to conclusions
	Integration	Convergence among group members
		Convergence within a single message
		Connecting ideas, synthesis
		Creating solutions
		(Group and class discussions; course assignments)
	Resolution	Vicarious application to real world
		Testing solutions
		Defending solutions
		(Course assignments: LEP Analysis Project, ESOL Modified Lesson Plans, Class Discussions)
	Perceived Learning	Related comments in written reflections
		Response to related survey-2 items & interview questions
	Design & Organization	Setting curriculum
Teaching		Designing methods
Presence		Establishing time parameters
		Utilizing medium effectively
		Establishing netiquette
	Facilitating Discourse by Teacher	Identifying areas of agreement/ disagreement

Facilitating Discourse by Students	Seeking to reach consensus/ understanding Encouraging, acknowledging, or reinforcing student contributions Setting climate for learning Drawing in participants, prompting discussion Assessing the efficacy of the process
Direct Instruction by Teacher	Presenting content/questions Focusing the discussion on specific issues
Direct Instruction by Students	Summarizing the discussion Confirming understanding through assessment and explanatory feedback. Diagnosing misconceptions Injecting knowledge from diverse sources Responding to technical concerns
Perceived Teaching Presence	Availability & Promptness & Teacher Immediacy Related comments in written reflections Response to related survey-2 items & interview questions

Satisfaction	With Elluminate	Actual participation and use
	With Gmail Chat	Observed motivation to use
	With the course	Related comments in written reflections
	With the instructor	Response to related survey-2 items & interview questions

Trustworthiness

For qualitative inquiry, Lincoln and Guba (1985) provide four criteria for trustworthiness: credibility, transferability, dependability, and confirmability. These are compared and explained with strategies to improve them in Table 11.

Table 11

Qualitative Criteria for Assessing Research Quality Adapted from Anfara, Brown, & Mangione (2002, p. 30)

Trustworthiness Criteria	Strategy employed
Credibility	<ul style="list-style-type: none"> • Prolonged engagement in field • Use of peer debriefing • Triangulation • Member checks • Time sampling
Transferability	<ul style="list-style-type: none"> • Provide thick description • Purposive sampling
Dependability	<ul style="list-style-type: none"> • Create an audit trail

	<ul style="list-style-type: none"> • Code-recode strategy • Triangulation • Peer examination
Confirmability	<ul style="list-style-type: none"> • Triangulation • Practice reflexivity

The *credibility* of the study was strengthened by data triangulation, long engagement with the participants and data collection, use of peer debriefing and member check. My previous teaching experience of this course and conducting the study over a semester provided me with long engagement with the setting, participants and data collection. Multiple data sources in this study came from students and document analysis and the instructor/my observations. To consolidate credibility, during data analysis, interpretation, and conclusion phases, I shared the reports with my participants to check their accuracy and credibility.

During data analysis process, I requested two of my colleagues to review a sample of my coding including the parts that highlighted as questionable, to participate in the coding, and finally to check my data analysis and interpretations. Both colleagues who were knowledgeable about the current study received 15% of the data set from participants and synchronous meeting transcriptions to code. One of them was experienced in the CoI and online education research so that she only needed little clarification for coding and checking my analyses. To the other peer researcher, I provided the necessary information on the Community of Inquiry framework, including tables of categories and example indicators of each presence in the framework, and the

research questions via email. After she became familiar with the framework and analysis, we talked on the phone to discuss her questions before she started coding. Finally, we compared and discussed our findings via emails and followed up with phone conversations. In the end, there was a total agreement on all issues.

To ensure transferability, thick description of the setting, participants, the study design, and methods were provided with a writing style of “honest and straightforward ...authentic...so as to achieve verisimilitude, a style of writing that draws readers so closely into subjects’ worlds that can be palpably felt” (Gall, Gall, & Borg, 2007, p. 474). Using a purposive sampling strategy also added to transferability of the study. Thus, readers of this study can make judgment in terms of transferring the findings to their own settings.

In this study, for dependability criterion, I used triangulation of data sources (students, instructor/researcher, and document analysis) and data methods (interview, survey, student reflections, and researcher journal), peer examination, member checking of the categories, and code-recode strategy.

Finally, to consolidate confirmability, triangulation and researcher’s practice reflexivity was utilized (Onwuegbuzie, 2000; Anfara, Brown, Mangione, 2002; Creswell, 1998).

Conclusion to Chapter 3

This chapter discussed the details of the research methodology of the study to answer this overarching research questions: How does the use of synchronous communication tools mediate the community of inquiry in an online pre-service ESOL course? The chapter provided a description of where, when, and how data were collected

and analyzed. In the beginning of the chapter, the research setting and recruitment of three participants with a purposive sampling approach was discussed. Data collection was ongoing over the semester using multiple data sources including surveys, interviews, participants' written reflections, transcript analysis of 3 live meetings, and researcher/instructor journal. Preliminary data analysis began as soon as each data set was received while the bulk of the data analysis took place after the semester ended. ATLAS.ti software was utilized for data analysis. Finally, the chapter concluded with the discussion of the steps that had been taken to ensure credibility of the study. The findings of the study are reported in the following chapters.

CHAPTER FOUR: RESULTS

Overview

Chapter four discusses the results of this research study which sought answers to the following questions:

Overarching Question: How does the use of synchronous communication tools mediate the community of inquiry in an online pre-service ESOL course?

1. How does the use of Instant Messenger (IM), Gmail Chat (for extended virtual office hour) mediate the community of inquiry?
 - 1.1. How does the use of IM mediate social presence?
 - 1.2. How does the use of IM mediate cognitive presence?
 - 1.3. How does the use of IM mediate teacher presence?
 - 1.4. How do students perceive the value and effects of IM in terms of course satisfaction?
2. How does the use of a SWBCS (Elluminate Live) mediate the community of inquiry?
 - 2.1. How does the use of a SWBCS (Elluminate Live) mediate social presence?
 - 2.2. How does the use of a SWBCS (Elluminate Live) mediate cognitive presence?
 - 2.3. How does the use of a SWBCS (Elluminate Live) mediate teacher presence?
 - 2.4. How do students perceive the value and effects of a SWBCS in terms of course satisfaction?

Building and sustaining a community of inquiry in an online course is a complex multifaceted and dynamic process which covers all pedagogical actions of the instructor, learning processes, and interactions among and between students and the instructor, whether synchronous or asynchronous. This study focused on how synchronous interactions mediate the community of inquiry, but in order to provide an overall picture of this intended community and to make sense of the findings, I will first describe how the course progressed, what significant observations were done, and what teaching methods and strategies were used. By doing so, I will be doing a holistic analysis of how the Community of Inquiry (CoI) presences mediated all of these components of this community over the semester. I will then discuss the results of analysis of Gmail Chat usage and whole class Elluminate Live meetings. Lastly, I will present the in-depth analysis of the three selected participants beginning with a brief profile of each: Tom, Kristina and April.

A Holistic Analysis of the Course

As indicated in the previous chapter, this research took place in an online preservice ESOL course, Language Principles and Acquisition, over the fall 2009 semester. I was both the course instructor and researcher. Course design and organization, which is a category of teaching presence in the CoI framework, was initiated long before the course began. This covered the planning and preparation of these methods and materials, some of which were modified during the semester: Course schedule, syllabus, selection of tools to be used, group activities, synchronous meetings, office hours, the textbook, assignments, rubrics, guidelines, instructions, exercises, quizzes, sample works, netiquette, content presentations and web resources. Some of

these procedures are also indicators of direct teaching such as presenting content and questions, and injecting knowledge from diverse sources.

The first interaction between the instructor and students took place a week before the semester started when I sent a welcome email to the students and posted this message as a course announcement on the course site. In this message, I explained where they could locate information for the orientation, syllabus, course information, section-1 documents, and guidelines for Elluminate Live and Gmail Chat. I also requested that they check the course site to get used to the design and participate in e-café. E-café discussion forum was created to provide a platform for students to get to know each other and the instructor through self-introductions, social interactions that include humor, casual language, self-projection, emotions, self-disclosure and sense of belonging, which corresponds to personal/affective expression category of social presence. These strategies were also used to create a friendly and risk-free learning climate, indicating the open communication category of social presence. On e-café forum, first I posted my introduction together with three photographs. All students participated in this forum, and except two students, all shared their photographs too. I read and responded to each student post by welcoming them, commenting or asking question on particular things they shared as well as inquiring about their previous experience with online education and Elluminate Live and their strategies be a successful online learner. Several students also commented on each other's introduction. This forum helped students get to know each other and form their groups. Beginning with my first email and announcement, I always noted that students could contact me any time with their questions. I tried to be available, supportive, and approachable as I believe this was critical for students to feel

comfortable to contact me when they needed, which manifests itself as open communication in CoI. In addition, during the semester, greetings for Thanksgiving and Halloween were used. At the SLA live meeting, one group displayed a Thanksgiving greeting card. I also created a Thanksgiving greeting card using all of our photographs and emailed it to the students. Some students responded immediately showing appreciation and emotion (e.g., “so cute!”, “loved it!”). Throughout the semester there was frequent interaction between the instructor and students using different CMC tools like email, announcement, discussion board, chat, and Elluminate Live. Except for a few messages and emails which were for greetings, congratulations on (wedding, baby, published article and TV show), quick recovery wishes, and compliments, all interactions were course related on issues like assignment instructions and submission, due dates, grading, feedback, group collaboration, group problems, and locating certain documents on the course portal. In almost all messages, salutation closure, and vocatives were used. All of these strategies that provided the medium for the establishment of social presence and encouraged cognitive presence also exhibited the characteristics of setting climate for learning, which is an indicator of facilitating discourse category under teaching presence. This provides an example of how presences interact and how teaching presence designs, facilitates, and directs “cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison, & Archer, 2001, p.5).

As explained in the previous chapter, the course was divided into seven sections, each of which approximately took two weeks (see Table 8 on page 133). Once a section ended, the next section folder was made available. Each section folder included an

introduction letter which explained all the section tasks, assignments, and deadlines. Introduction letters also included a checklist for the section where students could click on each task to put a check mark once they completed it. This was to provide extra support resource to students to keep on track in addition to already posted detailed course schedule and a course calendar. Additionally, I sent reminder emails for all deadlines and used Google Calendar and shared with the students (an application of the tool), but except for one student, the others either were not familiar with Google Calendar or were not motivated to try it. During the semester, I received positive comments from the students on the checklists and reminder emails sent out for all the deadlines.

Collaborative learning activities carry great importance for social presence and online community building (Arbaugh, 2005; Richardson, & Swan, 2003; Rovai, 2002). In this course, collaborative learning among groups and within groups took place in six out of seven sections. For group cohesion and effective interactions, each member selected a group member role (of manager, encourager, liaison, and organizer) during section-1 when groups were formed. In addition to these roles, one member of the group had to be the summarizer for at least one section. In section-1, only whole class discussions were conducted while groups were being formed by students. Each group had their own private work area on BB which allowed them to use discussion forum, file exchange, email, blog, and wiki. For group discussions, students needed to use their group discussion board, and/or Gmail Chat or Elluminate Live for synchronous interactions that could be recorded for grading purposes (see Appendix B for discussion rubric). The group discussion board was the most commonly used tool during the semester for section discussions. Some groups also reported that they used email, phone, and cell phone text

messaging for quick and short messages. Beginning with section-2, students first participated in group discussions during the first week of the section, and then, the summarizers posted their group summary (responses to given discussion questions) to a class discussion forum where each student commented on others' group summaries, asked questions, and gave examples, which kept discussions going for a week.

I actively participated in the class discussion board, modeling appropriate etiquette and effective participation. During my participation, I provided constructive and explanatory feedback on groups' summaries and individual contributions, answered questions posed, clarified certain areas, acknowledged, encouraged and reinforced student participation, and summarized the section once it was over. Students were individually graded on their group and class discussion participation in each section and immediate feedback was provided to students via grade center comment and/or email. These teaching presence activities are indicators of facilitating discourse and direct teaching. Effective class discussions and collaborative learning activities were necessary for students to be able to socially construct knowledge and engage in deep and active learning which reflects a collaborative constructivist perspective on teaching and learning (Garrison & Archer, 2000). This is the core of CoI for which to occur, cognitive presence needs to be achieved through direction of teaching presence and facilitation of social presence. All learning activities and materials were carefully designed and adapted before and during the semester. Group and class discussions were held in each section. Discussion questions covered presentation of content, analysis of samples of written ESL discourse, and application of each section topic to classroom teaching with appropriate instructional modifications for English language learners. In addition to discussions,

students' learning was assessed by quizzes, a midterm exam, lesson plans modified for ESOL, and an LEP Analysis case study. Course assignments and tasks gave the opportunity for all the categories of cognitive presence to be manifested. Triggering event, exploration and reflection categories were commonly observed in the group discussion forum while reflection and resolution were present in class discussions and other assignments. The case study project was the major assignment in this course which required the highest level of cognitive presence--resolution.

In this section, I provided an overall picture of the course and how the elements of CoI were manifested in the course design and delivery. This section did not intend to respond to the research questions, but this description and analysis will help readers make sense of the context and results, and decide how applicable the findings are to their own settings.

Analysis of Synchronous Communications

In this course, two different synchronous tools were used. For whole class meetings, a synchronous web-based course system, Elluminate Live was utilized, and for impromptu student-instructor interactions, Gmail Chat was used. I will first report the analysis of how Gmail Chat mediated the community of inquiry and student satisfaction.

Gmail Chat

In this class Gmail Chat provided a medium for unscheduled office hours so that I could be available to the students most of the time when they needed to contact me. During the first week of the semester, I added the students into my chat contacts and provided them with the visual and written instructions for how to use it. I also informed

them that they could request a meeting whenever they wanted, however, none of the students asked for a meeting during the semester.

The total number of chat sessions over the semester was 52. The number of chat sessions by months is as follows:

September: 17

October: 10

November: 9

December (till December 14th): 16

Total=52

The distribution of sessions among months is not surprising because students need more clarification both in the beginning and towards the end of the semester. Early semester, students requested help with group formation, locating course documents, and checking deadlines with me while towards the end of the semester, topics included conflicts with Elluminate Live presentation time, clarification of assignment feedback and grading, locating a form, and administration of a retake exam. The number of reported chat sessions only includes two-way synchronous communications between a student and me. It does not include any chat session that I initiated to send my response to students' emails via chat when they did not respond. It also does not cover one student-initiated message that I could not reply due to being away at that time. Lastly, it excludes the five chat sessions with the student who dropped the course by the fourth week of the semester.

The average number of chat sessions per student was 3 and the highest number was 12. Four out of 18 students never used Gmail Chat to communicate with me. Three

of these students were in a group together and used chat for collaboration on assignments. An additional note about this group is that they also used Elluminate Live for group discussions in the phonology and morphology section. In addition, another group used Gmail Chat often. They held their group discussions in two sections instead of using asynchronous group discussion board: Section-3, syntax and semantics, and section-4, discourse and pragmatics.

All of the three selected participants for this study, April, Tom, and Kristina, had used Gmail Chat with me only once. I will discuss their data in detail in the next sections.

In contrast to the number of chat sessions, the total number of emails (from the teacher to an individual or a group of students and from student(s) to the teacher) was 312, excluding the emails I sent to the whole class. When I analyzed email and chat information for each individual student, I noticed that except for one student who had almost equal number of email and chat sessions (14 and 12 respectively), the students preferred to use email. The minimum use of email per student was 8, the maximum was 37, and the average was 17. Table 12 shows how often each student used email and chat tools and provides sample excerpts for student perceptions of the chat and its role for building community of inquiry.

The student who used the Gmail Chat the most over the semester had 12 sessions with me, all initiated by her. In addition, the total number of email correspondence between us was 14. I noticed her being online quite often. We used written chat all the time although once when I offered to use audio or video, she said she had to download the program and restart the browser, but she did not sign in again that day. In subsequent

conversations, I did not offer to use audio chat and she never used it either. She mainly contacted me about assignment clarification, apologizing for missing deadlines, requesting for extension on assignments, and asking for technical help with Elluminate Live.

Table 12

A Sample of Students' Frequency of Using Emails and Chat over the Semester and their Perceptions on Using Chat and its Role for the Community of Inquiry

Email	Chat with Instructor	Chat with Group	Student Perceptions
14	12	Very Often	"I <3 gmail chat!! And you were ALWAYS available. This helped me sooo much! 10 10 10 10 10 10" "I think it does (help us establish and sustain an online learning community) because we have become more comfortable with one another... Yes (feeling a sense of social presence with the instructor and group members), it makes it much easier to ask for help when you know your classmates, because you don't feel embarrassed to look stupid."
14	3	Very often	"Gmail chat was phenomenal, easy to use, and easy to access others. I give it two thumbs up on all these areas (social presence, teaching presence, and

learning)".

21	3	Every week	"I just learned how to use it this semester and now I love it...I felt that it promotes all three (social presence, teaching presence, and learning). This is because it allows communication and communication is key to all three."
8	Once	A few times	"I felt that it was easier than writing emails and much more efficient as long as the other person was online. I was comfortable initiating chat. I did feel that the instructor was available whenever I needed... Yes on all accounts 😊 (it promotes social presence, teaching presence, and learning)"
11	None	None	"I have not used it. If I did use it then it would probably promote my sense of belonging to the online community."

In her reflections and Survey-2 responses, she commented on Gmail Chat very positively. She reported that she used chat with her group members and it was easier than calling them. She felt comfortable to contact her group members when she needed. Also, she believed using chat helped her learn better in the course. In her reflection-3 paper, when she was asked if Gmail Chat helped us establish and sustain an online learning community in the class, she wrote, "I think it does because we have become more

comfortable with one another.” Survey-2 asked her to evaluate the role of Gmail Chat in terms of teaching, social, and cognitive presence, sense of community, and overall satisfaction. Her response to this item was, “I <3 (probably means love) gmail chat!! And you were ALWAYS available. This helped me sooo much! 10 10 10 10 10 10”.

Based on my researcher journal notes, there were a few students who preferred emailing to chatting when we were both online at the time. Some students noted in their reflections and in survey-2 that they just emailed me because they knew they would get a prompt response, thus they did not choose to use chat.

Gmail Chat and CoI

All chat communications between students and me were recorded and analyzed using ATLAS.ti for the manifestations of CoI elements and categories.

Teaching presence. Teaching presence played a big role in the chat interactions because I was interacting with the students to answer their questions which were mostly about assignments. To begin with, the design and organization element was observed 17 times through instances of discussing assignment deadlines, responding to extension and resubmission requests, helping with group formation, and rescheduling the live meeting. A sample dialogue addressing design and organization indicators is provided below. In this sample, I was talking to a student whose group members were dropping the course. She did not know how to proceed with group projects. I offered her an extension on the group assignment due the following day and suggested helping her to join another group.

Thursday, September 24, 2009 at 7:41 PM

T: Hello,

Aylin: Hi [Name].

T: I am sorry to bother you but i have a slight problem

[Ten turns are skipped. The dialogue was about two group members who were dropping the course and group assignment which was due the next day.]

Aylin: If they (group members) drop, I can ask [Group Name] to include you.

What do you think?

T: that would be great if they do not mind.

Aylin: I think they will accept you :) and you can get extension on group assignments due tomorrow.

T: oh my godness [*sic*] thank you... i had no idea what to do

Direct instruction was the most common element of teaching presence with 62 instances in the chat data. It involved the topics of clarifying assignments, assessment, and feedback, confirming or reminding deadlines and specific instructions, teaching content (discussing quiz questions), helping students locate documents on Blackboard, and providing technical help. Below are two examples for manifestation of the teaching presence. Both conversations which took place with the same student at different times exemplify direct teaching. This student had problems with the quiz questions because she did not attend the Phonology and Morphology class meeting, did not watch the recording, and did not complete required readings.

Sample-1: Tuesday, December 1, 2009 at 8:52 PM

A: question--- i cant find nething [*sic*] in the book on paralanguage?

Aylin: chpt-11 it means non-verbal lang

A: oh! wow. thanks. lol. "non-verbal" is much more direct

Aylin: ☺

Sample-2: Friday, September 25, 2009 at 8:55 PM

A: question 7: English language permits multiple consonants occurrence successively. Two and three consonant clusters in initial and final positions may pose a problem to English as a second language learner. What can we do to help those students to pronounce these sounds? ----This question is confusing to me, and i cannot find it in the book.

Aylin: ☺ yes it is in the book, and I explained it in the recording. Ok, book page 44

A: ok i see it. even though i still dont understand it. :-/ hopefully after i listen to the recording i can comprehend all of it

Aylin: I believe you should because other students seemed to got it. I gave examples. Basically, 1) omit one of the consonants (most native speakers do it) like in raspberry, they don't pronounce p 2) phonetic syllabication: when we have a word ending with consonant sound and the following word begins with a vowel, we combine the last consonant sound with the first vowel of the second word as in have it -pronounced as (he vit) or give up (gi vap) these make it easy to pronounce

A: yes i see that in the book

Aylin: my other strategy is to focus on each consonant first, e.g. structure. practice /s/, then /st/, then /ructure/ finally structure

[Five turns are skipped. I provided her with the instructions to watch Elluminate Live recordings.]

A: ok will do. minimal pairs-- i cannot find anywhere in the book except for the definition

do they describe how it can help the classroom? or are we suppose to make up our own inference?

Aylin: Have you studied the PowerPoints under sec-2? Phonology PPT should have that part.

A: i did not realize we even had powerpoints! Ive [*sic*] just been reading the book ooops

Aylin: you can create many games with minimal pairs. they are critical for teaching/practicing phonemes, because when a child cannot differentiate b and d, you can use activities with minimal pairs so that he/she can understand that b and d are different sounds, they change the meaning [“Nameeee”- repeating the final letter of her name a few times] :(we always have PPT presentation

A: yes i said make a game out of it :) good

i thought u gave the PPT's while we were on elluminate, i didnt [*sic*] realize u had them available for us. ok i will look them up too. Thanks! .

Aylin: you are welcome! good night! good luck with the game tomorrow! And please review all assigned readings for next sections as soon as section starts :)

Facilitating discourse was not common in the chat conversation because Gmail chat was not used as a medium of conducting section discussions. Facilitating discourse

was manifested 15 times through instances of setting climate and encouraging students as can be seen in the following examples:

“You may have extra day or two if you need. Don't stress.”

“Feel comfortable to contact me any time you need to discuss anything”

“This is a process approach that is why it is only 45. Part-2- the whole document is 150 points. Don't worry about your grade, you will make up that :)”

“Just stay connected with me and your friends. You will success!!!”

Social presence. Social presence was observed in all chat conversations as the most common element of CoI. The majority of the dialogues included greetings, use of vocatives, closure, appreciation, informal language, and emoticons. Table 13 displays samples of social presence indicators identified in the chat data.

Table 13

Sample Indicators of Social Presence Categories Identified in the Chat Conversations

<i>Categories</i>	<i>Sample Indicators</i>
Personal/Affective Expression	<p>“and my car wont [sic] start...I'm like, crying and really stressed.”</p> <p>“Yay! I'm so glad to hear that!!! :)”</p> <p>“ooh noooo crap i must not have saved it.”</p> <p>“I feel bad about turning it in late”</p> <p>“I am a little scared, but I believe I can do it”</p> <p>“This question is confusing to me.”</p>
Open	<p>“I am sorry to bother you but i have a slight</p>

Communication	problem”
	“Can I ask you a question...?”
	“again i apologize for...:(”
	“Thanks again for all your help”
Group Cohesion	“Aylin-- I still cannot view the video”
	“i know we did it wrong last time n [sic] we want to do it right”
	“how are you?”
	“okie doke. Thanx... u 2” (You too)
	“ty” (thank you)

To begin with, there were a total of 71 instances coded for personal/affective expression. Self-disclosure and emoticons were frequently used by the students. Students expressed their confusion with certain content or quiz questions, stress, emotions, and anxiety for the midterm exam. (by one student). Humor was manifested only through use of “lol” (18) and “haha” or “hahaha” (2). Half of the number of “lol” was used by one particular student.

Personal/affective expressions produced by me were less than the students used. Those included mostly emoticons (29), emotion (7) and self-disclosure (1). Emotive expressions contained capitalization, repetitive punctuation, lengthening a name. Some examples are as follows:

“you did not SAVE ??? :(ohhh”

“Oh. I'm sorry.”

“Haleyyyyyy ☹ (Pseudo name)”

“I'm glad you continue :)”

Open communication was the most common among social presence categories, identified in 118 instances such as asking questions (both content related and locating resources), sharing group concerns, agreeing, apologizing, appreciating, requesting extension on assignments, and asking for technical help. Among these instances, asking questions and appreciating (thanking for the help) were the most frequent (48 and 54 times, respectively).

Different from the open communication instances by the students, open communication manifested by me as the instructor included mostly instances of acknowledging gratitude (18). In addition, it involved thanking four times and asking questions twice.

Group cohesion included salutation, vocatives, informal language use, inclusive pronouns, and very few instances of group identity and collaboration. There were a total of 65 instances observed as group cohesion. Salutation (20) and the closure phrases (18) were the most frequent instances followed by vocatives (10) and phatics (4). Use of informal language with spelling errors, missing punctuation, and shortened words or acronyms such as “ttyl” (Talk to you later) and “n” (for and) were observed in the data. Inclusive pronouns were frequently identified as well. There were 81 instances of “we” (31 of which were used by the instructor, and 22 of which used by the students to refer to the class instead of their group). There were also 7 instances of “us” (used by students) and 22 instances of “our”, 5 of which were produced by the instructor. Moreover, in four of the dialogues, group identity and group collaboration were revealed as seen in this

example: “I understand. I guess I assumed that each group member had done what they were assigned to do. I should not have assumed that.”

Group cohesion instances were more often used by me than the students, but they showed a similar pattern as student data. There were 80 instances in total, and most of them included salutation (25), vocative (26), closure (20) as well as wishing “good luck” (5) and phatics (4). I used vocatives more often than the students (addressing me with my name).

Cognitive presence. Cognitive presence was the least common element in chat conversations. Because chat conversations were impromptu and initiated by students most of the time and their intention for this medium was not learning the content, cognitive presence could not progress through four phases-triggering event, exploration, integration, and resolution. At the first phase of the critical inquiry model, a triggering event takes place as conceptualizing a problem or issue. This was observed when students asked questions or requested help with certain topics. My responses to the students’ questions were associated with teaching presence. Therefore, the dialogues exemplifying cognitive presence were provided previously as samples under teaching presence, direct instruction discussion. In these dialogues, triggering events were not followed by the exploration phase. They were simply followed by my clarification which included giving definition, pointing out the references, and giving examples. Students’ responses often contained appreciating.

Summary of Gmail Chat and CoI

Gmail Chat served as an effective medium for conducting extended office hours and enhancing interaction between students and me. Analysis of chat logs showed that

both teaching and social presences were manifested frequently. Cognitive presence indicators were observed the least because they were limited in a few chat conversations when students asked content clarification questions. Most students perceived Gmail Chat as an effective tool to promote social, teaching and cognitive presences. Students who did not use it for content learning purposes stated that Gmail Chat was not beneficial to their learning mainly because they did not use it for that purpose. Regarding social presence, participants believed it helped them feel the presence of the instructor and their group members. For teaching presence, they appreciated my being available to them most and providing immediate solutions to their questions.

Elluminate Live Meetings

Before the semester when I was designing the course, I planned to conduct five Elluminate Live meetings during the semester. These were planned for 1) giving the course orientation, 2) presentation and discussion of the phonology and morphology section, 3) having a midterm review, 4) group presentations and class discussions on SLA theories, and 5) presentations of LEP Analysis case projects. An additional session was created for another midterm review meeting. Five students attended the second midterm-review meeting, and the rest of the students were able to watch the recording. Two recorded content presentations via Elluminate Live were provided to students for section-2, phonology and morphology, and section-7, assessment. In addition, some of the student groups used Elluminate Live for their group communication and collaboration. First, I will briefly describe each class meeting, and then I will report the findings of the analysis of them. The recordings were carefully watched with frequent pauses and replays to transcribe all written, oral, and visual interactions. The files were saved as rtf

files and uploaded to ATLAS.ti for data analysis. Below is the list of all of the uses of Elluminate Live during the semester excluding the interview meetings with participants. The meetings that were not planned prior to the beginning of the semester are shown as “additional,” and those that did not include students and were just for the purpose of preparing presentation recordings are indicated as “not live”.

- Course Orientation (August 29th)
- Phonology and Morphology (September 18th)
- Recording of Phonology and Morphology (September 19th)-Additional and not live
- Midterm Review (October 16th)
- Midterm Review (October 18th) –Additional
- Group X used Elluminate Live for their section-2 group discussion (September 21st) –Additional
- Group Y used Elluminate Live for their LEP Analysis collaboration (September 30th) –Additional
- SLA Theories (November 20th)
- Recording of Assessment (November 21st) -Not live
- Group X’s LEP Analysis Presentation (December 4th) –Additional
- LEP Analysis Presentations (December 8th)

Before discussing the data from the selected meetings, I will first briefly describe the additional meetings and recorded course materials that were also used during the semester. Because the phonology section of the meeting recording failed, I decided to

prepare a separate recording for the class. I talked to a colleague of mine who would also need the recording for her class. On *September 19th*, we recorded a presentation and shared it with our classes. Also, for section-7, we prepared a recording on content presentation of assessment models, techniques and adaptations for ESL students on *November 21st*.

An additional Midterm Review Meeting was conducted on October 18th to complete reviewing the questions not finished in the previous Midterm Review meeting due to my loss of internet connection towards the end of the session. Five students participated in this live meeting. In addition, one of the groups was not able to attend the class meeting to do their LEP Analysis presentation due to a schedule conflict, therefore, they were given an opportunity to do their presentation at a different time than the class meeting. I was the only listener of their live presentation, but the recording was available to the rest of the class. We had a long in-depth critique session. Being the only group in the session and having plenty of time, most of the conversations took place through the audio tool.

