SKYPE™: A PORTAL INTO THE 21ST CENTURY
IN A SECONDARY SPANISH CLASSROOM

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by

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The purpose of this research study was to examine the experience of the high school students’ use of synchronous computer mediated communication (CMC) as they learn a second language. Six high school Non-Native Speakers (NNSs) of Spanish were paired with six middle school Native Speakers (NSs) of Spanish. The study addressed the primary research question, “How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?” These six NNS/NS dyads met once a week for 12 weeks. The students communicated through Skype™, a free online communication application, to complete various communicative tasks. Data from interviews, student journals, teacher journal, and videos were gathered and analyzed. Three findings emerged from the data: (a) the students experienced a variety of feelings that evolved over the course of the study, and these feelings were tied to their relationships with their NS partners and their own knowledge of the second language; (b) the students acquired the second language by taking ownership of their own learning and by using specific learning strategies; and (c) the students developed relationships with their NS partners that contributed to their feelings
about the project and to their second language acquisition. All of the findings were interconnected.
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CHAPTER I

INTRODUCTION

In this chapter I provide a summary of the goals for foreign language education for the 21st century. I include an overview of the history of Technology Enhanced Language Learning (TELL) and a synopsis of the research in synchronous Computer-Mediated Communication (CMC). I close this chapter with the purpose of my practitioner research study and a list of terms. This background information supports and guides my research and teaching.

In an effort to prepare our students for the world that they will inherit, the National and State Foreign Language Academic Content Standards established specific goals to address and acknowledge 21st century skills. Within the Standards it has been stated that educators must prepare students “to use a language in addition to English to communicate appropriately in a pluralistic American society and with the global community” (Ohio Foreign Language Academic Content Standards, 2003, p. 22). The Standards also “encourage active and experiential learning by balancing among structural, meaningful and culturally appropriate aspects of language that enable students to perform real-life tasks” (p. 23).

Today, with access to Web 2.0 tools, tools that allow the user to interact with the web content and/or others, second language students can learn about the target culture and use the target language to communicate with others throughout the world. With these tools, second language teachers can provide “active and experiential learning” (p. 23) and prepare their students to inherit the multi-cultural world in which they live—a
world full of different languages and cultures, a world that is no longer far off, but a world that is as close as the neighboring community or the nearest computer. The technological advances in the new millennium have made the vision of increasing knowledge about the target culture and enhancing second language acquisition a reality. As a practitioner researcher in the field of second language learning, and an enthusiast of technology, I continually look to explore the value and the implications of these tools. I also hope to improve my practice and contribute to the field of second language education through my research.

This dissertation research focuses on the use of one web-based communication tool, Skype. Skype is a free, online application that allows users to interact through video, voice, and/or text in real-time. With this form of synchronous CMC, individuals are able to correspond with others in the now. In my dissertation study, I describe my high school Spanish students’ experience of learning a second language with Native Speakers (NSs) in a synchronous CMC environment. My second language students communicated with their Spanish speaking counterparts weekly. During these communicative sessions, my students put their listening and speaking skills to the test by asking and answering questions in the target language. The use of Skype allowed me to provide an authentic experience for my students that could not be replicated within the traditional classroom. Through the computer, second language students can learn about the target culture and language, and prepare themselves for the world they will inherit.

The use of technology in the second language classroom is not new. Practitioners have always looked to technology to bring in the sights and sounds of the target culture
and to provide a means by which second language students can practice their skills. As new tools presented themselves, the practitioners and researchers explored both the advantages and disadvantages of these tools in the second language classroom. As the technology advanced, teachers and practitioners looked for new ways to reinforce language skills and learn about the target language and culture.

In the 1960s, the language laboratory and 8mm video were used to provide second language students with opportunities to produce and hear the target language. Although researchers worried that the technological constraints of the new technology would over shadow the advantages, both empirical studies during this era found the new technology to be advantageous to second language learning (Forsdale & Dykstra, 1960; Spencer, 1966). Researchers were optimistic that the technology would continue to evolve and become more user-friendly and less expensive (Forsdale & Dykstra, 1960). This vision was realized in the next decade.

The desire to find technological tools to help forward the acquisition of a second language increased in the 1970s as more evidence of technology use appeared in the research journals. The use of radio, video, handheld cassette player, and programmed instruction were used to not only motivate the second language student to practice listening, speaking, and grammar, but these tools were used to liberate the second language student as well (Kalivoda, 1972; Morley & Lawrence, 1972; Prince & Casey, 1972; Santoni, 1975). The shift from a teacher-centered to student-centered classroom was apparent.
Research regarding the use of the two-way radio to connect students with Native Speakers (NSs) also appeared in the research literature during this decade (Richmond, 1978). This real-life opportunity to communicate directly with the target culture set the stage for today’s synchronous CMC exchanges. Questions regarding the pedagogy to implement such an exchange were discussed. Researchers stated that attention to pedagogy improved second language acquisition in a technology enhanced language classroom (Huberman & Medish, 1975).

In the 1980s, although the use of radio appeared in the research literature (Wipf, 1984), descriptive and empirical studies about the use of video were more visible (Ecklund & Wiese, 1981; Garber & Holmes, 1981; Weissenrieder, 1987). As the video camera became more accessible, practitioners and researchers continued to find new ways to engage students. Video became a tool to analyze pronunciation (Ecklund & Wiese, 1981; Garber & Holmes, 1981) and to discern specific details to increase aural proficiency (Weissenrieder, 1987).

Also during the 1980s, with the advent of the computer, practitioners and researchers looked to determine how the new tool of the day could improve reading skills. Descriptive articles on the use of the computer to improve reading comprehension appeared in the research journals (Aoki, 1984; Holmes, 1984; Kleinmann, 1987; Pusack, 1984). Although the descriptive articles discussed the potential for the computer to enhance reading skills, one empirical study indicated that because the computer was in its infancy, the use of it to improve reading skills was not significant (Kleinmann, 1987). Although the use of the computer to enhance reading skills proved to be unsuccessful,
researchers and practitioners were confident that as the technology improved, the potential for second language learning would also improve.

At the beginning of the 1990s, the video camera was a common household item, and its use in the second language classroom continued to appear in the journals (Arey, 1993; Joiner, 1990; Pelletier, 1990). Researchers had already reported that student created videos enhanced second language learning; thus, they looked to explore the benefits of professionally produced target language video resources. With these videos, culture became a focal point and researchers looked to see if cultural information could be learned and retained through the use of video. The findings revealed that video did help the second language student learn about the target culture (Herron, Cole, Corrie, & Dubreil, 1999).

As hoped, by the end of the 1990s, computer hardware and software had improved and the incorporation of text into various software programs became a reality by the end of the decade. Results from the research indicated that not only did the skill of reading improve, but also evidence of the influence of the interconnectedness of the skills was acknowledged (Chung, 1999; Markham, 1999; Nagata, 1999). Collectively, the combination of the audio, video, and text helped the second language student acquire the target language.

By the end of the century, the World Wide Web and more sophisticated computer applications enabled the second language learner to connect directly with the target culture. Distance Learning provided a means by which second language students could interact with Native Speakers (NSs) of the target language; however, the results were
mixed. In Yi and Majima’s (1993) study, students were motivated to learn; however, the pedagogy needed to support this type of instruction was lacking. By the end of the decade, pedagogical and technical concerns were addressed, and Kubota (1999a) found that speaking and listening skills were enhanced in the Distance Learning environment.

In the new millennium, with sophisticated computer applications and software, the interconnectedness of skills continued to be reported on (Jones & Plass, 2002; Nikolova, 2002; Taylor, 2005). Also, creative ways to learn and use the language also appeared in the research literature. The use of videogames to improve reading comprehension (deHaan, 2005), the creation of podcasts to enhance speaking skills (Lord, 2008), and blogging to advance writing skills and cultural awareness (Elola & Oskoz, 2008) were not only visible but intriguing. These empirical studies were indicators of the success and progress of technology use.

Another use of technology found its way into the research literature. Asynchronous Computer-Mediated-Communication (CMC), text-based or oral messages that can be sent and received at different times, became the focal point of the research in the new century, and the results indicated that students not only improved their second language skills but were motivated to learn in this environment (Abrams, 2002; Kitade, 2008; Suh, 2002; Toyoda, 2002; Volle, 2005). With asynchronous CMC tools, second language students used the computer to access the target culture. Evidence of improved second language writing skills (Kabata & Edasawa, 2011; Kitade, 2008; Suh, 2002; Toyoda, 2002; Vinagre & Muñoz, 2011; Ware & O’Dowd, 2008) and knowledge about
the target culture (Abrams, 2002; Elola & Oskoz, 2008; Schuetze, 2008; Ware & Kramsch, 2005) appeared in the research literature.

Decade by decade, the advances in technology, and in the pedagogy to support its use, provided second language teachers and their students unique and engaging ways to practice their language skills and learn about the target culture. The use of the language laboratory, radio, video, and sophisticated computer applications and software all helped to forward the field of second language education by providing students with opportunities to practice language skills and/or learn about the target culture. In the last decade, asynchronous CMC tools, such as email and various types of discussion boards, connected the language learner to the target culture and language. Asynchronous CMC provides the language learner with extended time to think about the messages he or she sends and receives. However, synchronous CMC, a newer method of communication and the one used in my dissertation study, requires the second language learner to respond in real-time for the exchange of information is instantaneous.

The research in Synchronous CMC has produced a number of findings which second language educators must consider when creating synchronous opportunities for their students. These studies contribute to the over-all knowledge about the use of synchronous CMC. It is from these past studies that a comprehensive understanding of the use of synchronous CMC is gained. Seven themes emerged in the literature: equality in student participation, language production, negotiation of meaning, error recognition, pedagogical considerations in the choice of tasks, use of Native Speakers (NSs) and oral versus text-based chat are also presented.
In the traditional second language classroom, there is but one teacher and many students. The teacher interacts with the students and also creates opportunities for them to interact with each other. Although the teacher encourages all to participate, some students dominate. Research studies have shown that in a synchronous CMC environment, whereby students are interacting with just their teacher or with another individual, participation increases (Beauvois, 1992; Chun, 1994; Kern, 1995; Warschauer, 1996). To learn a second language, one must be an active participant in the process. Synchronous CMC provides the second language student with opportunities to increase participation and practice second language skills.

This increase in participation helped students to learn about their fellow classmates. Shin (2006) stated that the students felt that they were part of a community of learners. He identified that although they were alone behind the screen, they were part of an on-line learning community. Other researchers (Ghani & Daud, 2006; Wang & Hurst, 1997; Wenger, 1998) concurred and suggested that communities did not have to have physical borderlines; communities could exist in the virtual world. Furthermore, Yamada & Akahori (2007) noted that increased production allowed students to identify their own presence in this online community. The students acknowledged their own “social presence” and this contributed to the notion of the collective leaning community.

Along with equality in participation, researchers were intrigued by what students were saying in this online environment. Researchers found that the second language was used for a variety of purposes: leave takings, greetings, use of humor, task completion, and off-task discussion (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson,
2005, Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 1999; Peterson, 2009; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yamada & Akahori, 2007; Yanguas, 2010). How and why the second language students used the target language is crucial to the creation of materials for this online environment and the pedagogical considerations.

Researchers also explored the possibility of enhanced oral and written production of the target language. The researchers noted that the written text was conversational and could lead to improved oral performance (Beauvois, 1992; Blake, 2010; Chun, 1994; Warschauer, 1996). Beauvois (1992) called the text based synchronous CMC a “conversation in slow motion.” The researchers indicated that the written word could lead to an enhanced production of the spoken word and encouraged other researchers to explore this topic.

Doughty and Long (2003) and Chapelle (2005) noted that negotiation is vital for second language acquisition. Researchers began to explore the negotiation of meaning in this web-based environment (Blake, 2000; Kitade, 2000; Lee, 2008; Pellettieri, 2000; Smith, 2003; Tudini, 2003). As these conversations were text-based, researchers had access to an abundance of data to view how second language students were reacting when presented with input that was incomprehensible. The findings revealed that interactional modifications did assist the second language learner in the negotiation of meaning. These interactional modifications, such as requests for clarification and comprehension checks, allow the second language learner to comprehend the input. Yanguas (2010)
incorporated video and argued that visual clues, such as gesturing and nodding, can help the second language learner make meaning of the unknown.

Research has also provided empirical evidence on the choice and use of tasks in this online environment. Jigsaw, decision-making, and dictogloss activities provide students with opportunities to negotiate meaning (Blake, 2000; Lee, 2008; Smith, 2003). Thus, second language learning is enhanced by these activities. Pedagogical considerations were outlined, but the aforementioned researchers encouraged more research on task design.

Error recognition in the synchronous environment was a topic of interest (Dekhinet, 2008; Kern, 1995; Kitade, 2000; Ortega, 1997; Pellettieri, 2000; Warschauer, 1998). Second language students were producing the target language, but researchers wanted to determine if the students could identify and correct their own errors. The use of specific strategies to give feedback, such as Conscious Raising (CR) and structured feedback from Native Speakers (NSs), was found to have positive implications for error recognition and correction (Fiori, 2005; Lee, 2008).

Using Native Speakers (NSs) in chat can help the second language student to improve his or her pronunciation and acquire new vocabulary (Chun, 1994; O’Rourke, 2005). Tudini (2003) stated that proper scaffolding must be in place so that students are not overwhelmed by the NS. Chun (1994) concurred and suggested that the NSs must be aware of the second language students’ linguistic abilities.

Oral versus text-based chat is now a reality and researchers have compared the two modes of communication (Jepson, 2005; Sykes, 2005; Y. Wang, 2007). Although
second language students produced less of the target language in the oral chat environment (Sykes, 2005), the students’ pronunciation improved (Jepson, 2005; Y. Wang, 2007).

**Rationale for the Study**

First, although ample research has been done to determine the benefits of synchronous CMC in the second language classroom (Arnold, 2007; Beauvois; 1995; Blake, 2000; Blake, 2005; Blake, 2009; Chun, 1994; Darhower, 2002; Dekhinet, 2008; Fiori, 2005; Ghani & Daud, 2006; Hudson & Bruckman, 2004; Jepson, 2005; Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; Negretti, 1999; Okuyama, 2005; O’Rourke, 2005; Payne & Ross, 2005; Payne & Whitney, 2002; Pellettieri, 1999; Peterson, 2009; Satar & Ozdener, 2008; Sauro, 2009; Shin, 2006; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Vandergriff, 2006; Wang, 2007; Warschauer, 1995; Yamada & Akahori, 2007; Yanguas, 2010; Yilmaz, 2008), little research has been performed to understand the experience of the secondary second language learner in this online, real-time environment. Next, the use of video based oral-chat is a relatively new area of study and more information about how second language students negotiate meaning in this environment is necessary. Also, the use of NSs to assist the NNSs in achieving their language goals is possible with synchronous tools. We must continue to explore the use of these experts and their interactions with their NNS partners. Through qualitative research methods, knowledge of the high school student’s experience will contribute to the creation of pedagogically sound material which is socially and linguistically appropriate for the high school second language learner.
Purpose of This Study

The goal of my research study was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. As a Practitioner Researcher, I looked to investigate and understand the journey of my high school second language students and capture their accounts of learning and their interactions with middle school Native Speakers (NSs) of the target language in an online environment.

This dissertation study focused on students’ use of Skype, a web-based application that allows individuals the opportunity to connect and exchange information over the Internet, in the context of learning to speak Spanish. This is a one-to-one connection; one Native Speaker (NS) of Spanish was connected with one Non-Native Speaker (NNS) of Spanish. This exchange of information was synchronous and occurred in real-time. Both parties were able to hear, see, and communicate with each other. The goal of being able to use a second language to communicate and collaborate with others is a feasible alternative to immersion in another culture that many students may not be able to do. Experiences such as this embody the goals outlined in the State and National Standards and bring us one step closer to preparing this generation of learners for the 21st century.

Research Questions

How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?
1. How do the high school Non-Native Speakers (NNSs) of Spanish feel throughout this process?

2. How do high school Non-Native Speakers (NNSs) of Spanish enhance their second language skills and foster comprehension in this on-line environment?

3. How do the Non-Native Speakers (NNSs) and Native Speakers (NSs) of Spanish interact in this online environment?

**Definition of Terms**

In this section, I provide definitions for the vocabulary and abbreviations found in the research literature.

Asynchronous Computer-Mediated Communication, also known as Asynchronous CMC, does not occur in the now. Text or oral messages are sent and received at different times. Email is an example of asynchronous CMC.

CALL refers to computer-assisted language learning. The computer, or other form of technology, is used to assist in the acquisition of a second language. The computer is the primary source of language learning activities. These activities can range from simple vocabulary and grammar exercises to audio, video, and text-based resources.

CMC is computer-mediated communication. The computer, or a handheld electronic device, is used to transmit and receive messages. These messages can take the form of text or oral output. Computer-mediated communication may be synchronous or asynchronous.

ESL, English as a Second Language, generally refers to a specific curriculum that is taught to individuals whose native language is not English. Instructional support is
offered to students who are learning to listen to, read, write, and speak the English language.

L1 refers to the learner’s native language, in other words the learner’s first or native language.

NNS refers to a Non-Native Speaker of the target language. The individual may speak the language, but it is not the first language that was learned.

NS refers to Native Speakers of the target language. In general, this is the first language that was acquired by the individual. I am a Native Speaker of English. English was the language I learned as a child and was the language spoken in my childhood home. It was my first language.

Novice second language learner is a learner whose ability to communicate in the second language is limited. The learner has memorized some rote phrases and vocabulary and can answer simple questions.

SCMC refers to synchronous computer-mediated communication. This exchange of text or oral output occurs in real-time. Messages are sent and responded to in a timely manner. Skype is an example of SCMC. Written or oral conversations can take place in the now.

The terms foreign language, second language, and target language are used interchangeably in this study. All three terms refer to a language which is not the native language of the learner.

Web 2.0 is a web-based application that allows the user to interact with the web content and/or others.
Summary

In *Experience and Education*, Dewey (1938) stated, “In a certain sense every experience should do something to prepare a person for later experiences of a deeper and more expansive quality” (p. 47). We, second language educators, must be cognizant of the skills that students will need to know, and we must prepare them appropriately for entrance into the global society. The use of Skype is a relatively new Internet-based application that will help to enhance the skills of the second language learner. New and innovative ways of teaching and learning must be explored so that we can continue to grow with and address future issues. The inability to look forward is a prescription for failure.

Chapter 2 provides an analysis of the research findings and the theoretical stances that support this dissertation research. Chapter 3 provides the research method used for this dissertation study and a detailed description of the Skype project. Chapter 4 includes the findings. Chapter 5 presents a discussion of the findings in terms of the literature, conclusions, and recommendations for future research.
CHAPTER II

REVIEW OF LITERATURE

In this chapter, I review the research literature on Technology Enhanced Language Learning (TELL) and synchronous computer-mediated communication (CMC) within the second language classroom. The history of technology in the second language classroom offered me, the researcher, insight and direction into this ever-evolving field. Understanding the history of a field helps us understand its past, its present, and the implications for the future.

In the upcoming section, I provide background information about Sociocultural and Interactionist Theories. These theories underpin my research in technology uses in the second language classroom and much of the research in SLA. Both theories are prominently displayed in the research literature, and provide the framework for this dissertation study. To understand second language acquisition (SLA), it is important to understand the complexities of how we create meaning for ourselves and others. In order to understand this dissertation study, this background information is relevant.

Sociocultural Theory (SCT)

Although Sociocultural Theory (SCT), developed by Vygotsky, is often used to explain how children learn, the framework has been adopted by second language researchers to explain how language is acquired and enhanced (Lantolf, 2004; Ohta, 2000; Wink & Putney, 2002). Vygotsky (1978), a psychologist and advocate of constructivist teaching and learning, posited that meaning is made and language learning occurs during the social exchange process. Bakhtin (1986) stated that “words,
intonations, and inner-word gestures that have undergone the experience of outward expression ‘acquire’ a high social polish and lustre by the effect of reactions and responses, resistance or support, on the part of a social audience” (p. 92). For the purpose of my dissertation research, three areas of SCT were explored: (a) social activity (b) Zone of Proximal Development (ZPD), and (3) tools for mediation. In concert, these aspects of SCT allow the learner to enhance his or her second language skills. I first present information about social activity.

**Social Activity**

Language is developed as learners attempt to use the language to communicate in a social setting. These attempts might be riddled with flaws, but in time, the learner builds his or her capacity to use the language appropriately. As a young child learns the language, language errors are common. I “brang” my homework is eventually replaced with I “brought” my homework. Through a series of social interactions, be they formal or informal, the learner adopts the socially acceptable language. Imitation, a term used by Vygotsky (1987) to define not mimicry of the language but use of newly acquired language, is a strategy that is employed by the learner to not only comprehend the language, but to engage in the language to acquire enhanced skills. Vygotsky stated that imitation is “the source of instruction’s influence on development” (p. 211). Social interaction provides the learner with opportunities to practice language skills, and imitation fosters language acquisition.
**Zone of Proximal Development (ZPD)**

In my dissertation study, my Spanish students interacted with Native Speakers (NSs) of Spanish to construct new meaning. Exposure to a Native Speaker (NS), or expert of the target language, provided the Non-Native Speaker (NNS), or novice language learner, with opportunities to explore second language use. It was through this expert/novice dyad that an evident gap in knowledge existed between the two individuals. This gap is the potential for second language learning. Vygotsky (1978) defined this gap as the Zone of Proximal Development (ZPD). He stated that “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” (p. 86). As individuals interact with others and their environment, the gap between their lived worlds is processed and the potential for learning is illumined. According to Lantolf and Thorne (2006), “the ZPD is forward-looking through its assertion that what one can do today with assistance is indicative of what one will be able to do independently in the future” (p. 206). In the second language classroom, the ZPD equates to the opportunity to enhance the second language with the support of a more capable peer.

In order for the second language learner to maximize the potential for learning, assistance is often required. During interaction, the expert assists the novice language learner to accomplish the task at hand. Donato (1994) stated that “a knowledgeable participant can create, by means of speech, supportive conditions in which the novice can participate in, and extend, current skills and knowledge to higher levels of competence”
Support from the more capable peer or teacher promotes second language acquisition (R. Ellis, 2003). If the expert is cognizant of the novice’s abilities, he or she can provide the necessary support for the second language learner so that he or she can forward his or her language skills.

**Tools for Mediation**

Social interaction is the foundation for learning. We learn as we interact with others, and this learning is mediated by tools (Vygotsky, 1978). Tools are used to transform human actions, and therefore, transform the society and the culture (Vygotsky, 1981). Vygotsky (1978) posited that,

> The tool’s function is to serve as the conductor of human influence on the object of activity; it is externally oriented; it must lead to changes in objects. It is a means by which human external activity is aimed at mastering, and triumphing, over nature. (p. 55)

These tools can be symbolic, such as language, or they can be physical, such as pencils or computers. Along with social activity, the use of tools to acquire a second language is the focus of my dissertation research. I begin with the use of language as a symbolic tool.

**Symbolic tools.** We use language to navigate our way through our environment and to comprehend our reality. Lantolf and Thorne (2006) stated that language, a cultural tool, is used to “serve as a buffer between the person and the environment and act to mediate the relationship between the individual and the social–material world” (p. 199). Language is an instrument used to interpret the world around the individual and react
within it. A young child learns early on that the word “baba” can be used to obtain a bottle and that the simple use of “up” can be used as a request for the caregiver to pick up the child. Likewise, the second language learner absorbs words and phrases to comprehend the world around him or her and engage in task related activities. These words are tools that enable the individual, or second language learner, to tend to his or her needs and to engage in social activity.

**Physical tools.** Language is a symbolic tool used to navigate through the culture; physical tools can also be used to facilitate one’s journey. A shovel, pencil, and computer are examples of tools that make the completion of a task easier. Lantolf and Thorne (2006) stated that “physical tools allow us to change the world in ways that simple use of our bodies does not. Moreover, by transforming our social and material environment, we also change ourselves and the way we live in the world” (p. 199). Tools not only ease our burden, but they forward the culture by providing new insight into a problem.