Course Orientation Meeting

On August 29th, students attended the course orientation meeting to get comfortable with Elluminate Live, learn about course design, objectives, assignments, course content, and ask any questions they had concerning the course. The meeting lasted for two hours twenty minutes in the morning. Seventeen out of 21 students (3 students dropped the course later) attended the meeting. Two students had technical problems and could not launch the program, and one student was excused for health issues. I mostly used the microphone and only a few times used the chat tool while students mostly used

the chat and emoticons. Apart from the introductions, the audio tool was used 12 times by the students to ask me questions. Only one student did not have a microphone. In the chat log, there were a total of 170 messages, 9 of which were typed by me.

Teaching presence. Teaching presence was dominant in the meeting due to the meeting objectives that focused on teaching how to use Elluminate tools and introducing the course objectives, course design, and assignments. I uploaded PowerPoint documents to Whiteboard to do the presentation. The design and organization category was at the peak level because the meeting purpose was explaining the design and organization of the course--the curriculum, assignments, methods, course schedule, and netiquette. Direct instruction was observed with presenting course content briefly and defining certain terms and giving examples to clarify section topics. I often checked students' understanding and asked them to use emoticons. If they were confused they would use unhappy face and if everything was clear they would use happy face emoticon. During the first 15 minutes we went over the Elluminate tools. I made sure the students were able to do audio set-up, and use the microphone, text-messaging, and emoticons. In addition, I tried to create a welcoming atmosphere for the meeting as well as for the class. Each student introduced themselves by saying "hi", "good morning", this is [Name]". I addressed students by their names and ensured that student questions were welcomed anytime. One of the students said that she was stressed about her ESOL binder and I comforted her and explained what she needed to do. This pattern of setting the climate for learning reflects the facilitation of discourse, a category of teaching presence. Table 14 summarizes teaching presence indicators observed at this meeting.

Table 14

Sample Indicators of Teaching Presence Categories Identified in Orientation Meeting

<i>Categories</i>	<i>Sample Indicators</i>
Design & Organization	<p>Setting curriculum (presenting the course design and assignments)</p> <p>Establishing time parameters (describing how course schedule is set)</p> <p>Utilizing medium effectively (using Whiteboard, microphone and chat)</p>
Facilitating Discourse	<p>Encouraging students to ask questions</p> <p>Setting climate for learning (“Do not worry.” “Don’t be stressed”, “Please click on raise hand button anytime you have a question.”)</p>
Direct Instruction	<p>Presenting content and asking questions</p> <p>Confirming understanding (comprehension checks: “Is everything clear so far?”)</p> <p>Providing technical support (showing how to use Elluminate tools)</p>

Social presence. Keeping in mind that this was the first live meeting of the class, social presence indicators were more than I anticipated. Student to student and student to teacher interaction was high, giving evidence to students’ feeling comfortable to

communicate with other participants as well as the instructor, which contributed to both open communication and group cohesion. Personal/affective expression was manifested mostly through use of emoticons. In addition, there were a few instances of expressing emotion, using self-disclosure, repetitive punctuation, and humor. A nice example for self-disclosure was noticed when a student asked the deadlines of lesson plan assignments and as soon as she saw the deadlines listed on the course calendar, she expressed her emotion: “ohhhhh i am seeing it now! duh! sorry!!!!” In addition, after I explained the LEP Analysis assignment and asked the class how they were feeling about it, two students revealed that they found it overwhelming: “clear, but overwhelming 😊... I definitely appreciate knowing up front, I'll just have to process everything 😊”. Another instance was observed with one student who was stressed about the ESOL binder requirement because she was concerned that she did not take all of the courses listed on the program checklist. As she talked, she expressed how she was feeling about it: “...this is so stressful...I'm worried that my courses are not accepted...” Other students also revealed emotional responses related to binder requirements since they were not aware of or did not pay attention to these requirements before. The following excerpts indicate their feelings:

- “Going to spaz out now” (because she was stressed about not having her field experience log back from her previous ESOL instructor)
- “why did they not tell us this when we began? because we have like 15 classes in our binders...not to mention that we started taking classes as far back as two years ago”

Laughing out loud as in the form of “lol” was used twice by two different students. One of the students made a funny comment having coffee in hand as talking and this led a few more messages in the chat area leading a social conversation such as, “coffee makes me jittery”, “i [*sic*] wish lol ☺”, and “Tea ☺”. Another example could be observed in the following excerpt when a student logged in late and asked a question. Initials of student names are used to indicate turn-taking:

J: is this a recording

C: no [Name], welcome

K: haha

J: hey ok. sorry im[*sic*] lost

As the instructor, I tried to have a pleasant tone of voice and used humor. For example, I had high and joyful pitch as I said: “Heyyyy, we finished!” Lastly, a happy face emoticon button was used 12 times, and in the chat dialogues it was typed 17 times, 3 of which were used by me. Depending on the context, a happy face emoticon would indicate a positive response as “yes” or an emotive statement such as “I like it”, or “funny” while an unhappy face emoticon would mean “no”, “I am confused” or “I don’t like it”.

We can infer that open communication was present because there were many instances of students asking questions, agreeing with each other, and providing peer support. Student collaboration was evident when they helped each other with Elluminate tools and also course related questions. For instance, when a student typed, “do we hold down the audio button when speaking”, four students answered her on the chat. Again on the chat one student asked where the course calendar was and before I verbally responded

her, another student typed: “course information has the calender [sic] of assisngments [sic] there...try this: on blackboard, open course, then click on course information, she has posted a nice calender [sic] of what when”. Some students even initiated forming their group as seen in this message: “I would like to observe the same child together. E-mail me if you are also interested in this. I can observe in Pasco and Hillsborough”.

Group cohesion was present especially in the beginning and at the end of the meeting. In the beginning, all students introduced themselves which included salutations and phatics. Students also used vocatives (9 times to address another student and 2 times to address me). At the end of the meeting, appreciation and closures were common as seen in the following excerpt:

B: Going to go check e-cafe now. Thanks. I'll talk to you later! Bye.

Aylin (speaking): Good bye [Name]!

Em: ok. well [sic] I am going to head out too. talk [sic] to all of you later

Aylin (speaking): Bye [Name]!

El: hagd

Aylin (speaking): What does it mean, [Name]?

El: Have a good day ☺

Aylin (speaking): Oh, I did not know that. Thanks for teaching.

El: your welcom [sic] (yw)

J: I need to go too. Have a good day

C: I didn't know that either!

A: I'm going to head out too. Great meeting everyone! have a great weekend

Aylin (speaking): Good bye [Name]!

E1: good bye everyone. It was nice meeting you Aylin. I enjoyed Ellumincate [sic]

C: have a good rest of the weekend

Aylin: ☺ Thanks!

Aylin (speaking): Goodbye [Name] and [Name]!

In terms of language use, there were a few spelling errors, use of informal language as well as acronyms and shortened words such as “lol” (laugh out loud), “hagd” (have a good day), w/ (with), b/c (because). Inclusive pronouns (we, our) were used 27 times by the students in the chat messages and 8 times in student audio talk. It was certain that 3 students probably already contacted to each other to form a group and they always used inclusive pronouns in their questions as seen in the following chat dialogue. I noticed that one girl was addressing her group member “em” which was the first and second letters of her name, which might reflect close relationship between them. In the following excerpt my responses which were oral are not included:

E: do [sic] we need to make it evident to you during each group project who is what role in the group?

C: you [sic] know em, we could each be using our laptops as we have discussions and type what we are saying

E: that would work for me, if thats [sic] ok with Aylin...b/c we can even record the discussions too ☺

Cognitive presence. Because of the meeting objectives, cognitive presence was not the main element in this meeting. Students were learning about the course objectives, assignments and the course design, and additionally their ESOL endorsement requirement. However, to explain course content, I defined these linguistics terms and

provided some examples: phonology, morphology, semantics, syntax, discourse, and pragmatics. Students did not ask any question related to these terms probably because they were introduced to them in their previous ESOL course or there was not any triggering event. Nonetheless, they asked several questions related to the course requirements. These questions could be considered under the triggering event phase of the practical inquiry model. Some course related questions were as follows:

- “I cannot find the calendar. Where exactly is the calendar?”
- “How many people can we have in our group?”
- “How is the grading classmates going to work?”
- “when [*sic*] do you want the original plan?”
- “could [*sic*] you repeat Monday due Friday due, please”

However, most of the questions were asked about ESOL binder set-up. This was when many students used the hand-raise button to use the microphone to ask their questions. A few select samples follow:

- “ESOL binder includes all written work from ESOL related courses, correct?”
- “Do we need to write reflections for each course?”
- “If we don’t have original graded work, can we put the copies we have?”
- “shouldn't [*sic*] we have logged those late field experience hours during ESOL 1?”

The second phase of the practical model is exploration. This was observed for short periods of times when students were searching for solutions, brainstorming, and helping each other. According to the model, it could be private in some of the students’

world too. Such examples of exploration instances were identified in the following dialogue:

E: I guess if you choose to do this as a group you can both go in and observe together in a separate [*sic*] setting other than your internships/practicums

B: That person (who knows the student) could record the conversation, then the group could meet to listen and discuss

E: that is a good idea

[Seven messages are omitted]

Em: so i assume that we are only submitting ONE copy of each part for the entire group?"

J: i think so em

Em: thats [*sic*] what i figured

Em; ☺

The following phase, integration, was often provided by me in responding to the students' inquiries, but there were some students who provided focused evidence with a reference. For example, to explain where the calendar was, one student wrote this for her classmates: "course information has the calender [*sic*] of assisngments [*sic*] there...try this: on blackboard, open course, then click on course information, she has posted a nice calender [*sic*] of what when". The final phase of this model, resolution, which refers application or testing the newly learned solution in new contexts was not observed at this meeting because it was not the meeting objective.

Phonology and Morphology Meeting

Held on September 18th, this meeting aimed to present phonology and morphology, answer student questions, clarify their problem areas, and solve practice questions. Sixteen out of 18 students attended the meeting. The audio recording of the meeting failed except for the additional 30 minutes on morphology section. However, a total of 396 turns were recorded in the written chat logs. The average number of turns per student was 22, with 69 being the highest, and 2 being the lowest. Based on the analysis of recorded text-messages, researcher/instructor journal and students' reflections, it was evident that this meeting was successful in terms of student satisfaction and manifestation of CoI. A majority of the students indicated their satisfaction with the meeting, their perceived learning, teaching presence, and social presence.

Teaching presence. Teaching presence was observed throughout the meeting. It started with planning the session, which was initiated prior to the beginning of the course, creating the PowerPoint documents with content presentation and practice questions, and providing the students with guidelines and instructions which all indicate the design and organization category. During the phonology and morphology meeting, there were some technical challenges. To begin with, although I logged on one hour and twenty minutes in advance to upload PowerPoint documents, I just made it on time because the upload was very slow. Then, as I was stressed about the time, and not being able to interact with students (Elluminate Live does not allow use of any tools during the upload), I forgot to click on record button. I started recording when we finished the phonology part and one student inquired about the recording being available to them for a review. By that time, we had been in the session for one hour and fifty minutes. Therefore, the recording was

only of 30 minutes of the morphology section with two students who preferred to stay. Another problem we had was that during the phonology exercises, when groups were formed to practice questions, some students reported that they could not see the whiteboard in breakout rooms. Thus, instead of group work, we discussed the questions as a whole class.

Direct instruction was the major category of the teaching presence for this meeting. I presented the content using the microphone, Whiteboard, webcam, and web tour tools. Using the web cam, I modeled how to pronounce certain phonemes and how to differentiate among voiced and voiceless consonants (putting your fingers on your throat to feel vibration). We toured a phonology website where we listened to some of the phonemes, watched the video clips of how they are articulated, and studied a description of vowels, and the manner, place and voicing features of consonants. In addition, there were practice questions (typing on Whiteboard, selecting choices, matching items, text-messaging, or using the microphone to answer). Throughout the meeting, all teaching presence categories were employed.

Facilitation of discourse was apparent with student encouragement, summarizing, clarifying confusions, answering student questions, and prompting questions. I encouraged students to participate and appreciated their effort by saying for example, “Perfect!” or “Good job!” “Do you want to try this one too?” Because I was using the microphone for all the time, teaching presence indicators were not in the written-text messages, but based on 30 minute recording, my reflection in researcher/instructor journal and student reflections, I was able to analyze teaching presence. Some example

indicators of teaching presence categories identified in the meeting transcript are displayed in Table 15.

Table 15

Sample Indicators of Teaching Presence Categories Identified in Phonology and Morphology Meeting

<i>Categories</i>	<i>Sample Indicators</i>
Design &	Setting curriculum (presenting the agenda)
Organization	Designing methods (whole class and group work activities) Establishing time parameters (meeting time; group work time) Utilizing medium effectively (using Whiteboard, Web tour, webcam, groups, and chat)
Facilitating Discourse	Identifying areas of agreement/ disagreement (Do you agree?) Encouraging, acknowledging, or reinforcing student contributions (Thank you! Correct! Good job!) Setting climate for learning ("Don't hesitate to answer thinking it might be wrong. We are all just trying.") Drawing in participants, prompting discussion ("Come on! You can do this". "Anyone wants to try?")

Direct Instruction	Presenting content and asking questions
	Summarizing the content
	Confirming understanding through assessment and explanatory feedback (comprehension checks and practice questions)
	Diagnosing misconceptions (“Ok, but –th makes it a noun”. “Warm is adjective and warmth is a noun. So is it still inflectional?”)
	Injecting knowledge from diverse sources (Using Web tour; referencing the text book and other materials)
	Responding to technical concerns

Social presence. During the session, several students shared their emotions by revealing when they were confused, when they found the topic challenging, and when they liked the material. The indicators are apparent in these sample messages by the students: “those symbols really confuse me.”, “This seems so overwhelming :-/”, and “This looks like Greek to me! HaHa.” Students seemed to be comfortable asking questions and interacting with the instructor and classmates. They asked for clarification and showed appreciation when their questions and confusions were cleared up as seen in these messages: “can u [*sic*] give an example of discourse”, “Which subfield would incorporate non-verbal communication?” and “o ok thank you for the clarification.”

Another self-disclosure that was not content related was shared by a student: “i [*sic*] just moved (literally a U-haul in my driveway) and I cant [*sic*] find my book” and “I’m very

sorry but I have to go, I think my Bf [boyfriend] just broke his arm!!” I provided humor by using funny cartoons related to the content. Student reactions to the cartoons and other humor signals included: “AWESOME”, “funny”, “cool”, and “☺” happy face emoticon, “lol” and “As the only male: it would be impossible to have secrets in this room! HaHa.” This last sample message was sent after a message intended to be sent to a selected group member, but instead, it came to the main room. The student who warned him responded that “haha it's ok [Name], just wanted you to know in case you had something VERY private in the future”, and another student also commented; “lol poor [Name].”

Group cohesion was present especially in the beginning of the meeting when students were testing their microphones, and interactions included vocatives, salutations, phatics, and student collaboration for adjusting their audio level. Some excerpts from the introduction showing indication of group cohesion are: “Oh hey [Name]!”, “Hello [Name]”, “can you hear me?”, “nope”, “i [sic] dont [sic] think my mic is working”, “yeah [Name] it must be broken”, “am i [sic] too loud when i [sic] talk”, “Oh ok lol... is this a video thing?” “good thank you” and “its [sic] going alright.” Acronyms and shortened words to express emotion such as “LOL” and “lol” (laugh out loud), “ur” (you’re), “Bf” (boyfriend) emoticons (☺ ☹) were commonly used. Instead of using emoticon buttons to convey emotion, one student tended to type these graphical symbols: =) and :-/. Students did not pay great attention to grammar and spelling rules and used colloquial language in their written messages: “u” [you], “ur” [you’re], “yep”, “yay”, “ya” and “haha”.

Once the scheduled two hours ended, I indicated that I would finish the rest of the presentation within 15 minutes and they could stay or leave. Those who would leave could watch the recording. Two students (one of which was Tom) stayed for the extra

session time on morphology. Both students used the microphone all the time to answer questions. They were members of the same group and seemed to have developed familiarity and group belonging. We openly and collaboratively discussed each question. Each of us used first names to address each other. The female student said: “I am confused about inflectional and derivational” so we reviewed it, and later she again stated “I am still feeling a little bit confused.” Therefore, we solved more morpheme analysis questions. Both students also complimented each other’s correct responses. In addition, there was laughter a few times. First, it was when I could not define warm and warmth to show how they are different, and then when Tom used humor twice; one was at the closure, when I thanked them for staying longer, and Tom said: “someone had to guard the girls”. All these patterns show indicators of affective/personal communication, open communication, and group cohesion categories of social presence. Table 16 displays some samples of these indicators from the meeting.

Table 16

Sample Indicators of Social Presence Categories Identified in Phonology and Morphology Meeting

<i>Categories</i>	<i>Sample Indicators</i>
Personal/Affective Expression	“Cool”, “yep”, “=)”, “YAY”, “awesome”, “so”, “This looks like Greek to me! HaHa” “This seems so overwhelming :-/”
Open Communication	“it's splendid... like good chocolate” (referring to the website studied) “wonderful thank you so much”, “Oh ok lol... is this a video

thing?... or just audio.. sorry this is my first”

Group Cohesion “is it just me or do they sound the same?”

“I think to us it sounds the same”, “hey there, How are you?”, “good night”, “Hang in there [Name]”

Cognitive presence. The phonology and morphology section was probably the hardest section of the course for all students. As an instructor I observed that some students needed a lot of help with the content and they were not ready to discuss the practice questions. They were still at the exploration category of cognitive presence because they did not come to the meeting having studied the assigned materials. They were given a week to do the readings, study the tutorial on the given website, and bring their questions to the meeting to discuss. However, several students had not done any preparation and even did not know that the tutorial website was already posted for them to study before the meeting. This caused us to spend more time on phonology as I presented the whole chapter, provided several examples, and answered student questions.

Because only text-messages and a partial audio recording transcript was available, analysis of cognitive presence is limited. Moreover, assessing the process of critical thinking is challenging. It depends on how much of their cognitive processes participants choose to reveal in the discourse. As argued by Garrison, Anderson, and Archer (2001, p. 7), “There may be a variety of technical, access, or deeper social, psychological, and educational inhibitors to participation in the conference, which means that the transcript of the conference is a significantly less-than-complete record of the learning that has taken place within the community of inquiry”. As the first phase of the critical inquiry

model, triggering indicators were observed through instructors' presenting practice questions and students' sense of puzzlement and asking questions such as; "wait... is Thank voiceless?", "Which subfield would incorporate non-verbal communication?", and 'i [sic] never noticed the differences between the "th" sounds.'

The exploration phase manifested itself through brainstorming, questioning, and exchanging ideas as in these messages: "So placement of tounge [sic] and lip are important for speech therapy", "that makes sense. thanks [Name]", "no idea", "I think so", "So we need to memorize these symbols?" "sorry i [sic] have a southern accent and i [sic] can find the difference", "o it's ok i [sic] was just trying to help ya", "My guess might be t" and "Team [Name], pg 56 would help."

The integration phase indicates that learners synthesized their understandings of the phonology and morphology concepts and had a convergence on the answer for the questions. This could be observed in such messages: "ya voiceless", "thin and thank. i [sic] remember that example", "if in doubt, hold fingers to throat"

The resolution stage was limited in the data. This was due to the nature of the task. The purpose of the meeting was to present content (direct teaching and exploration) and give students a chance to solve practice questions and receive immediate feedback when they needed (facilitation of discourse and integration). Because the session objective did not aim for students' application of the learned material to classroom teaching, resolution was observed only when some students critically assessed the material and made comments on how they would apply them to a teaching or special education context. For instance, these comments indicated a high level of thinking when phonemes were being explained: "With this example it is easy to see why learning to read

English is difficult”, “This part is so important for teaching kindergarten and first [grade] for reading” and “The only thing I've seen is that students practice pronouncing words in a mirror.” The resolution level of cognitive presence for the phonology and morphology section was planned for further assignments such as asynchronous class discussions, LEP Analysis case study, and lesson plans.

Scaffolding and collaborative learning incidences were found in the data. A sample excerpt showing these indicators of cognitive presence is provided in Table 17. A dialogue among students, initiated by a student question reveals the first 3 phases of cognitive presence as well as showing the group cohesion category of social presence. At the resolution level, one student shows emotion (“woohoo”) as a way of showing excitement for finding the answer, which indicates the social presence personal/affective category.

Table 17

Sample Indicators of Cognitive Presence Categories Identified in Phonology and Morphology Meeting

<i>Categories</i>	<i>Sample Indicators</i>
Triggering Event	Practice questions E: wait... is Thank voiceless?
Exploration	A: i think so J: which sound in thank are you talking about C: th? E: yes

“like, s has a lot of different sounds”

“My guess might be t”

“Team [Name], pg 56 would help.”

Integration	Tom [Name] Yes it is
	J: ya voiceless
	Kristina: thin and thank.. i remember that example
	*E: woowhoo
	Tom: if in doubt, hold fingers to throat
Resolution	“With this example it is easy to see why learning to read English is difficult”
	“This part is so important for teaching kindergarten and first for reading”.
	“is this what they use for speech therapy?”
	“The only thing I've seen is that students practice pronouncing words in a mirror”

Midterm Review Meeting

Conducted on October 16th, this meeting’s aim was to review all sections necessary for the midterm exam, discussing different types of questions as a whole class, and through direct teaching and group discussions. The topics that would be included on the midterm were ESOL modification techniques for material adaptation, lesson planning, phonology, morphology, semantics, syntax, pragmatics and discourse. The whole class review activity lasted one hour, and the group activity took from 20 to 30

minutes. Groups were given 15 minutes in online breakout rooms, and then they would be brought back to the class so that each group would answer their questions. However, my Internet connection was down before groups were taken out of the breakout rooms. I was able to inform a few students through Gmail Chat and sent all students an email using my cell phone. Although we did not review all groups' responses as a whole class, the groups were able to discuss their questions and emailed me their responses. The whole session took one and a half hours instead of two hours.

Eleven students participated in the session. During the whole class activity, there were a total of 85 text-based chat turns, 6 of which were by the instructor, and 66 audio/microphone turns, 47 of which were by the instructor. Average turn per student was 10.2. The highest number of turns by one student was 27 and the lowest was 1, and that was a salutation in the beginning of the session. One of the students participated only during the breakout activity which was not observable.

Teaching presence. The design and organization category was in effect during the planning phase and creating the materials, as well as during the session with providing the session agenda and schedule--making use of groups and whole class activities, explaining how to participate, and using the medium (Elluminate Live tools) effectively. Although the initial planning of this meeting took place before the semester started, it continued with modification of the materials and methods a few weeks prior to the meeting. I prepared a PowerPoint document with 50 review questions (10 questions per group). Question types were matching, true/false, multiple-choice, multiple answer, and short answer. I emailed the questions to student groups just before the meeting so that they would not have any problems reading their group questions during the group

discussions. One hour before the onset of the meeting, I uploaded the document and created breakout rooms (with their group names) so as to save time during the meeting. The meeting started with session agenda and practice questions as a whole class. In the session agenda, I talked about the whole class and group competition activities. Upon finishing solving 14 questions collaboratively as a whole class by the end of the first hour, students were put into breakout rooms (their own groups) for 15 minutes to discuss their questions. At the end of the 15 minutes, they would be brought back to the class so that each group would answer their questions. The group with the highest points would be the winner, but due to my Internet loss, we were not able to accomplish that final step of the task.

Direct instruction was evidenced with my asking the questions, presenting content, summarizing, paraphrasing responses, assessing student comprehension, agreeing and disagreeing. During the whole class activity, I read each question and asked for volunteers to answer. Volunteers typed their answers in the chat area on Whiteboard or used the microphone to talk. After each question, I paraphrased student responses and provided detailed explanations reviewing the key concepts. On answer slides, we had charts and graphics as visual support especially for phonology and morphology sections. This whole class practice was to provide direct teaching opportunity and make students feel comfortable before they were put into groups. I tried to use different tools for students to choose the most comfortable way to participate. Facilitation of discourse was present for encouraging, acknowledging, and reinforcing student contributions, assessing the efficacy of the process, setting climate for learning, and drawing in participants. Several times, I encouraged them to participate by saying “I know you can do it! Come

on!” , “Other students?” , “Any other comments?” I emphasized that if they had any questions during the meeting, they should feel free to raise their hand or type their question in the chat area. For teaching application questions, I was setting the climate for learning as I wanted them to feel comfortable and to not stress about giving a wrong answer: “Don’t be afraid to just say what comes to your mind. This is impromptu. You don’t have time to prepare so even anything simple is ok.” I often checked student comprehension (e.g., “So far so good?” and “Any questions?”), asked them to use emoticons or applause to indicate their response, and if they had questions, to use hand raise button or type them in chat window.

Social presence. In the meeting transcript, the personal/affective expression category was exemplified by self-disclosure, emoticon and humor indicators. Self-disclosure was observed during the discussion of a question with these utterances “yeah this was confusing”, “I am little confused” and when I asked if they were feeling ready for the exam, self-disclosure responses were; “not quite”, “I just need to focus on phonology some more”, and “it’s a lot to know!!” A happy face emoticon was used 3 times by the instructor and 4 times by the students. The meaning of an emoticon depends on the context. Sometimes it is evident, but sometimes it is difficult to interpret whether it is only a positive response as “Yes!” or if it does add emotion to the response. For example, in these contexts, it indicates happy facial expression: “Who is the owner of this art 😊?”, “ready 😊”, “Come on 😊”, “correct 😊”, and “i [*sic*] think ur [*sic*] right 😊”, but when it was used solely during discussion of a question, it might just mean “yes” or “I agree” without showing happy emotion. Finally, another indicator was humor, though it was not common. Once when a student was saying, “[Name] (stretching the word), can

you hear me (stretching the word)?” she was laughing and stretching the words. Another example was the use of “haha” twice, and the students’ drawings on Whiteboard before the session started.

Open communication was the most commonly observed category. Compliments were used by the instructor a few times such as “Good job!” “Yes, that was a great idea”, and “Very good” and once via the Applause button when students answered questions right. Compliments sometimes were followed by appreciating, “Thank you!” used seven times by the instructor and four times by students when their questions were clarified. Students indicated agreement with their classmates using such phrases, “I was just going to ask the [sic] professor to elaborate on that [Name]”, “I think ur [sic] right ☺”, “yep”, and “correct [Name]”, “I agree”. There were also three occurrences of disagreement with previous student answer: “no -able means can”, “i think t is just a connector, not really a morpheme”, and “no forget is under lexical”. The majority of the students showed high participation, which might indicate that they were feeling comfortable conversing through Elluminate Live and interacting with other students and the instructor. Only two students were lurking or might not be actually at their computers all the time. However, their participation was observed during breakout rooms, which may show that they might be feeling uncomfortable verbalizing their thoughts in class discussion and thus they waited for the group activity, or they were not feeling well-prepared for the review session. Some students felt more comfortable than others and participated more. Due to the multiple-modality of the discussions, active students probably did not prevent others from participating. That is, while someone was talking they could chat or type on the Whiteboard, or use hand raise button to take turn. Moreover, not all messages had the

purpose of responding to a question. There were several social presence indicators in these turns as well. In addition, a feeling comfortable pattern can be inferred from these statements: “I am going to jump in again guys”, “hopefully, it is ok for me to jump in again” and “I guess I can start.” Finally, another pattern was asking questions, which indirectly relates to feeling comfortable too. Students asked questions to the instructor and to their classmates. Some examples were, “[Name] can you hear us?” “would it be the /z/ sound?”, and “wait, shouldn't it be table?”

In the beginning of the session, group cohesion patterns were apparent as students greeted each other using first names and informal language: “hey there [Name]”, “Hi, [Name]. How are you?” and “Hi guys!” Before the session started, three students were drawing on the Whiteboard using clip art and symbols. I commented on their drawings adding humor. The use of salutations, (e.g., “Hi everyone!” “Hi guys!”), closure, (e.g., “Talk to you soon! Bye!”), phatics (e.g., “How are you?”), vocatives, and drawings indicated that they were comfortable using the tool and participating with each other as well as the instructor, evidencing group cohesion. Other support for group cohesion was found when students collaborated to answer questions during the whole class and group activities. Among inclusive pronouns (we, us, our, and group), “we” was frequently used by the instructor.

Cognitive presence. The meeting aimed for a review of all topics covered in the midterm exam. Several types of questions were written for the session. The plan was to provide students with ample opportunities to review the topics through in-depth discussion and collaborative learning. Therefore, we began the session solving some questions as a whole class as a warm up. Teaching presence was also manifested through

direct teaching and facilitation of discourse whenever needed. In a way teaching presence and cognitive presence were manifested hand-in-hand.

The four phases of the practical inquiry model in describing cognitive presence were depicted as follows:

A triggering event, which initiates the inquiry process was activated by the presented questions and sometimes by students' questions when they were puzzled. The exploration phase occurred when students were trying to understand the problem and searching for solutions, including students' interactions as they brainstormed. Students demonstrated integration by providing structured and focused evidence, giving a reference or explaining the reason. The solution to the problem or expected answer to the question was reached collaboratively at the integration phase. The final phase of this model, resolution, refers to real life application or testing the solution in new contexts, but because this meeting did not aim for this, resolution was found only when some students made a connection with their own experiences and shared how they observed the application of certain teaching techniques and strategies.

An excerpt from the meeting transcript depicting interactions between students and the instructor and among students is shown in Table 18. In this discourse, the class was answering a morphology question collaboratively with the teacher's facilitation. Out of 11 students, 6 participated in this discussion. Students preferred to use written chat instead of speaking, which might be because the question was challenging for them and they did not feel comfortable enough, or it might be because several students were participating at the same time, and written chat seemed to be working better for this question. Social presence patterns that are identified in this discourse include open

communication, risk free expression, agreement, disagreement, asking questions, appreciating, feeling comfortable interacting with other course participants and the instructor.