Sociocultural Theory (SCT) posits that learning is social and our interactions foster the creation of new knowledge (Vygotsky, 1978). Furthermore, according to Vygotsky (1982), symbolic and physical tools help us navigate our way through society. A supporting theory, Interactionist Theory, is used to describe the process of negotiating the meaning of new language (Pica, 1994). This theory also plays an instrumental role in describing how we acquire a second language. In the upcoming section, I explain Interactionist Theory.
Interactionist Theory

Interactionist theorists hypothesize that language acquisition occurs through interaction whereby meaning is negotiated and knowledge is gained. The term “negotiation” inundates SLA research literature; thus, attention to it must be given. Pica (1994) defined negotiation as “modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility” (p. 495). The term “negotiation” is fitting for it represents the internal struggle of taking in unfamiliar input and making a deliberate attempt to make it comprehensible. During the practice of negotiation, conscious steps must be taken to make the unknown known.

Recognizing, or noticing (Schmidt, 1990), the input is the first step in language acquisition. Language learning begins, according to Schmidt, when learners unconsciously notice information. In other words, the learner happens upon vocabulary or a grammatical structure incidentally. Acquisition, however, does not occur until the learner compares the input with his or her output and makes a conscious decision to alter the output (Ellis, 1991). Thus, the learner “notices the gap” and makes necessary adjustments and modifies his or her output.

In order to comprehend the unknown information, specific strategies and processes have been identified by SLA researchers. Interactional modification, as defined by Chapelle (2001), is an “interruption of a communication exchange due to a breakdown in comprehension and subsequent attempt to recover from breakdown” (p. 49). These communicative breakdowns create an opportunity for the learner to take
ownership of the new information by using strategic linguistic maneuvers in order to discover meaning.

Varonis and Gass (1985) stated that negotiation of meaning is necessary during “those exchanges in which there is some overt indication that understanding between participants has not been complete” (p. 73). Gass (1997) claimed that the learning process itself is a quest which provides opportunities for second language acquisition. Taking the input to produce output is part of the acquisition process. Below you will find Varonis and Gass’s model (1985; see Figure 1). It should be noted that the “hearer” is the individual who utters a request for clarification and the “speaker” is the individual who responds to this request. The “trigger” is the information that is not understood by the hearer. The pattern is repeated until meaning is made by the hearer (Varonis & Gass, 1985). The delicate but deliberate dance between the two counterparts is part of the natural give and take that occurs with language acquisition. A “trigger,” or indicator that comprehension is obstructed, is acknowledged by the hearer and he or she responds to the ambiguous input.

<table>
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<tr>
<th>Trigger</th>
<th>Resolution</th>
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<tr>
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<td>T S R RR</td>
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<tr>
<td>Speaker</td>
<td>Speaker Response RR</td>
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<td>Hearer</td>
<td>Speaker Hearer</td>
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*Figure 1. Varonis and Gass’s model*
Pica and Doughty (1985) added to the conversation on negotiation by offering specific strategies used by the language learner to make input comprehensible. According to Pica and Doughty, in a confused or pensive state, the learner forwards the communicative process by using a number of communicative strategies: (a) clarification requests, (b) confirmation checks, (c) comprehension checks, and/or (d) repetitions. Here, the learner strategically poses questions, restates his or her thoughts, or asks for additional information to comprehend the input.

In order for language acquisition to keep on, Swain (1985) claimed that one’s interlanguage, language that one already knows, must be challenged and risks must be taken to produce new output. A conscious attempt to use the newly acquired information is equally as important as noticing the input. Swain stated that playing and working with the input is part of the acquisition process and without trial and error, language acquisition will be hindered if it is not produced.

Through the lens of Sociocultural and Interactionist theories, SLA researchers and I view communicative exchanges. We look to define and to process how individuals in a social setting negotiate meaning; thus, evidence of Sociocultural and Interactionist theories permeate the studies. These theories influence not only what we, researchers, study, but how we collect and analyze the data.

Below I present information on the history of technology use in the second language classroom. This historical perspective gives the reader an overview of how the field of Technology Enhanced Language Learning (TELL) has evolved. Mark Twain
stated, “The past does not repeat itself, but it rhymes” (Szasz, n.d.). I sought to let past research show me a direction for future research.

**Literature Review Procedures for Technology Enhanced Language Learning (TELL)**

Technology has been used for decades in the second language classroom, and its advancement has been documented in journals over the past 50 years. In order to show the evolution of the use of technology in the second language classroom, a literary review was performed. This historical piece looks to illumine (a) what technology was being used, (b) how the technology was being used, (c) what questions were posed by both the practitioners and researchers, and lastly (c) what were their findings.

In this literary review, three leading journals in the field of Second Language Acquisition (SLA) were examined to highlight the use and progression of technology in the second language classroom. *Language Learning, Foreign Language Annals,* and *Modern Language Journal* have been sharing research, insights, and experiences in the area of second language learning since the early 1900s. From these three prominent journals a broad perspective of technology use in the second language classroom was gained.

For the purpose of this research, articles were gathered from all three journals starting in 1960. This date was chosen because the use of the language laboratory started to appear by the end of the 1950s. Articles were viewed in intervals of three years; thus, articles from 1960, 1963, 1966, and so forth, through 2011 were read and a literary critical analysis was performed. Again, it should be noted that the goal of this historical
review was not to uncover all that has been performed in the field of Technology Enhanced Language Learning (TELL), but it is to give an overview of the research, to illustrate the progression in the field, and to determine future research possibilities.

Furthermore, to ensure an accurate portrayal of technology use in the language classroom, articles from the journal, *Language Learning & Technology*, were included in 1999, 2002, 2005, 2008, and 2011. Computer uses in the second language classroom had blossomed by the end of the 1990s and journals specifically dealing with the topic came onto the scene; thus, to ignore their presence would be an error on the part of this researcher for valuable information would indeed be overlooked. I chose *Language Learning & Technology*, an online refereed journal, for many of the authors that I cited in the area of Synchronous CMC, my dissertation research focus, had published one or more articles in this journal (e.g., Blake, 2000; Hegelheimer & Chapelle, 2000; Lee, 2008; Negretti, 1999; Ortega, 1997; Payne & Ross, 2005; Sotillo, 2000). I scanned the journals of *ReCALL* and *Computer Assisted Language Learning*, to ensure that comparable research topics and uses of technology were not overlooked.

Because of the abundance of data, it became increasingly more difficult to maintain a focus. Thus, after 1996, limited samplings of studies were chosen in order to illustrate the ever changing use of technology in the second language classroom. Furthermore, although descriptive articles that discussed various research projects, pedagogical concerns, and/or explanations of software were accepted prior to 1996, I did not include non-empirical studies after 1996 for there was an abundance of material.
Lastly, because I devote a section to synchronous CMC, articles dealing with this topic were not included in this review.

To help me organize the data from the articles, a chart was created to document the (a) year the article was published, (b) name of the researcher(s), (c) title of the article, (d) name of the journal, (e) type of technology, (f) research method, (g) information about the participants, and (h) research findings (Appendix A). From this chart, I was able to see, at a glance, the various types of research projects and the findings.

Prior to relaying the findings, it is important to share the definition of technology for this study. Technology has been defined as any piece of equipment that needs a battery or must be plugged in to function. Although simplistic, this definition captures the infancy and allows for the maturation of technology. As searches were performed, words such as, but not limited to, “computers” and “technology” were sought within the body of the article.

1960s

In the 1960s, the use of technology, although in its infancy, was finding its way into the second language classroom. Researchers and teachers were excited to explore the value and potential of this learning tool. Forsdale and Dykstra (1960) stated:

It is quite prudent, then, to visualize the day, before many months have passed, when it will be technically possible for a learner, including a very young one, to retire to a language laboratory, a corner of the classroom, the central school library, or some other likely spot, to use motion pictures that can readily be operated under his own control, as a learning resource. (p. 6)
As early as 1960, the vision for how technology could be used to improve second language learning was apparent. Researchers and practitioners, or pioneers, in this newly created field were determined to report their findings.

An early example of the application of technology was presented by researchers at Teachers College (Forsdale & Dykstra, 1960). In this project, the researchers used 8mm film to capture a conversation between two University students, one new to the University and the other a returning student. The individuals exchanged greetings and one student asked for directions. In a laboratory setting, language students viewed this 4-minute exchange until they felt comfortable with the vocabulary and various phrases used within the skit. The student later received a different 8mm film whereby he or she became the individual in search of directions. Thus, he or she became part of the film; researchers called this technique “face-to-face.” The disadvantage of this method was that there was no easy loading cassette available to view the film; however, researchers hoped that it would soon be created so that students could easily handle the material. Although the researchers realized the technical complications, they felt that the films could eventually provide an experience that would motivate the second language learner.

Unique applications of technology continued to appear and researchers shared the details through the professional research literature. Likewise, as technological advances were made, researchers observed and reported their findings. In one such empirical study, a researcher sought to determine the advantages or disadvantages of the use of new mechanical discs and their impact on student achievement (Spencer, 1966). The process of using tapes and/or mechanical discs was compared because researchers were
concerned that the new technology, the mechanical discs, would be more complicated and take longer to use; therefore, impacting the achievement of the students. Even though it did indeed consume more time to use the mechanical discs, there was no significant difference on the exam scores.

The budding possibilities of the use of the latest technology and also the possible constraints of it were presented in the abovementioned empirical studies. As the technology improved, the researchers’ and teachers’ interest in its use grew as well.

1970s

Drill and practice programs and programmed instruction became focal points in both education and foreign language instruction at the beginning of the decade (Phillips, 1980). Researchers and practitioners sought to determine if these programs could be used to teach and reinforce discrete grammar concepts and provide an opportunity for the learner to control the pace of his or her education (Prince & Casey, 1972). Although these linear programs were in the early stages of development, it was evident from the results that drill and practice programs could be used to support the teaching of grammar and provide individual support to the student.

Whereas linear programs had the students learn and apply specific grammar concepts, handheld tape players granted the student the opportunity to practice pronunciation and learn vocabulary. Kalivoda (1972) suggested the use of a personal handheld tape player so that students could advance their language skills outside of the classroom. Like in the language laboratory, the student would hear and repeat the various words and phrases. One obvious benefit to the handheld tape player was that students
were able to take it wherever they traveled. Once more, researchers were looking for, and found, new and innovative ways to enhance the learning of second languages.

Educators saw the need for students to take an active role in their own education. Individualized instruction and portable technology gave the language students opportunities not only to succeed, but it provided a means by which the students could take ownership of their learning. A shift from the teacher-centered to the student-centered classroom was beginning to occur.

Further evidence of the student-centered classroom as well as enhanced second language production can also be seen in the use of video. Videotapes were not only played, but also produced in the language classroom during this era. In one such study, students in an advanced conversational French course used video to critique their own performance (Santoni, 1975). The instructor created a structured lesson plan whereby the students learned about a French village. At the beginning of the unit, the students learned grammar, vocabulary, and cultural information, and throughout the unit, the students practiced the language and gained comfort with the material. At the end of the lesson, the students role-played villagers and carried on a conversation entirely in the target language. Afterwards, students viewed the videotapes and critiqued their own performances.

Whereas speaking was emphasized in the above example, videotapes were also used in classrooms to develop and improve listening comprehension skills. Morley and Lawrence (1972) posited that videotapes, if used properly, could advance listening comprehension skills of the intermediate and advanced language students. The
descriptive article shared a plan to incorporate the videos into the lesson so that the maximum result could be achieved. It was stated by the authors that videotapes could contribute significantly to second language study, but they cautioned educators to not misuse the technology as a form of “fun, diversion, or rainy-Friday-afternoon-filler” (p. 100).

Practitioners began to use technology to not only spark the interest of second language student but also to achieve the objective of the lesson. During this era, practitioners and researchers looked to create opportunities that utilized the latest technological tools and pedagogical know-how. In an empirical study presented by Huberman and Medish (1975), the researchers shared the results of an approach to instruction that utilized the technology of the day coupled with second language pedagogy. The researchers referred to this approach as Multi-Channel Instruction. In this approach, the use of videotapes, audiotapes, workbooks, and teacher assistance were carefully woven together to create an exemplary course. In this quantitative study, students in the Multi-Channel Instruction course, which was taught in one semester, outperformed students in a traditional course, which was taught over two semesters. Although students in the control group did have access to the language laboratory, it was determined that the use of video, as well as the structure of the course, produced significantly better scores in the areas of listening and speaking. Furthermore, the learning process was expedited. The combined exposure to the various activities and materials, especially videos, presented an interesting and successful approach to foreign language educators.
As for the aforementioned research studies (Huberman & Medish, 1975; Morley & Lawrence, 1972; Santoni, 1975), all three discussed the importance of motivation in the language classroom and believed video to be an excellent tool to capture and maintain the interest of the second language learner. Furthermore, researchers began to acknowledge that collectively, the technology and the proper consideration of second language pedagogy could enhance second language skills.

Like video, radio was also used to stimulate interest in the foreign language classroom. Early in the decade, radio was used to provide listening opportunities (Garfinkel, 1972). However, by the end of the 1970s, students were using two-way shortwave radio to communicate with foreigners in other countries (Richmond, 1978). This is the first example of students using technology to directly connect with members of the target culture. In a pilot study, students were observed using this technology over the course of a semester. Although there was no significant difference on scores between those who did or did not participate in the radio opportunity, students who did take part in the study appreciated the opportunity to use the language and stated that they were motivated to continue learning the language.

The 1970s proved to be an exciting decade in technology use in the second language classroom. Technology was used to capture and sustain the interest of students, practice language specific skills such as listening and speaking, and educators started to design materials and incorporate technology in pedagogically sound ways. Furthermore, through the use of the two-way radio, students were given authentic opportunities to interact with Native Speakers (NSs) of the target language and culture. As the decade
came to an end, the use of technology and interest in it continued to blossom and evolve, and researchers and practitioners looked to improve second language instruction through the use of the latest technology.

1980s

Technology continued to be used to bring the sights and sounds of the target culture to the language student. Furthermore, video kept on being used as a tool; however, new ways of using this tool were being presented. In a study by Ecklund and Wiese (1981), the researchers stated that the use of video could improve the pronunciation of students, especially those of the lower level courses. Together, teachers and their students viewed the taped production and corrective feedback and practice followed. The researchers posited that seeing one’s errors is more powerful than being told about one’s mistakes.

Whereas video was used to gain a better understanding of one’s abilities, it was also used as a means to foster communication. Garber and Holmes (1981) described a project whereby video, without sound, was introduced to students so that they could write and produce their own scripts. The purpose of the video was to provide a background, which would be a structure about which the students could write and speak. These video clips were five minutes in length and their topics were everyday situations, such as going to the market or the café. Students carefully viewed the videos and wrote and produced their own scripts to conform to the video. Although students enjoyed the venue and being able to apply the language in written and oral form, some students felt constrained by the pre-made video and believed the students’ creativity was hindered.
Great strides were being made during this era in the field of second (foreign) language education. Communicative competence in the areas of reading, writing, speaking, and listening were on the forefront in second language education (Phillips, 1980) and researchers looked to see how these skills could be enhanced by technology.

Specific applications of technology to address one of the aforementioned four skills were apparent in the literature during this time period. Shortwave radio again appeared in the research literature as a tool to cultivate the listening skills of the students. Like Richmond (1978), Wipf (1984) proposed the use of shortwave radio not only to engage the student, but to provide authentic, readily available opportunities for the student to improve his or her aural comprehension. According to Wipf, if the lesson is planned properly, students can learn to process the language, which is indeed a great accomplishment.

With the use of technology, aural comprehension became a feat that was possible. Both radio and video provided second language students with authentic material and opportunities to enhance their listening skills. Weissenrieder (1987) presented information on how to use videotaped news broadcasts to improve the listening skills of students. Again, like other researchers (Huberman & Medish, 1975; Wipf, 1984), Weissenrieder was concerned that if the lesson was not planned properly, the unfamiliar material could overwhelm students. Thus, in her reflective piece, she suggested that teachers first must understand the dynamics of news broadcasts prior to introducing them to the class. Next, once the structure of the broadcast is understood, teachers need to create levels of comfort for the student. At first, students need only attempt to discern a
handful of obvious words. After repeated listening attempts, students can build upon their knowledge base and gain comfort and confidence with their language acquisition abilities.

Shortwave radio and videotaped news broadcasts provided awesome opportunities for the students to hear the target language. With the advent of new technologies, listening to the target language became even easier. In the 1960s and 1970s, teachers used tapes to reproduce the spoken word. These tapes granted the teachers the opportunity to play and replay audio. Although these tapes provided valuable material, the use of the tapes could be unmanageable and time consuming. In order for a teacher to find a specific passage, the tape would have to be wound and rewound until it was located. Playing multiple passages would be an inefficient use of the teacher’s and students’ time.

With the advent of a microcomputer that randomly accessed audio, the technological complications of the past were eliminated. Researchers introduced the new invention and spoke of its direct application in the classroom (Henry, Hartmann & Henry, 1987). Passages could be located, played, and replayed instantaneously. In this descriptive article, the researchers spoke of the direct application of the new technology and the implications for second language instruction. Teachers could locate and play taped material for their students and exposure to specific passages could be presented in an efficient manner.

The improvement of speaking and listening skills when partnered with technology has been acknowledged in the abovementioned research. Reading, one of the four
essential language skills, was not overlooked during this era. Researchers were quite intrigued by the use of technology and specifically how it could help students acquire reading skills. Numerous journal articles appeared in the 1980s dealing with reading acquisition and the use of technology (Aoki, 1984; Aoki, Eddy, Holmes, Pusack, & Wyatt, 1984; Holmes, 1984; Pusack, 1984). Unlike the studies in the other two areas, when it came to second language reading there were concerns about the limitations of technology and what it could provide (Aoki, 1984; Holmes, 1984). At this time, the technological advances were insufficient and the incorporation of text was challenging. Although text could be incorporated, it was not as legible as a typed page; thus, technology became a hindrance as opposed to a solution.

Nonetheless, researchers were determined to locate a computer prototype that could provide students with ample reading opportunities and feedback so they might improve their skills (Aoki et al., 1984; Pusack, 1984). Computer Assisted Instruction (CAI) had found its way into the classroom by the end of the 1980s and language researchers looked to see if its use could be equally as effective in a second language classroom. In a quantitative study by Kleinmann (1987), six English as a Second Language (ESL) classrooms were examined. Three of the six received traditional, in class, reading opportunities while the other three classes were exposed to a software package specifically designed to increase reading proficiency. The study revealed that there were no significant differences amongst the two groups, and that CAI and non-CAI students faired the same on the end of the course assessment. The author suggested that the computer’s inadequacies to provide relevant, meaningful opportunities were reasons
for the outcome. Krashen (1982), a renowned second language theorist, was mentioned as providing a theory behind the insignificant results for without a controlled, increasingly more complex reading opportunity that is of relevance, the students’ comprehension will not improve.

1990s

As indicated, the 1990s seemed to be destined for greatness for technological feats bubbled over during the latter part of the 1980s. However, according to the research findings, few technological gains were visible within the professional research journals at the beginning of the decade. Video continued to be used and insights on how best it could be used were again reported (Joiner, 1990; Pelletier, 1990). A variety of different uses and applications trickled into the field (J. Bailey, 1996; Nagata, 1993; Yi & Majima, 1993; Wicks, Postlewate, & Lewental, 1996), but no overly creative applications or different uses were apparent.

The use of video and radio seemed to be commonplace in the language classroom. And although the personal computer had shown great potential, the computer hardware and software were still in their infancy. The early 1990s were calm, but educators and researchers believed that there would be powerful, engaging technological advances in the near future, and coupled with the advent of the World Wide Web (WWW) promises of technology enhanced language learning opportunities would be soon available (e.g., Kleinmann, 1987; Yi & Majima, 1993; Pelletier, 1990).

By the end of the 1990s, computer uses in the foreign language classroom were not only evident, but were reported by researchers in great numbers (J. Bailey, 1996;
Chung, 1999; Herron et al., 1999; Kubota, 1999a; Markham, 1999; Nagata, 1999).

Nonetheless, some of the empirical and descriptive studies being presented continued to illustrate concerns for how technology was being used. Distance learning and the use of satellite TV offered an opportunity for the language learner to be part of the target culture. This initial excitement turned into disappointment when researchers, using a qualitative case study design, discovered that the language learners were passive and actual communicative interaction between the two classrooms was limited (Kubota, 1999a; Yi & Majima, 1993). At this time, the pedagogy, which was needed to support such a program, was not in existence; therefore, the technological advances were of little use.

Along with the setbacks, came accomplishments. The incorporation of text into computer activities was an unattainable feat in the 1980s; by the end of the 1990s it became reality and researchers studied the various applications (Nagata, 1999). It was noted that immediate feedback helped to improve the language learner’s ability to read text. Thus, an additional tool to create proficient readers was now available.

Needless to say, the incorporation of text and exposure to audio and visual stimuli intrigued the language teacher and his or her students, and empirical studies were performed to determine the impact of the interconnectedness of text, audio, and visual data. Researchers (Chung, 1999; Markham, 1999) found that there was a greater impact on the ability to retain vocabulary if students were exposed to text, visuals, and audio simultaneously. While the research of the past focused on one of the four proficiency
skills (reading, writing, speaking, and listening), practitioners and researchers were now seeing the benefits of the interconnectedness of the skills.

Technology was now being used as a tool to help the second language student negotiate meaning. Collectively, audio, text, and visuals helped the students comprehend the material. Furthermore, the role of the teacher was changing. Whereas in the past the teacher was the presenter of information, he or she now was the facilitator of the activities. The focus from teaching to learning and, therefore, a constructivist approach to learning became evident in the professional literature (Reagan, 1999).

By the early part of the 1990s, the World Wide Web was launched, and acronyms, such as WWW, CMC (computer-mediated communication), and CELL (computer enhanced language learning), spilled into the professional literature. By the end of the 1990s foreign language educators were anxious to explore these applications within the classroom. The World Wide Web became one such tool for students to communicate. Empirical studies confirmed that the use of email and the creation of web pages were found to have a positive impact on the linguistic abilities of students (Kubota, 1999b; Kost, 1999). Students were motivated and engaged by the new technology and had enjoyed being able to communicate in this new arena. Furthermore, the students were again seen as active participants in their learning.

Along with the positive reports of how technology was being integrated into the foreign language classroom, some concerns were also illuminated (J. Bailey, 1996; Kubota, 1999b). The explosion of the various uses and technological advances were too much for the language student to keep up with. Students were no longer able to sit in
front of a computer and push specific keys, but rather they needed specific training on how to use the computer and its software. In Kubota’s (1999b) descriptive study, the researcher commented that students would benefit by having additional time to master computer skills prior to applying them within the context of the language course.

Technology, if presented and used properly, was a tool from which great accomplishments could be realized, but it is also important to recognize that technology is not the end-all be-all, and without curricular support, practitioners would have no common goals to achieve communicative competence. Thus, when the *Standards for Foreign Language Learning in the 21st Century* (American Council on the Teaching of Foreign Languages [ACTFL], 1996) were published and the national goals for second language learning were addressed, a clear vision of language learning was presented, and with the continued support of the American Council on the Teaching of Foreign Languages (ACTFL), these goals hoped to be achieved in the new millennium. The presentation of the National Foreign Language Standards was a pivotal force that did impact and will continue to impact the language classroom and the applications of technology.

Immediately following the emergence of the National Standards, researchers sought to identify different ways in which technology could be employed. In the past, video was primarily used to augment the aural skills of language students; however, due to the visible emphasis of culture in the National Standards, video now became a tool to assist language students in acquiring cultural information. A quantitative study with a pre-test post-test design was employed to show the impact of video in a college French
classroom (Herron et al., 1999). In addition to the pre- and post-tests, after the initial showing of each of the 10 videos, tests were also administered to determine short-term retention of the cultural information. The results identified a statistical difference on the scores of both the short- and long-term tests. The researchers indicated that culture could be learned by means of video. Furthermore, it was noted in the breakdown of test items that students retained more information on the practices of culture (daily living) than on the products of culture (places and people). Researchers suggested that the daily living events might appeal more to the student than the other, less practical, information.

A plethora of uses of technology were evident in the language classroom by the end of the millennium, the Internet and sophisticated computer hardware and software applications provided a means by which language students could work to achieve the National Standards.

2000

Creative and new uses of technology around which pertinent research could be conducted existed and found its way into the research literature. With the target culture now at the fingertips of the language student, practitioners and researchers sought creative applications of technology uses in the language classroom. The computer could now be used to access authentic material (e.g., songs, menus, newspapers) and to communicate with Native Speakers (NSs). The WWW, as well as other technological applications, present second language learners the opportunity to travel to the far off, remote target culture without ever leaving the comfort of his or her surroundings.
Learning about foreign cultures is commonplace in the language classroom, and educational researchers looked to see if the WWW could be used to become knowledgeable about our global society. In the new millennium, researchers looked to determine if exposure to the target culture through technology created new knowledge (Abrams, 2002; Elola & Oskoz, 2008; Schuetze, 2008; Ware & Kramsch, 2005). In a qualitative research study, researchers sought to determine if access to native speakers of the target culture via the Internet could help erode cultural stereotypes (Abrams, 2002). The control group learned about the culture by means of Internet-based activities and assigned readings. Likewise, the experimental group also completed the Internet activities and reading assignments, and in addition to the aforementioned activities, the members of the experimental group were paired with someone living in the culture being studied. Pre-project and post-project questionnaires were used to better understand the students’ perceptions of culture. Individuals from the experimental group appeared to use fewer stereotypical descriptions than did those of the control group, and were stated as possessing a heightened cultural awareness. The direct connection with the person from the target culture was noted as a reason for this occurrence. Students communicating with the native speaker felt more compelled to learn about the target culture and seemed more interested in the assignment. The technological opportunities offered the language learner a window into the world of the target culture; thus, the educational impact was markedly significant.

As illustrated above, new ways of using technology to learn about the target culture appeared in the second language classroom and detailed research on its use was
performed (Abrams, 2002; Elola & Oskoz, 2008; Schuetze, 2008; Ware & Kramsch, 2005). The use of video to teach culture was now being replaced with asynchronous forms of communication. The goal of learning about the target culture was the same; however, the tool to approach it had changed and presented teachers with direct access to the target culture.

Like the aforementioned example, more advanced technological tools allowed researchers to explore previously researched topics. In the 1990s, researchers presented the impact of the interconnectedness of video, audio, and text (Chung, 1999; Markham, 1999). It was stated that the combined use of these items clearly enhanced language acquisition. In the 2000s, this research continued; however, now researchers attempted to determine how the combination of the elements, or lack of one of the elements, impacted the students’ ability to recall information. In a quantitative study by Jones and Plass (2002), students were randomly assigned to a treatment group and exposed to one or more of the aforementioned elements of video, audio, and text. The results indicated that the students exposed to all three elements scored significantly better than those students exposed to only one or two of the items. Furthermore, it was noted that students receiving visual stimulus had larger effect sizes than those students who received text. Jones and Plass’ (2002) research design helped to explain the complexities and the various intricacies of language learning and presented the impact each element has on the language learner.

Researchers were attempting to determine not only which elements impacted student achievement, but also with which level of student was a greater impact made. In
a quantitative study by Taylor (2005), four groups were created: two groups of first year language students and two groups of third year language students. A third year and a first year group received captions with the video, whereas the remaining groups did not receive video captions. The results indicated that third year students outscored the first year students when exposed to captions. Taylor proposed that the lower level students might be overwhelmed and distracted by the stimulus. Being able to identify the strengths and/or weaknesses of a group could help in the creation and proper distribution of material; thus, the above findings were not only insightful, but constructive as well.

The second language learner and his or her needs were apparent in the above study. In attempts to understand the language learner further, future researchers explored the notion of student participation and language learning. Nikolova (2002) conducted research to determine if students who helped create learning material would have significantly higher post-test vocabulary recognition scores than those students who interacted with a pre-made software package. Whereas it was initially believed that students who created the material would have significantly higher scores, the results were not indicative of this belief. Nikolova (2002) posited that the creation process is time consuming, and although students may have achieved better results if granted enough time, time limitations and curricular concerns needed to be taken into account. Although active participation of students can produce better language learners, educators may not have the luxury of extending time so that students can be creative and apply their language knowledge. Nonetheless, the study helped to show the numerous variables that impact student learning and that time is a construct that should not be overlooked.
Understanding the student and how he or she learns was at the forefront of the research. Studies attempted to indicate what worked best in the language classroom, and for whom it worked best. Thus, qualitative descriptive studies offered additional explanations as to why and how students learn. Questionnaires helped to illuminate the feelings and beliefs of the participants. Stepp-Greany (2002) surveyed language students in a technology-enhanced language-learning environment and commented that students did believe technology to be an asset in the language classroom. The majority of students felt that they (a) learned more about the Hispanic culture, (b) improved their communicative skills, and lastly, (c) enjoyed the technology enhanced learning environment more so than they would have in a traditional educational setting. Furthermore, the students believed that role of the teacher is indeed important in a technology-enhanced environment, and the researcher suggested that this topic be looked into further. This descriptive study provided support for the belief that understanding the language students’ needs could improve instruction. Insight and knowledge about the teacher’s role in a technology-enhanced classroom can also help to create an accurate portrait of the learning environment and as mentioned, should be researched further.

Whereas questionnaires provide information about different aspects of the research study, other qualitative techniques were also employed to present students’ beliefs about technology uses in the language classroom. Suh (2002) used data found within the journals of students to help portray how the language students felt about computer uses and writing in a foreign language. Students elaborated more on the advantages of technology when writing than the disadvantages. The ability to easily edit
text and include graphics was a desired outcome. Furthermore, the ease of accessing information was also noted. However, for some students the peer editing process was frustrating for some students felt that they could not provide adequate help to their classmates because of their low-level language ability. Studies rich with vivid descriptions portray how technology can be used to enhance the writing process.

Asynchronous CMC, communication that is not bound by time, was also being used in the language classroom to provide writing opportunities to the second language student (Kabata & Edasawa, 2011; Toyoda, 2002; Vinagre & Muñoz, 2011). In Toyoda’s (2002) study, five second language students learning Japanese interacted via written chat with five Native Speakers (NSs) of Japanese. By means of discourse analysis, the researcher found that the second language learners made attempts to negotiate meaning when presented with language barriers. Once more, the teacher took on the role of facilitator while the students negotiated meaning and took ownership of their learning in the technologically enriched environment.

In Kabata and Edasawa’s (2011) study 75 students from two different universities were connected through the computer to assist each other in their own language learning endeavors. Tandem exchange between students studying Japanese and students studying English occurred through email, a form of asynchronous communication. The results indicated that the students’ grammar and vocabulary acquisition was enhanced. Furthermore, incidental learning gains were made by more advanced learners. It was stated that it is important to know the students’ proficiency level.
With the technological capacity to interact with the target culture and language, numerous studies about the use of asynchronous CMC filled the research literature (Kitade, 2008; Volle, 2005; Ware & Kramsch, 2005; Ware & O’Dowd, 2008). The research indicated that students learned about the target culture and were able to negotiate meaning in this on-line environment. Ware and O’Dowd (2008) looked to investigate the use of feedback with post-secondary students studying Spanish in the United States and post-secondary students studying English in Spain. The students were assigned to one of two groups: e-tutoring and e-partnering. In the e-partnering group, the students were not required, but rather encouraged, to give feedback. The researchers found that students in the e-partnering group gave less feedback. It was also noted that both groups liked receiving feedback and felt as if they learned from it. As teachers and researchers use technology in innovative ways to approach second language learning, without question, pedagogical concerns will be illumined and topics for future research are created.

With the advances in technology, practitioners sought to engage this tech savvy generation of second language students with appealing activities which would promote the learning of the second language. Videogames, the use of blogs, and student made podcasts are being used by practitioners and reported on by researchers. Empirical studies about these student-centered activities started to appear in the research literature in 2005 (deHaan, 2005; Elola & Oskoz, 2008; Lord, 2008; Yang, 2011).

DeHaan (2005) monitored the use of videogames by one post-secondary student studying Japanese and reported his qualitative findings. The results indicated that the student improved his listening comprehension and the recognition of the Japanese kanji
character. It was stated that the student improved in the aforementioned areas because of the highly repetitive nature of the game and the abundance of aural and textual language.

Elola and Oskoz (2008) provided quantitative and qualitative data to illustrate the benefits of blogging. In their study, 15 students studying abroad in Spain created blogs about their cultural findings. Topics for the blogs and discussions ranged from the elderly, pop culture, living in the city, and shopping. Twenty three post secondary students studying Spanish in the continental United States read these blogs, and it was shown that both the study abroad student and the traditional language student learned about the Spanish culture through this new age venue.

Like blogs, audio and video podcasts can be created by students to practice their second language skills. In a quantitative study performed by Lord (2008), the researcher looked to analyze the use of audio podcasts of 19 undergraduate students studying Spanish phonetics. In this study, the Spanish phonetic students created podcasts to practice producing the target language. The results indicated that their attitudes about the second language and their pronunciation improved over the course of the project.

In the abovementioned empirical studies, researchers presented new and engaging ways for students to learn the target language. We, practitioners, need to continue to find and explore creative ways for students to acquire the second language. With today’s technology, second language students can create avatars and send video emails. There is a great deal of potential uses of technology that have not yet been explored.
Summary of the History of Technology Enhanced Language Learning (TELL)

In order to illustrate how technology has been used in the second language classroom, I created a timeline as illustrated in Figure 2. The timeline shows the progression of the use of technology and presents how it was applied within the second language classroom. The illustration shows how simple uses of technology, such as the radio and video, are eventually replaced with more complex computer and Internet applications. With the advances in technology, researchers were able to analyze or to

Figure 2. Timeline.
present how technology improved the acquisition specific second language skills (e.g., writing, reading, speaking, listening, grammar, vocabulary acquisition, culture) and/or show how multiple skills can be enhanced simultaneously. The new technology allowed for researchers and practitioners to explore the interconnectedness of these skills. Furthermore, in the new millennium, with the aide of the Internet and asynchronous CMC tools, second language students were and are able to travel to the target culture without leaving the country.

Numerous researchers have stated that students are motivated to learn the second language in a technology enhanced classroom (Forsdale & Dykstra, 1960; Huberman & Medish, 1975; Kalivoda, 1972; Kubota, 1999b; Lord, 2008; Richmond, 1978; Stepp-Greany, 2002; Ware & O’Dowd, 2008; Wipf, 1984); thus, it is important for researchers and practitioners to continue to explore how technology can be used to practice and acquire a second language. In the upcoming section, information about synchronous computer-mediated communication (CMC) is presented. This form of communication connects the second language learner with the target language and/or culture in real-time.

Literature Review Procedures for Synchronous CMC

I addressed and analyzed the literature in the area of synchronous CMC in two ways. First, I reviewed the design characteristics of the studies, and then I focused on the common themes and the findings of the study. The use of two approaches allowed me to view the study from whole to part and part to whole, and I achieved a concrete understanding of the research literature. In this section, I share with you the findings of
my quest to understand the empirical studies on synchronous CMC and second language learning. The choice to include or exclude studies impacts my overall knowledge and understanding in this area; thus, a detailed description of the selection process is required and provided. Details about the characteristics of the design follow.

When considering whether to include an article in this literature review, I first and foremost only reviewed and included empirical studies. Informative and descriptive articles that dealt with specific computer applications, feelings about the use of technology, or the integration of CMC into the curriculum can be helpful but I was focused on empirical studies about authentic uses of synchronous CMC. A second criterion was that specific methods, quantitative and/or qualitative, had to be referenced and elaborated upon in the article for insertion into the review. The methods for the study provided the overall structure and framework and also indicated the appropriate rigor which is required for a systematic and thorough study; thus, mention of the research procedure was necessary. Finally, as my dissertation study is about synchronous CMC, I only sought articles dealing with synchronous not asynchronous CMC. Additionally, information regarding asynchronous CMC, as well as other forms of technology, was included in the review of the literature on the history of technology enhanced language learning (TELL).

Because my study focuses on oral chat, I originally intended to review only synchronous chat sessions that were oral, not text-based. Unfortunately, there is a paucity of research on the use of synchronous oral chat in the second language classroom. Out of the 36 empirical studies on synchronous communication, only 9 dealt with oral
chat (Arnold, 2007; Blake, 2005; Jepson, 2005; Kenning, 2010; Lamy, 2004; Satar & Ozdener, 2008; Sykes, 2005; Wang, 2007; Yanguas, 2010). And, this type of chat did not become visible in the research literature until 2004. Thus, for the purpose of this investigation, I expanded my search to include either text-based or oral chat. As both text-based and oral chats are often simply referred to as “chat sessions,” I distinguished between the two very different forms of communication as noted. Because chat has multiple meanings in the CMC world, my goal is to eliminate any confusion by specifying the exact form of communication.

After acknowledging that the article included information about synchronous CMC and had identified a methodological procedure, I entered the information about each study into a chart which contained seven elements: (a) name of the researcher, (b) name of the article, (c) year the article was published, (d) type of chat, (e) method(s) used, (f) participant information, and (g) research findings (Appendix B). This chart helped me organize the data so that I might be able to examine it in multiple ways.

**Design Characteristics of the Studies**

Collectively, the selection of participants, the research design, and chosen method reveal the setting and stage for the research. Without these facts, the reader is left to imagine the important details of the study. In the following section, I discuss the methods and participants used in the studies and the interesting findings that emerged as I looked across the collection. Also, I continue to explain my rationale for selecting and accepting research.
Participants

Participants for the empirical studies ranged from 1 (Blake, 2005) to 70 (Ghani & Daud, 2006). In regard to the one student (Blake, 2005), an in-depth case study approach was used to frame this qualititative study. The quantitative studies, whose participants fell below 20, also used a qualitative method to make up for the minimal number of participants. Because there was only ample research in the literature on the use of synchronous CMC in the second language classroom, I did not exclude any study because of sample size. Finally, one other noteworthy fact is that of the 36 studies, only one study (Satar & Ozdener, 2008) focused on the participation of secondary school students. University students were the participants in the remaining 35 studies. I elaborate upon this important finding in the conclusion.

Methods

Qualitative, quantitative, and mixed methods studies were reviewed by this researcher. Of the 36 studies, 21 were described as qualitative (Blake, 2000; Blake, 2005; Chun, 1994; Darhower, 2002; Hudson & Bruckman, 2004; Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; Negretti, 1999; Okuyama, 2005; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 1999; Peterson, 2009; Shin, 2006; Smith, 2003; Toyoda, 2002; Tudini, 2003; Wang, 2007; Yanguas, 2010), 6 were quantitative (Arnold, 2007; Blake, 2009; Fiori, 2005; Payne & Whitney, 2002; Sauro, 2009; Yilmaz, 2008), and 9 were mixed methods (Beauvois; 1995; Dekhinet, 2008; Ghani & Daud, 2006; Jepson, 2005; Satar & Ozdener, 2008; Sykes, 2005; Vandergriff, 2006; Warschauer, 1995; Yamada & Akahori, 2007), which is a combination of qualitative and quantitative methods. Of the
qualitative and mixed-methods studies, 19 stated discourse analysis (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005, Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 1999; Peterson, 2009; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yamada & Akahori, 2007; Yanguas, 2010) as a method of analysis. Because of this, I elaborate upon this method in an upcoming section. Three case studies (Blake, 2005; Hudson & Bruckman, 2004; Wang, 2007), one action research study (Okuyama, 2005), and one ethnographic study (Shin, 2006) remained in the qualitative category. These aforementioned studies provided an abundance of descriptive data which are elaborated upon in the findings. The primary method used for the quantitative research was a quasi-experimental design (Arnold, 2007; Blake, 2009; Fiori, 2005; Payne & Whitney, 2002; Sauro, 2009; Yilmaz, 2008) with a pre-test post-test configuration. In these studies, a control and an experimental group (or groups) were used to evaluate two or more strategies of instruction. Collectively, the empirical studies provided an array of information and evidence about the use of synchronous CMC in the second language classroom.

**Discourse analysis.** How learners process language to make it their own is a natural but complex process. Through the use of discourse analysis, the complexities of language use can be observed. Because 17 studies (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005; Kern, 1995; Lamy, 2004; Lee, 2008; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 2000; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yanguas, 2010) employed this method, discourse analysis is
deserving of some attention, and background information is provided. According to Darhower (2002), “discourse analysis has become a robust tool in detecting patterns in classroom communication” (p. 59). As I present information about this method, it will become evident that Sociocultural and Interactionists theories provide the overarching support for discourse analysis. Both theories focus on how meaning is negotiated; discourse analysis is an appropriate means to capture and explore how language is being used.

In order to understand the quantity and quality of interaction, researchers and teachers can use discourse analysis to categorize, and therefore, begin to comprehend the language use of the students. Turn taking, greetings and leave-takings, and various social exchanges can be illuminated by researchers through this process. Teacher to student, student to student, and teacher to whole group interactions can inform the teacher or researcher as to the social dynamics or language functions that are being used. These communication patterns tell a story of language use. Van Lier (1988) stated that “classroom discourse is a central part of this social context, in other words the verbal interaction shapes the context and is shaped by it” (p. 47). Through discourse analysis the meaning is sought and knowledge about the communicative exchange is gained.

Within the studies (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005, Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 1999; Peterson, 2009; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yamada & Akahori, 2007; Yanguas, 2010) discourse analysis is used in two ways. It is used to show what students are producing. In other
words, the conversations are broken down into specific categories such as leave takings and salutations. Researchers documented how students were using the language in the online environment. Discourse analysis was also used by the researchers to show how the selection of specific tasks and activities influenced the use of language by the students. The teacher’s selection of jigsaw, open-ended questions or information gap activities impacted the quantity and the quality of language production. Details about these findings are elaborated upon in the upcoming section.

In the above sections, I shared information about the following: (a) information regarding Sociocultural and Interactionist theories, (b) a historical review of the literature in the field of TELL, (c) the process for the selection of articles for the literature review, (d) basic findings about the participants and methods for the studies, and (e) information about discourse analysis. The structure and presentation of the abovementioned topics is deliberate for it should provide the reader with a solid foundation to comprehend the literature review and my research interest.

**Findings of the Studies**

In the upcoming sections, I elaborate upon the findings from the research. Within the literature, themes surfaced. These themes were used to organize the research findings. The remaining part of the review of literature has been divided into the following sections: Participation, Language Production, Error Recognition, Negotiation of Meaning, and Pedagogical Considerations. Research findings regarding text-based chat versus oral chat and the use of Native Speakers of the target language are also
presented. This structure allows the reader an opportunity to see the logical progression of the research about the use of synchronous CMC in the second language classroom.

**Participation**

In order for a student to acquire a second language, participation by the student is essential. As part of the learning process, the student must use the language. He or she must listen to the language and make attempts to mimic the correct pronunciation and must also try to verbally piece together the foreign words and phrases.

Unfortunately, participation by the second language student within the traditional classroom setting is minimal for students are uncomfortable speaking in front of their peers. A great deal of research on anxiety in the second language classroom exists (e.g., K. Bailey, 1983; Horwitz, Horwitz, & Cope, 1986; MacIntyre & Gardner, 1994; Young, 1991). The findings reveal that second language acquisition is hindered because of this anxiousness. Within the studies, students noted that they are afraid to make mistakes. This fear causes the student to opt out of speaking purposefully when given the opportunity. To this day, language teachers, me included, continue to struggle to get students to participate.

However, during on-line text-based chat sessions, researchers (i.e., Hudson & Bruckman, 2004; Kern, 1995; Okuyama, 2005; Wenger, 1998) have found that student participation increases dramatically. Reasons for this increase were presented by a number of researchers. Hudson and Bruckman (2004) commented that “students feel protected by the computer” (p. 27). Likewise, Bradley and Lomicka (2000) indicated that the computer acts as “a shield to being on stage” (p. 362). Beauvois (1992) noted an
increase in participation for shy and unsuccessful students; thus, an increased motivation to be involved in the discussions was evident.

To illustrate the common findings, I use the findings of Warschauer’s (1995) study of face-to-face (F2F) compared with synchronous text exchanges. In this study, 16 ESL students were placed into four groups: two groups were involved in face-to-face conversations and two groups communicated electronically with each other. The findings revealed that students in the synchronous CMC groups produced more language and participation by the students increased twofold. Within the findings, Warschauer presented information about how students felt about working in an online computer environment. He stated that “the students reported feeling that they could express themselves freely, comfortably, and creatively during electronic discussion, that participating in electronic discussion assisted their thinking ability, and that they did not feel stress during electronic discussion” (p. 127). Thus, increased participation can be attributed to the feelings of comfort in the online environment.

Warschauer (1997) acknowledged these feelings of anxiousness and offered insight as to why students are more likely to participate in a text-based computer-mediated environment. He stated that CMC, “(a) reduces context clues related to race, gender, handicap, accent and status; (b) reduces nonverbal cues, such as frowning and hesitating, which can intimidate people, especially those with less power and authority” (p. 473). According to Warschauer (1997), the computer becomes an equalizing factor; therefore, the student feels at ease behind the computer screen. Because of this newfound security, the student is more likely to participate.
Along with increased participation, an obvious and natural shift from a teacher-centered to student-centered classroom became evident in the literature. In a case study of university intermediate French students in a hybrid classroom (Hudson & Bruckman, 2004), small group discussions were held in the traditional classroom as well as the online text-based classroom. In the traditional classroom, teacher talk dominated; however, in the online sessions, the word count for all students showed a significant increase. One student in particular, went from a 20 word count in the traditional classroom to a 400 word count in the text-based environment. Along with reduced anxiety in this synchronous CMC environment, turn taking and making sure that everyone participated accounted for the increase in participation.

Kern (1995) also indicated that turn taking was an important element to increasing participation within the online environment. Within his novice French class, student participation outweighed teacher participation, and students who tended to dominate within the traditional classroom, because of turn taking, were less likely to do so in the computer mediated arena.

Because of this increased language production, students reported that they knew their classmates better (Wang & Hurst, 1997). Ghani and Daud (2006) noted that students spent more time in their online classroom than the traditional classroom. Also, the students made claims of belonging to a community of learners and did not feel alone in an online environment (Wenger, 1998). In an ethnographic study by Shin (2006), interactional patterns of ESL students were examined. Within the findings it was noted
that in the online environment, the students shared that the academic forum also became a social forum, and from this, a feeling of community was gained.

Students became aware of others within this on-line environment. Likewise, they became aware that they too were part of this community of learners. The students’ recognized their own “social presence” (Yamada & Akahori, 2007). The researchers used this term to note that the participants were aware of his/her identity in this on-line community and that this identity helped the learner to take ownership of his/her learning and therefore language production.

The use of synchronous CMC within the second language class has been beneficial for students feel less anxious in an online environment. Because of this, student participation has increased and students feel as if they are part of a community. Now that students are talking, what exactly are they saying? In the upcoming section, language production is the focus.

**Language Production**

Initial interest about language production from SLA researchers arose from a study performed at Gallaudet University in Washington, DC (Batson, 1988). Because students at this University are deaf, educators looked for a medium for these students to express themselves in a way other than American Sign Language (ASL). Researchers discovered that these students used the CMC environment to communicate in a creative and playful manner. Students produced more material and made more attempts to use the language imaginatively. The computer became their new voice.
Intrigued by the research, Beauvois (1992) looked to see if second language students could also express themselves creatively in this environment. The findings indicated that students do produce more, and what they produce is not only more creative but also more complex. Ortega (1997) and Warschauer (1998) accounted for this increased production because of the wait time in-between text entries. According to Beauvois (1992), text-based CMC chat is “a conversation in slow motion” (p. 455). Language students have the opportunity to pause and to reflect before responding to their counterparts. This wait time enhances language production.