Table 18

Manifestation of the CoI Elements and Categories in a Sample Dialogue while Solving a Question

Written Chat	Audio
<p>Moderator: come on 😊 (<i>TP-Facilitating discourse- encouraging</i>)</p> <p>Moderator: what is the root? (<i>TP-facilitating discourse-prompting discussion</i>)</p> <p>A: forget (<i>CP-Integration</i>)</p>	<p>Moderator: (reading the question on the slide) Morphology question. Find the morphemes in unforgettable. Place them under correct category on Whiteboard.</p> <p>Find the stem or the root morpheme first.</p> <p>Then ask yourself if it is lexical or functional. For other morphemes, answer if it is bound or not, and if it is bound, if it is inflectional or derivational. (<i>TP-Direct Instruction-Asking questions</i>)</p> <p>(<i>CP- Triggering</i>)</p> <p>(waiting for 15 seconds)</p>

Moderator: correct ☺ (*TP-Facilitating*

discourse-feedback) (*SP-Personal/*

Affective)

K: un is a bound morpheme (*CP-*

Integration)

C: un-forget-able (*CP-Integration*)

K: fortune is lexical (*CP-Integration*)

K: er

K: yeah

K: un is derivational

K: derivational? (*CP-Exploration*)

Moderator: Nobody is using the microphone. Ok, you said forget is the root, which is good. (*TP-Facilitating discourse-acknowledging*) Is forget functional or lexical? (wait for 5 seconds)

Moderator: I think K typed the word wrong. It is not fortune but forget. And yes it is lexical. Very good. (*TP-Facilitating discourse-acknowledging*) (Typing it on the correct column on Whiteboard) You can take the microphone. I am releasing it. (waits for 10 seconds)

Moderator: Thank you, K. Yes, un- is bound derivational. (*TP-Facilitating discourse-acknowledging*). What about able? Which category does it belong to? (*TP-Facilitating discourse-prompting*) (waits for 20 seconds- releasing the microphone) Yes, able is derivational, because it changes the category and meaning. Able can be both free or bound. If we say, I am able to do that, it is free. It

C: wait, shouldn't it be table? (*CP-Exploration*)

J: no -able means can (*CP-Integration*)
(*SP-Group Cohesion- feeling comfortable disagreeing*)

K: i think it is just a connector, not really a morpheme (*CP-Integration*)

C: what about that extra t? (*CP-Exploration*)

K: connector*

T: ☺ (*SP-Personal/Affective –Emoticon*)

C: ok, thanks (*SP- Open communication*)

K: You just add a t because of the word type (*CP-Integration*)

J: can able be functional too or no? (*CP-Exploration*)

J: oo ok thank you (*SP-Open*)

can stand alone as a free word, but in this word, unforgettable, it is attached so it is bound. Table? No, C. Forget does not have any relation with table. In terms of semantics, it gives the meaning of ability.

We can sometimes double some letters.

Morphemes need to be in meaningful relationship with the words they are

attached. (typing on the Whiteboard) (*TP-Direct instruction-clarifying, presenting*)

Ok, we finished the question. Now, I will put you into your groups. You will have 15 minutes. I emailed the questions to you.

Please check your emails and have them with you. (*TP- Design & Organization*)

Ok. Any questions? (*TP- Facilitating discourse*)

C: It looks like J had a question that is not addressed yet. (*SP-Group Cohesion-vocatives*)

Moderator: Able is lexical... (Clarifies able and gives examples). (*TP-Direct instruction- clarifying, presenting*)

<i>Communication-appreciating)</i>	You are welcome! (<i>SP-Open Communication)</i>
J: lexical? (<i>CP- Exploration)</i>	(Moderator defines functional and lexical words and gives examples)
J: u [sic] said able under lexical (<i>SP-Open Communication-quoting from other message)</i>	Correct, both of them are lexical.
K: no forget is under lexical (<i>SP-Group Cohesion- feeling comfortable disagreeing) (CP-Integration)</i>	
J: o ok (<i>SP-Group Cohesion-agreeing)</i>	
J: thanks (<i>SP-Open Communication- appreciating)</i>	

Note. SP stands for social presence, TP for teaching presence, and CP for cognitive presence.

SLA Theories Meeting

Section class discussions were often held asynchronously through the discussion board. In all sections, groups were given topics and questions to study and discuss as a group, create a summary to post on the class discussion board where they would interact with other groups. For first and second language acquisition theories, class discussions took place at an Elluminate Live meeting on November 20th. Groups prepared PowerPoint documents to present their assigned SLA theory. They were required to make their presentation interactive by asking questions to the class or creating an activity to

involve participants. Students received immediate feedback from classmates and the instructor as they were doing their presentation.

The meeting lasted two hours. Fourteen students were present. Two of them had to leave the meeting early. One student showed very limited presence. She did not use chat or audio tools. She only used applause and happy face emoticon once. Also, another student was away for half an hour due to technical problems. There were a total of 229 written text-messages, 24 of which were typed by the instructor. This number excludes the private messages (not in the recording), typing answers on the Whiteboard, and the use of interactive buttons, such as applause (5 times by individuals and a few people and 3 times by the whole class), hand raise (1 time), and polling for true and false review questions. There was a total of 119 microphone turns, 68 of which were by the instructor. Because the students had moderator roles to do presentations, the use of microphone by the students was high in this meeting. Considering 13 students, the average number of turns per student was 20. This was 16 for written chat and 4 for the audio. The student with the highest number of interactions had 44 turns.

Teaching presence. The design and organization category of this session was manifested through setting the curriculum and methods for the SLA meeting which began before the semester started and continued with delivering the detailed guidelines and instructions with time parameters to the students two weeks prior to the meeting. To cover several SLA theories, I had decided to use Elluminate Live instead of Blackboard discussion board to give student groups an opportunity to do live presentations which had voice, immediate interaction with other students and the instructor, and questions with immediate feedback. Having moderator roles and doing live presentations would be a

new experience for them. They had seen me as a model in previous meetings, therefore it was a good time for them to take a more active role. In the beginning of the session, I reminded the students of our netiquette rules, which incorporated how much time they had, and when and how they could comment or ask questions. I also warned them against sending any personal chat messages since they would be open to the student moderators. Before the session, I was feeling a little nervous that I would have an Internet connection problem, but this concern went away once we started the session. I signed in one hour and ten minutes in advance to upload groups' PowerPoint documents. In case we would have time after all groups finished their part, I had created a quiz for a review of SLA theories. However, we did not have extra time, nor was it necessary since groups included comprehension check and application type questions in their presentations.

The direct teaching category for this meeting was accomplished mostly by students. This meeting was therefore different from the previous meetings as it was student-centered. Groups had 2 weeks to get ready to present their given theories. They were asked to discuss application of the theories to classroom teaching, especially ESOL teaching. They also needed to make their presentations interactive through questioning or any other activities they could plan. Presenters asked the class comprehension questions including the types of short answer, true/false statement, fill-in the blanks, and multiple-choice (see a sample in Figure 12).

Facilitating discourse was the main role that I had in this meeting. I provided positive feedback to all groups, which I thought was necessary for students to feel confident, relaxed, and motivated during the session. I also asked if anybody was nervous and assured that they should feel comfortable. As the presentations were going on, I

asked questions to promote discussion. My questions were generally on helping them compare the theories, relating the theories to SLA approaches and models, and understanding the historical development in SLA methodology. Student presenters also undertook facilitator roles by prompting discussion, encouraging their classmates to answer questions and acknowledging the contributions.

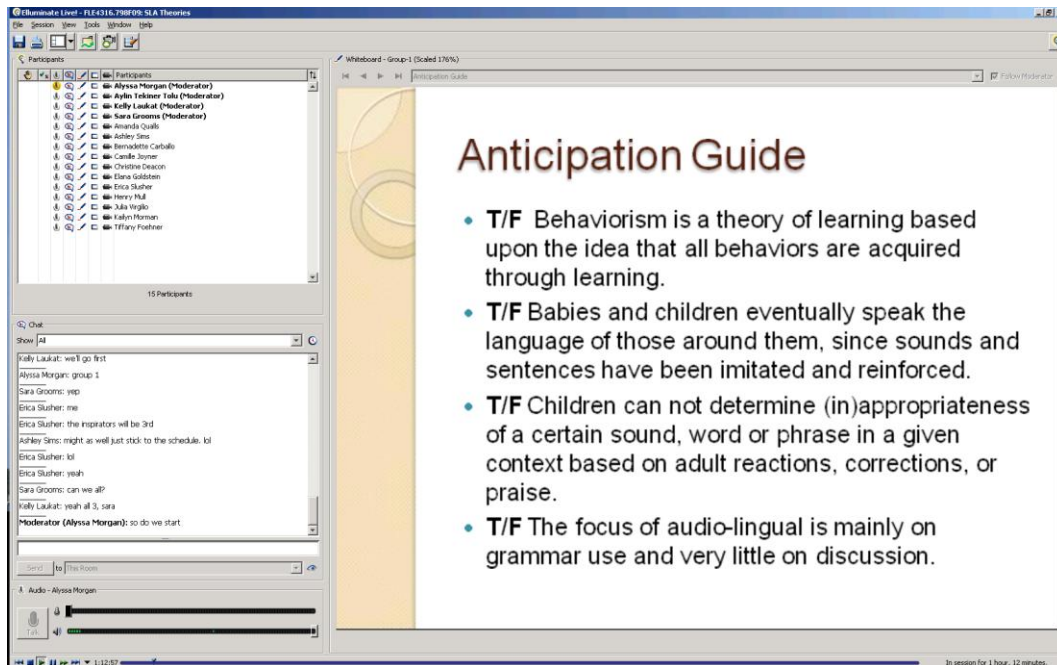


Figure 12. Screenshot of one of the groups posing anticipation and review questions.

Direct teaching was manifested through demonstrating how to manipulate PowerPoint slides on the Whiteboard. I helped some student moderators to locate their documents on the Whiteboard drop down menu. Tom also needed help with chat tool. During the session, I contributed to the discussion of the review questions and clarified any misunderstanding. After each presentation, I summarized the key points and if I had noticed any missing information, I brought it up to the discussion. For example, after

sociocultural theory presentation, I asked about dynamic assessment. Students had not read about it and it was good to give real practice examples of application of the theory to assessment procedures. When we finished all groups, Tom asked me which theories were prevalent in Turkish education system. I shared quite a bit of information with the class about Turkish education system and how I learned English. There was also another instance of sharing personal experience when we discussed Selinker’s Interlanguage Theory. One of the students who moved to the U.S. from Puerto Rico shared how her first language, Spanish, was affected when she became bilingual. I agreed and added my observations of changes in my first language as well.

Sample indicators of teaching presence observed during the SLA Theories meeting are provided in Table 19.

Table 19

Sample of Teaching Presence Indicators during the SLA Theories Meeting

<i>Categories</i>	<i>Sample Indicators</i>
Design & Organization	Setting curriculum (presenting the meeting agenda) “Who wants to go first? Type your group name in the chat area or on the Whiteboard in order”. Establishing time parameters: “Each group has 15 minutes. So we may finish before 2 hours.” Utilizing medium effectively by students and the instructor (using Whiteboard, chat, emoticons, audio)
Facilitating	Identifying areas of agreement/ disagreement: By student

Discourse

moderator: "Do you agree?"

By the instructor: "This is similar to what these models say, right?"

Encouraging, acknowledging, or reinforcing student

contributions: By the instructor: "Thank you! Excellent job! Well done!"

By students: "You got it [Name]", "great job ladies", "nicely done"

Setting climate for learning:

By students: "Remember folks we are all in this together! We can do this!"

By the instructor: "How is everybody? Are you ready?"; "We are not having an exam. You are not doing a presentation at a conference. This is only a class discussion. Is there anybody who is nervous or anxious?"

Drawing in participants, prompting discussion:

By the instructor: "What does popcorn reading mean?" "Ok. Instead of these two terms, control and automatic learning, what else can we use?"

By student moderators: "[Name], do you know why?"; "Anybody has a guess?"; "Can you think of any activities for this?"

Direct Instruction Groups presenting SLA theories and asking questions for

confirming understanding: “Now the activity we are doing is that to list some ideas to apply these theories in your classroom.”; “According to Vygotsky or SCT, learning happens in a learner’s ZPD.”

Instructor adding on the discussions, asking questions, and summarizing the key issues

Diagnosing misconceptions:

By the instructor: “Can we go back to the last question- T/F. I just want to be sure that everybody gets this correct.”

Injecting knowledge from diverse sources:

By the instructor and students: Sharing personal experience: “I wanted to add that I had similar instance going through my language in Porto Rico...”

Responding to technical concerns:

By the instructor to show how to use chat and Whiteboard: “I am just clicking below those arrows. Do you see the laser pointer?”; “Has everybody tested their microphone?”

By student moderators: “Right above the microphone there is a thin line to type in” “If you think it is true use happy face. If false use confused face. Can everybody click on them to see if you know where these buttons are.”

Social presence. Analysis of the SLA Theories meeting transcript revealed that both the instructor and the students manifested social presence through all of its three categories. Although infrequent, *personal/affective responses* were observed in examples of expressing emotions, a sense of belonging, using humorous remarks, and self-disclosure. Students mostly reflected their emotions using emoticons and emotive expressions, such as “yaya ☺”, “=)”, “what was the question again? :/”, “yes ☺”, and “nope i think we r [sic] good :)” In the following chat excerpt, we can observe humorous remarks when students were having a problem with locating the arrows to manipulate presentation slides. Please note that unless they are among three selected participants, only initials of the students are used to protect identity.

E: where is the arrow? i must be blind

T: me too lol

E: oh...you got it lol

In the first half hour of the recording before the actual presentations began, most of the discussions were manifestations of social presence. For example, the following excerpt shows how the class was enjoying VoIP and chat tools for social conversation before the presentations started. To differentiate typed and audio messages, “speaking” is used in parenthesis for audio messages.

Instructor (speaking): Hi Tom! Yes, we can hear you. How are you?

Tom (speaking): I have a really bad cold, but I am here and ready to go.

Instructor (speaking): Oh! That is too bad. Everybody is sick nowadays. I was in bed for a week. I hope you feel better soon.

Tom (speaking): Thank you very much. Not only I am sick but I am a mess so I am glad my camera does not work.

S: yep!

K: ew i was sick fri/sat

Instructor: Hope you are feeling much better now, K!

Upon discussing a few questions on PowerPoint documents and helping Tom with the chat tool, the dialogue above continued as the following, which provided more samples of emotions and self-disclosure and sense of belonging:

Tom: I'm glad you ladies can't get close to me in this forum as I have a fever and i [sic] am sweating... It's just terrible!

B: Sorry You're not feeling well Tom

T: hope u [sic] feel better

K: Ah, Tom. I felt that way all day yesterday. I didnt [sic] get out of bed until almost 4 pm yesterday

Tom: Thank you ladies... I really feel as if i'm [sic] part of a caring community!!!

Hee! Hee!

After greeting the students, I asked them how they were feeling and how the semester was going. The following dialogue also displayed emotions and self-disclosure.

B: I actually submitted 2 assessments today. I have another due Monday so feeling less overwhelmed now! Huh!!!

Instructor: good for you 😊

T: lucky

Another instance of displaying self-disclosure and emotions was observed as one of the students expressed her feelings when she was commenting on a group's presentation using the microphone: "I'd like to say that I really enjoyed your presentation and liked your PPT. It's very cute and now I am feeling a little bit insecure about my PPT." Upon starting her own presentation, she also noted: "To be honest, at the beginning I had a lot of problem understanding this theory."

The transcript also contained instances of repetitive punctuation, especially such as, "!!!", ungrammatical or informal language style, such as "yep, yup, Hee!, lol, we r,ew [sic]", which are common in text-based instant messaging.

Indicators of the *open communication* category are present in the data too. For example, in the sample excerpts discussed above, we witness that students were using the tool for social communication, feeling comfortable to ask questions, to comment, and to express agreement. These messages indicate that there was a comfortable learning climate enabling risk-free expression.

Group cohesion, patterns which are critical to build and sustain a sense of group commitment, were found in the transcript. To begin with, students were working as a group to do presentations. This activity involved collaborative group learning. In addition, there was frequent interaction among groups and individuals since presenters asked questions to the class and students seemed to feel comfortable to ask questions or comment on presentations. There were also instances of a student providing help to another student who asked a question related to Elluminate tools. Furthermore, phatics were common when there were salutations in the beginning and closures and

Thanksgiving greetings at the end of the meeting. One group shared a greeting slide with the class when they finished their presentation (See Figure 13).

I greeted individual students by name when they entered the classroom. Five of the students participated in greetings in the beginning. Because students did not sign in at the same time and some would sign in and leave their computer until the meeting time, not all of them might have had a chance to salute the classroom. However, the majority (8 out of 12) said goodbye or other closure expressions at the end of the meeting. Another indicator of group cohesion was the use of vocatives and inclusive pronouns. As an instructor, I paid attention to address students with their names and groups with their presentation. group name. Students also addressed each other by their first name (14 times). For example: “Sorry, you’re not feeling well Tom”, “You got it [Name]”, “[Name], do you know why?”, “[Name], you are on”, “[Name], your’re [*sic*] the bomb!! Good job.” There were also inclusive pronoun use such as use of *our* (8 times) in these samples: “That is the end of our presentation”, “Our SLA theory is Behaviorist theory and Audiolingual Method”, “do we need to tell you who our moderators?”, “Can I send you our updated PPT?”, “Our group did SCT”, and “Aylin, did [Name] get to send you our PowerPoint?”. Inclusive pronoun, *we* was much higher in use (41 times): “nope i think we r good :)”, “Now the activity we are doing is that”, “Ok, we have Piaget’s cognitive theory”, and “we’ll go first.” One particular comment by Tom indicates a sense of group cohesion: “Remember folks we are all in this together! We can do this!”

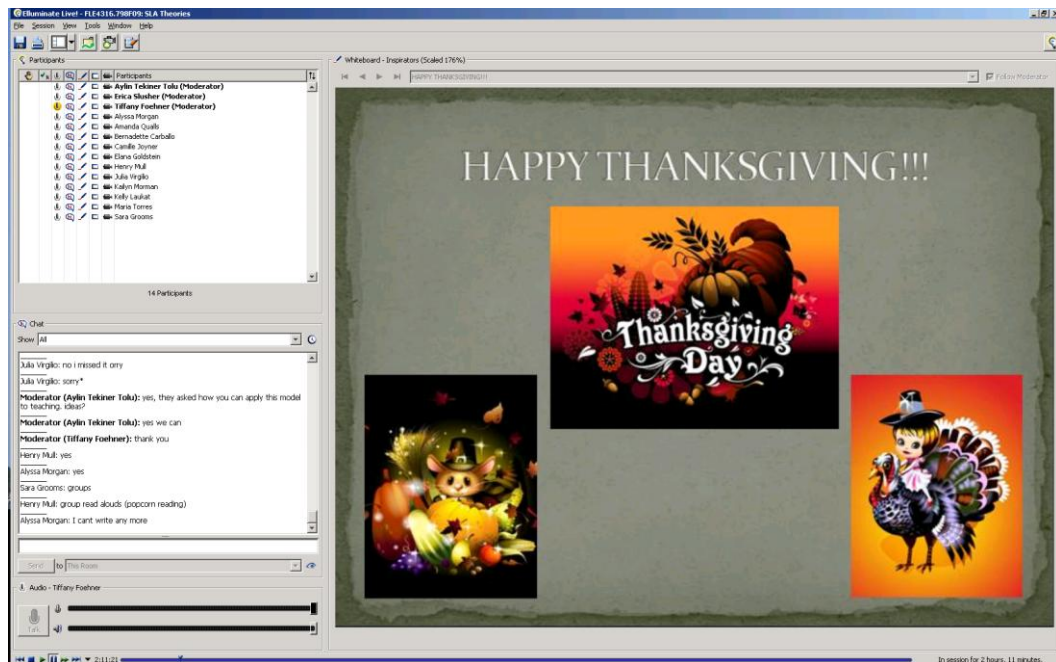


Figure 13. Screenshot of one of the groups sending greetings at the end of their presentation.

Cognitive presence. Student to student interaction was very high during the SLA Theories meeting. Students had the role of moderators and were in charge of their presentation, review and comprehension questions. I only contributed when needed to comment, compliment, clarify, exemplify, do additions, check comprehension and compare the theories. Therefore, student-lead presentations exhibited teaching presence and cognitive presence simultaneously. Social presence that was highly exhibited in the first half an hour of the session supported both teaching and cognitive presence through creating a welcoming, caring, and trustful learning atmosphere.

Cognitive presence began to be exhibited by the onset of first group presentation on behaviorism and Audiolingual approach to second language learning and teaching. The group started with a pretest asking the class true and false questions. The presenters did not comment on the responses and did not immediately provide the answers. They

posed the same questions at the end of their presentation. This time they elaborated on the answers and called on students to explain why they believed the answer was true or false. Taking into account that initial stages of practical inquiry probably took place during group discussions while preparing for this live presentation, triggering event and exploration phases were not common during the meeting. While the groups were presenting their assigned theories, the integration phase was revealed. Triggering event was initiated each time a group posed a comprehension or anticipatory question. There were also additional questions triggered by some terms used in responses (such as TPR for Total Physical Response method and popcorn reading). However, most of the questions were asked by presenters and those did not lead to exploration, but proceeded to integration and resolution phases as they were answered immediately by individual students. Only a few of the questions promoted exploration phase. As the discussions moved toward how to apply the theories to classroom teaching and ESOL strategies, the resolution phase was observed. Resolution was also evident when some students shared their personal experiences of language development and theory driven classroom applications and observations. A sample excerpt displaying these indicators is given below:

J (speaking): Can anyone think of more a teacher can do inside the classroom? Or does anybody have an example of how this looks like inside a classroom?

K: incorporate culture

C (speaking): Well, Julia, since nobody is chiming in, I was just looking at your third one: providing a comfortable environment. While small group activities, students do not feel overwhelmed to participate with whole class, so they kind of

get into their own comfort zone, and this promotes conversation. They don't feel anxious. They can relax a little bit, or learning comes more naturally.

B (speaking): I was thinking as C [Name]. Small group activities, team building, activities that help students feel a part of a group.

T: maybe using maps and activities that accentuate culture... these would be neat if left up over a long period of time

J (speaking): Thanks guys. Another thing C [Name] and I were reading about was: art, music, talk and humor can help students overcome barriers... [The following messages appear at the same time.] Ok, moving on. Thank you.

S: also giving verbal praise & encouragement can be beneficial to help the students build confidence

Aylin: use of skits, drama, role-plays. Do not correct all the errors all the time.

Aylin: Good points: art and music!

LEP Analysis Presentation Meeting

The final meeting was held on December 8th for the live presentations of students' LEP Analysis projects. One of the groups had conflict with the meeting time and thus, they presented their project on December 4th. Their presentation was recorded for the rest of the class to watch. In addition, this group was assigned to watch the other groups' presentations and write comments on them. On December 8th, 6 LEP Analysis projects were presented by 4 groups and 2 individuals. Although intended for 2 hours, the meeting lasted 3 hours because student participation was high and almost all presenters took longer time than they were required. There were 14 students present; one student signed in half an hour late, and 4 students had to leave before the final group's presentation. A

total of 319 written text-chat entries and 45 microphone turns took place during the meeting. My participation as the instructor included 78 turns, 21 of which were over the microphone. Eleven students used the microphone to present their case study. Two students in one group did not have a microphone, therefore they only used text-chat. The highest number of turns was made by Tom with 49 turns, including 5 times of use of the microphone. The student with the lowest participation rate had 6 turns. The average turn made by 14 students was 20.4. This was 18.7 for text-message per student and 1.7 for audio message.

Teaching presence. At this meeting, my role as the instructor was to coordinate presentations and provide feedback to the students' LEP Analysis case studies. This meeting was similar to SLA Theories meeting in that respect. The design and organization category included setting the curriculum, providing detailed guidelines and instructions which began before the semester started and continued with delivering reminders, feedback and support during the semester. In addition, it involved scheduling the meeting, creating the link, and uploading all of the 6 PowerPoint documents, which took more than one hour. That was why I did not use auto recording, but instead I manually started the recording once I finished all the uploading.

For the LEP Analysis case study project, students were free to choose to work as a group or alone. All student groups except for one worked on this project collaboratively. In that particular group, there were two members who worked individually. This project had a three-step submission process. The first one was submitting the plan of attack in which they introduced their student and wrote a plan of action for data collection and analysis. The next step was submitting the first part of the project covering introduction,

phonology, morphology, syntax, interview transcription, signed field log, and writing sample. I graded their papers and provided detailed feedback for any improvements needed. The final step was submitting the whole project and participating in a live meeting for presenting the project and commenting on other students' case studies. Students submitted their PowerPoint documents for the presentation of the projects. I decided to use Elluminate Live for student presentations since it would provide the best medium for the class to share their findings, learn from each other's' projects and provide comments in real time.

In the beginning of the meeting, I reminded the students how to do the audio wizard setup, how to talk, and how to manipulate PowerPoint documents on whiteboard. I explained the session agenda, clarified the rules and set the climate for learning: "We have 4 groups and 2 individuals. You have 10 to 15 minutes to present. We have 2 hours. In order not to bore the audience, please ask questions, make comments, raise your hand, and be comfortable to receive questions or comments." The design and organization also included putting the presenters in order. For this, I asked the student volunteers to type their names with their preferred number to go in the chat area or on Whiteboard. Although the class meeting was planned for two hours and written and verbal instructions were provided to students about how long each presentation should take, students exceeded the 15-minute presentation time. They seemed to be excited to share more about their case study. Also, the participants' attention was high. Therefore, I hesitated to warn some presenters about their time when they went over 15 minutes, but I did warn students who could not finish within half-an-hour. I would have used timer tool for Elluminate Live, however, a colleague who used it informed me that it caused stress to

some students. A more effective method for time management could be asking students to practice their presentation and estimate and adjust their time accordingly before the live meeting.

Facilitation of discourse was manifested through mainly acknowledging and reinforcing student presentations. In addition, in the beginning, I tried to create a comfortable learning atmosphere. I ensured all students were feeling comfortable with Elluminate Live tools by going through instructions once more and asking, “Are you comfortable with these? How are you feeling?” Next, before the first presenter started, I again focused on learning climate: “Ok, Tom, you are first. Just feel relaxed and be comfortable. We are just sharing what we have learned in this project.” A few times during the meeting, I needed to comment on our process in terms of time: “I think we are going slowly so I keep it short” and in the end, I said, “Different from the previous semesters, all groups went beyond 15 minutes. You were all motivated to share your projects. I enjoyed it a lot.” After each presentation, both the students and I always used positive comments such as “Great work!”, “Meticulously done”, “Thank you”, “Congratulations” as well as using happy face and applause emoticons. I tried drawing in participants to comment on the presentation: “Does anybody have any comments?” and “I am releasing the microphone to those who may want to comment to the group.” Using written chat during the presentation enabled students and me to provide comments and ask questions without disrupting the ongoing presentation. Due to the length of presentations, I kept my overall feedback shorter than usual. However, students received written feedback on their projects. The following excerpt given in Table 20 exemplifies ongoing comments and feedback dialogues as Tom was presenting the last sections of his

project and concluding his speech. This excerpt displays several examples of social presence, teaching presence and cognitive presence.

Table 20

A Sample of Comments and Feedback Dialogue during LEP Analysis Presentation

Meeting

Audio	Emoticons/Hand Raise/Applause	Written Chat
Tom: ... When I was Italy I had an embarrassing moment...	Student C clicks on “hand raise” button.	
C: Hey Tom! I just want to add on to pragmatics section. I am from Puerto Rican culture. Once I am having conversation with my dad on the phone, and my friend said, “Whom you are arguing with?”	[Tom released the microphone after sharing his experience.]	
Tom: Excellent example, C!... (continues his presentation)... had a few high school students tell me, ... They just cannot find right words to express themselves as truly as from their heart...	April uses happy face emoticon.	Aylin: right Aylin: 😊 Al: ha great story C

C uses happy face
emoticon.

J: differentiating instruction
woop woop

K: woop

Al: very true Tom

S: good point

...Get them involved in active
reading both at school and at
home, and make sure they
understand what they read. And
lastly culture inclusion is
imperative. Value their culture...

K: Ive [*sic*] heard that.

K: from adults^

Aylin: feeling pressure all
the time

K: I agree E [Name]

Em: this is exactly why
there is such an over-
representation of ESL
students in special education

Aylin: what about writing?

Professor Aylin says, "What about
writing"? Absolutely! I am a big

K: I agree Em [Name]

writer myself. I believe in reading
and writing. Most of my kids were
reluctant writers. I came up with
things to motivate them: Quick
writes...

Aylin: good point

Em: being culturally
responsive is necessary
[sic] as a teacher of all
students

El: reading and writing go
hand-in-hand Reading
makes writing better and
vice versa

Al: good idea

K: progress monitoring

Aylin: absolutely

Em: woo hoo progress
monitoring!!

Am: quick writes are great

Aylin: finished

...Next slide

Aylin: Tom, this is the last one.

Did you have more slides?

Tom: Ok. No. I was saying it on a
roll and I was just excited...My
conclusion is this: This assignment

April uses happy
face.

Aylin: ☺

was very interesting ...

K: lol

... Another eye opening reason

Aylin uses applause.

Aylin: ESOL SS are going through revisions now

was the whole issue of esol...

K: English is a hard

Through esol, preservice teacher

language, even for native

esol endorsement, we are trying to

English speakers.

help them

J: yes I agree

Am: so true!

Aylin: Does anybody have any

K: CONGRATS!

comments? (Waiting for a few

S: good job!!

seconds)

All students use applause.

April: great job Tom,

congradulations [*sic*]

Aylin: Excellent Tom! You put

Al: way to go!!

lots of experiences and emotions

K: awesome!

into your presentation. This made

J: Congrats!

it much real and enjoyable. You

S: wow!

provided many great teaching

Aylin: ☺ congrats!

suggestions. Ok. I think we are

E: congrats. good luck to

going slowly so I will keep it short

you as well

now. Next, group (X) will have

Aylin: big applause

moderator roles.

Direct instruction was basically manifested through student presentations. As the instructor, I responded to student questions and helped them with technical concerns four times. The following dialogues display this indicator:

The first example:

B (speaking): Are you putting those up or do we put them individually? (asking about uploading PowerPoint)

Aylin (speaking): I uploaded all the PowerPoint documents for each group or individual. Once you get the moderator role, you can use this drop down menu to locate yours, or I can do it for you. You will click on these next and back buttons (using laser pointer to show). Are you all comfortable with these?
How are you feeling?