Participation and the authentic use of the language increase in a synchronous CMC environment. However, Chapelle (2001) stated that the quantity should not be a reason to ignore quality. Therefore, she suggested that researchers begin to analyze the functions of speech being used by the students. Educators using CMC must know the types of language the students are producing.

Discourse analysis is a tool that is used to define the various types of speech that are produced (Sinclair & Coulthard, 1975). Furthermore, it can be used to indicate patterns within the text-based or oral chat (McCarthy, 1991). Categories that indicate how students are using the language are used by researchers and educators to determine what is being learned and how students are interacting. In the to-be-mentioned studies, the use of discourse analysis will allow the reader to see how students are communicating in a synchronous CMC environment.

Because of Chapelle’s (2001) urging, what students were saying in the synchronous CMC environment began to be reported by researchers (Chun, 1994;
Humor, sarcasm, and questioning all seemed to be present with the CMC classroom. In this text-based environment, emoticons, the use of symbols to show emotion, were also noted; that is, “😊” and “!” allowed the students to show how they were feeling.

Ghani and Daud (2006) used discourse analysis to define the types of chat that were produced by students during synchronous CMC. In their study of English as a Second Language (ESL) students at a university in Malaysia, they stated that the chat could be broken into four categories: greetings or introduction, task-related discussion, off task discussion, and the conclusion (pp. 53-54). The data revealed that students used the language to question, judge, support an opinion, and clarify. Although off-task comments accounted for 40% of the data, the majority of the time, the students were engaged in quality interactions that promoted language acquisition. Peterson’s (2009) finding complemented Ghani & Daud’s (2006) findings to reveal that although off-task discussion occurred, the second language learners stayed in the target language.

In a fourth semester Spanish class at the University of Pittsburgh, Darhower (2002) looked at the interactional features which emerged from the data. Darhower, like others (Chun, 1994; Ghani & Daud, 2006), found through discourse analysis that the written language could be broken into the following categories: intersubjectivity, time-off task, greetings and salutations, humor, and sarcasm. Intersubjectivity, as defined by Darhower (2002), is when students are “on the same wavelength” (p. 256), and he commented that the students were able to communicate and be understood by each other. Darhower also noted that time-on-task dominated; however, like Ghani and Daud (2006)
a significant percentage of time (up to 45%) was spent engaging in off-task conversations.

**Error Recognition**

Recognition of errors within the text-base chat was also presented by researchers (Dekhinet, 2008; Kern, 1995; Ortega, 1997; Pellettiere, 2000). Researchers questioned the accuracy of the grammar within the text-based chat sessions (Kern, 1995; Kitade, 2000; Ortega, 1997; Pellettiere, 2000; Warschauer, 1998). Yes, students were producing the second language; but the researchers were beginning to question the accuracy and the ability of the students to see their own errors. As indicated earlier, text-based chat is like a “conversation in slow motion” (Beauvois, 1992, p. 455). Therefore, learners have the opportunity to think before they produce. Thus, students should be able to question and, therefore, use grammatically correct structures. In this form of chat, learners can actually see their input. Thus, they should be able to make adjustments and edit their written speech.

Lee (2008) researched the use of corrective feedback with 30 novice speakers of Spanish. In his qualitative study, Lee created novice to expert pairs by partnering the 30 novice learners of Spanish with 15 advanced Spanish students. He found that through corrective feedback, the novice speakers were able to correct their errors. Furthermore, he noted that the goal of the learner and his or her advanced partner sometimes clashed. In other words, the advanced learner often became over involved in helping the student identify his or her errors. The novice students felt that this overt interference was disruptive and they expressed discomfort because of it.
In a quantitative study involving 44 intermediate Spanish students, Fiori (2005) explored the use of conscious raising (CR) with two groups of students. One group was form and meaning focused (FMF), whereas the other group was meaning focused (MF). During the synchronous exchanges, via conscious raising (CR), both groups were presented with feedback about their use of grammar. The findings revealed that more accurate language productions occurred in the FMF group. Also, the researcher noted that students were more likely to help each other in this group. The goal of focusing on form became a group goal.

Even though grammatical errors and off-task conversations were evident within the research, the research studies did clearly indicate that real, meaningful conversation is being had in the online environment. Pedagogical concerns, that is, how teachers are organizing and designing the lesson were voiced by numerous researchers (Chapelle, 2001; Chun, 1994; Darhower, 2002; Ghani & Daud, 2006; Okuyama, 2005).

Prior to discussing the pedagogical concerns, I first focus on the negotiation of meaning. Although I spent some time on this earlier in the chapter, I have chosen to include a brief overview of the negotiation of meaning for the findings in this arena also have some implications for lesson design and pedagogical considerations in the CMC environment. Interactionist theories guided the researchers to identify the intricacies of the negotiation of meaning.

**Negotiating Meaning**

As mentioned, Sociocultural Theory and Interactionist Theory influence SLA research greatly. Sometimes this is through the research design, the use of discourse
analysis in particular. In this section, evidence of their interconnectedness with the research design becomes apparent. As the researchers explored the interactions and oral exchanges of the participants, they looked to the theories and theorists in the field of SLA to guide their studies. Although I defined negotiation earlier, additional information about this complicated topic follows. I also include the techniques used by researchers to analyze the discourse.

The most useful interactions are those which help learners comprehend the semantics and syntax of input and which help learners to improve the comprehensibility of their own output. One reason that negotiation of meaning is valuable is that it can result in modified input, input which is better tuned to the learner’s level of ability. (Hegelheimer & Chapelle, 2000, p. 42)

Attempting to make sense of the content is a natural part of language acquisition. Confusion and misunderstandings persuade the language learner to seek information so that he or she can make sense of the material. The student must attempt to resolve this miscommunication in order for meaning to be made. Gass (1997, p. 107) stated that “negotiation here refers to communication in which participants’ attention is focused on resolving a communication problem as opposed to communication in which there is a free-flowing exchange of information.” This process of negotiation brings the student one step closer to comprehension and acquisition of the second language. It should be stated that negotiation does not cause acquisition, but it does promote it.

Various techniques are employed by the language learner to make sense of the content. These techniques can be either visible or audible. Yanguas (2010) stated that
meaning be negotiated through physical cues, cues that can be seen not heard. Body language and gestures can help the second language learner make sense of the unknown. The incorporation of video in Yanguas’s (2010) study helped to illustrate that language is not just about the written word, but it is about the actions and vocal inflections behind the word.

Because video was not used for the bulk of studies, discourse analysis was used to analyze the meaning behind the interactions. When students respond with “huh?” or present a perplexed look during a face-to-face exchange, the speaker senses that confusion has occurred and makes attempts to clarify the message. Long (1988) referred to these responses as “signals.” O’Rourke (2005) and Blake (2000) focused their research on the topic of signals.

O’Rourke (2005) created a tandem learning environment whereby Irish students studying German were paired with German students studying English. The term tandem is generally used to indicate that the learner is not only responsible for his or her own learning, but he or she is responsible for his or her partner’s learning as well. Reciprocity as well as autonomy are the two integral understandings of tandem learning.

During the text-based tandem exchanges, O’Rourke (2005) analyzed the types of signals used by the students. He found that within text-based exchanges, direct signals were used twice as often as indirect signals. Direct signals can be defined as “explicit indications of non-understanding-wh-questions and statement” (p. 443). These What and Why questions created a bridge between the known and the unknown, thus, promoting comprehension. In order to construct meaning, students must first deconstruct it; they
must pose questions to clarify and then comprehend material. Indirect signals, such as
the echoing or the repeating back of words and phrases, were used less frequently in this
online environment. O’Rourke posited that the text-based medium, as opposed to
face-to-face may contribute to the preferred use of direct signals.

Blake (2000), like O’Rourke, analyzed the use of signals in a text-based
environment. His study though focused on the relationship between the pedagogical
strategies employed and the implications of task choice. These studies focus on the use
of signals by the second language student to indicate the breakdown in comprehension.
In an intermediate Spanish class, he looked to determine if the type of activity would call
for an increase in the use of signals. Blake presented the students with three different
types of tasks: Information Gap Activities, Jigsaw Activities, and Decision Making
Activities. Of the three, he presented findings to support that Jigsaw Activities offered
students opportunities to pose more questions and inquiries. Thus, he posited that Jigsaw
Activities provide more opportunities for students to negotiate meaning and, therefore
acquire the second language. From his study it was shown that these lessons enable the
students to identify the vocabulary and grammar that is known to them and also to
recognize what they need to acquire to enhance their proficiency. Although O’Rourke’s
primary purpose was to illustrate how second language students use signals to foster
comprehension, his work also indicated that Jigsaw Activities were more beneficial in a
CMC environment.

Similar to Blake, Smith (2003) found that Jigsaw Activities are suitable for
second language acquisition. In his study, Smith looked at the use of both Jigsaw and
Decision Making Activities and he noted that both types of task called for negotiation. Furthermore, the type of task increased the amount of negotiation. The ESL students working on Decision Making tasks used one-third more of their time attempting to negotiate meaning. This confirmed the research findings of Pellettieri (2000). Pellettieri noted that task-based interaction encourages the negotiation of language. These tasks should be “goal oriented” (p. 83) and encourage the second language students to request and obtain information from each other.

Yilmaz (2008) researched two different tasks types: Jigsaw and Dictogloss. In this quantitative study of 54 ESL students in Turkey, he looked to determine which task would promote more collaboration within the online environment. Yilmaz (2008) found that Dictogloss promises greater collaborative dialogue in an online environment than Jigsaw, whereas Jigsaw triggered a greater number of language production.

When developing lessons and activities for CMC, Lee (2004) stated that “the key is to structure tasks that involve learners’ active participation in sharing, exchanging and debating information relevant to life experiences through self-expression and self-discovery” (p. 90). The choice of tasks and the task design itself have an impact on language acquisition.

**Using Native Speakers in Chat**

Scaffolding is a common technique used by educators to facilitate second language acquisition (Donato, 1994). When two individuals interact, in order for learning to take place, a gap in knowledge between the two parties must exist. This gap represents an opportunity for potential learning. Within the CMC environment, one way
language teachers can provide scaffolding is to pair NS with NNS of the target language. In this scenario, the experts (NS) are able to provide input that has not yet been acquired by the NNS. If the lesson is developed properly, the NS can help the NNS identify and acquire the new language.

Krashen (1982) posited that for acquisition to occur, the second language student must be exposed to material that is at a slightly higher level than his or her own knowledge. In other words, the input received must be greater than the student’s current ability level. This $i + 1$ (input + 1) environment is sometimes difficult to create in the second language classroom for the majority of learners are NNS of the target language. Kenning (2010) stated that individuals with like abilities tend not to negotiate for meaning. Thus, second language acquisition is stifled.

In order to provide scaffolding, some researchers have opted to pair NS with NNS of the target language (Chun, 1994; O’Rourke, 2005). Tudini (2003) paired NS of Italian with NNS. The data revealed that negotiations were not as predominant when NS were used. Although NS could offer colloquial and authentic uses of the language, Tudini posited that the gap between NS and NNS may have been too great for second language acquisition to be feasible. Also, within Tudini’s (2003) study, the pairs (NS to NNS) were not responsible for each other’s learning; students were not involved in a tandem exchange. In a tandem environment, the two counterparts care for each other linguistically. Both parties take on the role of the teacher and learner.

On the other hand, Chun (1994) used NS who were also graduate students in her text-based synchronous CMC German class. Chun posited that because the graduate
students were more aware of the linguistic abilities of the students that second language acquisition was enhanced. In order for acquisition to occur, a delicate dance between the second language learner and his or her counterpart must play out. The counterpart must acknowledge and work with the existing skills of the learner, and likewise, the learner must be willing to take risks and push himself or herself to find new meaning. Vassallo (2006) concurred and provided support for the use of tandem learning in the CMC environment. Together, NS and NNS must agree to support each other in their second language learning endeavors.

**Text-Based Chat Versus Oral Chat**

The bulk of the research performed in the area of synchronous CMC is text-based (Beauvois, 1995; Blake, 2000; Blake, 2009; Chun, 1994; Darhower, 2002; Dekhinet, 2008; Fiori, 2005; Ghani & Daud, 2006; Hudson & Bruckman, 2004; Kern, 1995; Lee, 2008; Negretti, 1999; Okuyama, 2005; O’Rourke, 2005; Payne & Ross, 2005; Payne & Whitney, 2002; Pellettieri, 1999; Peterson, 2009; Sauro, 2009; Shin, 2006; Smith, 2003; Toyoda, 2002; Tudini, 2003; Vandergriff, 2006; Warschauer, 1995; Yilmaz, 2008).

Recently, researchers explored these two different types of communication. In an effort to compare oral chat to text-based chat, Sykes (2005) studied three different groups of second language students in a third semester Spanish class. The only difference between the three groups was the mode of discussion used within the class. One group used a text-based discussion format, one group communicated via oral chat, and the final group met face-to-face for all discussions. Through discourse analysis, Sykes found that students involved in the text-based chats produced more language and attempted to
negotiate meaning more often than the other two groups. The researcher posited that because the two individuals could not see each other, it became necessary to use more language and pose more questions to continue the conversation and make meaning from it.

In a study by Jepson (2005), oral chat sessions and text-based chat sessions in an ESL classroom were compared. Here, repair moves by the language student were viewed. It was noted that in oral chat sessions, the learner focused on pronunciation more, repeated himself or herself more frequently, and made more attempts to repair grammar. One reason for the increased repair moves by students in oral chats is that the conversation is much slower. Jepson (2005) noted that text-exchanges occur within a minute, whereas with oral exchanges there is often a delay of up to 4 minutes. Because of this, students often have to repeat questions and also have more time to ponder what has been said.

Y. Wang (2007) performed a case study of five students studying intermediate Chinese. In this study, the use of videoconferencing was explored. Here, the students could not only chat with each other, but the students could see each other as well. In this study, NS were paired with the NNS of Chinese. Students stated that the video component helped them make a personal connection with their counterpart. Furthermore, the students felt that their pronunciation improved because they were able to see their partner and observe how he or she formed the words.

Many researchers have noted that text-based chat might be a great way to prepare second language students for oral chat (Healy-Beauvois, 1997; Payne & Whitney, 2002;
Smith, 2003; Sotillo, 2000; Tudini, 2003). Blake (2010) saw text-based chat as a bridge to oral production. Warschauer and Kern (2000) believed that language students can use text-based chat to strengthen their language skills so that when presented with the opportunity to engage in oral chat, he or she will have developed a stronger linguistic foundation and will be more likely to have a positive experience.

Beauvois (1992) and Chun (1994) concurred that text-based chat resembles face-to-face chat in that it is a natural, fluid conversation. The learners interact with each other as if they were in a face-to-face setting. Greetings, salutations, and informal questions engage the learner and encourage him or her to participate. Sotillo (2000) posited that the strategies learned during text-based chat sessions should transfer during oral sessions.

In a mixed methods study, Satar and Ozdener (2008) compared the use of oral chat and text-based chat of 30 secondary students learning English in Turkey. The researchers found that oral proficiency did increase significantly for both groups. As indicated by other researchers (Healy-Beauvois, 1997; Payne & Whitney, 2002; Smith, 2003; Sotillo, 2000; Tudini, 2003), text-based chat can serve as a platform for increasing oral production. Although both groups showed a significant increase in oral proficiency, Satar and Ozdener (2008) suggested that at the novice level, text chat may be a more appropriate tool for language learners who were less anxious in this environment. They suggested further exploration in this area.
Conclusions From the Reading of This Literature

Deliberately, the findings that I presented follow a logical order. From the focus on participation through the pedagogical implications, an obvious scaffolding of findings helped to forward the research in the area of synchronous CMC in the second language classroom. It appears as if researchers, study by study, are seeing the holes that exist within the research and are looking for ways to explore and improve the use of synchronous CMC within the second language classroom.

Nonetheless, more needs to be done to add depth and dimension to the body of research. In a meta-analysis of the research on computer assisted language learning (CALL), Zhao (2003) stated that the research in this field is limited in 4 aspects: (a) The number of systematic, well-designed empirical evaluative studies of the effects of technology uses in language learning is very small; (b) the settings of instruction where the studies were conducted were limited to higher education and adult learners; (c) the languages studied were limited to common foreign languages and English as a foreign or second language; and (d) the experiments were often short term and about one or two aspects of language learning (p. 7). Although Zhao’s analysis was about the field of CALL as a whole, his suggestions for future studies directly mirrored my own findings on the history of TELL and synchronous CMC in the second language classroom. Of the four suggestions of Zhao, two findings in particular are of comparable interest and concern. First, I do concur that there are a paucity of studies in the field, especially in the area of synchronous CMC. As I indicated, I was only able to identify 36 studies that met my requirements for inclusion. Although ample, more research must be done. Second,
more research must be performed at the secondary level. As I indicated earlier, only one of the noted studies took place at the secondary level (Satar & Ozdener, 2008). How high school students process and use synchronous CMC can help to add a different perspective to the current research.

Within the field of CALL, Zhao’s (2003) four suggestions cover and define the direction for future research. However, within the area of synchronous CMC, three additional areas must be explored. First, research must continue in the use of oral chat in the CMC environment. According to my research (see Appendix B), second language students have primarily connected with NS or NNS by means of the written word (Beauvois, 1995; Blake, 2000; Blake, 2009; Chun, 1994; Darhower, 2002; Dekhinet, 2008; Fiori, 2005; Ghani & Daud, 2006; Hudson & Bruckman, 2004; Kern, 1995; Lee, 2008; Negretti, 1999; Okuyama, 2005; O’Rourke, 2005; Payne & Ross, 2005; Payne & Whitney, 2002; Pelletieri, 1999; Peterson, 2009; Sauro, 2009; Shin, 2006; Smith, 2003; Toyoda, 2002; Tudini, 2003; Vandergriff, 2006; Warschauer, 1995; Yilmaz, 2008). Because of Internet bandwidth limitations and other technical complications, few empirical studies have been performed on the use of oral based chat (Arnold, 2007; Blake, 2005; Jepson, 2005; Kenning, 2010; Lamy, 2004; Satar & Ozdener, 2008; Sykes, 2005; Wang, 2007; Yamada & Akahori, 2007; Yanguas, 2010) in the second language classroom. Fortunately, because of the advancements of technology, although not readily used, the use of oral chat is now available. Online applications such as Skype, NetMeeting, Oovoo, and Mixxer allow for oral interaction between two individuals.
Second language students can chat with anyone, anywhere, and at any time in this online environment. The technological advances and the ease of use provide endless opportunities for the second language learner. Based on my own personal use of this technology at the secondary level, students are intrigued by this technology. As the technology improves, I feel confident that more and more studies will find their way into the literature.

Next, the use of NS within chat sessions must continue to be explored. Few studies commented on the use of the NS (Negretti, 1999; Satar & Ozdener, 2008; Tudini, 2003). Y. Wang (2007) stated that the students felt their pronunciation improved because of the one-on-one relationship with the NS. Native speakers can also provide scaffolding and offer a higher level of vocabulary (Chun, 1994). There is still a great deal to explore in this area.

Finally, within the area of synchronous CMC, the bulk of qualitative studies used discourse analysis as the primary research method (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005, Kenning, 2010; Kern, 1995; Lamy, 2004; Lee, 2008; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 1999; Peterson, 2009; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yamada & Akahori, 2007; Yanguas, 2010) only five studies (Blake, 2005; Hudson & Bruckman, 2004; Okuyama, 2005; Shin, 2006; Wang, 2007) were presented as case, action research or ethnographic studies. Detailed descriptions of the students’ feelings about use of synchronous CMC must be explored. Although quantitative data can offer insight into the use of
synchronous CMC, qualitative studies can help to further explain the findings and offer a different perspective on its use.

**Purpose of the Study and Research Questions**

The goal of my research study was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. As a Practitioner Researcher, I sought to investigate and understand the journey of my high school second language students and capture their accounts of learning and their interactions with middle school Native Speakers (NSs) of the target language in an online environment. Thus, this research project focuses on the following question and sub questions:

How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?

1. How do the high school Non-Native Speakers (NNSs) of Spanish feel throughout this process?

2. How do high school Non-Native Speakers (NNSs) of Spanish enhance their second language skills and foster comprehension in this on-line environment?

3. How do the Non-Native Speakers (NNSs) and Native Speakers (NSs) of Spanish interact in this online environment?
Conclusion

Technology in the second language classroom has evolved over the decades, and the findings that researchers have presented, and continue to present, build upon a comprehensive body of work. From the use of the language laboratory to the ipod, time and again both quantitative and qualitative research confirms that second language students are more engaged and motivated in a technology enhanced environment (Herron et al., 1999; Jones & Plass, 2002; Kost, 1999). As the technology improves, the research aims and findings must also continue to add depth and dimension to the body of research. Qualitative questions that attempt to reveal the Why and the How behind the aforementioned studies will help researchers to reveal the story behind the learning so that a deeper understanding of technology use in the second language classroom can be gained.

As we prepare our students to inherit the flat world in which we live, we (educators and researchers) must help our students acquire second language and technology skills (Friedman, 2005). My research project has been intentionally designed to explore these two 21st century skills. In Chapter 3, I outline the methodological procedures that were used to frame this study. Also, the theoretical perspectives and an in-depth explanation of the project are also defined. Data collection and analysis procedures are outlined. In Chapter 4, I present the findings, and I continue on with a discussion of the findings in Chapter 5.
CHAPTER III

METHODOLOGY

The purpose of this qualitative practitioner research study was to examine the experience of non-native speaking Spanish students’ use of synchronous computer mediated communication (CMC) as they learn a second language. A main research question (How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?) guided me on my journey. Grounded theory methods of analysis of data helped me to document and consider patterns within the data so that I could generate theories about the use of synchronous CMC in the second language classroom.

In this chapter I present the research questions. Then, I explain the research approaches and the theoretical perspective that influenced this research project. Next, I focus on the study design, include the context, participants, data collection, and data analysis procedures. I conclude with a discussion of ways that I attempted to assure the trustworthiness of the findings of this study.

Research Questions

How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?

1. How do the high school Non-Native Speakers (NNSs) of Spanish feel throughout this process?
2. How do high school Non-Native Speakers (NNSs) of Spanish enhance their second language skills and foster comprehension in this on-line environment?

3. How do the Non-Native Speakers (NNSs) and Native Speakers (NSs) of Spanish interact in this online environment?

Research Approach

Qualitative Inquiry

“Qualitative methods can be used to uncover and understand what lies behind any phenomena about which little is known” (Strauss & Corbin, 1990, p. 19).

I intentionally chose to focus on the voices of the participants, my students. As my research goal was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language, qualitative research methods fit best. Corbin and Strauss (2008) stated that “qualitative research allows researchers to get at the inner experience of participants, to determine how meanings are formed through and in culture, and to discover rather than test variables” (p. 12). This form of inquiry was well-suited for this particular study for it allowed me an opportunity to explore and gather the work related products and the inner thoughts and attitudes about the use of synchronous CMC so that I could construct meaning and share the story of the students’ experience. Creswell (1998) defined a qualitative study as a “complex narrative that takes the reader into the multiple dimensions of a problem or issue” (p. 15). It is through this narrative that my students’ stories will be told.

In order to get to the “inner experience” and view the “multiple dimensions,” I used a variety of data collection and analysis techniques. Influenced by the leaders in the
field of qualitative inquiry, I referred to the procedures outlined by Corbin and Strauss (2008) and Miles and Huberman (1994) for data collection and analysis. From interviewing techniques to coding, specific steps were taken to ensure a well-designed qualitative research study. These procedures are outlined in the data collection and analysis sections.

Along with being diligent when approaching a research study, Corbin and Strauss (2008) stated that to do qualitative research, one must also be “curious, creative, and not afraid to trust his or her instincts” (p. 16). Practitioner Research, a form of qualitative inquiry, embodies this type of research for the practitioner researcher explores his or her domain to seek new knowledge. As I am curious and love what I practice, Practitioner Research offered me a way to explore my interests about second language learning in a context I was familiar with and intrigued by.