S: i'm [sic] good

A: pretty good no questions here

C used happy face emoticon

The second example:

Tom (speaking): ...Next! (Sounds of his clicking on the keyboard)

Moderator (Aylin): do not use your keyboard

J: use the top arrows

Moderator (Aylin): I'll do that for you then

Direct instruction was also evident when either I or presenters provided examples for clarification or giving suggestions to improve the proposed activities. For instance, when a group was describing an activity to teach comparative and superlative suffixes by drawing columns on the board and matching nouns with correct morphemes, I suggested

using toys as manipulatives to improve the activity. On another occasion, when the group was explaining their student's improper use of he and she personal pronouns, I typed in the chat window: "not all languages differentiate gender for 3rd person singular." I also provided these terms when the presenters were referring them in their analysis report: discourse markers, negative transfer, and context clues. Moreover, there were a few times when I responded to student questions for clarification. For example, as we were listening to the presenter explaining how their ESL student was not pronouncing the final sound in -ing suffix, the following dialogue took place in the chat window:

T: so would that be a problem with inflection too?

Aylin: not a morphology problem, but it is phonology problem- dropping g sound.

Direct instruction also covers injecting knowledge from diverse sources, which was evident in student presentations and participants' comments since they shared their observations, field experience, using certain books and activities, and referencing some websites.

Social presence. Social presence indicators were frequently observed in the transcript of the LEP Analysis meeting. Compared to previous meetings, this last meeting witnessed more social presence indicators. However, it could be just because this meeting was longer than the previous meetings. To begin with, the *personal/affective category* had samples of expressing emotions, self-disclosure, and using humor. To express emotions, happy face emoticon tool were used 11 times some of which included multiple users at a time. On two of these occasions, I also used the emoticon button. Emoticon symbols were also used 14 times (6 of which were used by the instructor) in the written

chat such as, “i like skits =)”, “oh sorry ☹”, “=((”, “☺”. Other examples of emotive expressions included:

“yay madlibs”, “This class was very interesting...”, “oh wow, thats shocking”, “holy moly, really?”, “oh my”, “wow yeah”, “so cute! I love it”, “LOVE [Name of the school]!” , “ohhhh i like that idea”, “It was very very exciting”, “woop woop”, “woo hoo”, “hooray.”

As seen in some of the examples above, the text-based chat data included five instances of repetitive punctuation of “!!!”, two instances of whole word capitalization (LOVE and CONGRATS), ungrammatical or informal language style, such as “holy moly, yep, woop woop, thats, we r not the best of shape.”

Another indicator of the personal/affective category, self-disclosure, was also evident in the data. The following samples exemplify self-disclosure instances:

“When I was Italy I had an embarrassing moment...”

“I cannot tell you how difficult time I had with understanding basic sentence.”

“This assignment was very interesting”

“sorry our power point is a little wordy”

“I am sorry I am very very sick today.”

“sorry we r not n [sic]the best of shape”

“I will be an English teacher so these activities are important for me.”

“I find this example very funny with me. I am from Puerto Rican culture...”

The following dialogue also exemplifies self-disclosure in addition to expressing emotion and supporting a classmate. In addition, “no worries” exemplifies setting climate indicator of facilitating discourse category of teaching presence.

Tom (speaking): Ok! This is my first PowerPoint. Believe it or not! I paid \$60 to a technician guy to help me with PowerPoint. I am a little bit nervous but we are going to get it shot today.

K: holy moly

S: nah, don't be nervous!

Al: wow that great

Aylin: no worries

Humor was not common in this meeting either. Instances of humor were manifested through laughing (audio) two times by two students, typing “LOL” three times, “haha! great picture”, “Ha! Ha!” and adding funny cartoons on PowerPoint presentations by two groups. An example of using cartoons is given in Figure 14.

The open communication category of social presence was manifested through complimenting, acknowledging, encouraging, agreeing, asking questions, and participating in discussions. There were a total of 64 compliments (11 of which by the instructor), much more than previous meetings, 21 “thank you” (5 of which by the instructor), 15 questions posed by the students, and 12 agreements (4 of which by the instructor). The number of compliments was very high. This could be because there were more student presentations and also the meeting lasted longer than the others. Because the meeting did not include discussion of topics or questions such as those for the Midterm Review and SLA theories meetings, there was not any incidence of disagreement. High participation rate for the majority of students and asking questions to the classmates and the instructor can be taken as an indicator of students’ feeling

comfortable to communicate. Examples of the open communication indicators are displayed in Table 21.

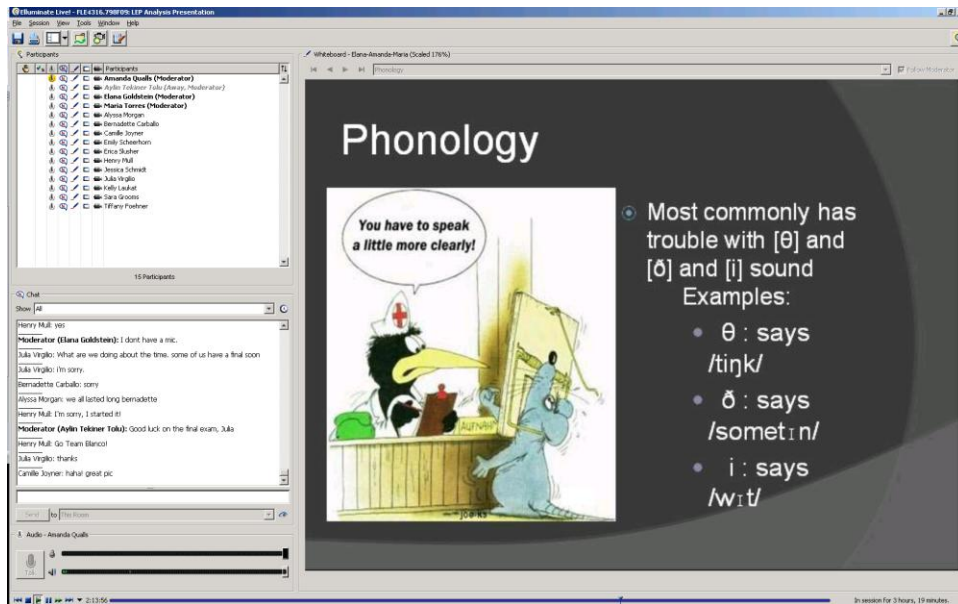


Figure 14. Screenshot of one of the group’s using humor through cartoons related to the content.

Table 21

Samples of Open Communication Indicators at LEP Analysis Presentation Meeting

Complimenting	“great job”, “good job ladies”, “very helpful”, “that is a very good point”, “Excellent suggestions”, “CONGRATS!”, “awesome!”, “Your doing a great job [Name]!”
Acknowledging	“thanks for staying everyone” “Thanks for the education Professor Aylin!”
Asking questions to the instructor	“are you putting those up or do we put them

	individually?”
	“can we go second”
	“What about in Turkey as far as student-teacher eye contact?”
Asking questions to classmates	“Did you mean BICS skills?”
	“why does he have an iep then?”
	“so would that be a problem with inflection too?”
Agreeing	“context clues are fantastic too. it is a great way to learn new vocabulary”
	“thats [<i>sic</i>] a great idea Aylin, manipulatives are always super helpful!”, “that is very true Tom. Good call!!”, “me too”, “I agree [Name]”

Group cohesion was manifested through the indicators of phatics, inclusive pronouns, vocatives, salutations, closures, and greetings. In addition, all students except for 2 worked as a group to do their projects. All members except for one group participated in oral presentation as well. Furthermore, group identity was emphasized three times by Tom when he encouraged and acknowledged his group members by saying “Go Team [Name]!!!” Phatics were mostly used by me. For example, in the beginning of the meeting, I asked students how they were feeling, I wished quick recovery to two students who said they were sick, told a student who had technical problems, “it is nice to have you here without any problems” and at the end of the meeting, I wished them good luck on their final exams and the rest of their academic

carrier, and congratulated those who would be graduating soon. Phatics samples used by students include, “I’m good”, “nah, don’t be nervous”, “I wish all of you much luck”, “good luck to you as well.” Among inclusive pronouns, “we” was used the most commonly: 48 times, (11 of which was used by me). Vocatives were also used frequently by both the instructor and students in such instances: “Hey Tom. I just wanted to...”, “very true [Name]”, “exactly [Name]. it is a hard reality ☹”, “i agree completely”, “great job [Name]”, “that is very true Tom. Good call!!” and “Good luck on the final exam, [Name].” There were 8 salutation instances and 18 closure phrases. Because the recording started after I finished uploading the documents and when most of the students were already online, it missed initial salutations among students. Nine out of 10 participants either said “bye”, “you too”, or “thanks” kind of messages before leaving. Only April left without any closure phrase. Furthermore, use of greetings was generally not very common. Because it was the end of the semester and winter break was about to begin, at the end of the meeting, I said: “Merry Christmas and Happy Holidays!” Student responses included: “you too”, “same to you”, “u too”, “u 2”, “Yes, everyone have a good winter break” and also Tom wrote: “Peace to all!”

Cognitive presence. This case study project was the major assignment in this course. Students had to collect data from an English language learner to analyze the student’s English language skills, evaluate the current classroom teaching methods and provide recommendations to improve student’s language skills. The project included conducting an interview with the student, carrying out miscue reading, collecting writing samples, observing the classroom and interviewing the teacher. In analyses of data collected, students practiced linguistic analysis (including phonology, morphology,

syntax, semantics, discourse, pragmatics, non-verbal communication as well as literacy). In critique of current teaching methods and techniques, they were required to apply various teaching methodologies studied in this course over the semester. Finally, at this last live meeting, students shared their case study with the class. All of the students received passing grades (above 70%) on their projects. Actually, a few groups received full points. In terms of a discussion participation grade, except for two students, they all got full points as well.

Throughout the meeting, groups and the instructor interacted with each other, compared and contrasted the cases, and commented on each project. Therefore, due to the objective of the meeting, there was not a linear progression among four stages of practical inquiry. The meeting aimed to observe the final phase, *resolution*, manifested through presenting the case study results. The first three phases of practical inquiry probably took place among group members over the semester when they were collaborating on the project as well as when they received feedback from me. However, during the meeting, there were still instances of triggering event, exploration and integration phases when there were impromptu questions asked mostly by students and once by me. For instance, one of the groups reported that the classroom teacher they observed did not use any ESOL strategies. Several students commented on this observation via text-based chat, which created a new discussion topic on ESOL teacher education and led to exploration and integration among the participants:

J (the presenter) is speaking: ..."Unfortunately the teacher is not doing much to help him." [After this sentence, the written chat comments focused on ESOL teacher education.]

El: its [sic] sad to see that a lot of teachers are not addressing some ELL issues

Em: i [sic] agree completely [Name]

C: [Name] i [sic] know, it is mostly lack of time

Aylin: but still many things can be done

Tom: They don't have the experience, at least the older ones who have no
experience with ESOL

Em: exactly C [Name]. it [sic] is a hard reality ☹

Aylin: lack of experience and training

K: =(

Em: this is very true as well Aylin. Hence why ESOL is so important in
preservice teacher training

K: i [sic] like skits => [The presenter is now describing teaching suggestions]

Tom: I think politics and an ethnocentric attitude is at fault!

T: me too

A: it is sad that a lot of teachers do not have the experience to teach esol students
but at least John especially is self-determined to ask and say what he needs

Em: yea Tom, that is what made this pretty easy for us. John is very self-
determined

Tom: You almost have to be until we get some uniformity in regards to teacher
training and the implementation of universal ESOL standards.

Tom: funding, funding, and more funding!

Tom: Until it becomes a priority, teachers will have to be more creative and
informed to help these ELL students!

The excerpt above exemplifies integration category through connecting ideas, synthesis and agreement. The dialogue also involves social presence's group cohesion category as manifested in examples of using vocatives and collaborating with others, and open communication in examples of feeling comfortable with interacting with others, participating in class discussion, referring to previous messages, and expressing agreement.

Another impromptu discussion occurred when one student asked a clarification question (triggering event) to the presenter and other 3 students also participated in this dialogue by agreeing, disagreeing, and brainstorming:

A1: did you say that he has a disability i [sic] missed it

B (speaking): No, he is not. It is not determined yet if it is speech issue or dental problem...

J: ya i [sic] think so [Name]

A1: oh okay thanks

J: why does he have an iep then?

A1: yeah thats [sic] what I was thinking

C: probably because of speech

J: then that would mean he had a speech disability.

A1: right

Em: yeah i [sic] was just thinking the same thing

A1: speech impairment

Other examples of triggering, exploration , and integration indicators are shown in Table 22.

Table 22

Cognitive Presence Categories and Sample Indicators at the LEP Analysis Meeting

Categories	Indicator Samples
Triggering	<p>“How do you use MadLibs? Is it a book?” (by the instructor)</p> <p>“did you say that he has a disability i [sic] missed it”</p>
Exploration	<p>“so would that be a problem with inflection too?”</p> <p>“why does he have an iep then?”</p> <p>“Perhaps we could develop a "meatball" song for pronouns?”</p>
Integration	<p>“conversational repair and quantity maxim violation are common problems in each case” (by the instructor)</p> <p>“being culturally responsive is necessary [sic] as a teacher of all students”</p> <p>“self-correction indicates awareness of his mistakes which to me indicates progress”</p> <p>“free writing [sic] is a great way to get students willing to write by not limiting them you are truly assisting them in their writing abilities”</p> <p>“It seems that the th sound is very common for most esol students”</p>
Resolution	<p>(All seven project presentations indicate resolution stage.)</p>

Summary of Elluminate Live Meetings

In this section, I have explained how each of the five Elluminate Live class meetings were planned and conducted over the semester. Using the CoI framework, I

described how social, cognitive and teaching presence categories were manifested in these synchronous learning environments. The analyses showed that each of the meetings displayed rich indicators of all presences with some differences among them. One of the reasons that could affect how a meeting differed from the other was the objectives and design of the meetings. A teacher directed and introduction meeting such as the Course Orientation created more teaching presence than the social and cognitive. In addition, interaction between student(s) and me was much higher than the interaction between students. I was the only moderator and used the microphone for most of the session to present course design, objectives, and assignments. However, at the other meetings when students become moderators to do their presentations (SLA Theories and LEP Analysis meetings) and take part in group activity and discussion of questions (Midterm Review meeting), both students' use of the microphone and interaction between students increased significantly. Further, cognitive presence was at peak when students had an active role to present and to discuss questions as in the case of Midterm Review and SLA Theories meeting. Results indicated that Elluminate Live provides an effective medium to create an active, student –centered collaborative synchronous learning environment which promotes the community of inquiry.

Next, I will focus on how students perceived application of Gmail Chat and Elluminate Live tools in terms of CoI and satisfaction. To provide in-depth analysis of students' lived experiences, feelings and perspectives, I will analyze the data from the selected three participants: Tom, Kristina, and April.

Tom

Tom's Profile

At 43, Tom was the oldest and the only male student in the class. He is married with a six-year-old daughter. He described himself as white Anglo. His native language is English and he also knows a little Italian. This was Tom's last course and last semester of his Secondary English Education degree that he had worked for 9 years to earn. The reason why it took so long to finish his degree was health issues. Due to an accident he had on the field while playing professional football, he went through several operations, complications and disability. Last year when he was expecting to be graduating in a week, he was told that he had to take 2 ESOL courses to finish. When he started his program 9 years ago, there was not an ESOL endorsement requirement, and when the state requirements changed, his advisor never informed him. I wanted to know if this made him have any negative attitudes toward our course, but on the contrary, I saw a very passionate preservice ESOL teacher who was determined to do whatever it took to improve himself. He was just feeling stressed because unlike other students in the class, he had not taken any ESOL infused courses. He wrote, "I feel as if I am playing catch-up to a class full of students who are light years ahead of me in their preparation for such a tough class! I'm trying very hard, but I feel a little overwhelmed." Another issue that concerned him was his poor technological skills as he described it in the survey-1. He hired a technician to set up his computer for our course. Basically, he needed to upgrade to Windows 2007 to be able to use PowerPoint, Blackboard and Elluminate Live, and he also got his new webcam installed. Unfortunately, no matter how correctly he followed my instructions, he could not make the webcam work at any of our live meetings.

Towards the end of the semester, he hired this technician again to get help on creating a simple PowerPoint document to present his project live. I told him that I could have helped him if he asked, but he was so nice to say that he knew how busy I was, and he just did not want to take my time. Additionally, he had not used either Elluminate Live or any IM tools before our course. Yet, this did not prevent him from being an active participant at our whole class Elluminate Live meetings. Actually, he was the most participatory student in all meetings. He supported his classmates with encouragements and greetings, and always provided insightful comments and had interesting questions to discuss with the class. However, he was not an active user of Gmail Chat. Only at our second interview did I learn the reason for that. When he had the technician work on his computer, the person forwarded his official school email account to his Outlook, so that he never needed to sign into Gmail and also he did not need to use chat.

I was able to feel the unique personality of Tom over the semester. I felt his social presence more strongly than I had of other students. I spent the most one-on-one time with him during our two interviews and two-hour Gmail Chat session in the beginning of the semester because he always had more to say and ask when we ended the interviews. Additionally, his self-disclosure was more evident in his discussions and assignments. He had a peculiar and amazing life story as a professional athlete on which an article was published in a recent magazine and TV shows and a movie are lined up on this story as he excitedly spoke about it. At our last Elluminate meeting, he talked about these exciting happenings: “it has been a whirlwind happening for me. It opened so many doors to me.” He shared this article with us on our e-Café forum in his personal introduction. I feel that I can describe him as friendly, knowledgeable, respectful, understanding (whenever we

had technical problems or time schedule conflicts), helpful (always offered help if there was a need), and interested in foreign cultures as he lived in Italy for some time and at the end of our interviews, we always had long conversations on different topics including education, politics, travel, and culture. He asked questions about my educational and teaching background, and the education system in Turkey. As a passionate teacher, he is also an advocate of ESOL; this was clearly observable in his class discussion postings, assignments, and in his comments at live meetings. For example, in survey-1 he reported that he gave a Spanish name to his group “in honor of our ESOL students.” In addition, at the LEP Analysis presentations, one group was presenting their observations of a classroom teacher who was not using teaching strategies for ESOL students in the classroom. This created a lively discussion in the class and below are examples of Tom’s messages in this chat dialogue:

“They don't have the experience, at least the older ones who have no experience with ESOL.”

“I think politics and an ethnocentric attitude is at fault!”

“You almost have to be (self-determined) until we get some uniformity in regards to teacher training and the implementation of universal ESOL standards.”

“funding, funding, and more funding!”

“Until it becomes a priority, teachers will have to be more creative and informed to help these ELL students!”

The reason for Tom to take this course online was to work at his own pace (indicated in survey-1). Before this class, he had taken only one online class, which was his previous ESOL course. In the beginning of the semester, he had a positive attitude

towards the course content and the use of synchronous communication tools. He noted about the course content, “I think the content is very interesting, necessary, and crucial to impacting our ESOL students in their second language acquisition.” His perceptions of the use of synchronous communication in our class were positive. His responses to survey-1 questions related to his initial thoughts about the advantages and disadvantages of Elluminate Live and Gmail Chat were as follows:

I am new to this application, but I can see the usefulness of such technology. As I use this new technology I should become more aware of its usefulness ...

Convenience and accessibility. Also, you get to hear and see other ideas, materials etc. in your home. In groups members could virtually talk to a team member who shares similar hours (early morning, late night)...(when asked about his concerns)

For me it is the technology aspects of such a program. Younger students are more familiar with recent technology whereas some of us are constantly learning new and exciting ways in which to effectively communicate.

Tom valued cooperative learning. He views learning as a socially constructed activity. He was an active member of our learning community. A few times he enunciated his age and being the only male in the class brings some advantages to this community as well as affecting his sense of presence:

Obviously having differences in perspective and being the oldest member, I bring another perspective. So being the oldest and only male and I think I have more classroom experience than some of them as well, I think I have a unique perspective to add to discussions. I tried to show some of that in practical terms. I would not consider myself an academic, but I would consider myself someone

who is extremely capable of communicating with children in our classroom and I do it well. Children seem to respond to the way I choose to address them. I feel I am able to, in discussions, to pass on some very practical things like, all of the things you do in your internship, remember to get comfortable shoes! (Interview-1)

To conclude, I believe Tom brought valuable perspectives to this study as well by helping us understand the use of synchronous communication tools and building an online community of inquiry in this ESOL course through his own words and voice. What follows next is the analysis of Tom's perspectives based on his written reflections on the use of Elluminate Live and Gmail Chat, first and second interviews, and survey-2.

Tom's Perspectives of Gmail Chat, CoI, and Satisfaction

Tom was not a frequent user of Gmail Chat because his emails were being forwarded to his private email account and he did not need to sign in Gmail page to use the chat tool. Over the semester, there were a total of 22 emails sent by Tom to me. They were not only about the course content, assignments, seeking clarification, and so on, but there were also a few social messages such as, "happy thanks giving" and "get well soon." As he reported in his fourth reflection, he used Gmail Chat 4 times over the semester, three of which were with his group members about class discussions, and one of which was with me. Our only chat session was initiated by him on September 18th and lasted two hours including Elluminate Live use after Gmail Chat. He was not comfortable with Elluminate Live and Gmail chat and wanted to test these tools with my guidance. At first he was stressed, but at the end of our meeting, seeing how easy things were and

being successful, he felt better. Below is the only text chat message he sent to initiate our chat:

Good Day Professor Aylin, Tom is here. I would like to have/or set a video conference through Elluminate Live. Is this possible? I am a little scared, but I believe I can do it now that My IT guy installed Mozilla Firefox and gave me a hyperlink to access Blackboard, a shortcut if you will. Are you available?

After my response, we opened audio and video chat, but his camera for some reason did not work. We spent some time on Gmail chat talking about how to add contacts and use video or audio options. Then, as I was giving instructions to sign in Elluminate Live on Gmail Chat, we had the rest of our talk through Elluminate Live. He just needed to feel comfortable with the tool before using it for the first time for class meeting. Once we finished technical issues, we talked about the course content, assignments, and finally we had some social conversation about our educational backgrounds and the interesting article on his life story that he shared with the class.

Tom's reflections on Gmail Chat were always positive but not comprehensive due to his limited use of it. Based on his experience, he felt that Gmail Chat is an effective tool to enhance social presence in the community: "it is an effective way to feel as if you are a part of the group. It gives you a social presence and the instructor's social presence as well" (Reflection-2). He also explained why he did not use it that often and how he felt about it:

G-mail Chat was O.K. For me personally, I did not use it that much because it was a case of learning too many firsts for me. Elluminate Live was a first for me.

A lot of the technology was new for me and this is why some of the technology was used more than others. It came down to time management and course load that prevented me from engaging the technology more than I did. The instructor gave great support and facilitation of the technology and often espoused its virtues. The couple of times that I did engage the technology things went fine and there was a social presence feeling when communicating with the professor or fellow students. I was satisfied with G-mail Chat although I did not use it very often.

Because Tom and I did not use Gmail Chat for direct instruction purposes, Tom did not perceive it as effective for his learning: “I don’t think it helps me to learn better, but I suppose it could be utilized in a different manner to do so” (Reflection-2). However, he could see this tool as an effective way of communication for preservice teachers to apply in their own teaching:

It is an excellent way in which pre-service teachers may get to experience this particular software as a student and reflect on its effectiveness in your own classroom with your own students someday. This is the technology of the future. Most people are a little scared of those types of changes, such as technology, because we are fearful of making mistakes or errors. Once you can conquer the learning curve of such technology, I believe it will be a popular and much used application. (Reflection-1)

He also had a suggestion for office hours. He said that although I was available to the students via Gmail Chat, some students would not try to use Gmail Chat even once, or

would not feel comfortable to contact me, but instead if I made it mandatory that every student should meet me at least 2 or 3 times in a semester, they would be forced to learn the tool and feel motivated to interact with me, which would also allow for more one-to-one personal interactions (Interview-1).

Tom's Perspectives of Elluminate Live, CoI, and Satisfaction

Tom's overall perspective of Elluminate Live was quite positive. Calling it an "awesome learning tool" (Interview-2), he was satisfied with all of the meetings. He stated, "In fact towards the end they were actually fun" (Survey-2). Although having limited technology skills and hardware and software issues, he never complained about mandatory live meetings. On the contrary, he stated that the best part of our course was Elluminate Live meetings: "The Elluminate Live aspect of the class was the most beneficial for me in terms of learning, because I was looking for instant feedback and new ideas and this venue provided just that" (Survey-2). My observation of Tom during the meetings supported his reflections as he was always eager to participate and do all necessary technology updates his old computer needed even though it cost him some money. In his own words, initially he was "concerned with connecting with the Elluminate session" but he "quickly settled down and became engaged with the lesson" (Reflection-1). His concerns receded with experience over the semester and actually he began to enjoy it, developed ideas of how it could be utilized in other settings and provided me with some suggestions. For instance, at our Interview-1, he expressed:

I don't have any concerns. I am a big fan of Elluminate technology. I only wish I had discovered it a couple of years ago. I can see the ability to utilize this in the classroom in many different kinds of settings. For kids who are sick and could not

come to school one day they can still participate in important part of the lecture. I see many good usages of Elluminate type technology and I am glad that I got to use it now. Perhaps it is something that one day would be implemented in public schools.

We can conclude that Tom's experience with technology during the semester increased his technical aptitude and motivation. In his first and last reflection papers as well as at the interview-1, he not only commented on academic advantages of attending a live meeting, but also on personal advantages and the flexibility of online learning compared to attending a class session on campus:

The obvious advantage is that my daughter knows that I am in the den working on the computer with my class. So, this is an advantage that I would not be afforded if I had to physically go to USF for class meetings. Wardrobe is not a concern because you don't have to dress up as if you were leaving the house. Lastly, you don't have the gas expense of the round-trip to campus (Reflection-1)... being at home and making my presentation without trying to find parking at USF! (Reflection-4)... I like the ability that it gives me the flexibility to put my daughter down and fulfill my duties as a father and as a husband, and then at my convenience, I can sit down and go over the materials at 11pm at night when my wife and daughter are safely in bed, and the house is locked up. The convenience of being able to access the info at any time is a great help to especially nontraditional students. I enjoy that aspect of flexibility, the ability to do things at your pace and at the time period that you feel you are the best learner. (Interview-1)

Tom expressed that synchronous class meetings “did contribute to our online community of learning”. He made it clear that he felt a sense of community of inquiry in our course: “We all feel as if we are a part of a learning community. We are, painfully sometimes, aware that this is an active community that can immediately hear (see) one’s post” (Reflection-3). He perceived Elluminate Live as a facilitator of our community of inquiry: “Elluminate played a role in that it was the end product of the mini-meetings or personal chats between instructor and student. So, in essence, Elluminate was the facilitator of the information.” He stated that these live sessions enhanced the social presence: “definitely had a role in helping get to know your instructor and classmates” (Interview-2), “When engaged in the Elluminate session you have an awareness of your fellow classmates as well as the instructor. You are constantly aware of their social presence” (Reflection-3). He elaborated on the role of synchronous meetings in creating a community of inquiry in his survey-2:

Elluminate Live forced everyone to be there at the same time and you could see who was present and who was not logged in. You were part of an online community who had issues and questions on material just like you did, but were on the same team!

Social Presence

Tom wrote in his reflection papers and also expressed during the interviews that he could feel the social presence of his classmates and the instructor:

I perceived the classmates and the presence of the professor just as one does when sitting in the classroom. I know it is not as personal and intimate as being in class

as a group, but the process was the same and it does have a face-to-face real life feel to it... You are all in it together and everyone has questions just like you do. At times you may make a mental question and then someone will ask a question that helps clarify the concept (Reflection-1)... Everyone has a social presence and the perceived sense of togetherness is real. It's the "*group mentality*" that we are all in this thing together and we are members of a unique learning environment... When engaged in the Elluminate session you have an awareness of your fellow classmates as well as the instructor. You are constantly aware of their social presence. (Reflection-3)

When probed about the developmental progress of social presence he sensed over the semester for his classmates and the instructor, Tom answered that there was a positive change since the beginning of the semester and Elluminate contributed to his perspectives greatly. At the second interview, about his sense of social presence of the instructor he stated:

Before the course, I did not know you. My opinion of the instructor has changed in that it is a more positive opinion because throughout my education I have had good professors and not so good professors. You never know what type of professor you are going to get. Everybody is different, different personalities. So I was worried with a class that has such challenging. I was worried what kind of professor I would have, and again good Lord was looking out for me, and gave me a professor that has personality you had. Because if the personality would have been different, I don't know if I could have survived.

He also commented on the development of a relationship with some of his classmates, specifically group members. He stated that he was able form distinct individual impressions of some group members through Gmail Chat and Elluminate interactions:

It was great being a part of team. Members of my team, at least in the conversations we had, they all treated me well. My feelings for my fellow teammates have changed as well. I did not know them previously and I got to know them professionally through the class material, but also a little bit as individuals. Several of them send me private emails congratulating me on Sports Illustrated and they wish me well. They knew it was exciting and I appreciated that. (Interview-2)

To build and sustain social presence, Tom believed in the importance of interaction. He felt a stronger sense of social presence with the students with whom he interacted most: “The ones you communicated the most with were the ones you formed a favorable opinion of. You definitely had a feeling of their social presence” (Survey-2). He also wished his group members were more available and motivated for group interactions: “they don’t want to go above and beyond the duty because that is why they took online class” (Interview-1).

Social presence arises through being able to project oneself socially and emotionally, as a real person through the medium of communication being used (Garrison, Anderson, & Archer, 2000). It is evident that Tom successfully projected his social presence and in fact he did it on purpose to diffuse coldness and create a group

cohesion and sense of community with the members he had not known before. He valued the role of Elluminate Live meetings which mediated the sense of community of inquiry:

I don't believe I could get to know them [classmates] without Elluminate. Look how often we met outside Elluminate! Like I said earlier some teams met more than others. I think also when I picked a group on, there were some groups that had young ladies taking classes together previously, so it seems like they are buddies they always take classes with. So they feel more comfortable being on the same team and therefore, they communicate more because they know each other. I found out that the groups that did not meet as much would probably be thrown together or put together and they did not know each other so there was this coldness and indifference to overcome so you get to know each other. That is a part of why I tried to put some personal. I tried not to make it all academic; tried to put personal in, so that I could let my personality come out, so that it was not just all about phonics or just the material. I tried to infuse a little bit personality within the presentation of the material to try to get to know my classmates.