**Practitioner Research**

In order to achieve the goal of this research project, Practitioner Research was the research method that was employed. Practitioner Researchers are experts in their field and use various research methodologies to better understand their own practice. These experts seek new knowledge in order to make educative decisions about present and future practices. Practitioner Research, as defined by McCutcheon and Jung (1990), is Systematic inquiry that is collective, collaborative, self-reflective, critical, and undertaken by the participants of the inquiry. The goals of such research are the understanding of practice and the articulation of a rationale or philosophy of practice in order to improve practice. (p. 148)
Practitioner Research is research that links theory to practice and presents educators with the structure to discover new ways of teaching and learning. Furthermore, it is an approach to qualitative inquiry that empowers individuals to seek answers to improve upon their current practice. The practitioner contributes his or her knowledge of the content and the context. By doing so, the practitioner becomes part of the solution to advance the educational system. Anderson, Herr, and Nihlen (1994) stated:

We see practitioner research not merely as individual practitioners trying to improve their practice, but as part of a larger social movement that challenges dominant research and development approaches that emphasize an outside-in, top-down approach to educational change. In other words, we believe that empowerment begins with a group of educational practitioners who view themselves not merely as consumers of someone else’s knowledge, but as knowledge creators in their own right. (p. 6)

Practitioner Research, as a form of inquiry, allowed me, the teacher and researcher, to be part of the process, to discover new ways of teaching and learning, and to contribute and create knowledge. I chose to not divorce myself from my role as a teacher, but to enhance it with new ways of knowing. Cochran-Smith and Lytle (2009) spoke of the “duality of roles” (p. 41) of the teacher as a researcher. This duality of roles, teacher and researcher, allowed me to draw upon my experience and to seek new understanding. As I am a teacher whose primary objective is to improve second language education in the school system in which I teach, attributes of Practitioner Research permeate this study.
**Grounded Theory**

In an effort to seek a new understanding, I chose not to enter into the study with predetermined theories in mind to verify. I wanted the meaning to emerge during the process of data analysis. Grounded Theory offered a frame for this approach and a summary is presented here.

A grounded theory is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory stand in reciprocal relationship with each other. One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge. (Strauss & Corbin, 1990, p. 23)

Grounded theory, as qualitative research methodology, advocates for the creation of meaning through the research process. According to Charmaz (2006), meaning is constructed and should not be approached with pre-conceived thoughts. As the Practitioner Researcher of this study, I was eager to investigate phenomenon and discover the “why” and “how” behind the learning. I looked to gather meaningful chunks of data to discern the meaning behind the study. This quest to construct knowledge prompted me to view the data from multiple angles. It was through the analysis of the data that I was able to consciously develop the research sub-questions and discover the findings that were most relevant. These sub-questions and findings emerged during the arduous
process of data analysis. The analysis of this data, and the influence of Grounded Theory, is discussed in an upcoming section.

I chose Grounded Theory as my research methodology because I identified that my study was distinctive to all other studies performed in the past. Charmaz (2006) stated that “grounded theory methods consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories ‘grounded’ in the data themselves” (p. 2). In Chapter 2, I informed the reader that the previous research focused on text based synchronous CMC interactions. These interactions were not face-to-face; both parties were “hidden” behind their computer and only their words identified them. Because my study focused on face-to-face interactions, I did not want to be influenced by the findings of the past studies. I chose to keep an open format so that I could discern meaning that is unique to my study.

Furthermore, my study, unlike others, focused on the use of secondary students. My high school novice language learners collaborated with NSs of the second language. As a Practitioner Researcher, I was curious as to how my high school students would interact with these NSs. I did not want to make assumptions about the learning that would occur. Grounded Theory, as my research methodology, allowed the data to speak to me. The findings and theories emerged during the process of data analysis and the stories of the face-to-face interactions of my novice and expert language learners were given voice. In concert, elements of Practitioner Research and Grounded Theory allowed me to construct the qualitative study to best achieve my research goal: to examine the
experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language.

**Theoretical Lens**

**Sociocultural Theory (SCT) and Interactionist Theory**

Sociocultural and Interactionist theories have influenced the thinking, teaching, and research in the area of second language acquisition for many years (Chapelle, 2005; Lantolf, 2004; Salaberry, 1996). These theoretical perspectives influence this study by offering insight as to how high school students studying a second language negotiate meaning during a synchronous on-line communicative exchange. Working in concert, the theories bring the technology and the humans behind the technology together and highlight the interaction between and within all parties.

**Sociocultural Theory (SCT)**

Sociocultural Theory (SCT), which is based on the work of Vygotsky (1978), a psychologist and advocate of constructivist teaching and learning, posited that meaning is made during the social exchange process. The basic premise of Sociocultural Theory is that learning is social. Individuals learn by interacting with others who are at different levels of development. Swain (2000) defined this process of language learning and negotiating meaning as, “where language use and language learning can co-occur. It is language use mediating language learning. It is cognitive activity and it is social activity” (p. 97). Swain’s description succinctly captures the interconnectedness of the social and mental processes that are necessary for meaning to be made.
Information about SLA by means of negotiation with others permeates the study. According to Vygotsky,

Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals. (Vygotsky, 1978, p. 57)

During social interaction, Vygotsky stated that we use language, a cultural tool, to help us tend to our wants and needs. New language is acquired through this interaction, and the cultural tool, language, is enhanced. As individuals interact with others and their environment, the gap between their lived worlds is processed and learning occurs. Vygotsky called this gap the Zone of Proximal Development (ZPD) and identified it as the potential for learning.

During social interaction, the individual uses language to maneuver within the environment, but language is not the only cultural tool. Lantolf (2004) stated that a cultural tool can be symbolic, such as language, or it can be physical, such as a pencil or computer. Lantolf and Thorne (2006) stated that cultural tools “serve as a buffer between the person and the environment and act to mediate the relationship between the individual and the social–material world” (p. 199). It is through the interaction with the environment, be it social or physical, where meaning is created.
As my study uses the computer to communicate with others, SCT provides the theoretical support for this dissertation study. Interactionist Theory, another influential theory about how language is learned, is presented below.

**Interactionist Theory**

In the field of Second Language Acquisition (SLA), the tenets of Sociocultural Theory provide the foundation for Interactionist Theory (Chapelle, 2005). Interactionist Theory highlights the linguistic, not social, element of second language acquisition. During interaction, the second language learner attempts to make the incomprehensible input, comprehensible. These dealings foster knowledge construction through the negotiation of meaning.

Pica (1994) defined negotiation as “modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility” (p. 495). During these communicative breakdowns, Interactionist theorists analyze how meaning is made. Varonis and Gass (1985) stated that when the input is incomprehensible, a back and forth exchange between the two parties is enacted until the breakdown in communication is resolved. According to Pica and Doughty (1985) strategies, such as clarification requests, confirmation checks, comprehension checks, and/or repetitions, provide the second language learner with opportunities to understand the new language. In order to retain the newly acquired language, Swain (1985) stated that input, or newly acquired language, can only be owned if the second language learner makes attempts to use it. It is through this forced output where the second language learner takes ownership of the language.
In my dissertation study, I describe my high school Spanish students’ experience of learning a second language with Native Speakers (NSs) in a synchronous CMC environment. Students meet on-line to partake in various communicative activities. Evidence of the influence of both SCT and Interactionist Theory will be clearly visible as knowledge about my dissertation study unfolds.

These aforementioned theories and the varied research approaches influenced the choices for setting and participants as well as data collection and analysis. These aspects of the design of the study are defined and elaborated upon in the next section. Throughout, the influence and careful consideration of the research approach and theoretical lens will be evident.

**Study Setting**

Detailed descriptions of the high school setting, selection process of participants, and the characteristics of the participants will help the reader understand the context of the study. The setting and the participants are the base of the study; thus, the intricacies of the selection process must be revealed so that a complete understanding of the project can be possible. This section includes explanations of the choice of the participants and the setting and how these choices were suitable for the research goals. It concludes with an in-depth explanation of the project during which data was collected.

**Duke Local School District**

First and foremost, it should be noted that the Duke Local School District was chosen because I am a World Language teacher within the school system. This study had

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1 All names of districts, schools, and students are pseudonyms to protect anonymity of the participants.
been designed so that I could examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. As the Practitioner Researcher of the study, I sought to construct meaning and to contribute new knowledge to the body of research in the area of second language learning. Below you will find an in-depth description of Duke.

Duke is located approximately 40 miles east of a major Midwestern city. The school buildings in the district are laid out in a campus-like setting containing an Elementary School, Middle School, High School, Wellness Center, and Theater. Buildings on the campus are connected via bridges and hallways. This campus provides its members with a state of the art facility and an abundance of technology.

The Duke Local School District is able to afford the facilities and the luxuries of technology not because its constituents are affluent, but because the district shares its home with a nuclear power plant. The taxes gained from the plant have helped the district realize their dreams for the school district and community. Because of the funding from the plant, this semi-rural school district in a middle class residential community is poised to provide a world-class education.

As part of this commitment to provide a world-class education, the district has invested in a K-12 World Language Program and has equipped me and the other language teachers with cutting edge technology. The district is fortunate to have two language laboratories. These labs were the physical setting for the study. Each lab contains 28 student computers and 1 teacher station. All computers are connected to the LAN (Local Area Network) and have access to a multitude of software and on-line
applications. Because of the wealth and availability of technology, coupled with the
districts’ pledge to prepare students for the 21st century, Duke is an ideal place to study
synchronous CMC and language learning.

Participants

Within the Duke Local School District, 2,000 students are enrolled. At the high
school, where I teach, approximately 660 students are in attendance. Of all students
enrolled, 98% are Caucasian, and English is the primary language spoken at home. Of
the Duke students, 90% take college preparatory courses, and 80% of all students attend a
post-secondary program after high school.

As I am a World Language faculty member in the Duke Local School District, I
have the good fortune of working with high school language students taking Spanish.
High School Spanish II students from my first period class were asked to participate in
the study. This time and these participants were chosen for it was the only time the NSs
of Spanish from the Smith City School District were available to participate.

Duke Participant Selection Process

I decided to offer this opportunity to all students enrolled in my first block
Spanish II course. I did not want it to appear as if I was favoring any student; thus, I felt
it was necessary to allow all students the chance to volunteer to participate. As I was the
teacher, I needed all students to trust me, and a hint of favoritism could cause the
remaining students to lose confidence in me. For this research study, I was not interested
in understanding the nuances of a particular type of learner. I was not looking to see how
low or high achieving students performed during this on-line communicative exchange.
During the first week of class, while we were in the Language Laboratory, I created and then posted an online questionnaire to all students in my first block section of Spanish II. Within the online survey, I stated that we had the opportunity to use Skype to interact with NSs of Spanish from a nearby district. I then asked the students if they would like to participate. The question stated,

This semester, we have the opportunity to speak with Spanish speakers at Smith City Middle School. We will be chatting with them through Skype. The activities that we use will be the same ones that are used in class. Would you like to Skype with a middle school Spanish speaking student? (Initial Survey, January 19)

I gave the students three options: yes, no, maybe. Initially, only four students selected YES. Because Smith City had six students who would be participating, I told all students from the indicated class more about the project and what the online exchanges would be like. It was my hope that two students would come forward to express an interest. Three students did come forward for a total of seven students.

Of these seven initial participants, one student withdrew her participation. I had six pairs, six students from Smith City Middle School and six students from Duke High School. With these pairs, I was confident that I would be able to collect enough data to support the purpose of my research: to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. Patton (2002) stated that “there are no rules for sample size in qualitative inquiry” (p. 244). He claimed that the researcher must determine the amount of evidence needed to
support his or her case, and with this in mind, the researcher must select an appropriate number of participants.

Prior to determining the participants in the study, I sought approval from Kent State University’s Human Subjects Review Board and the Smith and Duke school districts to conduct the study (Appendices C, D & E). Before the project started, my students, the Smith City students, their parents, and the school districts were all notified of the study. In the letters of consent, I requested permission to interview and record my students and to record the online conversations of both the Duke and Smith City students. Permission was granted by all parties.

**Participant Characteristics**

The Duke students who volunteered for the study were all White females whose native language was English. For the purpose of this study, their names were changed to protect their identities. Kendle, Jackie, Erica, Alyssa, Mia, and Danielle are their pseudonyms. These girls ranged in age from 14 to 16 years. Kendle was a junior, Jackie was a sophomore, and the remaining students were freshmen. All participants had taken Spanish I the year prior, and all of the students were novice second language learners. In other words, the students knew some basic phrases and were able to answer simple questions.

Although the students were all novice second language learners, their abilities differed. Mia and Danielle struggled in their Spanish I course. Their teacher informed me that they received Low Cs and that their pronunciation was poor. Nonetheless, the girls were very enthusiastic about this learning opportunity. In the online survey, both
girls stated that they were eager to work with and learn about the students from Smith City (Initial Survey, January 19).

The remaining students were all strong second language students. All had received A’s in level one and their teacher informed me that they were strong students. Erica, Jackie, and Kendle all hoped to improve their speaking abilities and were excited to be part of the Skype project. Alyssa also looked to improve her skills and “to learn how to speak more fluently” (Initial Survey, January 19). Of all the students, Alyssa appeared to be the strongest second language student. Even prior to the start of the Skype project, Alyssa attempted to pose her questions in Spanish and the written work she presented was superior.

**The Project at the Center of the Study**

In this section, I explain the background for the project and the technological considerations. Then I share about the language partners that the Duke students (the participants in the study) worked with. I then provide information on how I set up the Skype project, the activities that were used in the Skype exchanges, and the times and dates of the exchanges.

**Background for the Project Within the Study**

Within the traditional second language classroom, and in my classroom, NNSs of the target language dominate. Students rehearse their vocabulary, practice their grammar, and partake in interpersonal speaking activities with other NNSs. Although practical, the NNS to NNS combination can foster poor pronunciation and create a ceiling to learning in the second language classroom.
Krashen (1982), a second language theorist, stated that in order for learning to occur, the language student must be exposed to material that is slightly more complicated than his or her current level of knowledge. Krashen’s $i + 1$ (input + 1) theory, like Vygotsky’s (1978) Zone of Proximal Development (ZPD), requires a gap between the student’s knowledge and that of his or her partner. During an interdependent exchange, each learner depends on his or her partner to fill in the gap by providing material that is slightly more complex or richer than his or her own personal knowledge.

Based upon my own experience in the classroom, I concur with Krashen. I too believe that because students in the traditional second language classroom are interacting with other NNSs of Spanish, it is difficult for them to move beyond their current level of proficiency. In other words, it is hard for incidental learning and growth to occur when both parties possess similar skills.

In the past, in my Spanish II course, the learning scenarios that were created for students to practice their speaking skills had not been authentic; the experience was contrived. Students need real world experience; they need to be able to interact with NSs of the target language. With exposure to NSs of Spanish, the Spanish students can hear and interact with someone who possesses more knowledge. If the activities are structured properly, the NSs can add the depth to the conversation that is currently missing.

From my recognition that something was missing, I designed a technology enhanced project. The project involved the use of Skype to connect my students, NNSs of the target language, to NSs of the target language.
Technological Structure of the Project

To fully understand this project, it is important that I define telecommunication and offer some background on the form of telecommunication that was used, and why I chose this particular mode.

Telecommunication is any system that allows messages to be transmitted electronically. These messages can be synchronous, which means that both parties are interacting with each other at the same time, or the messages can be asynchronous, exchanging information at different times. For this study, synchronous computer-mediated communication (CMC) was studied. During synchronous CMC, users exchange information in real-time. In a synchronous exchange, individuals can communicate via text or speech. The students must not only comprehend the input, but they must also respond appropriately and in a timely manner very similar to face-to-face communication.

Because I wanted to provide authentic speaking opportunities for my Spanish II students, the form of synchronous CMC that I chose uses a Voice Over Internet Protocol (VOIP). I wanted my students to engage in authentic conversations, and this form of telecommunication allows for the second language learners to think on their feet and produce spoken language. The students’ pronunciation, fluency, grammatical accuracy, and vocabulary choices were put to the test as they made an effort to communicate in this face-to-face web based environment.

At the start of the study, there were a handful of online applications that allowed the user to speak and see each other over the Internet. I chose to use Skype because it is a
free online application that allows users to interact in real-time. Users of Skype can connect online and converse either via text, video conference, or voice, or employ a combination of audio and text. During this project, students had the capacity to see, hear, and text their counterparts.

The video component within Skype was utilized because I wanted students to make a connection with one another and I know that the visual images further comprehension. Foster and Ohta (2005) found that physical signs such as head nodding and facial expressions helped the speaker to determine if confusion or comprehension is present. Y. Wang (2007) concurred and acknowledged that these physical signs promoted the negotiation of meaning so that comprehension can be ascertained. Thus, all computers used for the research project were configured so that video was possible.

Prior to this research project, I used Skype to communicate with friends and colleagues for well over a year. I was very comfortable with this online application and was anxious to teach students about it. I had also used other forms of synchronous CMC, such as ICQ and OOVOO, but Skype seemed to be very user friendly, and I knew that the language students would need minimal training on its use.

I now provide information as to how the NS counterparts and their district were chosen for this study. Rationale for their selection and descriptions of the locations and the NS participants are provided. The Skype project itself is also presented.

The goal of this research project was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. Although the information about the Duke School District and Duke
participants were presented and the participants’ learning is the focus of the study, it is important to also be familiar with the collaborating school district and the individuals with whom they interacted. Even though I collected only minimal data from the ESL students from the collaborating district, such as vodcasts, I felt it was important to be aware and to acknowledge all who were a part of the project in the classroom. When discussing CMC, the parties become interdependent. The interaction forces the participants into a mutually supporting relationship. In other words, the parties rely on and help each other grow intellectually and socially. Thus, to ignore the other party would counter the assumptions of the theoretical framework upon which this study was built.

**Smith City School District**

Spanish students from the Duke Local School District collaborated with students in a neighboring district, the Smith City School District. It is important to describe this setting and to share how and why this district was identified as a suitable partner.

The neighboring district is located 30 miles east of a major Midwestern city. The Smith City School District is only minutes away from the Duke Local School District; however, it is vastly different. The fertile farmlands and middle class neighborhoods in Duke are a stark contrast to the office buildings, retail stores, and hospital located in the Smith City School District.

This lower middle class community had old, deteriorating school buildings with little to no infrastructure to support the latest technology. Fortunately, with funding from the state, the Smith City School District recently finished the construction of modern,
high tech school buildings. Because students in this study would be connecting via technology, it was vital that the proper technology and infrastructure existed. This new technology made the Smith City School District an appropriate match for Duke.

Another significant factor in considering Smith as Duke’s partner for the study was the proximity of the two districts. This allowed me, the teacher and researcher, to minimize any technical complications that posed potential problems. I made certain that the IT Departments of both districts were able to collaborate and assist each other with any and all technical concerns. I knew that distance between the partnering districts could hinder the study.

Finally, and most importantly, Smith was chosen as a suitable partner because the district is comprised of a diverse mix of ethnicities and races. It is estimated that 30% of students enrolled at Smith are Hispanic. Because of the large Spanish Speaking population, ESL (English as a Second Language) services are provided. It is from these ESL classes, where language partners were sought. Although support for ESL students is found from elementary to the high school, the majority of ESL classes are offered at the middle and elementary schools. I chose to work with the middle school students for they were closer in age to my high school students.

Although technology has no borderlines and can allow the end user to travel across continents, Smith’s technology, proximity to Duke, and large number of NSs of Spanish made Smith a perfect candidate for the Research Study.
Smith Language Partner Selection Process

As for the selection of the middle school Smith students who were partner with the Duke students, I called upon the help of the ESL teacher from Smith. The ESL teacher from Smith volunteered to take part in the exchange. She, a veteran teacher of 15 years, was excited to have an authentic learning experience for her students. The ESL teacher knew her students as she had worked with them the previous semester. I hoped that this would mean she would have little to no trouble finding volunteers.

Because of Smith’s rotating and ever changing schedule, the only common time that both parties would be able to meet online was from 8:00am to 9:00am. Smith’s first period class was the only class that remained constant throughout the semester. This time was used as a homeroom and an activities period. Students could do homework or could attend club meetings. The ESL teacher offered to her ESL students the opportunity to communicate with NSs of English from a neighboring district. The teacher informed the students that they would be using Skype during the activities period. After a detailed description of the project to her students, the ESL teacher was able to identify six ESL students who were willing to participate in the Research Study. Consent forms were presented to these students and their parents in Spanish. The ESL teacher also contacted the parents to present additional information about the project. Although I am the researcher of the project, I thought it best that she contact the parents since she had already established a relationship with the parents.
Smith Student Characteristics

The Smith City language partners ranged in age from 13 to 15 years. Like my students, these ESL students were also given pseudonyms. There were four boys and two girls: Chato, Enrique, Leonardo, Jorge, Linda, and Juana. All were eighth graders at the middle school. All students were NSs of Spanish. These students were all born in Mexico and the primary language spoken at home was Spanish. All spoke English; however, their ability to use the language differed from person to person. The two female students had been in the United States for 9+ years. Based on the transcripts, I would place these girls in the high intermediate level of speaking proficiency. In other words, these girls were able to carry on controlled conversations and had a wide range of vocabulary. The male students had only been in the United States for 3 to 5 years. These students were in the low-intermediate range of proficiency. They were able to ask and answer simple questions and provide basic information. They also had developed a somewhat broad vocabulary base.

Timeline for the Project

Table 1 illustrates a timeline of how the project developed.

Setting up the project. Prior to the selection of the student participants, I met with the ESL teacher and administrators from the Smith City Middle School to discuss the project and possible complications. The ESL teacher was excited about the collaborative project but did express some concern about access to computers. Although the Smith City Middle School had a computer lab, the ESL teacher stated that they would have to compete with core teachers for lab time. Although it was not part of the original
<table>
<thead>
<tr>
<th>Phase</th>
<th>Dates</th>
<th>Tasks</th>
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<tbody>
<tr>
<td>One</td>
<td>November 2009</td>
<td>Meet with Smith’s ESL department to determine the number of Spanish speaking students/classes who plan to participate in the Skype exchange. Record times of classes and number of possible participants.</td>
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<tr>
<td></td>
<td>November 2009</td>
<td>Begin the IRB process.</td>
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<td></td>
<td>November 2009</td>
<td>Communicate with Smith’s IT department to make certain that their computers will be able to connect with our computers via Skype. Work out any technical issues.</td>
</tr>
<tr>
<td></td>
<td>November 2009</td>
<td>Work with Duke’s IT department to make certain that our computers will be able to connect with Smith’s computers via Skype.</td>
</tr>
<tr>
<td></td>
<td>December 2009</td>
<td>Create Skype accounts for Duke and Smith City. Download Skype and Vodburner on all computers.</td>
</tr>
<tr>
<td></td>
<td>December 2009</td>
<td>Meet with Smith’s ESL teacher to educate her about Skype and the communicative activities that will be used.</td>
</tr>
<tr>
<td></td>
<td>December 2009</td>
<td>Educate Duke students on how to use Skype. Continue to work with Smith’s ESL teacher on the use of Skype.</td>
</tr>
<tr>
<td></td>
<td>January 2010</td>
<td>Introduce Skype Research Project to Spanish II students at Duke and request volunteers. Participants will be asked to volunteer. Continue to work with Smith’s ESL teacher on the use of Skype.</td>
</tr>
<tr>
<td></td>
<td>January 2010</td>
<td>Collect consent forms from Duke and Smith students.</td>
</tr>
<tr>
<td></td>
<td>February 2010</td>
<td>Meet with Smith’s ESL teacher to determine student pairs. Configure the computers so that the pairs have easy access to each other in Skype.</td>
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<tr>
<td>Two</td>
<td>February 2010 to April 2010</td>
<td>Duke students use Skype to communicate with a NS counterpart from Smith. Students use online survey to record details and thoughts about the online experience</td>
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<tr>
<td></td>
<td>March 2010</td>
<td>First round of semi-structured interviews</td>
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<td></td>
<td>April 2010</td>
<td>Second round of semi-structured interviews</td>
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<td></td>
<td>May 2010</td>
<td>Focus group session</td>
</tr>
<tr>
<td>Three</td>
<td>June 2010 to December 2010</td>
<td>Data analysis</td>
</tr>
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</table>
plan, I wrote for and received a grant so that the Smith City students would be guaranteed access to computers. With the grant monies, six Asus Netbooks and headsets were purchased. These computers were donated to the Smith City School District after the completion of the project.

Before turning over the six Asus computers to Smith City Middle School, I downloaded Skype on each computer and assigned the computer a Skype username and password. I set up the computer and the account so that the computer would remember the username and password. Each computer was then labeled with the username (e.g., Smith01). The students only had to click on the Skype icon to be directed to their account. I asked the ESL teacher to make certain that her students were assigned to a computer. I wanted the same student using the same computer each time. I wanted my students to be able to call the same computer each time and know who would be behind the screen. Plus, I wanted all students to take ownership of and care for the technology in their possession.

In a similar fashion, I created six Skype accounts for the computers in the Duke Language Laboratory. I assigned usernames and passwords like those of Smith (e.g., Duke01). I then set up the computer to remember the username and password. Like the Smith students, my students were required to sit at the same computer station each time. Plus, they were expected to connect with the same NS counterpart. Information about the partnerships are presented later on.

Vodburner, a free application that works in concert with Skype, was downloaded on the Smith and Duke computers. Vodburner captures the video exchange and produces
a side-by-side video display of both speakers. In order for me, the practitioner researcher, to fully understand the students’ experience, I knew that I would need to view the online exchanges. Thus, Vodburner was a perfect tool to harness this data.

Once I created Skype accounts, downloaded Vodburner, and labeled all computers, the training on the use of Skype began. I met with and trained the ESL teacher from Smith and their Technology Director on the use of Skype four weeks prior to the online exchanges. I was very concerned about technical complications; thus, I made sure to devote time to training, and we decided to meet three times. During the training sessions, the ESL teacher learned how to place and receive Skype calls. We discussed the use of the video call and how to enable the video camera. Because Skype is a very user friendly application, little training was required. Nonetheless, it was important to make certain that the ESL teacher was comfortable with the use of Skype for she would be training her students.

During lab days, prior to the start of the project, all Spanish II students at Duke used Skype internally to talk to their peers. Although only six Spanish II students would be connecting onsite to NSs of Spanish, I wanted all students comfortable with this tool. I planned to have the six Duke participants connect to the Smith students, and my remaining 22 Spanish II students would use Skype to connect internally with a fellow classmate. My goal was to offer a comparable learning experience to all Spanish II students. For the most part, all students were exposed to the same content and given comparable time on speaking, vocabulary, and grammar activities. Within a couple of
lab sessions, all Spanish II students could place and receive video calls and knew how to address minor technical complications with the audio and video.

**Partnerships.** I chose not to create pairs prior to the start of the project. The students’ choice or use of computer determined the partnerships. The student who was seated at the Duke01 computer connected with the student at the Smith01 computer. Furthermore, I chose to keep constant the partnerships. I wanted the same students connecting and communicating every time. I did this for only one reason. Because of previous research, I knew that the students were going to be nervous about this online exchange (K. Bailey, 1983; Horwitz et al., 1986; MacIntyre & Gardner, 1994; Warschauer, 1995; Young, 1991). I hoped that if the students were paired with the same individual, this anxiousness would subside over time. First and foremost, I attempted to create a comfortable atmosphere for all students.

**Timeline for the exchanges.** In order to have multiple opportunities to interact, I decided upon a minimum of 10 Skype exchanges. We planned to connect every Tuesday from the 5th of February until the 25th of May. I chose this length of time because as an experienced teacher and understanding the research I predicted that it would take the students a minimum of three weeks to become comfortable with the process. Furthermore, for students to be able to identify growth with their use of the second language and develop a working relationship with their counterpart, an extended timeframe was required.

Because I determined a minimum of 10 sessions would be necessary, I scheduled 12 sessions knowing that student absences and/or a calamity day (i.e., snow day) could
occur. The weather in the Midwest should always be considered and should never be underestimated. Although the weather did not disturb the chosen Skype exchange times, standardized testing did. Because of OTELA (Ohio Test of English Language Acquisition) and OGT (Ohio Graduation Test) testing, we were forced to reschedule three of our Skype sessions from Tuesday to Friday. In the end, even with student absences and scheduling conflicts because of testing, all students were able to meet online 10 times.

**Language use.** Prior to giving details about the different types of communicative activities that were used during the exchange, I want to address my expectations for language use for each language learner. It should be known that, as the teacher, I not only wanted my Spanish II students to have the opportunity to practice their second language skills, but I also wanted the ESL students from Smith to have an opportunity to practice their second language skills. Thus, there were two parts to every activity. For the first part, my students posed the questions in Spanish, and the Smith students responded in Spanish. For the second part, using the same activity, the Smith students posed the questions in English, and my students answered in English. These activities were purposefully designed to give both parties a chance to practice and hopefully enhance their second language skills.

Additionally, it should also be known that I promoted a tandem experience. In a tandem experience both parties are equals; they share the same goals for language learning. Based on research, I knew that this “equality of status” (Ellis, 1983, p. 8) would cultivate a greater learning experience for all. During the two interviews, the students
and I defined and talked about the term *tandem*. I wanted the students to know from the beginning that they were part of a team and that they could learn from each other.

**Activities for the exchange.** As I approached the design of activities to be used in this study, I intentionally provided structure and support for the language learners. For the first exchange, I created simple questions that the students had already learned. Here are some sample questions from the activity: What is your name? How old are you? What is your family like? Where are you from? These questions were designed to allow the pairs to use previously learned material so that they could get to know each other.

Information exchange tasks, according to Ellis (1983), promote second language acquisition. Furthermore, requests for personal information foster an amicable relationship between the two individuals in the exchange (Lee, 2004). I wanted the questions to be relatively easy to answer at first. I also presented the questions to the students two days prior to the exchange. The students were able to see and practice the questions prior to their first exchange. Smith (2003) suggested that the key to language acquisition is to careful scaffold the learning so that knowledge can be constructed. The teacher must purposefully plan material that allows the learner to build upon previous skills.

Scaffolding (Donato, 1994), an intentional level of support, can ensure that the learner is capable of acquiring the information. Like building blocks, the learner will build on his or her own knowledge in manageable chunks. With consideration of the theory behind the learning and the comfort of the students, the initial activity allowed for the language learners to get to know each other, and it pulled from previously learned
material so that the students would be comfortable with the activities (Appendices F & G).

After the initial Skype exchange, the Smith City ESL teacher and I, the researcher and teacher, discussed and planned each activity two days before each Skype session. The theme for the activities was governed by the Spanish II course. Activities were created to allow the Spanish II students an opportunity to practice the vocabulary and grammar from the unit. Although I chose the topic, the ESL teacher made suggestions as to how she wanted the activities to appear. She also made modifications to better suit her students. For example, when discussing travel, the ESL teacher told me that she was concerned that some of her students might not have the necessary documentation to be in the United States. She was worried that if my students asked if they possessed passports, it could cause an uncomfortable situation. Thus, we reworked the activity so that the students could discuss an ideal vacation and destination (Appendices H & I). As the researcher and the teacher, I had the luxury of making adjustments in midstream. With the help of the ESL teacher, we created questions that were suitable for all students.

As the researcher and the educator, I was able to modify my original plans to ensure a good experience for all participants. Throughout the study, I made modifications to my activities to acknowledge not only the learner but also the learning. I noticed after the first couple of activities that my students were struggling with basic requests for information and clarification. Thus, on the third speaking activity, I provided a useful phrase list in Spanish and English (Appendices J & K). Here are some examples of the phrases that were included: Could you repeat your answer? How do you spell that?
Slowly please! These “interactional modifications” furthered the negotiation of meaning (Pica & Doughty, 1985). The students now had tools to help them process and acquire the second language.

Throughout the study, I listened to the students’ needs and requests, and I attempted to create an experience that they would not only enjoy but would also enhance their second language skills. Towards the end of the experience, all of my Spanish II students had commented during the interviews that they enjoyed the more challenging activities. They liked trying out their language skills and desired to have more complicated activities. Therefore, my activities once again changed to reflect this desire. Drawing activities and more complex question/answer activities were created to meet this need (Appendices L & M). Again, the luxury of being the researcher and educator granted me the opportunity to address the needs of all students.

**Researcher as Participant**

Practitioner Research supports the dual roles of researcher and educator, and it should be made clear that throughout this study, I had multiple roles: researcher, participant observer, and teacher. I considered myself a participant in this process for I was actively involved with the study and the students as their teacher. Because I possessed the overarching vision, it was important that I was able to interact with the participants and the technology involved in the study.

At the start of the study, I was a veteran teacher and had taught Spanish for 20 years. As an educator, I had always incorporated technology into my lessons. I designed my own website, created podcasts, and always researched new and innovative ways to
engage this generation of learners. In 2006, the Ohio Foreign Language Association (OFLA) awarded to me the Foreign Language Educator of the Year Award in the area of technology. Because of my keen interest in student achievement and technology, I sought and earned a Master’s Degree in Curriculum and Instruction with a concentration in Computer Uses. Furthermore, I finished my coursework for a PhD in Curriculum and Instruction.

**Research Procedures**

In this section, the data collection and data analysis procedures are elaborated upon. It should again be noted that the purpose of this study was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. How I collected and analyzed the data was influenced by this purpose. In order to understand the students’ journey, I had to gather the proper evidence and approach the interpretation of this evidence in a way that would support my research goal. I begin with data collection procedures.

**Data Collection**

This study used a variety of methods to gather data about the second language students’ experience with NSs in an online environment. Semi-structured interviews, a focus group session, a student online journal and the teacher’s personal journal were employed to help the researcher gather evidence and construct a robust story of the Spanish II students’ experience. In addition to the aforementioned sources, artifacts such as Skype recordings were gathered and analyzed to help create an accurate story. It is from this data, that I constructed the meaning behind the experience.
Interviews. In order to more fully comprehend the students’ experience, two individual interviews were conducted during the semester class and a focus group interview (see Appendices N, O, P). According to Patton (2002), “The purpose of interviewing, then, is to allow us to enter into the other person’s perspective” (p. 341). Through the interview process, I sought to bring forward the students’ voices and to give the students an opportunity to share their inner thoughts and feelings about the use of Skype in the second language classroom.

Since I had interviewed high school students for a different study in the past, I knew that although an interview guide approach would be more suitable for a grounded theory research study, it would not be appropriate for the age of the participants in this context. An interview guide, as defined by Charmaz (2006), is a series of open-ended questions that keep the interview conversational and informal (p. 29). Both the interviewer and the interviewee explore and probe a variety of topics relevant to the study. I found with the past study that high school students do not like to elaborate. They are very succinct with their responses to questions.

I decided that I would choose a semi-structured interview because I wanted the freedom to explore the comments made by the interviewee. The use of the semi-structured interview allowed me to explore the topics and probe for more information. According to Patton (2002), “Probes are used to deepen the response to a question, increase the richness and depth of responses, and give cues to the interviewee about the level of response that is desired” (p. 372). This form of questioning granted the students an opportunity to elaborate upon their thoughts. Again, as I knew that the
students would not be very talkative, this approach allowed me to gather the data needed to describe the students’ stories.

**Semi-structured interviews.** The first interview took place four weeks into the project and the second interview occurred eight weeks into the project. The interviews were intentionally spaced to occur at the beginning and middle. At each stage, I sought to reveal evidence about the students’ learning journey. During the interviews, I posed questions to the students about their feelings. I asked them to tell me what it was like to work with a NS of Spanish. Furthermore, we spoke of their relationship with their counterpart and their use of the second language. Here are some examples of questions that were posed during the first two interviews: How do you feel about speaking with a Native Speaker of Spanish? Does your counterpart ever have trouble understanding you? What do you do if he or she doesn’t understand you? Do you think your use of Spanish has improved?

The questions were created to capture the experience of my students. As I was the researcher and teacher, I had the luxury of altering my original, or proposed, questions to better understand what was truly occurring in the study. Before the second interview, I noticed that my students were speaking in English quite a bit. Thus, I created a question to address this use of English. The flexibility to react to the moment helped me to capture the students’ experience.

Prior to the interviews, the students were given time to review the information they entered into their online journal. I allowed time during the interview to review this material for I anticipated that the high school students would be nervous. Thus, I wanted
to give students the opportunity to relax for a moment and review their own personal comments.

**Focus group interview.** At the end of the semester, the Duke students involved in the study and I participated in a focus group interview. It was my belief that the focus group session would not only complement the data gathered in the interviews, but it gave the students one more opportunity to share new thoughts, feelings, and/or personal findings. This culminating activity was also a way to recognize the students’ commitment to their personal learning goals and to the project. In a sense, the focus group session allowed me to gather new material and it also allowed for closure.

I also chose the focus group interview so they could hear their peers’ responses and elaborate upon them. It was intended to be another tool to get students to tell me more about the experience. Patton (2002) stated that “in a focus group participants get to hear each other’s responses and to make additional comments beyond their own original responses as they hear what other people have to say” (p. 386). My assumption was correct, students did elaborate upon their peer’s comments. The focus group provided data that would help me describe and interpret the students’ experience. The questions written for the focus group interview mirrored the structure and the content of the two semi-structured interviews. Here are some sample questions: At the start of the Skype project, how did you feel about speaking with Native Speakers? Do you still feel this way? Generally, the Skype sessions took 40 minutes. How would you describe that time?
**Student journal.** “Capturing words while the action is fresh, the author is often provoked to ask the question ‘why?’” (Holly, 1989, p. 71).

I wanted to be able to record the students’ feelings and thoughts about the project immediately after each Skype session ended. I chose to create an online questionnaire for students to take following each session. Although I call it a questionnaire, I do refer to it as the students’ online journal.

The questions were created in an online quiz and survey program called Quia. My students were familiar with Quia; thus, I thought it would be a great place to store their thoughts and feelings about the experience. When I initially created the questions within Quia, I had posed numerous questions about their use of the language and their feelings about working with a NS (Appendix Q). For example:

I stayed in the target language

(a) the entire time

(b) most of the time

(c) some of the time

(d) I struggled to stay in the target language

I liked using Skype because…..

Eventually, I realized that there were too many questions for the students to answer. It was taking the students 10 to 15 minutes to fill out the questionnaire and they were unable to complete the additional class work. As I was not only the researcher but the teacher, I made changes. I knew that I would be able to see the videos of their sessions which would tell me about how much time they spent in the target language and
other observable behaviors; thus, I asked the students to tell me about their experience that day. In the end, the students responded to two questions after each session: How did today’s session go? What can you tell me about your experience?

Teacher journal. In order to keep track of my own ideas about the Skype project and to elaborate upon the tension created from the duality of teacher/research roles, I chose to keep a journal of my experience. Like the students, I too reflected upon the Skype project. I kept an electronic journal, or ejournal, of my thoughts and experiences through emails. I created a separate Google email account for these journal entries. Each journal entry was a separate email to myself. The use of email would allow ease of collection and it was a format I was comfortable with already. For example, I knew that if my computer crashed, I could access the data in my sent mail from my school account, or I could access the data in the inbox of my newly created account.

As I wrote in the online journal, I wrote in it as if I were writing to someone. I found it easier to share the students’ experience and my experience through a narrative. My feelings of frustration and concerns about the students’ use of English filled the pages of my online journal. When I wrote, I did my best to capture how I felt about the process and I also hoped to capture the students’ experience. As a Practitioner Researcher, I knew that the details of the project and my observations would be important. Although it was challenging at times to find time to write during the Skype sessions, I did my best to record my thoughts either during or immediately after the session ended. I also had random thoughts come to my mind throughout the week; these thoughts were also entered into my online journal.
Below is an excerpt from my first journal entry.

Crazy and chaotic. We were supposed to connect at 8:03, but there were so many complications that we were unable to connect until 8:20. And, only three students were able to hook up with their NS partner. While I was trying to get the students connected, the other students were opening up and working on their blackboard agendas. Unfortunately, because there was so much chaos, I don’t think the students really paid much attention to their agenda. We never did get two of the 6 computers connected. Now that I think about it, I think it is because the students on the other end did not accept our invitation to Skype. I need to make sure that the Smith teacher adds our computers to her list. They need to add these computers to the contact list. (February 5, Teacher Journal)

Both the students’ journal entries and my own entries allowed me to capture the feelings in the near moment. Unlike the interviews, these written records showed how we, the students and I, were feeling around the time of the Skype session.

Artifact collection. I was fortunate to be able to record some of the Skype sessions. These videos were considered artifacts and were viewed as data. I recorded the Skype conversations between the Duke and Smith students through the use of Vodburner. Vodburner, an Internet application that works within Skype, creates side-by-side videos of all conversations. I chose this application because it allowed me to see the actual conversation. In the interview, students might tell me that they stayed in the target language during the Skype session; the video footage would confirm or deny this statement.
I was happy to find a way to record the actual conversation. Unfortunately, the students were not able to save all of their videos. Although I had typed out directions for the saving of the videos, the students, at times, ignored steps and/or saved the video improperly. In the end, I had videos of all participants for a Skype session from the beginning, middle, and close of the project. The data from the recordings was used to support the students’ comments about their use of the language or interactions with their counterparts. The evidence gathered from recordings helped to strengthen the findings from the interviews for they should parallel each other and add context to the data.

Data Analysis

Grounded theory, as a form of qualitative inquiry, requires the researcher to explore the data and allow it to speak to him or her (Charmaz, 2006). For this to occur, the researcher must first gather and organize the data. To begin this process, I first transcribed all interviews. I transcribed all interviews myself because I wanted to again hear the responses of the students. Although transcription is a time consuming process, I felt that it was necessary so I had another opportunity to hear and now see the data outside of the moment of collecting the data.

As for the videos, I viewed all three sets of videos—a total of 18 videos. I did not transcribe the videos word for word, but rather I looked for evidence that supported or negated what I saw and what the students had said during their interviews. I also looked at their physical and emotional reactions to their partners. For example, I noted: “Both students smiled and chuckled as they exchanged information about themselves. It appears that they are becoming more relaxed and comfortable” (February 5, Video 1).
The information gathered from the videos was important; it helped me to understand the students’ experience. I saw first hand how the students interacted and negotiated meaning. I could see, to some degree, how they felt during the process. The laughter, the smiles, the obvious nervousness were all recorded and became part of the story.

I took the data from the interviews, videos, and teacher and student journals and put it into a spreadsheet (see Figure 3). The following headings were used: name of the participant, evidence, source of the evidence (e.g., interview, teacher journal, video, etc.),

![Figure 3. Data analysis spreadsheet.](image)
and the date that the evidence was captured (e.g., February 5). The original spreadsheet contained well-over 550 pieces of data. The constant comparison method was used to approach the multitude of data. Corbin and Strauss (2008) stated that “as the researcher moves along with the analysis, each incident in the data is compared with other incidents for similarities and differences. Incidents found to be conceptually similar are grouped together under a higher-level descriptive concept” (p. 73). If the data is approached properly, with the emergence of similarities and differences, the researcher can begin to identify categories.

Open coding, the first stage of the coding, was used to begin the process of understanding and organizing the data. Strauss and Corbin (1990) defined open coding as “the part of analysis that pertains specifically to the naming and categorizing of phenomena through close examination of the data” (p. 62). To begin the process of open coding, I filled the column that was labeled “categories” with my initial thoughts about the emerging themes. Line-by-line in the spreadsheet I entered thoughts about the meaning behind the data. Phrases such as language use, tandem learning, feelings, and relationships filled the column. I repeated this process numerous times until categories surfaced. The three categories that surfaced were feelings, second language acquisition, and relationships.

Within these categories, sub-categories emerged during the process of axial coding. Axial coding “puts these data back together in new ways by making connections between a category and its sub-categories” (Corbin & Strauss, 1990, p. 97). In order to compare the items within the main category, I created yet another column. In the
sub-category column I noted how the data was alike or different. For the category of feelings, the subcategories of sadness, joy, frustration, and fear surfaced. Again, like in open coding, numerous passes were made through the data. I not only attempted to identify sub-categories at this time, but I also made notes to myself about some of my observations. For example, I noted that some data could be used for multiple categories. One student spoke of her fear of making mistakes during the Skype session. Because of this fear, she chose to be more attentive in the traditional classroom. I started to realize that some of the data was interconnected and could be placed in multiple categories. In these instances, I made notes and made certain that the data was represented in the appropriate categories. These notes, also called memos, were easy to insert within the spreadsheet and provided me additional ways to view the data. Charmaz (2006) stated that memos “catch your thoughts, capture the comparisons and connections you make, and crystallize questions and directions for you to pursue” (p. 72). These notes and memos aided me as I entered into selective coding.

Although it appears as if I moved easily from open, to axial, and then to selective coding, this was not a linear process. Thoughts about the categories and sub-categories and how they were related constantly entered into my mind. These thoughts initially took the form of memos. Eventually, as I attempted to visualize the interconnectedness of the categories and sub-categories, I chose to create a diagram (see Figure 5 in Chapter 4). A diagram, or conceptual framework, allowed me to see how the categories were intertwined. Miles and Huberman (1994) stated:
Conceptual frameworks are best done graphically, rather than in text. Having to get the entire framework on a single page obliges you to specify the bins that hold the discrete phenomena, to map likely relationships, to divide the variables that are conceptually or functionally distinct, and to work with all of the information at once. (p. 22)

This conceptual framework gave me the opportunity to show the complex nature of the relationships of the various categories and sub-categories. This conceptual framework adds the depth and dimension to the study. This shall be elaborated upon in Chapter 4.

**Ethics of the Study**

In this section, the trustworthiness of the study is discussed as well as the limitations. A great deal of consideration was given to these two areas. My goal was to be able to present the findings from my study and for the readers to have confidence that the information is reliable. Below you will find information about the two areas.

**Trustworthiness**

In order to make certain that the story I presented is trustworthy, I chose to intentionally include multiple data sources which help construct a robust story of the Duke students’ experience of synchronous CMC in the second language classroom. Lincoln and Guba (1986) stated that for a research study to be trustworthy, multiple perspectives must be presented. The researcher must be aware of these multiple realities in order to paint a fair portrayal of the story. In order to see the multiple perspectives, a variety of data collection tools was required. Semi-structured interviews, the focus group, the teacher journal, the student online journal, the video artifacts helped me to
present a detailed, elaborate description. Patton (2002) referred to the multiple and varied uses of data as triangulation, and he stated, “Triangulation strengthens a study by combining methods” (p. 247). Through this triangulated data, I was able to achieve the goal of the study: to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language.

Another way to increase the trustworthiness of a study is for the research to work with a peer-debriever. A peer debriever “reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher” (Creswell, 2003, p. 196). This process pushes the researcher to thoroughly consider each step of the research process. Since I lived far from the University and had no one to converse with about my research study that understood well how to act in this capacity, my advisor took on this role. I spoke to her weekly during the data collection and analysis phases. She served as a sounding board as I attempted to build theories and navigate my way through the abundance of data. At times, she would pose questions to me that helped me think differently about what I was seeing. She encouraged me to read and reread to develop new and more nuanced answers and understandings. These debriefing sessions helped me to stay focused as well as added to the trustworthiness of the study.

Towards the end of the study, I was fortunate to have an additional peer debriever. The Assistant Superintendent from the school district in which I teach met with me on multiple occasions to discuss the data. As she has her Ph.D. in the area of Curriculum and Instruction, she understood the need for additional support. She, like my advisor, posed questions to help me better understand the data.
Although I originally planned to do a member check with the participants in the study, I found that the student participants reacted poorly to their written words. They found the transcript of their interview to be awkward and embarrassing for it was filled with pauses, utterances, and incomplete sentences. As the participants are high school students and my goal was to make them feel as comfortable as possible throughout the process, I chose to have a conversation with them about their comments. These conversations were brief and were used to determine if I, the researcher, had accurately captured their comments. Lincoln and Guba (1985) stated that member checking helps to avoid misunderstandings and create a level of trust between the researcher and the participants.