(Interview-2)

Personal/affective expression, which covers self-disclosure, use of emoticons, humor, and expressing emotions, was projected by Tom. In fact he was the person who used humor and self-disclosure more than any other student. Open communication indicators such as feeling comfortable to interact with classmates and the instructor, participating in discussions, complementing, showing agreement or disagreement, and asking questions were used and expressed by him. His high participation gave support to this. During our first interview (in the middle of the semester), he said he was feeling

valued and appreciated by his group members. He mentioned his receiving compliments on his group summary from the group members.

Finally, group cohesion includes the indicators that serve a purely social function such as phatics, salutations, inclusive pronouns, and addressing participants by name. Tom showed all these types of indicators through his interactions with the class members and the instructor at the live meetings as well as in his written reflections, survey responses and at our interviews. Some samples of his utterances that highlight social presence are given in Table 16.

Table 23

Samples of Social Presence Indicators Used by Tom at Elluminate Live Meetings

Categories	Indicators	Examples
Personal/Affective Expression	Self-disclosure	“Thank you very much. Not only I am sick but I am a mess so I am glad my camera does not work.”
	Humor	“I’m glad you ladies can’t get close to me in this forum as I have a fever and I am sweating... It’s just terrible!”
	Emoticon	☺
	Self-Projection/Expressing	“Thank you ladies... I really feel as if I’m part of a caring community!!!
	Emotions	“Hee! Hee!”
	Forming distinct	“I feel like I got to know a couple of

	impressions of some peers	them”
Open	Learning Climate/ Risk-	“I felt fine during the session.”
Communication	Free Expression	“It is fairly easy to interact and it is
	Feeling comfortable	an effective means of
	conversing through CMC	communication”.
	Feeling comfortable	“I felt comfortable in participating in
	interacting with other	class discussions and expressing my
	course participants and the	thoughts and feelings”
	instructor	
	Asking questions	“Where do I type in? Do I have to
		click on my name?”
	Referring explicitly to	“you could use context clues to guess
	other messages	that one too! audio-hearing, lingual-
		talking”
	Expressing Agreement	“I agree [Name]”
	Complimenting	“[Name], you’re the bomb!! Good
		job”
Group Cohesion	Salutation	“Hello fellow classmates!”
	Inclusive pronouns	“Remember folks we are all in this
		together! We can do this!”
		“Thank you ladies... I really feel as if
	Sense of belonging	I’m part of a caring community!!!

Hee! Hee!”

Vocatives

“Good job [Name]”

Teaching Presence

Tom’s perspective of teaching presence was very positive. He felt a strong sense of teaching presence and he found my style of teaching effective and my personality and rapport with students “admirable”. Patient, understanding, available, kind, compassionate, supportive, encouraging, thoughtful, and cognizant were some of the adjectives he used in his statements addressing my teaching presence and personality. I felt that for him a teacher’s personality was a critical factor:

Good Lord was looking out for me, and gave me a professor that has personality you had... I think that the other students were appreciative of it too. You could tell that from their comments that they were appreciative of your personality. You know as well as I do. You have taken more classes than I have. You know that the instructor can make or break a class. (Interview-2)

He positively commented on learning materials, tasks, course organization, class atmosphere, teacher availability and support. He especially appreciated emotional support he felt and expressed this a few times. As I explained in his introduction, he was feeling that he did not have necessary background knowledge in ESOL and technology skills as his classmates, but I assured him he did. I expressed how I found his synchronous and asynchronous class participation insightful and professional. His confidence increased by the mid-semester as he himself witnessed receiving compliments from his group members as well as good grades on the assignments and midterm exam. The following

excerpt elucidates his appreciation of my availability, personality, and indicates he developed a sense of friendship and trust:

She was always available for me and I greatly appreciate her kindness and compassion. This was an unexpected extremely difficult semester for me ... She made it less stressful by just acknowledging that it can be stressful, but just relax and take one thing at a time. Thanks professor Aylin. If you need me for anything please feel free to send an e-mail and I will be there for you. You have certainly been there for me this semester! I appreciate your time as always.

In addition, he enunciated that we had a welcoming and risk-free learning environment:

Your sense of purpose was admirable. I have had other professors or grad-students who have taught classes that I was in that did not foster the calm and supportive atmosphere that you were able to create. You often made the comment, "no pressure, just relax" and this was an astute move on your part to try and take some pressure off of a student ... You were thoughtful and cognizant that life happens and technology sometimes fails. (Survey-2)

His comments on my role as a facilitator of discourse were positive throughout the semester. He also always valued the immediate and positive feedback:

Professor Aylin did a great job as facilitator and teacher... You always managed to say something good about the student work or presentation. I like this positive feedback and encouragement and I feel that this attitude goes a long way in building rapport with your students. (Survey-2)

Students had the opportunity to receive live direct instruction through the medium of Elluminate Live. Tom was appreciative of receiving direct instruction: “The instructor's direct teaching was another voice or way of presenting the material. She was supportive and quick with encouragement and that is a style that I, too, enjoy” (Survey-2). He reported that he learned how to differentiate voiced and voiceless consonants from my demonstration using the webcam: “I did not have a problem with voiced versus voiceless anymore because I just put my fingers on my throat and I would be saying these consonants” (Interview-1).

Cognitive Presence

Tom’s learning philosophy is oriented towards socio-constructivist approach. He values collaborative learning, therefore, he always emphasized how Elluminate allowed us to create knowledge collaboratively and how he enjoyed interactive activities. For instance, in reflection-1 paper, he stated that he perceived Elluminate Live as a beneficial tool to facilitate his learning experience:

You read the material once by yourself and then you get to see the professor expound upon some idea or piece of the material that perhaps puzzled you when you were reading the material by yourself...I thought the PowerPoint presentations were effective tools in the learning process. The various groups’ questions were an effective discourse on the related material. (Reflection-3)

Furthermore, he said that without Elluminate Live meetings, his learning would not be “as interesting as it has been” and added that “you have the ability to hear instantaneous feedback of what your fellow classmates are thinking...If you did not have

the illuminate in this class, there is no way you could feel and participate in that kind of feature” (Interview-1). Receiving immediate feedback and diverse perspectives are most commonly stated benefits of synchronous meetings in his data. He found multiple modalities of communication effective as he benefited from the chat tool during audio presentations. In addition, he did not exclude social presence from cognitive presence as he noted:

I have a perceived sense of community while logged in to Elluminate Live. You got instant feedback with suggestions and critiques. The ability to make comments in the little text box during a slide presentation or PowerPoint was a good tool for those who like to comment on the issues as they arise. You get some really good ideas there. It was a learning community and we were all in the proverbial same boat. (Interview-2)

Providing him a sense of community, Elluminate Live gave Tom a chance to understand that he was not the only student who was challenged with the content and had questions to ask. He benefited from when other students requested help and received immediate support and clarification:

It was interesting to note what type of problems others had with certain parts of the lesson. There was times when I felt unsure or a little confused with the material that others raised their hands or used the frown icon to assert their feelings...The ability to ask in real time a question when the need arises is great because you receive immediate feedback to your concern. (Reflection-1)

Tom's satisfaction with his learning was noticeable. As previously noted, he said he wished he had taken this course prior to his internship. His ultimate aim and motivation in taking this course was to become a better ESOL instructor and, therefore, he did his best to achieve it. He expressed his satisfaction in Survey-2:

I am satisfied. My goals were to learn some new and innovative strategies that I could implement in my classroom that would ease the difficulty of second language acquisition for my ESOL students. Elluminate Live was a portal to new and exciting voices who have wonderful thoughts and ideas on how best to teach linguistics and literacy to our ELL learners. The course assignment such as the LEP project was an all-inclusive way of implementing the new knowledge learned in a real world setting. The interaction among group members and fellow classmates made me feel as if we were part of an exclusive learning community.

In this excerpt, Tom again brought up the role of social presence, that is, his sense of community and interactions with class members in his learning. The LEP Analysis project was the major assignment of the course and involved data collection, analysis and application of all the course content. Tom was always active in both live and asynchronous class discussions. He went beyond what was asked for class participation for full credit: "I try to add to discussion when I make a comment. I know the purpose of discussion board. I try to stimulate discussion to see other perspectives" (Interview-1). He asserted that Elluminate Live meetings made learning authentic and meaningful for him. When I asked what he meant by authentic, his explanation was as follows:

Authentic is just the individuals' ability to present the information in a unique way because we all have different personalities. Everybody learns differently. Sometimes we get our education blinders on. We are accustomed to seeing things in certain way based on our life experience. When I say authentic, it was an awesome learning tool in that, you got to see other people's perspective, and how they would deal with a particular learning disability. Sometimes you are sitting and making notes like I did, and you going like "I am going to try this". I make a little note if I get this particular problem and it is nice to have likeminded people that have different perspectives. (Interview-2)

He expressed that he valued learning from other students, being able to receive different perspectives and watching and listening to instructor and student presentations.

Elluminate Live made it possible for him to interact whenever he needed during live presentations. This was a unique learning experience in that it was not like asynchronous text-based interactions which lack immediacy and voice. In addition, his reflection on the phonology and morphology meeting revealed that because he found the phonology section difficult, as did other students, he benefited from direct instruction. He commented on the use of the webcam when I demonstrated certain phonemes and how to differentiate voiced and voiceless consonants:

When I was trying to figure out voiced versus voiceless, and you made the comment of put your finger on your throat, I did not have a problem with voiced versus voiceless anymore because I just put my fingers on my throat and I would be saying these consonants and seeing that if they are vocalized. (Interview-1)

Summary of Tom's Perspectives

Tom brought a unique perspective to the study by being the oldest student, having very limited technical skills, and displaying a very strong social presence. He always expressed high satisfaction with the course and the instructor. He appreciated learning about Elluminate Live and Gmail Chat as well as their pedagogical use for our course objectives. He was not able to use Gmail Chat often because his emails were forwarded to his Outlook and he had to learn several things at one time, however, he predicted that it would be a very effective tool to enhance instant communication and social presence, and if used for content teaching, it could enhance cognitive presence too.

Tom found Elluminate Live very efficacious for augmenting all elements of CoI. He felt comfortable communicating with others and, offering self-disclosure. He also felt like a valued community member, which helped him to feel the social presence of the other students and the instructor. He also rated my teaching and use of synchronous communication tools effective and our class activities on Elluminate Live as worthwhile. He believed live meetings were the most beneficial to him to learn course content and feel as if he were in a real classroom.

Having finished Tom's perspectives of Gmail Chat, Elluminate Live and CoI, I will continue with our second participant, Kristina.

Kristina

Kristina's Profile

Majoring in Secondary English Education, Kristina was a 24-year-old stay at home mother of a baby daughter, and was home schooling two other children to make

money. Being a full-time student, home schooling, and taking care of her baby take up all her time.

She was enrolled in a few face-to-face classes with some of her classmates, but as she reported she only knew their names and did not have any friendships. One of these students formed a group and invited her to she join them. Although she could have worked individually in this course, she chose to work as a group due to the amount of work involved. As a student, I can describe her as high-achiever, organized, but introverted. At our interviews and in her reflections, she frequently emphasized her learning style being individual rather than a group or social learning style: “I am very introverted. I like to do things on my own. It is just how I am” (Second Interview). Moreover, she preferred reading to listening. She also articulated a few times that she did not like to talk much in classroom settings, which I often noticed at the live meetings.

In terms of technical skills, she said she was not an expert but did not have any concerns either (Survey-1). She did not have previous experience with any synchronous online learning tools. Her initial perception of Elluminate Live was very positive, “It gives the next best thing to face-to-face” (Survey-1), but she was not content with the meetings due to her schedule. In addition, she acknowledged that she often used instant messenger tools to interact with her family and friends. However, for both Gmail chat and Elluminate Live, she did not seem to be motivated to use them as she responded “not really” when asked in Survey-1.

She preferred face-to-face learning to online learning. She would have taken our course face-to-face if she had had a flexible schedule. She had taken only one online course previously which probably affected her expectations for this course and overall

online education perceptions. Her previous course was not designed with social constructivist approach. She did not interact with any other students and hardly with the teacher. She finished the whole course in two weeks because the course only involved readings and self-evaluation quizzes which were not scheduled. She took our course online hoping to finish everything ahead of time and have more time for her other courses. Two excerpts below describe her expectations from an online course:

Most people who take online courses do it because their schedule does not allow for them to take classes at regular times during the week. I was frustrated with mandated meetings and group work because my schedule was not very conducive towards that. I was expecting to be able to complete work on my schedule and ahead of time so that I actually finished the course ahead of time because I have such a busy schedule. (Survey-2)

When I asked her to elaborate on this statement, she expressed:

If you already had the Elluminate session recordings available and things like that I could watch them and get the work done. If I did not have to deal with the actual weekly things due, so much group work every week... And that is what I meant by not being able to do it ahead of time. Because when I signed up for an online that was what I was hoping...It is just me. I am not a big fan of Elluminate. It is not a bad thing. It is just me personally. It is just my expectation of an online course. That was not what I was thinking. (Second Interview)

Kristina's Perspectives on Gmail Chat, CoI, and Satisfaction

Kristina and I had one chat session over the semester. Similar to Tom, Kristina was not a frequent user of Gmail Chat. However, she did not have any technical concerns

like Tom did, but she just did not prefer it. Her comment, “I’d rather send an email than chat” at our first interview clarifies why I received 16 emails from her. Further, she clarified that this was also because of my quick response to emails:

When I send you email, I get a pretty quick response. That is better. Some of my teachers I send an email and I might get a response a week later. In that aspect you are really available. I have not had any issues. I have not needed to talk to you so I just asked my questions in email. That is easier for me. I don’t like being online. I don’t know (Laughter). (First Interview)

In her reflection-1, she expanded on her reasons by writing that she was occupied with her daughter and she could only study at odd times:

I am a stay at home mom and I home school two children so my days are pretty full. I do not really have the time to use gmail. Especially during the times other people are available. I work on my work at odd times, trying to fit it in during my daughter’s naps and on days I do not have the other kids with me.

Similar to our first interview dialogue, she repeated herself in her last reflection, but this time, she added a concern, not knowing how to save chat conversations in case she needed them although our course documents noted the auto recording of written chat conversations:

I don’t really like using chat things in my day-today so I didn’t even think to use it. Yes the instructor was available if I needed but I still felt the email was sufficient enough because her responses were just as prompt as if I was on a chat

and I then was able to save her response if I needed to, something I have no clue how to do on a chat. (Reflection-4)

I also think that her lack of motivation to use chat was partially due to her personality as well. She often told me that she was introvert and did not like to talk much, and when comparing audio and written communication, she said she preferred text since she felt more comfortable to express herself that way.

She and her group mostly used email as well. She commented on using email frequently with her group members as “it seems the most effective” (Reflection-2). In her last reflection, she elaborated on it:

Our group communicated mainly through Gmail. According to my mailbox I received about 94 messages from my group members and sent close to 40 of my own messages to them. We talked mostly about our project and group discussions for the sections due that week. We would post on the group page but we still did most of our communication through Gmail because it was more convenient for most of us. I know that we are able to check our mail from our phones while we are out and do responses that way.

Kristina and I used Gmail Chat at 8:31pm on November 6th. We only used text-based chat that lasted 2 minutes. Upon receiving my reminder email to the whole class, she contacted me to request an extension on an assignment submission. Social presence indicators were employed in our chat. Her statements included a happy-face emoticon, self-disclosure and personal details of where she was and how she would travel, which contributed to personal/affective category of social presence. In addition, her request,

questions, and appreciation of the extra time were indicators of open communication. Finally, although she did not use a salutation, she ended the conversation with a greeting and this was an indicator of group cohesion category of social presence. The whole chat conversation was as follows:

8:31 pm. Kristina: I just got your email about the Lesson Plan 2. I am out of town at my parents and forgot that it was due tonight. I have it done but it is on my computer at home. Can I turn it in tomorrow by 1pm? I will be leaving Ocala by 10am and if there is no traffic issues should be home by then. It is a 2 hr drive but I have to make stops because I have my daughter with me. I think I can get the lesson plan from the email I sent you with it but I rather not have to do the assignment twice if at all possible and it will be rushed and not the same as the first because there is no way I am going to remember exactly what I did originally.

8:32 pm. Aylin: Ok, Kristina.

Kristina: Thank you so much. I just really didn't want to do it twice :)

8:33 pm. Aylin: I understand.

Kristina: Will I be able to post it to BB or should I email it to you?

8:34 pm. Aylin: yes, you will be able to upload. In case there is a problem, you can always email.

Kristina: Thank you. Enjoy your weekend.

Aylin: you too :)

I addressed her with her first name and responded to her closure greeting, which indicate group cohesion. Like her, I also used happy-face emoticon once. Moreover, there were indicators of teaching presence. The design and organization category was observed when I was helping her with when and how to submit the assignment. Yet, cognitive presence was not observed in this interaction.

Regarding her satisfaction, she responded that she was very satisfied with the tool, but she was not available to use it. Besides, she did not expect to perform synchronous communication in an online course.

Having used Gmail Chat twice over the semester, Kristina's evaluation of how it affects the CoI in our class was limited. Kristina did not want to be a part of an online learning community since a few times she reported that "I did not really care about the community, I just wanted to do my work" (Survey-2). As previously discussed, her online learning perception, expectations, and attitude towards group work were probably contributing factors for how she felt and thought about our course. Being occupied with a baby daughter and her other courses, she just wished to finish the course in a shorter time period than a regular semester period. Therefore, she wrote, "using synchronous tools was not conducive to what my expectations for an online class were" (Survey-2). However, she reported that she felt a sense of social presence of the instructor and class mates, especially of her group members:

I feel like I am able to put my opinion out there in my discussion topics. Others do read it and they respond. I really like that, because you see that you are not just posting to post but other people read it. It is nice.

She agreed that Gmail helped her get to know the instructor and group members better, but she considered the email conversations rather than the only two chat sessions she had over the semester. She also added that “other communications were enough of a community builder for me and the purpose of this class for me” (Survey-2). Apart from synchronous communications, she thought self-introductions, emails, instructor feedback, and group projects helped her feel a sense of learning community:

e-Café forum was a nice way to introduce us to each other and see photos of each other, personal emails were helpful in keeping up to date with each other, prompt feedback, group projects let us interact more with classmates. (Survey-2)

In terms of cognitive presence, she could not comment on the role of instant messaging because she did not have any experience. Our chat session did not involve content discussion and she did not use chat to discuss content with her group members either. She said, “I never used it for learning.” Likewise, considering teaching presence, although she valued my being available, supportive, and prompt in responding her, she could not comment on its role for direct instruction and facilitation of discourse.

Kristina’s Perspectives on Elluminate Live, CoI, and Satisfaction

Kristina expressed that she was satisfied with the Elluminate Live meetings and felt that they contributed to the community of inquiry in the class. However, she still would prefer not to have them because of her busy schedule and her learning style which was based on reading and individual work. She appreciated being able to interact with the instructor and classmates in real time as she wrote: “Students were able to interact with each other and the teacher and get immediate feedback on questions and group

presentations” (Survey-2). Yet, she was upset to sacrifice the time she could have spent with her husband and baby. After her first experience with Elluminate Live at our Orientation meeting, she noted in her Survey-1: “It gives the next best thing to face-to-face” and said at Interview-1: “I think it is a great communication tool”. In her Phonology and Morphology meeting reflection paper, she enunciated that the meeting time was not good for her. She was tired during the meeting since she usually went to bed at 8p.m. and woke up at 5a.m. because of her baby. Further, she stated: “I was frustrated with the fact that the meetings are on Friday nights because those are my relaxing nights I get to spend with my husband” (Reflection-1).

Kristina acknowledged that she was feeling a sense of community of inquiry by the middle of the semester. At our first interview, she indicated that she was feeling more connection with her group members compared to other students since she was interacting more often with her group. In her reflections, she observed that other students were having social interaction with each other using the chat tool at Elluminate Live while waiting our sessions to start. For her, it was hard to join in them because she thought “I think they are used to online courses...they already got their little clicks which I would think hard to do online but apparently not...but I don’t get involved because I really don’t know what they are talking about”. To my next question about Elluminate Live meetings and community building, she gave a similar response. From her responses, I felt that she perceived community of learning as more like getting to know classmates and having social interaction with them, which she had no intention to do in an online course. By mid-semester, from her response below, it was clear she was not still feeling comfortable communicating with class members at the meetings:

I feel it adds some to community aspect but I see it more as a way of review of what we are learning at that time...when I am on there, I don't want to talk to people. I just want to see what you are doing. It is a good review. That is my point. I would rather be that because it will go quicker than trying to communicate with everybody. I don't know them so it is hard for me to communicate with them. But other people who are comfortable with online settings, I think they probably would feel different without Elluminate and they would want that, but I don't, just because I don't care to know my classmates. It is just me. (Interview-1)

Social Presence

Kristina often emphasized how she did not have any intention to get to know her classmates and build any kind of friendship with them in any course she takes because she separates her academic life from social life. She asserted: "I participated in the required meetings and postings to bb [Blackboard] but I did not have a desire to get to know anyone personally to connect with them" (Survey-2). We discussed how we should take the term, friendship as classmate-ship and how it meant knowing and feeling connected to other community members and feeling comfortable to interact with them for the purpose of enhancing learning. For her, an online learning community is not necessary to build in a course. Her preferred learning style is individualistic and her expectation from an online course is to learn wherever and whenever she wants. However, being exposed to a different online learning experience in our course, there were certain things she enjoyed and found effective. Doing group assignments and participating in class discussions was rewarding for her because it was not only the instructor who would read and comment on. Especially for discussion forums, she felt

she could express her opinions freely and her point of view was acknowledged by community members, implying group cohesion: “I feel like I am able to put my opinion out there in my discussion topics. Others do read it and they respond. I really like that, because you see that you are not just posting to post but other people read it. It is nice” (Interview-1).

Kristina felt social presence of her group much stronger than of the class. Referring to the breakout room activity in phonology and morphology meeting, she noted: “because I am more comfortable with my group I felt more like a participant” (Reflection-2). Moreover, receiving discussion questions an hour before the meeting was beneficial for her since her group had time to go over the questions. Such group activities enabled Kristina to build a bond with them:

I did feel togetherness with my group, which is an improvement from the last meeting. I have had time to work with my group and I also had time beforehand to work on the questions so I was able to be more involved in discussion rather than just eating up time trying to figure out what the answers were.

Over the semester, Kristina and her group conducted one Elluminate meeting. She enjoyed having real-time audio group communication rather than emailing back and forth or waiting for a reply on discussion forum. She commented on this experience quite positively:

I enjoyed the Elluminate just for ourselves because I had to go to the interview and it was good to hear what they all wanted me to find out. It was really great. I

wish our schedules worked better, so that we can actually do more of them. We have one member with 3 jobs and it is hard to get schedules work.

In her final evaluation of social presence and live meetings, she was content that Elluminate Live enabled her to hear her classmates, but again by comparing online course to face-to-face courses, she highlighted that it would never be the same as the social presence in a face-to-face classroom: “I still feel that it will never be like a face-to-face classroom but hearing my other classmates was a great help in letting me know them better” (Reflection-4). Lack of body language and mimics in online communication was a challenge for her to feel comfortable to interact. In her early reflections, she brought up this issue twice both for cognitive and social presence:

I know that in a regular classroom I take clues from my classmates; if they look just as lost as I am then I will gladly raise my hand and ask questions. But in this setting I rather send an email to you individually or just figure it out on my own.
(Reflection-1)

I asked her how she would feel if each speaker used a webcam, and she responded, “that would be helpful, but I know a lot of people who do not like their webcams” (Interview-1). In her reflection-3, she noted how the use of webcams during our first interview enhanced her sense of my social presence: “I feel more comfortable since the interview I did because we used the webcam to see each other, it was more personal”. At the last meeting when she presented the LEP Analysis project with her group, she did not use her webcam. She wrote in her reflection: “because it was 9am (I’m not a pretty sight that early in the morning 😊).

By the end of the semester, Kristina was feeling much more comfortable in interacting with me and other students. At our second interview, she stated that Elluminate Live was effective in changing her perspectives of the instructor and students. Watching other students do presentations made her feel closer to them because she “got to hear their voice and teaching techniques” (Reflection-3). She noted that each meeting contributed to our community of inquiry because she believed “the more time you spend with a group the more the community grows” (Reflection-3).

When queried about what other factors helped her feel a sense of community in the course, Kristina mentioned e-Café introductions with photos, frequent emails, instant feedback, and group projects (Reflection-3).

Unlike Tom, Kristina did not strongly project her social presence at Elluminate Live class meetings. Her participation was minimal. Since breakout rooms are not observable, I was not able to witness her participation with her group, but she stated that she felt more comfortable interacting with her group members and enjoyed the breakout-room activities. Her highest participation rate with 17 text-messages was observed during the Phonology and Morphology meeting. At other meetings, she only had 2 or 3 messages. First, personal/affective expression was hardly exhibited by Kristina. She did not use humor and self-disclosure. She used happy-face emoticon once at the Midterm Review meeting. Second, open communication indicators were not common either. She articulated that she was an introverted person and did not talk much even in face-to-face classrooms. Yet, she reflected that she felt comfortable interacting with her group members and with me when she needed. She offered help to a classmate who did not

release the microphone by writing, “yes but u [*sic*] need to let the mic go”, answered another student’s question, and showed agreement (Phonology and Morphology Meeting). Third, group cohesion indicators included use of informal language (e.g., “u” instead of you) and her closure messages such as, “bye”, “talk to you later”, and “Nice meeting all of you.” She also expressed that she was feeling being valued and appreciated by her group members in the reflection papers, surveys and at the interviews.

Teaching presence

Kristina reflected a positive perception of my teaching presence. In evaluating the course design, assignments, and materials, she wrote that she was “very satisfied” and added: “all my goals were met. I wanted to grow in content education and I did” (Survey-2). Regarding the design and organization category of teaching presence, although the course design was not what she expected for, she found the course very organized and the course materials very effective. She appreciated how we used discussion forums which let students interact with each other. She knew other students would read and comment on her posts. E-café forum created a welcoming atmosphere in the course. In terms of using collaborative group work, she stated that she would not prefer to work with a group, but she decided to do so due the LEP Analysis project. Overall, she was very satisfied with the course by the end of the semester.

Regarding my teaching style and availability, she enunciated: “The instructor was very supportive and understanding. She was always available and prompt in her responses” (Reflection-4).

Pertaining to Elluminate Live meetings and my direct teaching, she rated direct teaching and facilitation of discourse “very good” and wrote, “enjoyed the live meetings and her availability to answer questions on the material was helpful” (Survey-2). In addition, she found breakout room activities very effective in terms of immediate interaction as she elucidated: “I like that I am able to communicate in real time with my group. It is very helpful when trying to work on things, especially those group questions” (Reflection-2). In addition, she emphasized that arranging breakout rooms for the groups to work collaboratively for the midterm review was effective. Likewise, she commented on how we planned SLA theories section and held a live meeting for groups to present the theories they were assigned with: “ I feel that because this section was so dense in information that it was good to have each group do a section then share it” (Reflection-3). However, because of her approach to teaching which will be discussed in the following section, she critiqued designing group presentations for course content delivery.

Cognitive Presence

Kristina’s perception of the live meetings in terms of learning included both negative and positive aspects. She was not content with live meetings because she was not expecting any kind of interactivity from an online course. In addition, she had a problem with the meeting times due to taking care of her baby sacrificing the time that would be spent with her husband. Last but not least, she pronounced that she did not need interaction with others and she would be fine with just watching previously recorded presentations:

I learn stuff just on my own. I liked it when we did the review, but I don't really care if other students are there. Just you reviewing it for me I would be fine with that. I don't really need interaction with other students to learn the material and I understand it. (Interview-1)

On the contrary, she also wrote in her reflection-1 how interacting with others was beneficial:

I like that we get to interact with each other and hear questions from other classmates that may help us even if we did not think of the question on our own. I also think it helps as a review because there are examples and we can ask for clarification on things if we need it. (Reflection-1)

Similarly, she judged the breakout room activities very effective in terms of immediacy of interaction. Yet, she complained that during whole class activities at the Phonology and Morphology meeting, there were students who jumped to answer questions fast, which did not give her enough time to respond:

I think Elluminate is good when we were doing group work because we were able to discuss back and forth...We talk through email but it is still late. It is real time so it is very helpful in doing group work. When it was the whole class, I feel like there are some people who know the material better so they jump in there before anyone else can give an answer and that was kind of frustrating. I think it is a great communication tool. (Interview-1)

She also assured that she benefitted from the meetings, learned new ideas, and clarified any issues she had. Regarding the LEP Analysis meeting and receiving different perspectives and ideas from other student groups, she offered: “I really I liked the last meeting because everyone did so many different students... Because I am in secondary education, I was not even thinking that anyone would do elementary student so it was really nice to see elementary students” (Interview-2). Therefore, she always had mixed feelings and thoughts. During our second interview, I got more chance to learn about her learning philosophy and teaching style. After our SLA Theories meeting, when groups presented their theories and interacted with the class through questions and comments, Kristina wrote in her reflection: “I feel that students’ teaching the material was not really the best idea because they are bound to miss something that the teacher would want to cover”. Her statement caused me to ask her if she as a prospective teacher would not use group work and student presentations. She replied, “I believe students miss a lot and when the teacher wants to cover the things students missed, the teacher misses it too”. I inquired if my teaching presence, clarifying, giving samples, covering what was missing, and summarizing key points at the end of each presentation was not satisfactory to overcome such possible obstacle. Her response was as follows:

I think it was enough from what they were doing. But then from my view, watching it and listening, I had to keep together what they said and also the stuff you were adding. It is not cohesive, because it is not in an order I am used to, which also goes along with reading because if it is reading I know that it is in order. If I am listening to, I have to put it in an order to make sense. ” (Interview-2)

Then, I asked her if she plans to use student presentations when she becomes a teacher, she replied, “Yes. It is just difficult for me to adjust to that, but yes. I am going to have to learn to do”. In reference to LEP Analysis meeting, her comment on cognitive presence was as follows:

I am very introverted. I like to do things on my own. It is just how I am. It is not a reflection on Elluminate itself; it is just how my personal preference deals with the Elluminate. It is hard for me to say that I could have learned the material without Elluminate meetings because I did not actually have the material with me to try and learn it. So it is hard to say if I would have been able to or not.

(Interview-2)

There were a few unique advantages she felt Elluminate Live provided. She thought without Elluminate Live, LEP Analysis presentations done asynchronously on discussion board would lack voice and authors’ personal input. Additionally, not all students would read the whole documents and comments and feedback would not be in real-time. This was how she wrote in her last reflection paper:

Elluminate is a way for the class to meet as a whole and it helps give groups immediate feedback and helps them appreciate their own work because they get to share what all their work accomplished. (Reflection-4)

She expressed that she learned more from collaborating with her group on the LEP Analysis project than listening to other groups’ presentations: “teaching strategies and creative ideas were gained from listening to other groups’ presentations, but for the

most part I feel what we did in groups benefited us more than this meeting alone did” (Reflection-4).

Summary of Kristina’s Perspectives

Calling Elluminate Live “the next best thing to face-to-face”, Kristina was satisfied with the course and had positive perspectives on synchronous communications, but as she said, she was just not expecting these tools to be used in our course. Having a busy schedule, she sometimes had conflicts with meeting times. In addition, in her daily life she does not use instant messaging tools and, therefore, she was not online on Gmail Chat. Based on her two experiences with Gmail Chat, she found it effective for the instructor’s availability and creating social presence.

Kristina’s previous online course experience, personality and learning and teaching style preferences had some effect on how she perceived our course. Being an introverted person, she did not take an active role during class meetings. She needed some time to feel comfortable enough to interact with other students. Kristina often emphasized that she was not expecting to have any synchronous communications from an online course. Moreover, before the semester started, she was not expecting to get to know other students, build social presence, learn collaboratively, and in short be a member of a community of inquiry in this course. Her learning preference heavily depends on reading and working alone, which directly influence her teaching style. Yet, she admitted that she would work hard to change her teaching style from teacher oriented to more student oriented and let students do work collaboratively and do presentations.

Kristina's overall perspective of Elluminate Live meetings and their role in the community of inquiry was positive. She needed some adjustment time to feel comfortable with synchronous meetings to present her social presence and participate freely in discussions. Nonetheless, she never became an active participant in class meetings, but as she said she was more participatory in break-out group activity. Regarding cognitive presence, she benefited from live group discussions as she was able to solve exercises collaboratively with her group members. She believed that live sessions helped her clarify any questions she had, learned new teaching ideas and different student cases from her classmates.

What follows next is the analysis of our last participant's perspectives.

April

April's profile

April was a 21-year-old Puerto Rican "fulltime student/housewife". Her major was Secondary English Education and she aspired to become an ESOL specialist. She was a hardworking student, and through our interviews I got to know her as friendly and talkative.

She had taken 5 online courses previously and was enrolled in 3 online courses in the semester, which made her the most experienced online learner in the class. She preferred online course to face-to-face courses because she believed she was able to learn more from an online course. She expressed:

When you go to a class like F2F it is more just a lecture. You sit there and teacher talking and you are taking notes. It is actually my experience. I have not taken that many F2F classes that were interactive. And with an online course I

prefer them better because I take them at my own pace, at comfort of my own home. Usually in the end I like my online classes a lot more than my F2F classes. So I think I have a little biased view. As far as how much I learn, I learn more from my online classes than my F2F classes because it kind of like showing up and pretending to pay attention. (Interview-1)

Another reason for her to enjoy online learning was less commuting to campus: “The less I have to drive to campus, the better” (Survey-1). She rated her technical skills and online learning skills as very good. Although she was very familiar with instant messaging (for online games), she had not used Elluminate Live or a similar SWBCS before. Her previous online courses did not utilize synchronous communication, yet in one of the courses, they had one class meeting via a text-based chat tool. In the beginning of the semester, she was quite positive about the use of Gmail Chat and Elluminate Live and she did not have any concerns related to these tools (Survey-1). Her initial comments on Elluminate Live were as follows:

I have taken many online and distance learning courses in my college career. This course is the first to attempt to implement online class sessions. The only thing close to this genuine communicative interaction I have had before was the whole class being in a chat room...For a distance learning course this has been the most effective tool I have seen used yet. Online courses rarely provide the chance to interact with the professor, let alone all your peers, in a normal classroom-like setting...I give the Elluminate program two thumbs up. This is a very effective tool for distance learning and I hope the future brings better and newer programs like such. (Reflection-1)

She had not previously enrolled in any face-to-face course with any of the students in our course, nor did she know any of her classmates, but she said she remembered Tom's name from their online ESOL-1 course. Thus, she contacted Tom to form a group and then they joined with another pair. She expressed that she preferred group work and her ideal online course description included effective group communication and collaboration:

If we have group work, obviously one thing would be students communicate with one another. Another ideal thing would be a teacher who is always available. Because a lot of times, as I take online classes, you email a teacher, they don't respond. It is like a week later if you have a question for an assignment due. Also, there would be a lot of communication and collaboration. People work together easily. Assignments are explained. Maybe model assignments are online, like samples. The teacher is like free for questions to clarify any miscommunication or misunderstanding. (Interview-1)

April's Perspectives on Gmail Chat, CoI, and Satisfaction

April used instant messaging tools for online game purposes in her social life. She also had one class meeting on chat in a previous online course. In our course, she found using chat "easier than writing emails and much more efficient as long as the other person was online" (Reflection-4). She stated that she always felt comfortable initiating chat. She thought synchronous communication with her group "would be much more effective" than asynchronous communication and hoped they would use it (Reflection-1). At our first interview, when I inquired if her group was using Gmail Chat to collaborate on assignments, she highlighted that they had not used it yet due to conflicting schedules:

We have not, but I don't think we will. Everyone has so different schedules. Everyone is doing their own thing and that is like a problem with our group. Once a person wants to meet a student, but nobody is available, the person gets mad because they have to do the work by themselves. As far as a common time we are all free, we have not been able to come to an agreement on, so I think that is one of the main reasons why we don't ever have a chat discussion whatever. It is just using phone helps better. Because you know them they are there, and if they don't answer, you can email them. (Interview-1)

April emailed me 8 times during the semester. Although I often noticed April online on Gmail chat, we only had one chat conversation over the semester, which was initiated by me to respond her question sent via email. In the beginning of the semester, she did not know much about Gmail Chat program as she said:

I think mine is set up so if someone were to chat with me, they see it. I don't really know how it works though. My USF email is Gmail account and all that fun stuff. I think one or twice I see someone say "hi, hey look," but I really don't know how to look if people are online" (Interview-1)

Therefore, I explained what she needed to do and she followed my directions as we spoke. It turned out that she had not clicked on the button to display her contacts, which was why she was not able to see who was online or offline when she logged in. At our second interview, she expressed that she used the chat tool with her group "very sparingly" and towards the end of the semester she chatted with two of her group members to discuss their group work.

April sent me an email on November 19th midnight. She was concerned that her group members did not collaborate with her on the SLA Theories presentation and on the last lesson plan modification assignment as much as they were supposed to. Therefore, she decided to work on the lesson plan alone and requested some extra time. I read April's email at 8am on November 20th. Because she was online when I read the email, I used the chat tool to reply her questions. Our chat conversation was as follows:

8:07a.m. Aylin: Good morning, April. I read your email. You just need to inform your friends about this. I mean you should let me know who did what and I will grade accordingly (individual grades for each person). You can have more time to work on your lesson plan if you need.

You will also grade your group members out of 50 points at the end of sec-7.

8:09 a.m. Hope that makes you feel better.

8:12 a.m. April: Good morning

I just finished the slides and uploaded it to the class discussion board

Aylin: very good.

April: I feel bad about turning it in late but I had very little help with this

8:13 a.m. Aylin: I understand.

8:14 a.m. April: I guess I will be moderating the whole thing, since I made it and nobody else will really know what to say. Well thank you for your understanding I am going to start working on the lesson plan now.

8:15 a.m. Aylin: Ok.

8:16 a.m. You may have extra day or two if you need. Don't stress.

April: ok thank you :) see you tonight

Aylin: see you :)

The analysis of this conversation according to the CoI elements revealed that there were social presence and teaching presence indicators. Regarding the personal/affective expression category of the social presence, both April and I used happy-face emoticon once. A self-disclosure indicator could be observed in her statement of feeling bad about turning the assignment late. In terms of open communication category, it could be inferred that she was feeling comfortable to interact with me. Her written and verbal explanations on how comfortable she felt to contact me and her classmates supported this inference as well. In addition, use of greetings and closures as well as my addressing her with her first name contributed to the group cohesion category. Teaching presence patterns were mostly related to facilitation of discourse because she was disappointed in her group and was stressed about missing the deadline. I tried to make her feel better and continue working hard. Moreover, giving her an extension would be relevant to the design and organization category as well. Finally, this conversation did not include any cognitive presence indicators.

April's evaluation of Gmail Chat in terms of satisfaction and CoI showed that she was satisfied with it as an instant messenger tool because it did not require installing additional programs and it was shared by all classmates. She wished her group had utilized it more often. Regarding its role for the learning community, she reported:

Although not as effective as the illuminate program, I do believe that any synchronous communication tool, such as Gmail chat, promotes social interaction amongst students and teachers, especially with an online course. (Reflection-2)

She believed it was effective for social presence. She could not comment on cognitive presence because she said she did not use it for learning. In terms of teaching presence, she noted that she did not observe me teaching on chat. She must have conceived teaching presence solely as direct teaching. She valued my being available on chat whenever she needed.

April's Perspectives on Elluminate Live, CoI, and Satisfaction

April valued a socio-constructivist approach to online education. She considered interaction and active student involvement very critical for online education: "Like I mentioned before authentic interaction or the simulation of such is a key element in instruction because it allows the students to feel safe and comfortable and more willing to learn" (Reflection-1). Likewise, she regarded feeling a sense of community as a significant factor for students to feel connected to the class, comfortable and being valued so as to be successful learners.

Having a feeling of community within a classroom is an integral part of effective teaching. Students have things I like to call affective filters that keep them from reaching their fullest potential. These filters can be things like being tired, being easily distracted, or feeling unwelcome or negatively about their environment.

When students feel safe and welcome in a classroom they are more likely to feel comfortable enough to actively participate in class. That being said, I feel that this program is very useful for a distance learning course. I would not necessarily say the same thing for a class where students meet face to face on a usual basis.

However, a sense of community and the ability to have authentic communication

with one another are things that are rare with online courses. The Elluminate program seeks to help solve this problem. (Reflection-1)

Her first impression on Elluminate Live was in her own words: “I am delightfully surprised because I have never seen a program like this before. I am impressed” (Interview-1). Different from her previous online learning experience, this course met her purposes and needs better. “It is probably the best course in terms of community,” she said (Interview-1). Elluminate Live provided not only real-time interaction with other students and the teacher, but also it enabled group activities and hand-on interaction with the Whiteboard which made it “almost like a natural class” (Interview-1) and made “learning more authentic” (Reflection-1). For her, it had an advantage over face-to-face classroom too by taking away negative distraction due to looking over people (Reflection-1).

In her first and second reflection, she commented on the role of synchronous communication and her sense of the CoI:

I have taken a lot of online classes. Usually they are just like this is due here, submit it here. There is no actual communication and not like actual community. An online learning community would be when people are actually interacting with each other and communicate. And with this program, it seems like, online community is even more so because we are interacting with each other more on personal basis rather than just emails or whatever. (Reflection-1)

She was very satisfied with the course itself and conducting synchronous class meetings which she believed has a positive influence on creating a community of inquiry:

I believe Elluminate help builds a sense of community within our online class. I enjoy being able to interact with other students as well as the instructor on a more personal basis from the comfort of my own home. Students were able to ask questions and correct any misunderstandings on the spot. This ability is not a common one when it comes to distance learning. (Reflection-2)

At the end of the SLA Meeting, she seemed certain that we had established a community of inquiry as she noted in her reflection paper: “Most definitely by now, I feel that we have in fact established a community of learning. I do mostly feel a member of this community” (Reflection-3). At our first interview, when I asked her if her feeling a sense of community of inquiry was related to just the use of synchronous communication or there were other factors, she emphasized that it was not the sole reason:

I don’t think it is the ultimate reason why we are feeling a sense of community, but I think it helps like greatly as far as seeing people, talking to the people, hearing people and being able to interact with them in that way. (Interview-1)

She believed that apart from synchronous communications, “personal emails, prompt feedback, and the mass amount of cooperative learning assignments positively affected creating an effective learning community” (Interview-1).

Social Presence

According to April, among all her online courses, she felt the strongest social presence of the instructor and classmates in our course. She said: “I obviously feel more comfortable and connected with this course, people, and the instructor and students than I had felt in my past online classes” (Interview-2). In her first reflection, she reported:

I felt that this was the closest to the real thing that I have experienced while taking a distance learning course. I felt that the interaction between students and teacher was very authentic and wonderfully imitated a face to face classroom setting.

(Reflection-1)

April perceived the interactions as authentic and “never forced” and as a “key element in instruction because it allows the students to feel safe and comfortable and more willing to learn” (Reflection-1). She felt very comfortable interacting with other students and the instructor. She described our learning community as “the most definitely a safe and warm learning environment” (Reflection-1).

Regarding the role of Elluminate Live, she believed that “Elluminate provided for a more authentic social presence” (Survey-2) and helped her perceive the instructor and other students as more real:

It was very easy to believe you were talking to a living being and not just a computer because of ease of communication between everyone.” (Reflection-1)

I think it was much more effective than having to read text. It puts a voice to a name. It makes you feel more connected and comfortable with the person.

(Survey-2)

Being satisfied with the meetings and feeling a sense of social presence in the class, she worded her satisfaction with our first meeting as: “I feel all student needs were met for both an online course as well as a face to face instruction. Students were able to do just about anything they could do in a normal classroom setting” (Reflection-1).

In her next written reflection, she commented on how social presence was contributing positively to the learning environment. She compared the online interactions at our meeting to interactions in an on-campus classroom:

Despite the fact that I was in the comfort of my own home, I felt that the social interaction was very real and authentic. This greatly contributed to the learning environment. Although I could not see their faces, I felt as if I could just as easily communicate with my peers and instructor as I would if I was in a face to face classroom setting. (Reflection-2)

The last two meetings, SLA Theories and LEP Analysis, which gave students a chance to be the moderator and do presentations, were particularly effective for April. She considered both meetings as imitating face-to-face classroom presentations. She also commented on her perception of teacher's social presence:

This meeting provided for a more realistic perception of social presence. We the students were able to talk to the class and interact with one another more so than the past Elluminate sessions. Minus the fact that we could not see our classmates give their presentation, we were still able to present to the class. This greatly benefited my perception of my classmates' social presence. The same can be said for the instructors [*sic*] presence. You were moderating the class just as you would in a face to face classroom presentation assignment. (Reflection-3)

Compared to Tom's and Kristina's participation during the Elluminate Live meetings, April displayed a moderate participation rate. She was very active in the Phonology and Morphology meeting to interact with her group members, particularly with Tom, about the lesson plan practice activity that Tom had not shared with the group

yet. There were a total of 12 messages sent by her to group members using the private message option of the chat tool. The messages included greetings and phatics such as “hey there ☺ how are you doing? are you figuring [sic] out this illuminate thing quick enough?” She provided instructions for Tom to use private messaging. These were indicators of group cohesion and open communication. She also sent 3 messages to the classroom and participated in answering questions through highlighting and matching activities.

In our Midterm Review meeting, she hardly communicated. Before our session started, she greeted other students who were online by addressing them with their first names, which would indicate group cohesion. She also played with Whiteboard drawing tools. In the SLA meeting, she was the moderator for the group and presented the Social Cultural Theory in an interactive way. She posed anticipatory questions initially and checked the answers at the end of her presentation. She was successful in involving students. Other group members contributed to the presentation by using the chat and microphone tools. April posted 4 short messages in the chat log during that meeting, however she did not comment on other groups’ presentations which might be because she “felt a little anxious”. She wrote: “I feel that I was too preoccupied on my own presentation to worry about what everyone else was saying. Instead, I was paying attention for tone pitch and presentation styles that I could try and model” (Reflection-3).

At the last meeting when students presented their LEP Analysis projects, she was not the moderator and was not very participatory as she explained: “I am sick as a dog. I was more comfortable using emotions and text based chat because of this. I feel that perhaps if I wasn’t sick, I would have been more attentive and more willing to verbally

communicate” (Reflection-4). She posted 11 written messages on chat. Those messages included 2 happy-face emoticon, 4 “yes”, using vocative and “lol”, congratulating and praising comments. She seemed to reflect all three elements of the social presence.

Teaching Presence

April was quite positive about the teaching presence existed in the course over the semester: “I felt the instructor’s support; facilitation of discourse and direct teaching skills were all obviously present, and very well done” (Survey-2). Concerning my availability, she said: “I did feel that the instructor was available whenever I needed” and expressed her satisfaction:

I am very satisfied with your availability. I don’t necessarily want to visit teachers at their office hour either. Because they are just like 2 hours during a day at the office and you are not always available to make that time. You don’t have that limited time. You are very flexible. You work around our schedule. You make the extra effort, so I think this makes me satisfied. You are better than most teachers I have ever had. (Interview-1)

She added that using synchronous communication tools made me more available to the students: “Most teachers of distance learning courses do not even bother utilizing synchronous tools such as Gmail chat or elluminate” (Reflection-2).

In her evaluation of the course design and materials, she expressed how she found the course well organized and the materials effective. She enjoyed the flexibility in time that online courses offer, but she found live meetings beneficial as well:

I enjoy the way this class is set up. I can do everything from the comfort of my own home. I am not required to log on at a certain time; I can do my work as I please. I do appreciate, however, the once in a while illuminate chat session. This helps greatly with clarifying any confusions students might have. (Survey-1)

Synchronous meeting times did not create any problem for her. On the contrary, she appreciated them: “If I had still a question or something confused, there was always once a month meeting and you could ask for clarification and once a month is not that often. That was not a big deal for me” (Interview-2).

She believed that I was detail-oriented and provided them more than what was sufficient, “almost like a dummy proof” (Interview-1) in terms of instructions and explanations. At our first interview, when she said she was feeling a welcoming and effective learning environment, I asked her if teaching presence contributed to this and she responded:

Yes, because this course is very organized. There is introduction letters for every section. That is more than I really expect from an online course. You make little checklists for us to use when we are done. Not only what is due and when but you explain each thing and you don’t have to really do that. And you are very helpful with any explanation or clarification. We feel comfortable with all these thorough explanations of what you can do and you wrote all these items in rubrics and they help as well.

Because she thought she was a disorganized person, to stay on track, she benefited greatly from introduction letters, reminder emails, checklist, and Illuminate Live meetings.

Regarding my direct teaching role on live meetings, she rated them very effective. For example, for Phonology and Morphology meeting, she wrote: “I personally find the textbook lacking at times, so it was very beneficial to have the content taught in different words” (Reflection-1). For this meeting, she liked how I made students actively interact with each other in group activity as well as with the PowerPoint by highlighting words and drawing lines for matching-type questions, but she thought there should be more of these kinds of activities to involve students. Her other suggestions included checking on each student in case they might not be really present in the session though they seem:

I think it would have been a lot more cooperatively interactive if we had more group work within a lesson... Also someone could login and just walk away from their computer. Other things would may help, maybe like, you know, probably most students would not agree with me but ask students questions directly “what do you think “, if there is no answer, obviously they are not there. Apart from the Elluminate, just the class itself, other than cooperative learning assignments which greatly helped and we had a lot of them so there is really nothing else I can suggest to improve the community. (Interview-2)

April believed that my use of the webcam during the Phonology and Morphology meeting was very helpful not only in terms of enhancing social presence but also for direct teaching which affected her learning in the end:

The ability to see the instructor teach was beneficial because facial expressions help display messages sometimes. Additionally it helps the students feel more comfortable, that the teacher is a real person and the student is not just talking to a computer. Being able to see the teacher talking is most defiantly beneficial when

discussing phonology because students are able to see how the mouth shapes and forms different sounds. (Reflection-1)

April's critique of my facilitation of discourse was short but positive. She accentuated that Elluminate Live meetings provided her with immediate feedback which she needed for clarification of certain things. She thought I managed group presentations and facilitated the class discussions well: "I feel that you did a good job as a facilitator by asking clarifying questions during the presentations" (Reflection-4). She felt a safe, risk-free and welcoming learning atmosphere where she could freely interact with others:

I was fully capable to "raise my hand" during class, ask for clarification, physically interact with the power point as well and verbally communicate with the teacher. Like I mentioned before authentic interaction or the simulation of such is a key element in instruction because it allows the students to feel safe and comfortable and more willing to learn. I feel all student needs were met for both an online course as well as a face to face instruction. Students were able to do just about anything they could do in a normal classroom setting. (Reflection-1)

Cognitive Presence

April emphasized that she enjoyed and benefited most from participating in a dynamic, collaborative and authentic learning environment. In her written reflections, she accentuated that Elluminate Live meetings "have an important role "(Interview-1) for her learning as they ameliorated cognitive presence by turning learning experience into more authentic, enabling immediate feedback and interactions and facilitating knowledge.

Regarding her learning experience at the Phonology and Morphology meeting, she noted:

I found that last section was pretty hard with all phonology, you know IPA, that was a little bit over my head, but through these Elluminate sessions it really helped clarifying the misunderstandings because it was almost like a face-to-face class where people got to ask questions also hear other people's questions; like really you know, got rid of any confusions or whatever. So as far as my other online classes, this class has been pretty good as far as with facilitation of knowledge without the whole face-to-face interaction. (Interview-1)

Furthermore, she stated that watching the teacher phonemes was very helpful: "Being able to see the teacher talking is most definitely beneficial when discussing phonology because students are able to see how the mouth shapes and forms different sounds" (Reflection-1). She expressed that other factors that enhanced cognitive presence were live interactions with classmates and active participation:

I also enjoy the ability to talk in groups as well as privately between other students using Elluminate. I very much enjoyed being able to interact with the power point and the lesson being taught. This makes for learning more authentic. This is very important especially when dealing with distance learning situations. (Reflection-1)

She highlighted the importance of differentiated instruction, learning styles, and immediacy in interaction for which Elluminate Live was an effective medium:

Not everybody can read the book and understand everything. Some people need to hear it explained differently. Like if you read something and it does not make any sense and they talk to someone, and they hear the same things put in different words, and they get it. It actually what Eluminate does for this class. We can hear

all these people's questions we might have not have thought of. You can explain something in different way than the book and we get it. It is like visual support... Whether it is just at the discussion board, that can happen too, but it is not as effective as hearing it or seeing it happen. It is asynchronous so time is a bit problem. (Interview-1)

Drawing on her experience of watching our recorded Elluminate Live meetings, she expressed the following advantages of having recordings for her learning:

I watched the orientation also midterm review. It was not just PowerPoint slide; it was actual explanation. So when we were doing for the midterm, it was really nice to go back and be able to hear someone explaining it rather than just trying to remember what you heard in class the other day. (Interview-1)

April had a concern when she was the moderator for her group's SLA theories presentation. She said she was always stressed to do a class presentation not only in an online course. She was concerned about her grade and so occupied with her own presentation that she could not pay attention to other presentations and learn from them effectively. She said:

As far as group presentations go, I think for example maybe if two groups today, not all at once, it would be more effective because there is no way to change the fact that when someone has to present they will be preoccupied on their own presentation because no matter how much someone prepared, they still try to prepare the last minute. So it is kind of like just a problem that all classes have when someone presents, they will be preoccupied with their own presentations. As far as group work and group lessons that are not presentations, I don't believe

it is the same thing because that is not a big grade you have to prepare for as a part of interacting in the class. (Interview-2)

Summary of April's Perspectives

April was the most experienced online student in our class. She prefers taking online courses to on-campus courses because she believes she learns more from online courses. She provided in-depth information how she perceived online education, community building, and the role of synchronous communications. Having a social constructivist approach to teaching and learning, she valued the course design and use of synchronous communications, particularly Elluminate Live in our course. Regarding Gmail Chat, she felt that it enhanced her sense of social presence of her classmates and the instructor. She was very satisfied with use of Gmail Chat for instructor's availability which she thought more efficient than having fixed office hours.

Although she had taken several online courses previously, our course was the first one utilizing a synchronous web-based course system. She believed our live meetings which brought "a whole another level" and promoted the community of inquiry. She expressed that she had never felt such strong social presence in her previous online courses. She perceived interaction as the key to creating an online learning community.

Regarding cognitive presence, she emphasized the effectiveness of online group activities and interactive tools of the Whiteboard. Overall, she felt as a member of an effective online learning community and was very satisfied with the course, her learning, and synchronous communications.

Conclusion to Chapter Four

I have presented the data analysis and results herein. First, I analyzed the Gmail Chat logs and five Elluminate Live meeting recordings in terms of CoI. I also expounded how three selected participants perceived synchronous communications in terms of CoI. In the following chapter, I will discuss the results in light of the research questions. Then, I will proceed with implications for theory, practice and future research.

CHAPTER FIVE: DISCUSSION AND IMPLICATIONS

Introduction to Chapter Five

The purpose of this study was to examine the use of two synchronous communication tools and their role in building a community of inquiry in an online preservice ESOL course. Therefore, first, Gmail Chat and Elluminate Live class recordings are analyzed from the Community of Inquiry (CoI) framework. Second, rich and thick portraits of the three targeted participants' experiences and perspectives are discussed in Chapter 4.

In this final chapter I will discuss the findings in light of the research questions. In addition, I will outline pedagogical and theoretical implications that emerged during data collection and analysis. Lastly, I will conclude with discussion of further research directions.

Discussion of Findings for Research Questions

This study was guided by the following overarching question: How does the use of synchronous communication tools mediate the community of inquiry in an online pre-service ESOL course? Two different synchronous communication tools were used in the course where the study took place, therefore, two further research questions with sub-questions were formulated to guide the study: . The first question focused on Gmail Chat while the second question focused on a synchronous web-based course system (SWBCS), Elluminate Live:

1. How does the use of Instant Messenger (IM), Gmail Chat (for extended virtual office hour) mediate the community of inquiry?
 - 1.1. How does the use of IM mediate social presence?
 - 1.2. How does the use of IM mediate cognitive presence?
 - 1.3. How does the use of IM mediate teacher presence?
 - 1.4. How do students perceive the value and effects of IM in terms of course satisfaction?
2. How does the use of a SWBCS (Elluminate Live) mediate the community of inquiry?
 - 2.1. How does the use of a SWBCS (Elluminate Live) mediate social presence?
 - 2.2. How does the use of a SWBCS (Elluminate Live) mediate cognitive presence?
 - 2.3. How does the use of a SWBCS (Elluminate Live) mediate teacher presence?
 - 2.4. How do students perceive the value and effects of a SWBCS in terms of course satisfaction?

Gmail Chat, CoI and Satisfaction

Provided by the university, adjacent to the official email page, and not requiring additional software use, Gmail Chat was very convenient to use. When students had a question and needed to contact me, or when they were about to respond to an email, they were able to switch to chat if I was online.

There were a total of 52 chat conversations between students and me, the majority of which took place in the last two weeks of the course. This shows that students needed more instructor support towards the end of the semester to complete their assignments and get clarification on their grades and feedback. In addition, all chat sessions except for one were text-based. Although there were two failed attempts for audio chat by the

students because of a required update for audio communications, it seems students feel more comfortable with text-based chat than audio or video conversation. Another reason could be that because these interactions were unplanned and often lasting for only a few minutes, text-based messages might be perceived less obtrusive than “calling” (on the chat). Once a session started, students might have refrained from initiating audio talk considering the shortness of the conversation. Niphard and Murphy (2007) also observed similar pattern on Elluminate Live class meetings when students exclusively used text-based chat. Although these two tools provide very different settings and therefore might have different reasons for tool choice, students might feel more comfortable with text-based communication which provides them time to formulate and revise their questions and responses as one of the participants, Kristina expressed:

I used written text mainly because I am more comfortable with it and feel like I can express what I want to say better this way than in any other way. I did use the other methods of communications but I was still more comfortable with text.

(Reflection-4)

Chat conversations seemed to encourage more casual and affective conversations which promoted social presence (Stein, et al., 2007). I observed more social presence in chat logs than emails and asynchronous discussion forums. Therefore, instant messaging tools made casual conversations possible and may create a trustful bond between an instructor and student.

Gmail Chat dialogues (between students and the instructor) reflected all three elements of the CoI framework--social, teaching and cognitive presences—though at different levels. Social presence was the most prevalent element followed by teaching

and finally cognitive presence. This distribution can be explained by the fact that almost all conversations included social presence indicators of salutations, greetings, closures, emoticons, asking questions and appreciating the help. Open communication projected by students was higher than personal/affective and group cohesion categories because open communication involves the questions being asked. This pattern is similar to previous research (Akyol, Vaughan, & Garrison, 2009). High open communication indicated that students perceived a welcoming learning environment and felt comfortable asking questions of the instructor. Comparing social presence indicators by the students to those projected by me, I found that my group cohesion indicators were slightly more than students'. This was because I tended to use more vocatives, phatics, salutations and closures than students did. Students' open communication, which often included asking questions, triggered teaching presence, especially the direct instruction category.

By affording opportunities to be available to students in real time when they needed a quick answer or immediate clarification on course assignments, Gmail Chat enabled the manifestation of design and organization, direct instruction, and facilitation of discourse. Direct instruction indicators were observed the most because the needs of the students often led the instructor to provide feedback, clarify assignments and instructions, and submitting assignments. Real-time spontaneous student-instructor interactions by means of Gmail Chat also proved to be very effective to meet students' needs and satisfaction.