Researcher bias is a potential threat to the trustworthiness of any study. As a researcher, I brought my own beliefs and preconceived theories. Knowing this, I employed numerous strategies to maintain a fair and balanced presentation of the data and to push myself to not just see in the data what I might be predisposed to see. Triangulation of the data, member-checking, and peer-debriefing were conscientiously utilized to protect the trustworthiness of the study.

Limitations

The sample size for my study was small. Although there were six pairs, a total of 12 students, I only interviewed and collected data on my students, the Duke participants. Furthermore, these students were high school students; the findings might not be translated to post-secondary institutions.
Ethical Considerations

Some ethical considerations have been addressed with the context of the study. However, I elaborate upon the major concerns in the upcoming paragraphs.

I did not want the illusion of favoritism to taint the students’ feelings about the course or me, their teacher. Therefore, I did not choose my participants, they volunteered for the study. All students who volunteered were asked to participate. Students needed to trust that my actions were sincere and that my main priority was to help them achieve their learning goals. Informally, I talked to the students weekly about the project and their willingness to participate.

Second, as the safety of ALL students was my number one priority, it was fortunate that I, the researcher, was able to meet the Smith participants in advance. The Internet can be an intimidating place; hence, knowing who all the participants were was comforting.

Third, with the utmost desire to make this project beneficial for both parties, the Smith ESL students posed the questions in English and the Duke students responded in English. Afterwards, the Smith ESL students posed the questions in Spanish and the Duke students responded in Spanish. Both parties had the opportunity to practice their second language skills and benefit from the experience.

Chapter Summary

Chapter 3 provided an overview of the purpose of the study, research questions, research design, and the theoretical underpinnings of the study. A detailed description of the study design was also presented. The context of the study was described as were the
participants. The selection process for both was presented as well. The project as the center of the study and the curriculum granted the reader an inside look into the activities for the online exchanges.

The specific tools for data collection were described. Throughout, Grounded Theory was elaborated upon. Evidence of its influence was especially apparent in the analysis of the data. The various coding methods were chosen to allow themes to emerge within the data.

Chapter 4 presents the findings of this study. The findings present the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. These findings may help to inform other practitioners and researchers interested in synchronous CMC in the second language classroom.
CHAPTER IV
RESULTS
Overview

The goal of this practitioner research was to examine the experience of students’ use of synchronous computer mediated communication (CMC) as they learn a second language. In this chapter, I look to illumine the experience of my six high school Spanish students who used Skype to communicate with middle school Native Speakers (NSs) of Spanish from a neighboring community. In order to capture the students’ stories and their experience, the main question which guided this research was refined over the course of the study. For this study, one main question and three sub-questions guided my research:

How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?

1. How do the high school Non-Native Speakers (NNSs) of Spanish feel throughout this process?
2. How do high school Non-Native Speakers (NNSs) of Spanish enhance their second language skills and foster comprehension in this on-line environment?
3. How do the Non-Native Speakers (NNSs) and Native Speakers (NSs) of Spanish interact in this online environment?

From multiple iterations of analysis of data as described in Chapter 3, three findings emerged:
1. The students experienced a variety of different feelings which evolved over the course of the experience, and these feelings were tied to their interactions with their NS partners and their own knowledge of the second language.

2. The students acquired second language skills by taking ownership of their own learning and by using specific strategies.

3. The students developed relationships with their NS partners that contributed to their feelings about the project and to their second language acquisition.

The data revealed that the students experienced and displayed a variety of feelings about the project. The students used strategies to acquire the second language and also took ownership of their own learning. Finally, the relationships that evolved were instrumental in helping the students acquire the second language. An illustration of these findings can be found in Figure 4.

The data also revealed that the findings were interconnected and multilayered. The students’ feelings about the project and their learning were interwoven with their desire to acquire the second language and to learn more about their NS counterpart. Although complicated, it is clear that the findings interacted with each other to create a multi-dimension view of second language learning in this on-line environment. To illustrate the findings as separate entities and as influential forces, I present Figure 5.
Figure 4. Findings.
In the following sections each finding is explained in more depth. Also, evidence of the interconnectedness of the findings are also presented. Excerpts from the data were selected to help the reader see the themes and connections that led to the findings. Through the excerpts and the descriptions of the findings as a whole, I highlight the experience of the high school second language student.

**Students’ Feelings Throughout the Experience**

The first finding related to sub-question 1 describes the high school students’ feelings throughout the course of the research study. Feelings of fear, frustration, joy, and sadness were evident as I sifted through the data. In the beginning, the students experienced some fear and frustration because of their concerns about their own second
language skills, working with a NS of the target language and the technical complications. As the process progressed, and the fear and frustration subsided, the students enjoyed learning and interacting with their NS partners in the online environment. At the end of the project, the students were all sad for they developed relationships with their NS partners and were motivated to learn in this unique online environment.

Although the upcoming section focuses on the various feelings that the students displayed, I also incorporate data that reveals the interconnectedness of the findings. This overlap reveals a more complex multi-dimensional view of data as well as a more robust presentation of the students’ stories.

Fear

First, it should be noted that fear is a broad term that I use to encompass the state of being afraid, nervous, or anxious. Thus, as I use this term, its definition is broader than that of just fear. All six participants experienced fear, and this feeling emerged more so at the beginning of the project. Once the students became more comfortable with the process, their NS partner, and their own second language skills, the feeling subsided and little evidence can be found of its existence until mention of a face-to-face gathering was discussed at the close of the project.

Fear subsiding after time. Erica talked about her fear on the first day of the Skype project. She said, “I was a little nervous the first day we started, because I didn’t know what it was going to be like. But, once I started talking to Enrique and everything, it was fine. It wasn’t anything to worry about” (interview 1, March 25). Erica was
uncertain about the experience and what her partner was going to be like. She didn’t
know what to expect; thus, this fear of the unknown created anxiety for her. Others also
commented that their anxiety lessened as they understood the process and knew what to
expect. Danielle stated, “I mean at first I was kind of scared. Like the first time we did it
[skyped]. But after that, it was kind of like ok” (Interview 1, March 25).

**Fear of mistakes.** The fear of performing an unknown activity is scary for many
of us. I wanted to explore why it was that the students were afraid and what it was about
the experience that made them anxious. The data reveals that this anxiousness was
caused by their fear of making a mistake in front of an expert in the target language. It
was far more involved than just being exposed to a new situation. All six participants
spoke of this fear. Erica stated,

Well, I was afraid I was going to say something wrong. And, then say something
stupid. I don’t know, not say it right and then they would be like “what are you
talking about? You are trying to learn Spanish and you have no idea what you are
doing.” (Interview 1, March 25)

Erica did not want her counterpart to see that she had limited ability in the target
language and that she doubted her skills.

Within the traditional language classroom, students work and collaborate with
other non-native speakers of the target language. Students are more willing to make
mistakes in front of someone who is also learning. However, when an expert is present,
someone who speaks the language fluently, the second language student is more
conscious of his or her abilities. This heightened sense of the student’s ability causes the
student to become afraid. Mia specifically mentioned the difference between talking to a fellow classmate and speaking with a NS. Mia stated, “Yeah, it’s just laugh it off [with her fellow classmates]. For them [Smith City partner], I am kind of like, ‘I made a mistake;’ what are they going to think” (Interview 1, March 25). Jackie offered a specific skill on which she feared making an error. She said, “Like if I pronounced something wrong I kind of felt uncomfortable because he knows it [the Spanish language] really well. I don’t know it” (Interview 1, March 25).

**Fear and motivation.** I was happy to see that the students could identify the cause of their nervousness. Kendle revealed how she used her fear to enhance her second language skills. She stated, “and I think ahead I guess. If I use this, and I know how to say it now, I’ll know how to say it then and I won’t look stupid. So, I won’t feel stupid” (Interview 2, April 17). Kendle knows that she can control her fear by taking ownership of her learning. This issue of taking ownership of one’s learning is addressed at length when the final finding is presented. Kendle’s comment demonstrates the interconnectedness of the findings and how they influence each other.

**Fear and face-to-face meeting.** As stated earlier, the start of the Skype project was when the feeling of fear appeared the most. This feeling of fear did not emerge again until the end of the study. At the close of the study, the students had asked to meet each other. And, although they had been talking online for 12 weeks, they expressed anxiousness when they found out that they would be meeting their counterparts at a restaurant. When I talked to the students about this fear during our focus group conversation, Mia said that it is going to be “way scarier” to see her partner in person.
(Focus group, June 2). I asked Jackie to express why it would be so scary. She responded, “On Skype if you run out of conversation, you can just hang up. You just can’t walk away from the person. I want to see him [her counterpart], but I don’t want it to be awkward” (Focus group, June 2). All the students agreed that the face-to-face conversation would be different than their Skype session. It appears that the students felt protected behind the computer and knew that they could fall back on the structured activity if they became uncomfortable. This feeling of security would not be present in the face-to-face encounter. The students would have to create their own conversations and interact in a different environment. And, although they were looking forward to meeting their counterparts, they were nervous about it.

**Frustration**

In this section, the feeling of frustration is explored. Like with fear, there are reasons behind this frustration. Frustration was expressed by student participants around two issues: (a) technical complications which hindered their ability to interact with their NS counterpart, and (b) their individual inability to produce the target language.

**Frustration and technology.** As the teacher and researcher for this project, I personally felt frustrated numerous times because of the technical complications. I had spent many hours prior to the start of the project making sure that the computers had the appropriate equipment and that all equipment functioned. Webcams, headsets, and computers were purchased with grant money and the Smith City teacher had been trained on how to use them. Thus, after countless of hours of preparation, I became frustrated when technical complications occurred. I knew that these technical complications could
interfere with the students being able to interact on-line. In my teacher journal from February 5th, I stated:

Crazy and chaotic. We were supposed to connect at 8:03, but there were so many complications that we were unable to connect until 8:20. And, only three students were able to hook up with their NS [Native Speaking] partner. While I was trying to get the students connected, the other students were opening up and working on their blackboard agendas. Unfortunately, because there was so much chaos, I don’t think the students really paid much attention to their agenda. We never did get two of the six computers connected. Now that I think about it, I think it is because the students on the other end did not accept our invitation to Skype. I need to make sure that the Smith City teacher adds our computers to her list. They need to add these computers to the contact list. Originally, when the Smith City computers were set up, we only had added the duke-local 1 through 10 computers. I remember thinking that this contact list was ample for I had included 4 additional Duke computers to the list. Unfortunately, I didn’t take into consideration the web cams. Only 3 webcams in sections 1-10 worked so I had to have students move to computers with working webcams. This obviously complicated matters. (Teacher journal)

Like me, my students were also frustrated with the technology and many of them noted this in their interviews. Erica talked about her frustration with the technology. Evidence of this frustration not only appeared in her words but in her tone. She was noticeably bothered by technical complications. She responded, “Something was wrong.
I couldn’t see him at first or something. I had to like keep calling him, but then I think
something was wrong with his webcam and then the teacher fixed it and everything was
fine” (Interview 1, March 25). Erica’s frustration was shared by her classmates. The
concerns about the microphone or webcam were comments made by all students
(Interview 1; Jackie, Kendle, Danielle, Alyssa, Mia, March 25th). Erica identified that her
partner did not know how to answer the Skype call properly. She stated, in a bothered
tone, that she would call him multiple times before he accepted the call properly. She
stated, “Sometimes Enrique doesn’t click video call, and like I have to call him once or
twice. That’s just to get the video through” (Interview 1, March 25).

As I look at the data, in the months of April and May, fewer comments were made
about technical concerns and evidence of their frustration with the technology slowly
began to disappear. In the second round of interviews, Alyssa noted, in a happy tone, that
everyone seemed to be getting more comfortable with the technology. She stated,

I think it’s [the Skype session] just a lot smoother. Like at first, we were still
trying to work out the bugs and figure out who’s doing what. But now I mean we
got what’s going for us and what we’re doing. (Interview 2, April 17)

The feeling of frustration because of the technical complications subsided as the students
became more comfortable with the technology. As the study progressed, the technology
did not interfere with the students being able to interact on-line.

**Frustration and inadequate language skills.** Frustration on the students’ part
was also evident when they realized that their language skills hindered them from
accomplishing the task at hand. The Duke students, my Spanish students, had very basic
Spanish skills. As outlined in Chapter 3, these level two students were considered Novice language learners. In other words, the students had limited vocabulary and had only memorized some basic phrases in the Spanish language. Novice students are able to perform simple greetings and salutations; they can also ask and answer some very basic questions. Thus, I was not surprised when the students expressed frustration with not being able to communicate with their NS counterpart. During the second interview, Kendle discussed an activity that she had been working on in the previous session. She said,

Like this one for the ‘avion [plane]’ the one that I didn’t know. Or, whatever that says. Um. I waited ’til afterwards and I was like and I kept thinking about it what she was saying. And, I had to ask Jackie what it was, what she was saying. And, I couldn’t figure out what she was saying. I had to flip it [the paper] over because I was like so lost. (Interview 2, April 17)

On occasion, this feeling of frustration would push the student to retreat. The student would give up the battle of negotiating meaning for she felt so lost. During my first interview with Danielle, she revealed that she just stopped asking questions to find out the information. She noted that she didn’t want to feel stupid and that she knew that she wasn’t going to get the information she needed. Just like fear caused many students to not want to make mistakes in front of their NS counterparts, frustration also pushed the student to retreat.

Numerous factors may have limited these Novice language learners from enhancing their second language skills. Fear and frustration have been discussed; other
factors work to enhance the chances for second language learning. Where fear and frustration may act to limit, joy has the opposite impact. In the upcoming paragraphs, you will see how the students’ joy for the project helped the student take positive steps towards acquiring a second language.

Joy

Like fear, the term joy is used to express a wide range of emotions. I use joy to express a feeling of happiness and/or comfort. In this section, the term joy is used to show that the students are content with themselves, their learning process, and their NS partners. As the students became more comfortable, they allowed themselves to take linguistic risks and rely on their partners for help. Again, the interconnectedness of the findings are presented within the individual findings. Below I present excerpts to illustrate this feeling of joy.

Joy and comfort. Once a routine was established and the fear subsided, the students started to look forward to their Skype sessions. When I asked Alyssa during the second interview how things were going, she commented, “Good! I think it’s getting better, I think. People are [pause] it’s more of a routine now. So, it’s fine” (April 17). The students were starting to become comfortable with the process and they also were becoming more comfortable with their partners. Erica said, “Yeah, and I feel like I am being more comfortable with him and not as nervous. I was nervous, but now it’s just like ‘Oh, I’m talking to Enrique again’” (March 25, Interview 1). Her excitement is not only visible in her words, but it was clear in her tone of voice.
Because of their newfound comfort level with their partner and the process, the students started to look forward to their Skype sessions. The joy of seeing their partner and also their eagerness to learn in this online environment became apparent. However, it should be noted that this excitement was not always the case and their comfort with their partner and the project evolved. In Video 1, I recognized that Jackie was not comfortable with her partner or the process. I wrote,

Jackie is noticeably anxious. She keeps looking at her paper and does not look at the screen. She performs the activities, but she does them quickly and appears to be uncomfortable. Her voice is soft, and she doesn’t appear confident. This is not like Jackie. (February 2)

In Video 2, I wrote

Jackie’s demeanor is calm. She is smiling a lot and calls her partner by his name. She appears to be having fun as she laughs at her own mistakes. She appears to be comfortable with her partner and the activity. (March 30)

Jackie’s newfound enthusiasm and comfort with the project and her partner became more and more visible over the course of the project. When I asked Jackie why she liked Skyping, she said, “I think it’s [the experience] cool, like I tell my friends that I got to talk to Chato today. I like talking to him. I think it’s a cool experience” (Interview 1, March 25).

Jackie’s comment typifies the remarks made by all participants in the study. All enjoyed seeing their NS counterparts, and evidence of relationship building became more and more apparent. I discuss the students’ relationship at length later on in the findings.
However, I want to establish that even early on, the students enjoyed seeing their NS counterparts. The students were slowly beginning to add to the depth and complexity of this online relationship.

Joy and motivation to learn. Other than seeing their partner, I encouraged the students to tell me more about why it is that they enjoyed the sessions. Most expressed that it was the novelty of the experience. When I asked Alyssa to elaborate upon why it is that she enjoys the sessions, she stated, “I think just ’cause it’s different than sitting at a desk. It gets kind of boring after a while. I think it’s nice to change it up” (Interview 1, March 25). Mia also expressed that she felt more motivated to learn in the online environment. She indicated that it was fun and that she looked forward to each session. She said, “I think it’s actually fun. [laugh] I don’t like everyday doing the same exact thing. Like coming in . . . I think it’s cool that we get the opportunity to talk with someone from a different school” (Interview 1, March 25).

This newfound enthusiasm and comfort level allowed the students to explore learning a second language in a manner that was fun and exciting to them. The students commented about how this newfound joy for learning translated into second language learning. Danielle, a struggling Spanish student, chose to be part of the study because she really wanted to learn the language. She understood some words and phrases, but she struggled with pronunciation and the structure of the language. At the start of the semester and the course, I remember worrying that she might not be successful in Spanish II. Because Danielle’s second language skills were inadequate, I was initially surprised when she had decided to be part of the Skype exchange. However, this
experience gave Danielle an opportunity to enjoy the learning of the second language and to realize that she could learn it. Danielle commented, “Towards the end I started caring about Spanish. After Skype, I started focusing” (Focus group, June 2). Danielle enjoyed the Skype sessions; this had an impact on her learning.

Mia was also a struggling student who now found pleasure in learning the second language. Mia told me that her goal was to be able to speak more fluently. When I asked Mia what it was that she was the most pleased about, she said, “I am not so hesitant to say the words. I can speak more fluently” (Interview 1, March 25). Evidence of Mia’s enhanced skills are elaborated upon in the next section. It is the joy of this accomplishment that I wanted to highlight. It was this joy that allowed both Mia and Danielle to move forward in their quest to learn the second language. Again, the interconnectedness of the students’ feelings and the fostering of a relationship and acquisition of second language skills became evident.

**Sadness**

The final sub-category is that of sadness. My findings in regard to sadness are straightforward. Although simplistic, it is important to acknowledge that all participants from Duke expressed feeling sad about the close of the project. This is evidence that the students had started developing relationships and were taking ownership of their learning. The fact that the project had come to a close bothered all the students. The students expressed sadness about not seeing their counterpart again, and they also expressed sadness for not being able to continue to learn in this online environment.
In Erica’s online journal, she talks about how she is sad that she will not see her partner again and that she wishes she could keep in touch with him. Erica realized that it was her last session and she owns her feelings by saying that she is sad (May 25). In video three, I noticed that Erica was behind Danielle’s computer. Erica saw Enrique in Danielle’s monitor and she shouted, “Hey Enrique! I miss you already!” (May 25). She developed a relationship over the course of the 12 weeks and now it was coming to an end. During the final Skype session, Alyssa informed her counterpart of her sadness. She said in a sad voice, “This is our last time talking. Did you know that? We’re not going to talk anymore. Aren’t you sad?” (May 25). Unlike Erica, Alyssa didn’t develop a friendly relationship with her counterpart. The two rarely exchanged personal information and rarely explored a conversation beyond the established activities. Nonetheless, Alyssa still felt sad to know that it was ending.

The main research question and the first sub-question asked that I, the researcher, examine the experience of the students and identify their feelings. Although not entirely in sequential order, the Duke students generally moved from fear and frustration to joy and sadness. It appears that once the students successfully conquered their fear of making mistakes, meeting someone new and of the fear of the unknown, the students became more comfortable with their NS counterparts and acquiring second language skills. The feelings are important as they relate to second language learning for they set the stage for the students’ language exploration and use. Furthermore, their feelings had an impact on how they interacted with their partner in the online environment. In the
upcoming section, I provide details about how the students enhanced their second language skills and fostered comprehension.

**Strategies for Learning and Ownership of Learning**

The second finding was that the students used strategies to enhance their second language skills and to foster comprehension. The students also started to own their learning as they acknowledged their own needs to acquire the second language. As noted in the main research question and sub-question, I looked to define the experience of my students. It should be noted that I felt confident that their second language skills, because of their access to experts, would be enhanced, and I hoped that I would see evidence of this in the data. The data revealed that through the use of specific strategies, students enhanced their second language skills and negotiated meaning. However, I did not anticipate that the students would take ownership of their learning. I was pleasantly surprised to find evidence of this in the data.

Prior to outlining the sub-categories for this finding, I would like to share my initial reaction to the data. At first glance at the data, I was concerned for I found the use of English to be plentiful, and I had not anticipated that it would be used in excess. As a second language teacher, I hoped that my students would practice their second, not their first, language. What I discovered as I kneaded the data was that the use of English (L1) became a strategy to acquire the second language and to foster comprehension. This “strategy” is elaborated upon in the upcoming section.

It is from the initial revelation about the use of English that three of the four sub-categories emerged. These three strategies are addressed prior to discussing the final
sub-category of ownership. Students used three primary strategies: they used English to make the incomprehensible input and output comprehensible; they used teacher created phrases to promote negotiation and ease transitions; and they used mimicry of the NS to improve target language pronunciation. Together, these three strategies help show how the students negotiated meaning and enhanced their second language skills in this on-line learning environment. Evidence of how these three strategies promoted second language learning are elaborated upon below.

**Use of English**

As stated, the use of English in this online project was startling to me at first glance. In my teacher journal dated March 23rd, I wrote:

I was shocked at how much English the students used today. This was really the first time that I took some time to observe how they were interacting with each other and focus on what they were saying. My students were using English exclusively during transitions (from one activity to another). They also used English socially, that is they used it to have small talk with their partner. I wonder how much English the Smith City students know? It seems that English is the language of comfort. My students don’t know enough Spanish to have small talk; therefore, they are using English to find out about their partners.

(Teacher journal)

It was not until the end of the study, and an exhaustive review of the data, that I realized that the use of English was a strategy that the students used to foster comprehension and to negotiate meaning.
Obstacles or barriers to learning frustrate the novice language learner. My students, at this point in their learning, were able to ask and answer simple questions. Their limited vocabulary and comprehension of grammatical structures placed them in the early levels of language learning. Thus, my students were incapable of maneuvering within the second language when faced with an obstacle. A simple yet clear example of a language obstacle appeared in Video 1. Erica asked her partner Enrique a basic language question. She asked, “¿Cómo te llamas?” [What is your name?] Her partner responded with “Leonardo.” Erica was confused and said, “huh?” (February 2). Erica knew what the question meant, but she was not prepared to hear his name pronounced in Spanish. She was confused for she didn’t know how to write his name on her document. Therefore, she asked in English “What is your name?” (Video 1, February 2).

When communication broke down and my students were not able to comprehend or react to their NS partner, English was often the strategy that was employed. Please remember that although their counterparts were NSs of Spanish, these students were also beginning-intermediate to advanced-intermediate users of the English language. All of the NSs, the Smith City students, had been in the United States for at least three years; four of the six NSs had been here for nine years. Unlike my novice language learners, the Smith City students had more control of their second language, English. All could not only ask and answer simple questions, but they could also carry on a controlled conversation. These students had acquired more of the second language vocabulary and had more opportunities to practice it. An example of superior second language skills can be found in Video 2. Danielle’s partner, Linda, with no support from the activity
document, described a food item to Danielle in English. With perfect pronunciation, Linda said, “It’s green, it’s got something in the middle, it’s black on the outside and it’s a vegetable” (March 30). Linda could give clear, detailed descriptions. She was not a Novice second language learner. Based upon the video data, I would estimate Linda’s speaking proficiency at the intermediate-high or low-advanced range. Although not all the Smith City students spoke the English language as well, their second language skills were far more superior to my students’ second language skills.