Cognitive presence was the least observed category in the chat dialogues between the students and me. Aligned with previous research, this finding also emphasized the critical role of teaching presence in designing effective learning tasks for cognitive

presence to take place (Garrison & Cleveland-Innes, 2005; Kanuka, Liam, & Laflamme, 2007; Meyer, 2004). In my course, the role of Gmail Chat sessions was not to teach but rather to be available to students for impromptu interactions. In addition, students often had questions related to clarification and extension on assignments request, group formation issues, course schedule and location of materials. Moreover, because Elluminate Live was used to conduct content presentations and discussion, students' needs that would have led to cognitive presence might have been met through Elluminate Live and asynchronous communications. However, examples of cognitive presence indicators showed that although not as effective as Elluminate Live, Gmail Chat can be used to achieve cognitive presence, especially through the triggering event, exploration and integration phases of the Practical Inquiry model.

The study results indicated that students were very satisfied with Gmail Chat no matter how often they used it. Yet, students who used it more often showed higher excitement and satisfaction in their reflections. As an instructor, I was also very content with this tool to make myself more available to the students and to provide immediate support to them when needed. Frequent chat dialogues with students helped me get to know them better. I was able to feel social presence of the students who were often online and chatted with me better than those who did not use the chat.

The main obstacle for students to use Gmail Chat with their group members was schedule conflicts. However, I also believe that another factor could be not having a proactive group organizer member to plan for live meetings for the group. Two of the five groups which scheduled their discussion meetings used Gmail Chat effectively to discuss section questions and to collaborate on group projects. The satisfaction level of

these students was very high. Although other students did not use it often, they still were satisfied with Gmail Chat, which met their needs for impromptu conversations with the instructor and group members. Therefore, we can conclude that if instructors require student groups to utilize Gmail Chat and plan their weekly meetings early in the semester, this tool can also allow for effective manifestations of cognitive presence.

In conclusion, results showed that Gmail Chat supports emergence of community of inquiry through affording opportunities for synchronous communication among students as well as between student and instructor. Conversations included both social and academic dialogues, use of emoticons, informal language, which lead to manifestation of teaching and social presence and to some extent cognitive presence. However, depending on how and why it is used, it can promote cognitive presence to a higher degree.

Illuminate Live, CoI and Satisfaction

Both student participants and I as the course instructor were very satisfied with Illuminate Live and perceived it as an effective SWBCS to create and sustain a community of inquiry in our online course. Its ease of access through the course management system (Blackboard), user-friendliness, and interactive tools provided a rich medium for our community to meet live as a class to conduct class and group activities, discuss questions, support each other, and have dynamic and multi-dimensional interactions (audio, text-chat, emoticons, Whiteboard). Illuminate Live received many compliments from the participants, such as: “improved effectiveness of our course” and “allows for the element of face to face meetings to be brought into an otherwise independent learning environment.” The major problem we faced was scheduling the

meetings. Although we achieved a high participation rate for each session, meeting times were not convenient for some students. Scheduling synchronous meetings for online courses is a challenge to consider (Park & Bonk, 2007).

Elluminate Live provided ample opportunities for social presence to be projected and felt by the course members. Participants emphasized that they felt a real classroom atmosphere when they were on Elluminate Live because of several reasons. First, they were able to see who was online in the participants' window and had the option to communicate with whomever they chose in private or in public. They were also able to listen and talk, ask and answer questions through chat or audio, and use interactive Whiteboard tools to type on the board similar to what students do in a face-to-face classroom. In addition, they stated that watching the teacher explain and demonstrate the topics were both effective for their learning and enhanced the social presence of the instructor. Apart from students' perspectives, transcript analyses also showed that Elluminate Live was a highly-effective medium for all categories of social presence to be manifested. All meetings displayed indicators of social presence categories. There were slight frequency changes among categories in each meeting, however rather than the temporal effect, it was the meeting methods and activities affecting which category indicators appeared. For instance, open communication and group cohesion indicators were higher in SLA Theories and LEP Analysis project presentation meetings than Orientation and Midterm Review meetings. This was because both in SLA Theories and LEP Analysis meetings, student groups were presenting content and leading class discussions, which gave opportunities for students to complement each other, appreciate, ask questions, agree and disagree with each other. In contrast, I moderated the

discussions and asked questions in the Orientation and Midterm Review meetings most of the time. These tasks did not create much opportunity for social presence indicators among students. Similarly, teaching presence projected by students or by me was influenced by how the meetings were designed. When given active roles, students displayed both cognitive presence and teaching presence indicators simultaneously. Participants' reflections on student-led discussions and presentations were positive as well. Such activities helped them get to know each other better since almost all students took turns using the microphone and to some degree projected personal/affective indicators. These activities also enabled them to learn new perspectives from each other and share personal anecdotes.

Critical role of teaching presence

As the CoI framework suggests, the three presences are very dynamic, interacting, and overlapping. It is almost impossible to discuss how they were projected in live meetings in an exclusive way because often even one dialogue over a discussion of a question displays all presences cyclically. While teaching presence is mediating social and cognitive presence, social presence also seems to be moderating both teaching and cognitive presence by adding intimacy, use of vocatives, feelings, appreciation, respect, and humor. Nonetheless, for effective cognitive presence to develop, dialogues need to lead to integration and resolution, which is tightly dependent on how tasks are designed, questions are formulated, climate is set, and discourse is facilitated. This highlights the central role of teacher effectiveness. Instructors, whether in face to face or online environments, must hold effective teacher dispositions, skills, and knowledge. Even in an online setting, online teacher educators serve to be role models for preservice teachers.

Therefore, we need to apply various effective teaching approaches, methods, and techniques in our online courses not only to provide the best learning environment, but also opportunities for preservice teachers to observe and hopefully incorporate in their own teaching repertoire. This finding of the critical role of teaching presence is aligned with previous research (Akyol & Garrison, 2008; Anderson, et al., 2001; Arbaugh, 2008; Ice, et al., 2007; Garrison & Cleveland-Innes, 2005; Kanuka, et al., 2007; Shea et al., 2005; Shea & Bidjerano, 2009; Vesely, et al., 2007). What follows next is the discussion of significant themes identified in this study.

Critical role of social presence for cognitive presence

In alignment with previous CoI studies, this research also identified that social presence is a crucial element to be achieved to promote cognitive presence (Akyol & Garrison, 2010; Arbaugh, 2008; Garrison & Arbaugh, 2007; Garrison & Cleveland-Innes, 2005; Garrison & Vaughan, 2008; Richardson & Swan, 2003; Swan & Shih, 2005). Participants emphasized that knowing their classmates helped them feel comfortable to ask questions and participate in discussions. Establishing social presence prevented feeling “embarrassed to look stupid” when they needed to ask a question as Tom said. As their sense of social presence increased, active participation also increased in live meetings. However, we cannot attribute higher participation exclusively to the social presence level because each meeting design and activities differed, and towards the end of the semester students were assigned more active roles and were graded on their participation.

Effects of student expectations, previous experience, and preferred teaching and learning styles

Congruent with previous studies, participants' perceptions of synchronous interactions and CoI seemed to be affected by their course expectations, previous online education experience, and their learning and teaching styles (Shea, Pickett, & Pelz, 2003; Swan & Shih, 2005). Participants who valued collaborative learning considered live meetings and group activities as very important to enhance our community of inquiry. One of the participants who did not enjoy speaking in a classroom environment and did not prefer collaborative learning, did not have desire to be a member of online learning community. She was not so sure how her learning and sense of community would be different without the use of Elluminate Live. Her course expectations were affected by her previous online course experience which was self-directed and did not resemble our course at all. She emphasized that she enjoyed the meetings, learned from other students, received different perspectives and various teaching ideas, but she felt she could have received the same benefits just from reading and studying alone which was her learning preference. Similarly, one of the students in this class as well as some other students from my previous courses shared with me that they perceived online courses as independent learning and for self-motivated students, and if they needed an interactive learning environment they would have registered for a face-to-face section. They believed collaborative learning and synchronous interactions are not for "online" courses. It is interesting to observe such differences among student expectations and perceptions of online education. This also supports the findings of Vesely, Bloom, and Sherlock (2007) as they found that a student's desire and need to be a member of the learning community

might be an important factor in how they project their presence and how they perceive the learning community.

Greater sense of social presence for the group and instructor

Similar to what Stodel, MacDonald and Thompson (2006) found, this study revealed that participants felt stronger social presence of their group members than for other classmates. In addition, participants also felt stronger social presence of the instructor compared to non-group members. This can be attributed to a higher number of interactions among group members and individual students and me. Although all students were required to interact with their classmates both on the discussion forum and during live meetings, this was probably less than the communication they had within their own groups. This finding also gives support to previous studies putting the interaction at the core of education, online learning, and community of inquiry (Boettcher & Conrad, 1999; Garrison, Anderson, & Archer, 2000; O'Sullivan, 2000; Tu, 2004; Tu & Corry, 2003 .

Change in perspectives over time

Participants' reflections showed how student perceptions were changing as we progressed in the semester. Two participants admitted that at the beginning of the semester they never expected to feel a sense of community in an online course. Yet, by mid-semester, after our third live meeting, they noted how they started feeling part of a community of inquiry, and by the end of the semester they felt even more membership and were very satisfied. This shows that for an effective community of inquiry to develop, members also need time in addition to a well-designed course with collaborative learning pedagogies.

Perceiving teaching presence as content teaching

From my interactions with participants and reading their reflections, I realized that participants perceive teaching presence as solely teaching content (presenting and explaining) rather than all components of teaching presence: design and organization, direct teaching, facilitation of discourse and being available and approachable. Through interviews I needed to get detailed information from my participants. I wonder if students value an instructor's content presentation the most, and if that is the case, how it affects online course instructors' evaluations. Would it not be unfair to overlook extensive work to design the course, create course materials, grade assignments, provide feedback and technical help, and answer student questions? A further study might focus on what students expect from online instructors and how their expectations shape their satisfaction and CoI perceptions.

Other factors found to be effective by students for CoI

This study also highlighted that apart from synchronous communications, the overall course design based on socio-constructivist and collaborative learning, group assignments, weekly group and class discussions which were planned in detail, frequent emails, prompt feedback and self-introductions and social conversation on e-café positively contributed to the creation of a community of inquiry through establishment of social presence and facilitation of cognitive and teaching presences. Participants also found course materials, assignments, rubrics, and the textbook effective for their learning. This finding solidifies the critical role of teaching presence, which begins even before the semester starts. Online instructors' dispositions, skills, and knowledge are pivotal for creating an online community of inquiry. Again, this is not restricted to online education

only. Any learning environment, face-to-face, blended or online, requires instructors who are responsive, welcoming, approachable and available, and who use effective pedagogical strategies.

Theoretical Implications

All elements of CoI have been observed in synchronous learning environments in this study, suggesting that synchronous interactions support building an effective community of inquiry. Manifestation of the presences depends on the types of tasks which are tied with the objectives of the live sessions. All live class meetings require rigorous planning and preparation. However, I also observed that once a welcoming and safe learning environment was created, regardless of the meeting type (such as course orientation, direct teaching, student presentations, and so on), certain open communication and group cohesion indicators of the social presence tend to take place because both the instructor and students often use salutation, greeting, closure, phatics, appreciation, peer support, vocatives and inclusive pronouns. Other indicators such as “feeling that his/her point of view is acknowledged by others” and “feeling comfortable participating, conversing, and disagreeing” are not directly observable in the analysis of meeting transcriptions though. For these indicators, we need other methods of data collection such as interview, survey and written reflection, all of which proved effective in this study.

Different from asynchronous discussion forums, a SWBCS creates multi-dimensional and real time interactions which bring some differing patterns of CoI elements into place. To begin with, instructors need to carry out multiple roles simultaneously in a live session. While in an asynchronous discussion, an instructor

might just contribute to the discourse when needed, in a live meeting the instructor must multi-task by listening to students, reading text-messages, writing in the chat, presenting content, and dealing with technical problems. These require manifestation of all categories of teaching presence as well as projecting social presence to make student feel comfortable to participate, encourage interaction, respect different perspectives, and praise contributions. Therefore, teaching presence in synchronous sessions would be less linear than it is in an asynchronous environment.

Methodological and Software Implications

The recording feature of Elluminate Live has proven to be an unobtrusive and efficient way to collect data for course-based research. However, there were some problems. To begin with, as a moderator I needed to sign into the session some time in advance to upload presentation documents, and I did not want to start recording at that moment so as not to cause trouble for students who would watch the recording. However, once students started coming aboard, asking questions or requesting technical help, it was difficult for me to remember to initiate recording on time. This problem has been resolved with the new release of Elluminate Live as it now prompts the moderator with a pop-up window at the time of sign in saying that the recording has not been started. A moderator can keep that window open until he/she clicks on the record button.

Another restriction was not being able to observe student interactions within their groups. Newer versions of Elluminate Live may improve this feature. Also, a further study may focus specifically on student-to-student interactions within their group environment, and different private sessions can be created for each group to be recorded.

However, such a task design would not allow for an easy flow between an entire class and group activity.

An additional update to Elluminate Live which would be very effective is one that would allow instructors to observe the attendance of lurking students. Currently, we cannot be sure if a student is actively listening to the session or leaves the computer and is engaged in something else. To a certain point, through interactive tasks and comprehension checks, we can control this, but it would be effective if we were notified about inactivity as do many instant messenger programs which show an “Away” message next to the person’s name. Similarly, in the participants’ window of Elluminate Live, the moderator could be notified with a message if a participant student has not been active for a certain time. The instructor might be given the option to modify the length of lapse depending on the meeting and activity. For example, at the time of an online quiz, we would expect students to use the program frequently while in teacher directed presentations, we may view a 5-minute lapse as normal.

In terms of research, Gmail Chat was to be an effective tool for collecting written chat dialogues. If I had a chance to replicate this study, I would make sure all students use Gmail Chat with me during the first week of the semester because I noticed that some students did not read the instructions and refrained from using Gmail Chat due to not being able to save their interactions. In addition, some had not downloaded the program necessary to use the audio chat feature while some just did not prefer it. Therefore, our chat dialogues had to be mostly text-based. Instructors as well as researchers may need to encourage students more for use of audio and webcam in a chat. This proves to be especially significant because the participants in this study were preservice teachers.

Experience with technology not only would help them overcome their technology phobia, but also encourage them to be creative in incorporating technology into their teaching.

Lastly, data triangulation through surveys, interviews, researcher journal, and self-reflection papers effectively contributed to the study's strength. Survey-1 helped me identify my individual participants while Survey-2 displayed the participants' overall evaluations and perceptions at the end of the semester. The researcher journal reflected instructor's perspectives and guided me in data analysis. Moreover, student reflections revealed students' immediate feelings and perspectives right after each experience with Elluminate Live, which were specific in terms of different tasks and activities that took place in each meeting. Students' reflections also provided information about changes in perspectives over time. Interviews with the selected three participants provided many insights into student perceptions, feelings and thoughts. Participants provided more information during the interviews than they did in their written reflections and surveys. It helped us clarify any issues and identified new themes. It also enhanced our social presence.

Pedagogical Implications

This study has demonstrated that synchronous communication tools effectively promote CoI in an online course. As previously discussed in Chapter 2, the majority of online courses include solely asynchronous communications, which may lead to student isolation, frustration, and delay in communication and feedback. Our course included both asynchronous and synchronous communications. Asynchronous interactions were carried out through group and class discussions in each section through discussion board, document sharing, emails, and other Blackboard tools such as the grade book where I

provided feedback to students. In addition, I used Gmail Chat and Elluminate Live for synchronous communications. Although synchronous communications enhanced CoI, the overall course design based on socio-constructivist learning had a big role in creating CoI. First and foremost, group formations for semester-long section discussions and major projects enabled social presence among group members to prosper. All participants stated that they felt social presence stronger for their group members compared to other classmates. Therefore, the results of this study provide support to previous studies and researchers putting collaborative learning and interaction at the core of online education and community of inquiry (Arbaugh, 2005; Richardson, & Swan, 2003; Rovai, 2002). Moreover, creating a forum just for self-introductions and social conversations (e-Café in this course), posting photographs with introductions, frequent emails, and holiday greetings contributed to the participants' sense of community feeling.

What follows next is the discussion of practical implications for Gmail Chat and Elluminate Live.

Gmail Chat

I used Gmail Chat to be available to my students in real time to answer their questions. This proved to be very effective in place of holding fixed office hours or just being available via email. Students did not need to download any additional software. Having both chat and email applications on one screen facilitated the synchronous interactions. Compared to Elluminate Live, Gmail Chat did not require any creation of meeting sessions, therefore, it was more readily available to the students.

Based on their schedule, instructors may provide students with fixed hours to be available online. However, there are some implications that we can derive from this study to better the use of Gmail Chat or any other instant messaging tool:

- Provide clear instructions and if possible visual representation for first time users.
- Require students to meet you online during the first week of the semester to test the tool with audio and, if possible, video options.
- Emphasize that Gmail chat conversations are saved and can be searched with key words when needed.
- Encourage student groups to utilize the chat for group communication and collaboration.
- Motivate students to use audio and video chat.
- Remind students to sign into chat when they study for the course so that they can communicate with their classmates who are studying at the same time.

Illuminate Live

Training and Planning

As necessary for all lessons or meetings, a live online meeting requires knowing how to use the tools, planning the session agenda in detail, providing clear directions, and having a back-up plan for unforeseen problems.

First and foremost, institutions need to provide avenues for faculty training and professional development for becoming effective online educators. Transition from on-campus teaching to online teaching should not be seen as an easy task of digitizing course

content. Like face-to-face instructors, online instructors need to be approachable, available, understanding, and welcoming. They must remain open and flexible to ideas, diverse techniques, and new programs and applications. They need to know how to utilize these programs effectively to meet course objectives rather than using technology for the sake of technology.

Regarding using SWCS, faculty also need appropriate training in strategies, techniques and methods to create CoI efficaciously. They may benefit from studying guidelines, attending virtual or on-campus workshops, and collaborating with colleagues. Further, any instructor planning to implement synchronous communication tools needs to practice with them first. Practicing with the tools before using them in a live meeting with the class will provide tremendous help to foresee possible obstacles and plan sessions accordingly. For example, on Elluminate Live, assigning students to breakout rooms, uploading group task information on each group's Whiteboard, communicating with each group during breakout activity, reminding about time, and taking all students back to the main room might be challenging.

Having a detailed written plan would be useful for the instructors for a live session since unexpected things may happen and instructors may get distracted and forget important tasks in their agenda. It is frustrating to have technical problems or lose the Internet connection just minutes before a live class meeting. Therefore, in order not to panic, it is advisable to have a back-up plan and communicate this with the students so that they will know what to do in case you have technical problems and are late to the meeting or if you suddenly get disconnected in the middle of a session. If problems occur before the session starts, asking students to discuss a problem that has been sent them via

email and wait for you for 10 minutes may prevent cancelling the meeting if you resolve the technical problems. If you lose the connection during the session, students may continue with their task (like presentation or group activity) for some time. In addition, asking students to check their emails in case of a technical problem might be useful if you are able to send email to the class about the situation.

Giving clear directions for everything, even for something as seemingly simple as to how to do introductions, is necessary. Just saying, “Hi, I’m Aylin” does not provide an effective introduction because it does not help members get to know each other. It also makes it hard to follow each participant as turns become so fast. Directions are especially important for break-out activities because communication with each group becomes a challenge once students are assigned to break-out rooms. The instructor (or assistant moderators if available) can enter each group to check on their progress and answer any questions the groups have. However, students need to be informed about these possible group visits by the moderators beforehand.

Interactivity

Multi-dimensional and dynamic interactions are made possible through the use of different tools available on Elluminate Live. While this system can be used for preparing content presentations for use as asynchronous course materials, for a fun and effective live meeting instructors need to promote interactivity through making different tools available to students (such as chat, audio, emoticons, Whiteboard tools) and designing effective activities. Listening to a live lecture without any active participation does not differ from listening to a previously recorded lecture. This neither motivates students to listen attentively nor provides the instructor with feedback. Participants in this study

highly valued the interactive activities that we used. Asking students to do presentations or lead a discussion will give them a totally different experience. Such activities will enhance peer support and scaffolding. Thus, online instructors interested in using a SWBCS should plan their sessions to involve students actively as much as possible. In lecture sections, check students' learning frequently with short review questions, pausing and asking about the pace of the session, and using humor to take attention. Making use of different tools will also add excitement and effectiveness to the session. For example, taking students on a web-tour, using break-out activities, devising student presentations, creating interactive PowerPoint documents where students can draw, highlight or type on were efficacious in this study.

Setting Climate

All participants expressed that they valued how my strategies and verbal encouragement made them feel comfortable and stress free during our meetings. I realized the critical role of setting the climate especially when April expressed how anxiety prevented her paying attention to other groups' presentations during the SLA Theories meeting. Because she had technical problems and attended the meeting late, she was not online when I tried to create a stress-free learning environment at the beginning of the meeting.

Use of Webcam

Using a webcam on Elluminate Live augments social presence and cognitive presence. Results showed that participants appreciated when I used a webcam to introduce myself and to explain certain phonology topics. They expressed that it made them feel my social presence. They had a picture to go along with my name and audio,

which made them see me “as a real person”. Also, they stated that my facial expressions and demonstrations helped them learn voicing feature and how some phonemes are produced. However, I think students do not feel comfortable using their webcam in a class meeting. They could have used a webcam during their SLA Theories and LEP Analysis project presentations. Moreover, I could have used it more often rather than just using it to demonstrate certain topics. It was not because I did not feel comfortable with it, but rather I just did not remember it. It was only during our interviews that both participants and I used webcams. I think students and instructors may need more adjustment time to use a webcam in class sessions. In addition, on Elluminate Live, students may need structured activities and instructions for when and how to use a webcam so that they would not feel “odd one out” when they open their camera window.

Time Management

The last, but certainly not the least, critical element is time-management and its articulation to the students for use in live meetings. Sometimes there might be so many questions from students that the instructor may not be able to finish his/her agenda. The instructor either may opt to continue with the questions and conduct another live meeting to finish the agenda or answer the questions via email or resume at the end of the session if there is extra time. Time-management is also important when students are doing presentations. Students should observe their allotted time. Instructors may use the timer on Elluminate Live and remind students about the time. Finally, when instructors pose a question to the class, he/she should be careful to give enough wait-time to students to respond. Since some students might immediately answer the question on the chat or on the Whiteboard, students should be reminded to wait for a minute or so before they share

their answer. This would give all students necessary time to think over the question before they see the answer.

Recommendations for Future Research

Although CoI framework is in its 10th year, there is scarce research on its use in online courses integrating synchronous communications. The majority of the studies analyzed asynchronous discussion board texts, which could only reflect a part of community of inquiry in a course. There is high need for more studies to investigate synchronous interactions and tasks as well as course designs in the light of a CoI framework. This study was limited with being conducted in one online course environment in one organization only. Future research might expand to larger sample populations or might replicate this study to other contexts. Future research in different contexts will provide insights into the role of instructors' attributes and teaching approach as well as the role of learners' needs and characteristics. Such research will be valuable to provide an opportunity to support or question the findings of this research.

The current study did not focus on how one element of CoI impacts the other. We can draw a tentative conclusion based on participants' reflections that both social and teaching presence positively affects cognitive presence. Nonetheless, further studies may investigate the relationship among each of them and the impact of each presence, (social, cognitive, teaching) on perceived learning and satisfaction in synchronous communications.

An experimental case study might be conducted to compare two sections of one course taught by the same instructor where one of the sections involves synchronous communications. It would be interesting to investigate in what ways CoI and student

satisfaction might differ by using synchronous communications. A similar study might also focus on teaching presence, in other words, how different course designs and various instructional techniques used by different instructors impact CoI and student satisfaction.

It would also be significant to examine social presence within synchronous group meetings. How would it be different from entire class meetings? Would students project more social presence in their groups than in a class meeting? Would regular synchronous group meetings enhance social presence and finally cognitive presence?

We will continue to be amazed with the new technologies entering into online education. For example, currently internet phones and iPad applications are gaining in popularity. Therefore, further research can explore pedagogical applications and results of new multimedia or learning management systems through the lens of a CoI framework.

Conclusion

This study yielded that synchronous communications in the form of impromptu student-instructor interactions on an instant messaging tool and live class meetings facilitated the manifestation of the CoI elements—social, teaching, and cognitive presence. Providing extended “office hours” through Gmail Chat reinforced the instructor’s availability to the students, made immediate interactions possible when students needed them, and enhanced social presence. It appeared that the more the students used this chat with their group members the more satisfied were they with it in terms of CoI.

A SWBCS, Elluminate Live, provided effective tools to implement collaborative and constructivist learning activities and created a real classroom feel where students

could project their own social presence and feel the presence of other members. Through immediacy and high interactivity with multiple tools such as webcam, audio, text-chat, breakout room, and Whiteboard tools, Elluminate Live enabled the development of a dynamic balance of all the presences to sustain a community of inquiry.

In conclusion, when used in coordination with asynchronous communication tools such as email, discussion forum and other course management system tools in a preservice ESOL online course which was designed and delivered based on socio-constructivist learning and teaching techniques, synchronous interactions have shown to positively contribute to the development of an effective online community of inquiry.

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APPENDICES

Appendix A: Syllabus

College of Education-University of South Florida

FLE 4316, Language Principles and Acquisition

Section 798(Distance Learning)

Syllabus – Fall 2009

Instructor: Aylin Tekiner Tolu **Office:** Virtual Office via Elluminate
audio/video by appointment and find me online
at Gmail Chat

E-mail: atekiner@mail.usf.edu **Prerequisite:** FLE 4315

Course Description:

This course is **totally online**. That is, we will not be able to have face-to-face office hour or class meeting except the **orientation and midterm** days. All communications will be via the Internet mostly **asynchronously** (email and discussion boards) and a few times **synchronously** (real-time meetings for office hours and 4 class meetings) for which you need a headset to be able to talk. Webcam is not necessary but preferred.

The course provides an overview of the components of language, linking them to methods and techniques of providing comprehensible instruction to English language learners. Designed for pre-service and in-service teachers, this course supports the development of professional literacy skills geared towards appropriate pedagogical practices for the instruction of English language learners in Florida.

Course Goals & Objectives

1. Students will demonstrate basic comprehension of the sub-fields of Linguistics by defining, describing and applying to social and classroom context the disciplines of:
A) Phonology & Phonetics—B) Morphology—C) Semantics—D) Syntax—
E) Discourse, Pragmatics, & Nonverbal Communication
2. Students will apply their comprehension of the subfields of linguistics through:
 - Analyzing authentic oral and written language of English language learners (from videotaped and/or audio-taped oral samples and samples of student writing) in class.
 - Developing a case study describing an English language learner's linguistic competence.
3. Students will apply their knowledge of linguistics and the second language acquisition process to developing, implementing, and evaluating appropriate instruction through:
 - Developing lesson plans and assessment measures for a variety of topics with appropriate instructional modifications for English language learners
 - Developing a case study describing an LEP student's literacy development.

Essential Websites

1. Blackboard link for the course site and email (Gmail) at <https://my.usf.edu> (You must access this site regularly!)

Appendix A (Continued)

2. Main college ESOL Website <http://www.coedu.usf.edu/esol> (Site has information on the endorsement, the ESOL Folder, and resources.)
3. FLE e-Portfolio Policies and Chalk & Wire
<http://www.coedu.usf.edu/main/departments/seced/ForLang/FLEePortfolioPolicies.htm>
<http://www.coedu.usf.edu/main/chalkandwire/index.htm>

Required Textbook: Ariza, E. et al. (2006) *Why TESOL? Theories and Issues in Teaching English as a Second Language for K-12 Teachers*. (3rd ed) Kendall/Hunt Publishing Company. ISBN-13: 978-0757527005
Available at USF Bookstore. Also online @: www.amazon.com and www.bn.com

Course Requirements

All readings, activities, and assignments of this course are filled with numerous varied evaluation activities to support mastery of the knowledge and skills needed for effective teaching of LEP students. I ask you to use the assignment rubric (under Rubrics and Forms) to do a self-evaluation before you submit your assignments. All assignments for this course will be submitted via Blackboard.

Projects & Assessments

You must see the Schedule and Calendar and each section introduction letter for due dates. Assignments are due midnight on the dates indicated. The instructor reserves the right to revise this schedule as needed. You will be informed about any modifications. Extensions are not granted, so be certain to work on assignments throughout the semester, and create electronic backups of your work, even for the posts to discussion board. Be in control of your own learning - you are preparing for a demanding profession with a high degree of responsibility - practice both being responsible and professional in this course. If this is your first distance-learning course, you might find it difficult to get used to, therefore, plan ahead and visit the website at least 4 times a week and contact your professor when you have a question.

- Late submissions are NOT accepted without a permission granted first. Late submission will lead to 10% off for each day-up to a week. No assignments will be accepted after a week late.
- All deadlines are by midnight of the given day.

Below is the summary of requirements. Read carefully all assignment instructions and rubrics, and check samples on Blackboard.

1. Analysis of an LEP student's linguistic development (LEP Analysis): 200 points

Core Task- need to get at least 70% to pass. Remember to keep a print out copy in your ESOL binder. Also submit this assignment to Chalk and Wire during the finals week.

This assignment will be done collaboratively in your groups. The assignment has 3 step-submission:

Appendix A (Continued)

1. LEP Plan of Attack is 5 points. Submit your step-by-step plan for LEP Analysis data collection.
2. Part 1 is 45 points. Part I will include introduction, phonology, morphology, syntax and interview transcription with IPA. Part 1 will be carefully reviewed by the instructor and feedback will be provided for necessary revisions. When the whole paper (Part I and II) is submitted, you are expected to have made necessary changes to Part I and follow along in Part II. Your first grade on Part-1, out of 45 will not be changed, but the whole paper will be graded.
3. Part 2 (the whole paper-everything included- introduction, phonology, morphology, syntax, semantics, discourse and pragmatics, literacy, writing sample, interview transcription, signed observation form) is 150 points.

2. ESOL-Modified Lesson Plans: 150 points (50 points each)

Core Task- need to get at least 70% to pass. Remember to keep a printout copy in your ESOL binder. Also submit this assignment to Chalk and Wire during the finals week.

Can be done as a group or individually! You have to plan this early in the semester so as not have any scheduling problems with your group members.

Write your own lesson plans (or a unit plan) or find them on the Internet (cite the reference), then submit it for me to check them. Once I approve, you can start your modifications. Modify these lessons for a class with students at all four levels of English proficiency.

You will also have a practice with lesson plan modification activity in Section-1 and 2. Each student will review other groups' lesson plans and comment on them. Follow the format and all requirements provided on the instructions and rubric (Section-1 Folder & Rubrics/Forms Folder).

3. Five Online Quizzes—100 points- One attempt only! Do not miss their deadlines. They will be automatically unavailable after 11:50pm by the deadline.

4. Midterm exam — 150 points (Note: It is required to pass this exam with a 70% to receive credit for this course). The exam will be administered in a lab on campus! Retakes are allowed if you fail the midterm. There will be non-graded midterm review tests and an online whole-class meeting via Elluminate Live for midterm review.

5. Presentation of LEP Analysis at online Elluminate Live meeting: — 100 points- Each group will present their project online. You will introduce your student, discuss his/her skills and major problems in each area (phonology, semantics, morphology, syntax, pragmatics, and literacy) and explain your best teaching suggestions for these areas. Presentation is 70 points (explanation, content, PowerPoint). Participation is 30 points (commenting on other groups' cases, asking and answering questions, giving examples, recommendation, etc.). Those who have to miss the online meeting will do the reflection on discussion board asynchronously.

Appendix A (Continued)

You will need a headset (or a microphone and speakers). Detailed information and the rubric are on BB under Assignments.

6. ESOL binder preliminary check and Chalk & Wire—50 points - Take your binder when ready to ESOL office at EDU 266, (813- 974-6880), for the preliminary check before its deadline in section 7. Make sure to get your name checked in our class list in the office. I will get the list from the office after the deadline. You will have your ESOL binder checked in each ESOL course you take to make sure that you have completed your work from previous ESOL courses and have received the check-off sheet and that everything is in your binder. Check ESOL website for setup instructions <http://www.coedu.usf.edu/main/ESOL/ESOLFolder.html>

Print and place major assignments (LEP Analysis and Lesson Plans) in your binder after they are graded. These assignments do not have to be in the binder when you get your binder checked during this semester. Place them in the binder when you receive your grade.

You are responsible to get a final check-off of your ESOL binder in the ESOL Office before graduating.

Any questions please contact me or refer to the ESOL Office, EDU 266, (813) 974-6880.

Those who plan to graduate this semester: Be sure to have completed late field experience if you are graduating this semester and let the ESOL office assistant know that you are graduating. You will pick up your course completion checklist from the ESOL office after the semester is over.

7. Participation in group & class discussions and Reflection papers -- 250 points (200 points by the instructor and 50 points by your group members). Active, thoughtful, and timely participation is a critical component to creating a dynamic and effective learning community online. You are expected to be an active participant in online discussions. Reading the required chapters of the text, looking at the on-line presentations, and your personal findings and experiences will help the quality of the contributions that you make. Participation in group and class discussions will be graded by the instructor (200 points). Check the discussion evaluation rubric for details.

There will be four synchronous meetings (Elluminate Live) over the semester. You will submit a reflection paper after each live meeting. Each reflection paper is 10 points. Those who have a work or class schedule conflict or emergency problems will contact me and they will do the discussions and/or make-up assignment asynchronously. They also need to inform their group members in advance if the meeting involves group work.

Group and self-evaluations: You will evaluate yourself and your group members at the end the semester. See the form on BB. The average point given to you by your members and yourself will be assigned as your grade out of 50 points. This will help you get a fair individualized grade for your participation. Be professional, respectful

Appendix A (Continued)

and responsible group member; support each other in terms of motivation and critical thinking.

Grading Scale

Your final grade will be the total of points accumulated for the projects, activities and participation listed above. Course Overall Grade:1010

A=900 or above; B=800-899; C=700-799; D=600-699; F=0-599

ESOL Endorsement Requirements

The ESOL Endorsement involves more than just taking the ESOL courses, please see the website for a full explanation of all the ESOL requirements:

<http://www.coedu.usf.edu/main/ESOL/ESOL.html>. Here is a summary:

1. ESOL Courses: It involves meeting all the ESOL Performance Standards (PS) in your ESOL Courses (by completing ALL assignments satisfactorily) and passing the exam with a 70% or better – At the end of each of your ESOL courses you will pick up a sign-off sheet for all the ESOL Performance Standards met in that course from the ESOL Office- EDU 266.
2. ESOL Infused Courses: Collecting course work to document ESOL PS's in all your ESOL-infused courses.
3. ESOL Late Field Experience: It involves documenting that in one of your internships, you have taught in a classroom for a minimum of 10 days, supervised by an ESOL-Endorsed teacher; and that you have successfully planned, implemented, and assessed instruction for at least one ESOL student. The ESOL PS's that were met in the field experience need to be documented– see ESOL Late Field Experience form at: <http://www.coedu.usf.edu/main/ESOL/LateFieldExp.html>
4. It also involves getting a final check-off in the ESOL office (EDU 266) before graduation. The binder check assignment in this course is not your final binder check for graduation unless you have met all requirements for binder.
 - ESOL & Florida Accomplished Practice (FAP) Requirements (for ESOL-infused courses and other courses where assignments need to be collected by students to complete their portfolios): Please note certain assignments are marked (e.g., AP4 and 8, and/or ESOL22) or (*) and should be saved once graded, as appropriate documentation for one or more of the Florida Accomplished Practices/ESOL Performance Standard. You have to print out your work and put them in your binder. All ESOL courses must be completed on the Tampa campus.

Chalk & Wire ePortfolio

In compliance with national and state-approved program standards, the Foreign Language / ESOL Education Faculty of the USF College of Education (COEDU) have identified a set of critical tasks (in ESOL-3, these are Lesson Plans or Unit Plan and LEP Analysis) that students must satisfactorily complete prior to graduation. These critical tasks are aligned with the Preprofessional Benchmarks for the Florida Educator Accomplished Practices (AP's) and closely articulated with the COEDU Conceptual Framework.

Appendix A (Continued)

The assessment system in the Chalk & Wire ePortfolio system is separate and distinct from the university grading system. Each Critical Task will be graded according to an established rubric provided in the Chalk & Wire System. Grading for these assignments is based on a 5-point scale with 5=Excellent; 4 = Good; 3 = Average; 2 = Poor; and 1 = Failure. See rubrics in 'Assignment Information' section on Blackboard.

Students must receive a score of 3, 4 or 5 for EACH Critical Task in order to receive a passing course grade and earn a degree. Students should log on to their ePortfolio periodically to check their grades and ensure successful completion of each Critical Task. See Foreign Language Education ePortfolio policies at: <http://www.coedu.usf.edu/main/departments/seced/ForLang/FLEePortfolioPolicies.htm>

Online Communication & Attendance

I will communicate with you through Blackboard; thus, it is absolutely imperative that you ensure you receive messages from your e-mail account in Blackboard. If you do not receive e-mail from me through Blackboard, then you will need to check with Academic Computing and correct the problem. In addition, communication with me should be basically through your official USF e-mail account. If you don't get a response from me in 48 hours, contact me again. In addition, type a relevant topic in the Subject area of your email, include your name and group name if it relates to your group. If it concerns your group, include each group member in To or in CC.

Compared to face-to-face courses, online courses take more time for both students and teacher. It is advised that you plan to study 10 to 15 hours weekly and make whatever arrangements are needed in order to give yourself this time to devote to your studies. You are responsible for your own learning, both in terms of the knowledge and skills you are here to obtain and refine, as well as in consideration of the children whose lives you will impact in your professional practice. By taking this course, you show that you know how much time and effort you need to spend on this course.

Other Policies

Students with disabilities are responsible for registering with the Office of Student Disabilities Services in order to receive special accommodations and services. Please notify the instructor during the first week of classes if a reasonable accommodation for a disability is needed for this course. A letter from the USF Disability Services Office must accompany this request.

All students have a right to expect that the University will reasonably accommodate their religious observances, practices and beliefs. Students are expected to notify the instructor in writing by the second class if they intend to be absent for a class or announced examination, in accordance with this policy.

- Incomplete grades are ONLY available to students if all of the following conditions are true at the time of request:
- 75% of the course requirements have been met.

Appendix A (Continued)

- All course requirements that have been met have received a passing grade.
- The student has a documented reason for being unable to complete the course requirements.

Code of Conduct:

Students will treat other individuals (read: your professor, your classmates, your cooperating teachers, your case study subjects, and office staff) with respect and human dignity in all interpersonal relationships, including emails, chats, group and class discussion messages.

Academic Dishonesty: Students will not engage in theft - the unauthorized taking, misappropriation or possession of any real, personal, or intellectual property owned or maintained by the university, any person on campus, or any other person or agency. (Read: don't steal stuff, don't plagiarize-even material you find on the internet, and don't copy one another's individual work. Consequences are an FF for the course, indicating dishonesty on your transcript, or dismissal from your program, the College, and/or USF). The University of South Florida has an account with an automated plagiarism detection service which allows instructors to submit student assignments to be checked for plagiarism. I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to a web-based plagiarism detection program. For more information, go to <http://www.ugs.usf.edu/catalogs/0405/adadap.htm>.

Students will not engage in disorderly conduct - any breach of the peace, such as causing a disturbance or being unruly.

The College of Education CAREs

The College of Education is dedicated to the ideals of Collaboration, Academic Excellence, Research, and Ethics/Diversity. These are key tenets in the Conceptual Framework of the College of Education. Competence in these ideals will provide candidates in educator preparation programs with skills, knowledge, and dispositions to be successful in the schools of today and tomorrow. For more information on the Conceptual Framework, visit: www.coedu.usf.edu/main/qualityassurance/ncate_visit_info_materials.html

Appendix B: Evaluation of Discussions

Evaluation of Discussions

Discussions are one form of interaction between students in the class and with your instructor. As you will learn this semester, these interactions are a very important part of distance learning. Therefore, they are a big portion of your grade. Please be sure you understand how they will be graded and that you are aware of proper Netiquette for communicating in electronic formats. If you need a Netiquette refresher, check out the Rubrics and Forms area of the course site.

Group Discussions: Students should participate substantially in group and class discussions. Groups can meet online using group discussion board and/or Elluminate. Elluminate meetings are recorded (both text and audio), thus I can grade them. Each student should contribute to their group if a group discussion is assigned for that section. Discussions do not mean that you post your answers to discussion questions. Frequent posts with questions, clarifications, examples, and so on need to be apparent. In each section, the summarizer should create a summary of their discussions answering the section topics effectively. The whole group members, especially the manager should approve the summary before it is posted to the Class Discussion Board. This requires great planning and collaboration, and having your own group deadlines to meet the course deadlines effectively.

Class Discussions: After summaries are posted to class discussion board, each student should read all postings; per each topic pick at least one other group's summary (or one individual's response/question) to respond and reflect on. Group members should be active to answer any questions for their summary. Our aim is to create an effective learning environment by high-level critical thinking and synthesis.

If there is no group discussion for that section (Section-1), you must post your original discussion and comment on one other student's posting for each topic. Critical thinking and reflection should be evident in the conversations. Each section is designed for 2 weeks. To enable the constructive communication, all original postings have to be sent by the deadline. That is, you will have 4 days to respond/comment to others.

Each group member will play a specific role in the group environment at all times. You will assign these roles during Orientation or the first section and email to me your role sharing. Everyone is responsible for his/her own work and required to be a productive part of the group. **Peer evaluations** as well as **self-evaluations** (the form is under Rubrics/Forms on the Menu) on performance as a group member will be turned in during Section 7. The average point (out of 50) you get from group evaluations will make 1/4 of the overall participation grade. You will submit the self and group evaluation form via the Assignments area when requested. This grading process allows for fair individualized grades and still provides an opportunity for you to work in groups.

Appendix B (Continued)

Section 1: 25 points (for class discussions-CD)

Section 2: 35 points (10 points for Group discussion-GD, 10 points for CD, 5 points for Elluminate Meeting-1, and 10 points for Reflection Paper-1)

Section 3: 25 points (15 points for GD, 10 points for CD)

Section 4: 30 points (10 points for GD, 10 points for CD, 10 points Reflection Paper-2)

Section 5: 25 points (15 points for GD, 10 points for CD)

Section 6: 35 points (10 points for GD, 15 points for Elluminate Meeting-3 participation, and 10 points for Reflection Paper-3.

Section 7: 35 points (15 points for GD, 10 points for CD, 10 points Reflection Paper-4)

Total: 210 points (+ 50 points from self & group evaluation)

Group and Class Discussion Rubric

	%0- 25%	%30-50%	%60-75%	%80-100%
Promptness	Zero contribution timely.	Contributes only within the last hours of deadline.	Contributes timely.	Frequently contributes in a timely manner which leads to effective discussions.
Content quality of the posts	Irrelevant content.	The entry represents just personal perspective, which does not reflect reading materials.	The content represents rich, thoughtful critical analysis.	The content represents rich, thoughtful critical analysis and synthesis. References are used.
Contribution to the Learning Community	No attempt to contribute learning community. Just use of agreement statements. For example, "I agree with what you said in your post", or "I liked your idea" does not count as moving the discussion to the next level.	Very limited contribution to the learning community.	Responds to some other community members' posts constructively, motivates the discussion by thoughtful questions and/or comments.	Aware of needs of community; frequently attempts to motivate the discussion; presents creative approaches to topics.
	* Quality of the group summary affects each member's group discussion grade. Members should be in agreement with the group summary before it is posted!			

Appendix C: Self and Group Evaluation Rubric

Use this form to evaluate the members of the group as well as yourself. Write the name of each group member in one of the columns, then assign a score of 0 to 5 (0 being the lowest, 5 the highest) to each group member for each criterion. Then total the scores for each member. At the bottom of this sheet make any comments that would like about your group interactions both positive and negative. You will submit this via the assignment area when requested.

Your name:	Group Name:				
Criteria	Group Members' Names (including yours) in an alphabetical order based on surname				
NAMES:					
Meets deadlines					
Contributes good ideas in meetings					
Submits high-quality work					
Shows respect for other members					
Your overall assessment of this person's contribution					
Total Points- out of 25					

Comments:

Appendix D: Survey-1

1. What is your name?
2. How old are you?
3. What nationality are you? What is your first language?
4. What is your major area of study?
5. How many web-based or Internet courses have you taken prior to this semester?
6. What made you decide to register online section of this course instead of face-to-face section?
7. How do you rate your computer and Internet skills?
8. How do you rate yourself as an online learner?
9. Do you have a computer and the Internet connection at home and/or work? If you have Internet, please explain if you use dial-up, cable, or DSL modem.
10. Do you have a headset and a webcam?
11. How much familiar are you with chat programs like Gmail Chat, MSN Messenger, AOL, or Skype? How often and for what purposes do you use them? Do you use text-message, audio or video conferencing?
12. The course instructor uses Gmail Chat to be available to the students by being online for extended hours. Do you think this will help you in any way? Do you plan to contact the instructor via chat when you need?
13. Would you prefer taking this course in a traditional face-to-face format, an asynchronous format (e.g., only Blackboard), or a blended format (e.g., both Blackboard and Elluminate Live and chat)? Why or why not?

Appendix D (Continued)

14. Did you use Elluminate Live or any other synchronous (real-time) web-based course systems before our course?
15. What advantages do you think Elluminate Live or other similar systems may offer for learning and creating an online community of learning where students feel connected to the instructor and other class members, and learn from each other?
16. Do you feel motivated to use Elluminate Live?
17. What concerns might you have regarding the use of Elluminate Live in this course?
18. Have you known any of your classmates or the instructor before this course?
19. How have you formed your groups? What factors affected your decision?
20. Are you taking any face-to-face courses with any of your classmates together?
21. Please feel free to share any other comments you have.
22. Since the beginning of this semester, how comfortable have you felt about:
 - Contacting the instructor
 - Contacting other students
 - Participating in class discussions
 - Expressing your feelings
 - Expressing your thoughts
23. Since the beginning of this semester, how do you feel about:
 - Instructor support
 - Classmate support

Appendix D (Continued)

- Learning materials
- Learning activities/tasks/assessment
- Overall course satisfaction

24. I will conduct a dissertation study in this class during the semester. I kindly ask your voluntary participation for this study. If you accept, I will contact you for 2 online interviews (one in the mid semester and one in the end of the semester), and use the data from your reflections, course assignments, and surveys. You can find all necessary information in the Research Folder under Course Documents. Also, you can contact me for more information. Will you be willing to participate in this study?

Appendix E: Survey-2

Overall Perceptions

Name:

1. How satisfied are you with this online course? Were your goals and/or expectations met? Please explain (e.g. the course activities, assignments, content, interactions, etc.).
2. How comfortable did you feel about:
 - Contacting the instructor
 - Contacting other students
 - Participating in class discussions
 - Expressing your feelings
 - Expressing your thoughts
 - Learning the content
3. How did you feel about:
 - Instructor support
 - Instructor's direct teaching
 - Classmate support
 - Overall course satisfaction
4. Have you perceived a sense of online community of learning in this course? Why or why not?
5. Which aspect of this course was most beneficial to you in terms of learning and why? (This can include different types of course activities, types of interactions, etc.)

Appendix E (Continued)

6. Were you able to form distinct individual impressions of some classmates (feeling a sense of social presence) during this semester? If yes, what helped you achieve this most?
7. Did you feel your point of view was acknowledged by the instructor and other students?
8. Did you feel a real connection with the instructor, group members, and other students?

Related to Elluminate Live

9. Do you believe during this semester the Elluminate meetings contributed to our online community of learning?
10. How did you feel when you listened to the instructor and other students speak (e.g., compared to text messages, what did audio add to communication)?
11. How do you rate all Elluminate Live meetings we had in terms of (please comment on each section):
 - Your learning
 - Instructor support and facilitation of discourse
 - Instructor's direct teaching
 - Peer teaching (group presentations)
 - Social presence(projecting oneself socially and emotionally, thus being perceived as real people and feeling a sense of togetherness)
 - Student interactions and classmate support
 - Overall satisfaction

Appendix E (Continued)

Related to Gmail Chat

12. How do you rate Gmail Chat use in terms of (please comment on each section):
- Your learning
 - Instructor support and facilitation of discourse
 - Instructor's direct teaching
 - Social presence(projecting oneself socially and emotionally, thus being perceived as real people and feeling a sense of togetherness)
 - Interactions with other students and classmate support
 - Overall satisfaction

Other Factors

13. Apart from the use of Elluminate Live and Gmail Chat, what other factors (such as face-to-face orientation, e-Café forum, use of photos, use of audio messages/emails, personal emails, prompt feedback, group projects, and so on) do you think affected creating an effective learning community in this course (which covers social presence, teacher presence, and meaningful learning)?
14. Compared to other online courses you took before where synchronous tools were not used, what difference did using the synchronous tools (Elluminate Live and Gmail Chat) make in terms of interaction, learning, and a sense of belonging to this class?
15. Please feel free to comment on any other issues you want to share with me?

Thank you.

Appendix F: Synchronous Meeting Student Reflection Log

Regarding the today's synchronous meeting session, please describe:

1. How you felt during the session.
2. The challenges and problems you encountered.
3. The advantages that you perceived regarding the use of Elluminate Live.

Regarding the today's synchronous meeting session, please comment on the following topics:

4. Your interaction with the instructor. (Effective? Met the needs? Easy to interact? Felt comfortable to interact?)
5. Your interaction with other students.
6. Your learning (Has it been effective to learn the content? Do you value live meetings for your learning the course content?)
7. Your overall satisfaction of the meeting.
8. How did the Elluminate meeting affect your perception of social presence? (projecting oneself socially and emotionally, thus being perceived as real people and feeling a sense of togetherness online)
9. How did the Elluminate meeting affect your perception of classmate's and the instructor's social presence (e.g. did you perceive them as real like in face-to-face classroom?)
10. How did the Elluminate meeting affect your perception of instructor's and/or peers' teaching presence (direct teaching, presenting content, providing clarification and feedback, facilitating student learning). What tools or strategies did you find effective? What was not effective?

Appendix F (Continued)

11. Overall, do you believe this meeting contributed to creating an online community of learning for our class? Do you feel we have established a community of learning by now? Do you feel as a member in this community?

Note: Sense of community is “a feelings that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillan & Chavis, 1986, p. 9). Creating a sense of community in an online course alleviate s students’ feelings of loneliness and isolation that is impediment for learning.

12. So far how often have you used Gmail chat or any other synchronous tools with the course instructor and classmates? How do you evaluate its effectiveness? Would you rather prefer an office hour via Elluminate every week?
13. If you have not used it, what is the reason? Do you plan to use?
14. Do you rate the instructor’s availability to the students?
15. Comment on your experience with Gmail chat in this course, do you think it promotes social presence, teaching presence, and your learning? Do you think it promotes having an online community of learning?
16. Please share any other comments you have.

Appendix G: Synchronous Meeting Researcher Observation Log

Date:

Time:

Purpose of the session:

Presenters/Moderators:

Number of participants:

Teaching Presence & Cognitive Presence

Tools used:

Materials and resources the instructor used:

Teaching strategies the instructor used to motivate and encourage learning:

Interaction between the instructor and the participants:

Interaction among the participants:

Assessment and results:

Technical issues:

Social Presence indicators during the meeting:

Other incidents and/or comments:

Appendix H: Instructor/Researcher Self-Reflection Protocol

Background/ Previous Experience/ Course Design and Delivery

1. How long have you taught online courses and which, technologies have you used?
2. Does this course include any face-to-face meetings?
3. What is your training and experience in using synchronous tools in an online course?
4. What is your teaching load this semester? What is the enrollment in your course?
5. What are the biggest challenges of teaching this course online?
6. How do you plan to use Elluminate Live and Google Talk/Gmail Chat in your class?
7. What strategies are you currently employing to increase social presence, promote building a learning community and reduce feelings of isolation? What role do you think the synchronous tools play to achieve these aims?
8. What is the role of student-to-student interaction in this course? How do students interact with each other? How do you interact with your students?
9. What other advantages do you foresee with using synchronous communication tools?
10. What challenges do you foresee with using synchronous communication tools?
11. How do you inform students about Elluminate Live meetings as well as Google Talk/Gmail Chat ? Have you incorporated synchronous sessions into the course syllabus and calendar?
12. How do students in your class learn how to use synchronous tools? (Face-to-face orientation, written instructions, and/or practice meetings)

Appendix H (Continued)

13. Instructor/Researcher Self-Reflection at the end of the semester
14. What is your overall impression of use of Elluminate Live and Gmail Chat tools in this semester?
15. How often did you end up using Elluminate Live and Google Talk/Gmail Chat?
16. How was the participation rate in whole class Elluminate Live meetings?
17. How many students interacted with you using Google Talk/Gmail Chat?
18. How many students requested to have Elluminate Live meetings with you or with their group?
19. What challenges did you experience with using Elluminate Live and Google Talk/Gmail Chat? How did you try to solve them?
20. How would you rate the use of Elluminate Live for building a community of inquiry (teaching presence, cognitive presence, and social presence)?
21. How would you rate the use of Gmail Chat for building a community of inquiry (teaching presence, cognitive presence, and social presence)?
22. What is your perception of student satisfaction for Elluminate Live and Google Talk/Gmail Chat?
23. What were the most positive and negative experiences you had related to the use of Elluminate Live and Google Talk/Gmail Chat?
24. Based on your experience with these synchronous tools in this semester, what modifications would you make to your teaching? What recommendations would you have for other online instructors?

Appendix I: The Probing Interview Questions

1. How often have you used Elluminate Live and Gmail Chat in this course so far?
2. Are you using these tools to communicate with your friends? Tell me about your experiences, or why you do not use.
3. I noticed that you (e.g. did not participate much during our live meeting), please tell me about what affected you.
4. You wrote in your second reflection that (e.g. I enjoy synchronous meeting), can you please elaborate on this?
5. What is your overall impression of use of Elluminate Live and Gmail Chat tool in this semester?
6. Do you have any concerns related to synchronous interactions in this course?
7. What features of this course do you find most valuable to your learning?
8. Do you feel a sense of belonging in this course (to the instructor and other students)?
9. What do you think about the role of synchronous communication in your learning?
10. Do you think we feel more close and “real classroom” with the help of synchronous communications?
11. What do you think about teacher availability, office hour, and immediacy?
12. Are you comfortable with interacting with other students and instructor? What factors mediate your comfort level?
13. Remember our last Elluminate Live meeting, I was teaching (e.g. phonology), if we did not have that meeting, how do you think your learning would be affected?

Appendix I (Continued)

14. Do you believe having synchronous interactions affect your satisfaction with this course?
15. If you were the instructor, would you use synchronous tools and how similar or different way compared to this course?

Appendix J: Informed Consent



INFORMED CONSENT TO PARTICIPATE IN RESEARCH

Information to Consider Before Taking Part in this Research Study

IRB Study # _____

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study.

We are asking you to take part in a research study that is called: The Role of Synchronous Communication in an Online Preservice ESOL Course: Community of Inquiry Perspective.

The person who is in charge of this research study is Aylin Tekiner Tolu. This person is called the Principal Investigator (PI). However, other research staff may be involved and can act on behalf of the person in charge.

The research will be done in your online course, FLE 4316, Language Principles and Acquisition (section 798F09) at the USF.

Purpose of the study

- The overarching aim of the current research study is to investigate how synchronous computer mediated communication (CMC) tools mediate community of inquiry as well as student satisfaction in a totally online preservice ESOL course. Specifically, the aim is to understand the role and perceived effects of two types of synchronous CMC tools, Gmail Chat and Elluminate Live, on the student satisfaction and online community of inquiry which includes social presence, cognitive presence and teaching presence.
- This study is being conducted for a dissertation.

Study Procedures

If you take part in this study, you will be asked to

Appendix J (Continued)

- 1) Be interviewed twice: first, during mid-semester and second, at the end of the semester. Interviews will be conducted via Elluminate Live, will last approximately one hour and will be recorded. Based on the survey and reflection data, you may be contacted for another short interview.

[The following procedures are part of the course assignments and/or documents and records]

- 2) Take 2 online surveys: first, early semester and second, at the end of the semester. The survey-1 takes approximately 30 minutes. Survey-2 will take place approximately one hour.
- 3) You will be asked to write a short reflection on your each use of synchronous communications during the semester. Four Elluminate Live meetings are scheduled for the semester. And each meeting is recorded for course and research purposes. Use of Chat/Gmail Chat depends on student intention. Text-based chat sessions are recorded. These recordings as well as your class performance (participation and assignment grades) will be analyzed.

Alternatives

You have the alternative to choose not to participate in this research study.

Benefits

The potential benefits to you are to become a reflective learner.

Risks or Discomfort

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

Compensation

We will not pay you for the time you volunteer while being in this study.

Confidentiality

We must keep your study records as confidential as possible. All data including audio or video communications will be recorded in the BlackBoard course site and only the PI and you will reach your interview recording. Pseudo names will be used to protect your privacy. The data will be kept confidential at the researcher's home and saved on personal password-secured laptop. The data will be maintained for 5 years and then will be electronically destroyed. Except the PI and dissertation committee, no other person will reach the data. However, certain people may need to see your study records.

However, certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

Appendix J (Continued)

- The research team, including the Principal Investigator and dissertation committee.
- Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.) These include:
 - The University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Other individuals who work for USF that provide other kinds of oversight may also need to look at your records.
 - The Department of Health and Human Services (DHHS).

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are.

Voluntary Participation / Withdrawal

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please the investigator or the research staff. You are free to participate in this research or withdraw at any time. If you agree to participate in this study and later decide to withdraw it will suffice to let the PI know in writing through an e-mail. There will be no penalty or loss of benefits that you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your student status in this course you are taking with the PI.

Questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, call Aylin Tekiner Tolu at 407-430-8038.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

If you experience an unanticipated problem related to the research call Aylin Tekiner Tolu at 407-430-8038.

If you have questions about your rights as a person taking part in this research study you may contact the Florida Department of Health Institutional Review Board (DOH IRB) at (866) 433-2775 (toll free in Florida) or 850-245-4585.

Appendix J (Continued)

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you want to take part, please sign the form, if the following statements are true.

I freely give my consent to take part in this study. I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

Signature of Person Taking Part in Study

Date

Printed Name of Person Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect.

I hereby certify that when this person signs this form, to the best of my knowledge, he or she understands:

- What the study is about.
- What procedures/interventions/investigational drugs or devices will be used.
- What the potential benefits might be.
- What the known risks might be.

Signature of Person Obtaining Informed Consent

Date

Printed Name of Person Obtaining Informed Consent

Appendix K: Copyright Permission for the CoI Figures and Tables

-----Original Message-----

From: Dr. D. Randy Garrison [mailto:garrison@ucalgary.ca]
Sent: Sunday, July 26, 2009 4:49 PM
To: atekiner@gmail.com
Subject: Re: Community of Inquiry & Request for permission

Aylin,
You have my permission.
I would be interested in hearing about your research.
Best wishes,
RG

Aylin Tekiner wrote:

Dear Dr. Garrison,

I am a doctoral student at the University of South Florida, working on my dissertation. My degree will be in Second Language Acquisition and Instructional Technology.

I am very interested in the CoI model. My dissertation focuses on the role of using synchronous communication tools for community of inquiry in a totally online preservice teacher education course. Also, in another study, with my colleague, we plan to investigate teaching presence role for online collaborative learning. I would like to ask your permission to use a copy of your CoI figures and tables depicting categories and indicators of each presence in our written papers, with appropriate citations to your work per APA guidelines.

If you are interested in the findings, I would be happy to share them with you.

Thank you for your consideration and help.

Sincerely,

Aylin Tekiner Tolu

ABOUT THE AUTHOR

Aylin Tekiner Tolu received her B.A. degree in Teaching English as Second Language at Middle East Technical University in Turkey in 2002. After graduating, she worked as an English instructor in an elementary school and English language institute for adults. She received her M.S. degree in Cognitive Science from the same university in 2005. While being a Ph.D. student in Second Language Acquisition and Instructional Technology program at the University of South Florida, she worked as an ESL instructor in the English Language Institute, worked as an ESOL office assistant, and taught applied linguistics and preservice and inservice ESOL courses in the College of Education.