During the interviews, all of my students commented on the second language skills of their NS counterparts. Most were surprised to find that the Smith City students spoke English. Erica stated,

I think they know a lot more English than we know Spanish. And we both can speak English together and figure out what we are saying. If I was saying Spanish and not knowing completely a lot of Spanish. It’s just easier to say it in English. (Interview 2, April 17th)

It appeared that Erica was relieved. She knew that her skills were limited and it was refreshing to know that a crutch to learning the language existed.

Others also commented on their NS counterparts’ knowledge of English. Mia said,

I think if I don’t know something in Spanish I just say it in English because that’s what I am used to. It just comes natural. I’m not used to Spanish so if I don’t know it, I just say it in English. (Interview 2, April 17)
Mia, a struggling Spanish student at the beginning of the term, seemed relieved to know that English was an option. She knew her skills were weak, and she had indicated that she was afraid of saying things incorrectly in the target language. The data showed that the use of English was employed for two specific reasons. With the security net of their counterparts’ English knowledge, my students used English when they felt that they didn’t have the vocabulary to express what they wanted to say and/or they weren’t being understood. The first of the two are addressed first.

**English due to limited knowledge.** Evidence of my students’ limited knowledge of Spanish, and therefore the use of English, was apparent in the data. As students struggled to express themselves, English became a strategy for them to get the meaning across. Before I present data to illustrate this struggle, allow me to give you some background information about one of my students. This information is valuable for it explains why she used English. Alyssa is a phenomenal second language student. Within the classroom, she always challenged herself to speak in the target language. Alyssa used, on a regular basis, her useful words and phrase list to clarify meaning and to comprehend the spoken word. She acquired more vocabulary because of this, and she enhanced her second language skills. Evidence of her enhanced skills are provided in the next section. Nonetheless, Alyssa’s knowledge of the second language is limited. And, although she tried her best to always stay in the target language, there were times when she was incapable of doing this. During one activity, the students were asked to describe food items to their partners. The Native Speaker was given a paper with pictures of twenty different foods. My second language students described these food items to the
native speakers using the vocabulary from our unit. Alyssa performed this role beautifully, and she also responded in Spanish when her partner presented clues to her in English. Alyssa attempted to request the size of the food item that her partner was describing by saying, “más grande que pumpkins?” [bigger than pumpkins?]. Alyssa didn’t know the word for pumpkins, but she knew her partner would. Alyssa stayed in the target language, until she lacked the vocabulary to do so.

All students, strong and weak, used English when the words could not be found. Danielle, a struggling student, identified quickly during the second interview that she used English when she lacked the vocabulary that she needed to complete the task. In the second interview, she stated, “If you’re [the teacher] not around, or if you are helping someone else, I’ll just say it in English” (Interview 2, April 17). Danielle, unlike Alyssa, did not explore the use of the useful phrases. She wanted to improve her language skills and addressed this as a goal; however, when she was faced with a challenge, she opted to use English. This was her comfort level. Danielle felt safe knowing that English, a strategy to ensure comprehension, was at her disposal. Evidence of Danielle’s use of English can be found in the Video 2. She, like Alyssa, used English when she could not find the words to express herself. In Video 2, Danielle said, “blanco, verdura, amargo, salado, redondo and it smells” [white, vegetable, bitter, salty, round and it smells].

**English to promote comprehension.** English was used when the student struggled to express a word. English was also used when the students felt that their counterpart didn’t understand them. In the data, I found multiple examples of my students using English to make sure that their partners understood them. It was not
uncommon for my students to repeat the question or response in English. It was, at times, almost parrot like in that the student would pose the answer in Spanish and then repeat it in English. This intentional mimicry promoted comprehension.

In the first video, Danielle wants to make it clear to her partner that her skills were weak. She prefaces her answers to the to-be posed questions with “I’m really bad at Spanish. So, I thought you should know ahead of time” (February 2). Danielle wanted her partner to know, in English, that she was going to struggle. Evidence of this struggle, and also her use of English can be found in a later video. Danielle struggled to pronounce the word “sin” [without]. She says it as if it were the English word “sin.” In English, the “I” is short not long. Because she feared that her partner did not understand her, Danielle provides the information in Spanish and in English. She said, “Bebida, sin sabor, that means no flavor” (Video 2, March 30). Danielle used English to ensure comprehension.

Danielle was not the only student to use dual language simultaneously; Erica also made numerous dual language comments. A simple example of this use was also noted during the food description activity. In order to describe an avocado, she verbalized, “I said it’s green. It’s verde.” Erica did make attempts to avoid the use of English, but when her counterpart showed signs of confusion, Erica chose to use the English language. In the first video, Erica attempts to ask in Spanish “¿Cómo se deletrea eso?” [How do you spell that?] (Video 1, February 2). She was really making an effort to stay in the target language. Unfortunately, her partner was confused for her pronunciation was slightly off. Erica again asked him in Spanish to spell his name. She said, “¿Cómo
se deletrea eso?” [How do you spell that?]. In English, her partner asked her to repeat herself. Erica became frustrated and posed the question again, but this time she posed it in English (Video 1, February 2). The use of English is a strategy that allowed my students to get their point across. My students used English to ensure that their counterpart understood them.

**Use of Teacher Created Phrases**

As indicated in the above paragraphs, the use of English became one strategy that my second language students explored so that they could express themselves. A second strategy to communicate with their NS peers and keep on in the target language was the use of teacher created phrases. My students were encouraged from the very first exchange to use teacher created phrases to help them clarify meaning while attempting to stay in the target language. Phrases, such as “Please repeat that? Can you spell that? Louder please,” were provided on each activity so that the students could make an attempt to remain in the target language.

**Asking their NS partner to spell a word.** Alyssa, the student with the stronger language skills in the beginning, appreciated having the useful phrases on the activities. During the second interview, I asked Alyssa which phrase or phrases she used most frequently. She responded,

Can you repeat that please? Often, more so now, how do you spell that? ’Cause if he says it, sometimes I can’t understand what he is saying and it might be like the simplest thing. One time, it was the travel thing, and he said he wanted to go to
Mexico. But he said it so weird that I couldn’t understand it. (Interview 2, April 17)

Alyssa used the teacher created phrases to help her negotiate meaning. She wanted to understand her partner, and she knew if he spelled the word for her that she would have a better chance of understanding him. This strategy gave Alyssa an additional opportunity to comprehend the spoken word. By using this strategy, Alyssa was able to realize that it was Mexico that he was saying. In Spanish, the word Mexico is pronounced like May-He-coh (phonetic pronunciation). There is no X sound, but rather it is an English H sound. This is very confusing for the novice learner. After requesting the spelling of the word, Alyssa realized that it was Mexico; she was so excited to discover this. She stated, “Yeah, but it was so fast! I was like ‘what? What?’ [laugh] I felt bad because I kept telling him to repeat it. So, I just had him spell it, and I was like ‘oh, Mexico!’ [laugh]” (Interview 2, April 17). I witnessed this particular exchange and I commented in my journal. I wrote:

I was impressed with Alyssa for she really wants to use and learn the Spanish language. When I walked passed her, she had asked her partner in Spanish to spell his ideal destination for she could not understand what he was saying. It turns out that he was spelling MEXICO. It was evident that she was so pleased with herself for she had used the language to better understand her partner. (Teacher journal, March 12)

**Asking their NS peer to slow down and repeat.** All students talked about how quickly their NS counterparts spoke in Spanish. And all made comments about not being
able to understand their partners. When I asked Kendle if she had trouble understanding
her counterpart, she said, “Sometimes, yeah. ’Cause they talk a little faster. Actually a lot
faster. I just ask them to repeat it slower or something” (Interview 1, March 25). Kendle
said that this strategy was helpful. She knew that she could understand her counterpart,
but she needed to hear the information a couple of times. Erica also felt overwhelmed by
the speed of the language. Her frustration was evident in her voice. She stated,

    Just because when he speaks Spanish, he says it real fast. And like it’s easier for
    me to understand it when it’s slowed down a little bit. I have to hear it like 5
times before I like catch every part of it. (Interview 2, April 17)

In Video 2, evidence of this need for repetition is found. Enrique, Erica’s partner,
mumbled the word “papas” [potatoes]. Erica said “repite” [repeat]. She said it with
confidence. Enrique responded “papas” [potatoes] (March 30). The student requests for
clarification and repetition were useful tools as they attempted to negotiate meaning in
this on-line environment. These strategies paved the road to second language acquisition.

I would also again like to comment on the interconnectedness of the findings. The
students’ frustration about their inadequate skills was apparent as they discussed the
strategies that they employed. In the upcoming paragraphs, I share additional evidence of
how one student used the useful phrases to transition from one activity to the next and
keep in the target language.

    Keeping in the target language. Alyssa was an above average language student
who was looking to use this experience as an opportunity to become more fluent. Alyssa
wanted to be challenged. She desired more complicated material. Within the classroom,
I provided differentiated activities that were more difficult. I hoped that the Skype sessions would allow her to put her language skills to the test and catapult her into the next level of fluency.

In the first interview, I talked to Alyssa about her desire to be challenged and about the difference between working with her classmates and working with native speakers. Alyssa was quick to respond, she stated,

I like the Smith City people better because you talk to all of the Duke people all the time. It’s not really anything new. You’re just practicing with them. It doesn’t seem like a big deal to me. But when you are talking to somebody you don’t know, or aren’t as familiar with, you want to do better. You want to like, I don’t know how to say it, but . . . It’s just a better experience. I guess you’d say. Cause you don’t know them and you are trying to learn more and see more as you are doing it. (Interview 1, March 25)

Alyssa saw the advantages of working with a native speaker. She realized that the use of an expert would provide her with an opportunity to stretch her language skills. Alyssa used the teacher created phrases to not only comprehend what her NS partner was saying, but she also used the phrases to transition from one activity to the next. Alyssa was the only student to make a concerted effort to keep in the target language.

It is true that most students used the phrases to clarify or request information. “Repite por favor” [Please repeat that.] This phrase is spackled throughout the data. No students, with the exception of Alyssa, used the phrases in order to stay in the target language in between activities. In the analysis of the videos, I found numerous examples
of this. In one such example, Alyssa wanted to know if her partner wants to go first. She asked him in perfect Spanish “¿Quieres ir primero?” [Do you want to go first?] (video 2, March 30). All others would have posed the question in English. Alyssa wants to challenge herself and this is one way that she goes about this task. Another example of her use of transitions was when it was her partner’s turn to go, Alyssa said “a ti te toca.” [It’s your turn.] (video 2, March 30).

Alyssa was the only student who made obvious attempts to always keep in the target language. She is an extraordinary student who always exceeds the expectations of all of her teachers. In the language classroom and in the online environment she challenged herself in order to improve her skills. Alyssa took ownership of her learning through the use of the aforementioned useful phrases. Every teacher dreams of their students wanting to learn and creating their own opportunities for learning to occur. After I discuss the use of mimicry, a strategy to enhance pronunciation, I talk about the students’ desire to take ownership of their learning and I provide evidence of this.

**The Use of Mimicry**

As the researcher and the teacher, I had hoped that I would find evidence of enhanced second language use and comprehension. I expected that the use of experts would promote second language acquisition. Although all students used mimicry to enhance their speaking skills, one student in particular not only used it but identified mimicry as her primary strategy to advance her own skills. I highlight the success story of Mia and provide specific examples of her growth. Plus, the student’s own
interpretation of her accomplishments is also presented. Mia’s use of mimicry was a strategy that she employed to enhance her second language skills.

Mia’s pronunciation at the start of the project was poor. Her Spanish 1 teacher had told me that she did poorly on most of the speaking assessments because of her inability to say the words properly. Early on in the course, her poor pronunciation was quite obvious to me. In class, I noticed that her classmates had trouble understanding her during paired activities. I too at times struggled to understand her. Thus, I hoped that her pronunciation would improve during the Skype sessions, and I found evidence of this feat.

During the first interview, I asked Mia to share with me her goals for this experience. Mia said, “To be able to pronounce the words more. Because I have like trouble like pronouncing them [the words]. If I hear them talking over and over, it goes in my head so I can understand it better” (Interview 1, March 25). When I asked her why she thought her pronunciation was getting better, she said,

[My] pronunciation is getting better by like hearing them say it. Just like whenever I say something and he says it back. Like I can hear him say and the next time I say it I feel better saying it. (Interview 1, March 25)

Mia’s use of mimicry helped her to improve her pronunciation. She learned to watch and listen to her counterpart and attempt to mimic his pronunciation. I was glad to see that she noticed this as well, and I asked her to tell me more about why she thought her pronunciation had improved. Mia said,
I think maybe getting the opportunity to talk with someone that knows Spanish much better than us. Instead of our classmates which are just learning it just like us. They actually know the language, just like Martin [a fellow classmate] knows it. It’s like I feel better working with him or speaking with him cause he knows it better. (Interview 2, April 17)

Mia hoped that working with an expert, instead of just a fellow second language learner, would provide additional support for her.

Mia seemed to be more confident with her language skills, specifically her pronunciation, early on in the experience. During the first interview, she claimed to be more comfortable with the language. Again, this is evidence of the interconnectedness of the findings. When I asked her to elaborate, she said, “Just like the way I speak. I am not so hesitant to say the words. I can speak more fluently” (Interview 1, March 25). I am glad that her confidence has improved, and I hoped to see evidence of improved pronunciation in the videos.

On one of the first activities, the students were asked to ask and answer questions about themselves. In Spanish, Mia asked her partner to describe her family. Her partner responded, “familia pequeña y loca” [small and crazy family]. Mia repeats the phrase in Spanish with perfect pronunciation. The word “pequeña” [small] is a very difficult word for the novice language learner. In English the QU makes a KW sound; however, in Spanish this combination of letters makes a K sound. Mia did exactly what she had described to me. She listened to her counterpart say the word and she repeated it. Mia’s
use of mimicry helped her to master the pronunciation of this challenging word and to improve her pronunciation.

I also found evidence in my journal that Mia started self-correcting. In one activity, the food activity, Mia tried to say the Spanish word for chicken. She said the word POLLO as if the two LLs made an English L sound. In Spanish, two LLs sound like a Y. Mia was quick to catch her mistake and she reacted with the correct pronunciation [Teacher Journal, March 30]. Although I was thrilled that Mia was using mimicry to improve her pronunciation, I was ecstatic to see that she was identifying her own errors. This is concrete evidence of growth. The use of the expert, coupled with her strategy of mimicry, enhanced Mia’s second language skills.

**Students Taking Ownership of Their Learning**

From the analysis of the data, I found evidence that the project influenced the students’ learning beyond the computer interactions. There is an abundance of evidence to support this statement. The students became more conscientious about their learning because of the Skype sessions. They listened more intently in class, practiced their pronunciation prior to the activities, and requested more complicated material so that they could assess their own abilities. Their desire to learn the language transcended the Skype experience and the lines between the two environments blurred.

**Attention to second language task prior to Skype session.** Erica spoke about the time when she was asked to describe the food items to her partner. We had practiced this the day before, and I had informed the students that they would not be given the Spanish words during the Skype session. The students knew that they would have to be
comfortable with the vocabulary or the Skype session would not be successful. When I asked Erica about this, she said, “The time we did it with Skype there wasn’t Spanish words on it. I think you didn’t have Spanish words on it. I knew I would be using the words, I prepared myself in advance” (Focus group, June 2). Erica acknowledged that she herself took ownership of her learning. She knew the task at hand, and she prepared herself. Erica also reported that she was more aware of her pronunciation. She stated, “I am more aware of when you’re saying it in class, so I know that I am saying it right to him” (Interview 2, April 17). The online experience helped give the activities in class a purpose. The students’ desire to improve their Spanish and use it properly with their counterpart influenced them inside the traditional classroom.

In Erica’s case, she also noted that the Skype sessions helped her in the traditional classroom. There now was a connectedness; the one environment flowed into the other. Each environment was different, but both offered challenges and opportunities. Erica commented that she struggled with listening:

   For me, I think the listenings are the hardest in this class. So these ones [listening comprehension activities] help me a lot. Yeah, so when they are saying a sentence, I actually listen to what they are saying so I can draw exactly what’s happening. (Interview 2, April 17)

The lines of the two learning environments have blurred.

Kendle also talked about how she is more attentive in the classroom because of the Skype sessions. I asked Kendle if the Skype sessions have helped her with the learning of the Spanish language. She commented,
Um . . . I think it has because now I’m like realizing more of the pronunciation. Because I’ll be talking, I’ll be like in class or whatever. I’ll try to pronounce or to pronounce something better and um, because I’ll be like I’ll probably use this on Friday. (Interview 2, April 17)

Kendle realized that her actions in the traditional classroom will influence the outcome in the online classroom. With this revelation, Kendle took ownership of her learning.

In the above examples, I talked about how the lines of the two worlds, the on-line environment and the traditional classroom, merged. The environments were not independent but rather interconnected. They fed off of each other to assist the student in acquiring the enhanced skills which were outlined in the last section.

Preference for activities. Evidence of how the students took ownership of their learning also presented itself in the types of the activities which they preferred. The students, all students, repeatedly requested more challenging material. This request tells me, the teacher, that the students wanted to challenge themselves. Never would I have thought that students would beg me for more challenging material! If I didn’t have the data in front of me, I would have thought I was dreaming. In the following paragraphs, I present information about the students’ request for activities and their thoughts about the activities.

Jackie was quick to respond when I asked her which activity was her favorite. She stated that it was the picture guessing activity. In this activity, the students had to listen to a series of descriptions and then they had to select the picture that best fit the description. When I asked Jackie why she liked the activity, she said,
Because . . . it was harder for me which I liked it. Because, I was starting to understand the words that he was saying. Like he didn’t go through all of them. He would just say a few sentences about it. And he would try to make me guess. Like sometimes I didn’t know because he would say “it’s good weather.” I’d be like “explain more.” And, he goes “you have to try to guess.” Um, “there all good weather.” That was fun. A few times I had to ask him what he meant. But I did pretty good. I think. (Interview 2, April 17)

Jackie acknowledged that the activity was difficult, and she liked the challenge. Jackie enjoyed assessing her own abilities and this indicates that she was taking ownership of her learning.

As I stated previously, the lines of the on-line environment and the traditional classroom overlapped and became interdependent. In this upcoming example, the student talked about how she struggled with listening. Generally, Erica scored well on the reading, speaking, and writing exams, but she struggled on the listening exams. Through the explanation of an activity, Erica posited how one activity helped her to enhance her listening skills. She stated,

For me, I think the listenings are the hardest in this class. So these ones help me a lot. Yeah, so when they are saying a sentence, I actually listen to what they are saying so I can draw exactly what’s happening. (Interview 2, April 17)

In this activity, the NS read seven sentences to my second language students. He or she was to describe a beach scene, and my students were to draw what he or she was saying. My students did not have access to the written sentences; they had to listen and
comprehend in order to be able to draw. Erica knew that she needed to challenge herself in the area of listening. She realized, or owned, her weakness and she sought activities that could provide her an opportunity to challenge herself and she embraced the opportunity.

In order for my students to improve their own second language skills, they used strategies to assist them. The use of English, teacher created phrases and mimicry helped the students comprehend their partner, be understood by their partner, and enhance their own skills. Furthermore, because the students took ownership of their learning, the lines between the two environments, the Skype environment and the traditional classroom, blurred. The students requested more complicated material and were more attentive in class. The students became more conscientious of their own learning in both environments.

**Relationships**

A third major finding was that the students developed relationships with their NS counterparts that contributed to their feelings about the project and to their second language acquisition. The feelings of fear, joy, frustration, and sadness described previously were all interrelated with the students’ quest to acquire a second language and their desire to build a relationship with their NS peer. Although each finding has been presented separately, some evidence of their interconnections has emerged and will continue to emerge and be clearer in this last section of the paper.

The relationships that students developed during the Skype experience are elaborated upon in this section. The primary research question guided me as I sought to
describe the students’ experience. Although, second language research and teaching, and mine in particular, is heavily influenced by social interaction. I did not anticipate the strong nature of the relationship aspect of the experience. The data clearly indicate that the relationship component of the peer interactions was a primary motivator for student learning and their feelings about the project. The power of this finding is great for it appears to provide the momentum and passion for their learning. Students connect with their NS counterparts and discover a reason to use the second language. This finding has been divided into three sections: (a) sharing personal information with their counterpart, (b) offering a show of mutual support, and (c) taking the relationship outside of the Skype environment.

**Sharing Personal Information With Their Counterpart**

During the second interview, I talked to the students about the types of activities that we had performed. We had done a variety of different activities, and I was curious to know which ones they liked best and why. In the second finding, I stated that the students desired more complicated activities so that they could stretch their second language skills. In this section, I present information to address their desire to know more about their partners. The students specifically requested activities that would allow them to gather personal information about their partner. Jackie stated, “Um . . . it would be cool if you put like questions about him. Asking questions about themselves and like their culture and stuff” (Interview 2, April 17). Even my shy student Mia said that she wanted to know more. She said,
More about himself and his culture. Instead of stuff like you give us. I like just talking in Spanish between us. Like, “How do you like school? What do you do in your family? What do you do in your spare time? How’s Mexico? Have you ever been there?” I just like talking to him about himself instead of getting certain things to talk about. (Interview 2, April 17)

The students desire casual talk and less prescription or rote material. The students want activities that help them to learn more about their partner.

**Using English to learn about counterpart.** The students desired to know more about their partners, but they weren’t given the proper activities to discover more about them. Because of this, the students opted to use English as a tool to learn about their counterpart. Again, evidence of this multilayered, interrelated web is apparent. Students are building a relationship through the use of a specific strategy, English. Although I mentioned the use of English earlier, I now talk about it with respect to developing a relationship.

The students informed me during the interviews, online student journals, and the focus group session that they used English exclusively to find out more about their partners. They stated that they performed the required activities quickly and then moved on to a sharing session. The students asked and answered personal questions about themselves. In the online student survey, Jackie talked about her NS counterpart. It was their third skyping session and she was anxious to find out more about him. In the online survey she shared,
When we were done with activity i asked him a little bit about himself and his best friend Enrique. Chato also said that there was no reason for moving over to the US and he thinks he moved over here 5 or 6 years ago. But i loved the whole part because Chato is Awesome. (February 19)

Jackie wanted to know about the person behind the screen. She wanted to know who he really was; thus, she used English to help her find out more about her partner.

Erica also used English to learn more about her friend. Furthermore, she realized that the online sessions were more than just about learning the language. She knew that it was about building a relationship. In the online student journal, she wrote, “i liked asking questions about my partner and what he likes. it helps me learn more about him and see him more as a friend than just someone i talk to on sykpe” (Online student journal, March 30). The intricacies of this online relationship are difficult to define and describe for it is so interconnected. There are a number of online language learning sites where the students can see and hear the target language; however, this need to connect with someone and learn about them appears to be one reason behind the learning. It has become a reason to share, to strive, to learn. I think it is about making the content real. The words that they care to learn have a purpose. They are not just memorized utterances. Collectively, the students’ feelings, their desire to acquire the language, and the need to connect to another person have presented a wonderful learning opportunity.

In the upcoming section, the data show how the students help each other to acquire the second language. The students begin to develop a tandem relationship; a relationship whereby each participant is not only responsible for his or her own learning,
but also responsible for his or her partner’s learning. All students, Smith City and Duke, clearly identify and indicate that they care about their partner’s learning and want to contribute to it.

**Offering a Show of Mutual Support**

Although students were fearful of making mistakes in the beginning of the experience, as described earlier, the students eventually came to realize that in order to learn the second language, they were going to make mistakes. This awareness helped both second language learners (my students and the Smith City students) to realize that they could help their partner enhance their own skills. This desire to help was seen on both sides of the computer. Smith City students offered an abundance of support to my students. And, my students were also responsive to the needs of the Smith City students. Both groups came together to support each other in the quest to learn a second language. Their relationship with each other was evolving. The students were starting to trust each other. Erica spoke of this evolving and budding relationship during the second interview. She stated,

’Cause like at the beginning like you didn’t really know like what to say or like their personality. But like as each week goes on, you learn more about them. Like how they react to things and you become more of like friends instead of like to talking to someone from Smith City. (April 17)

Erica was starting to know her partner; therefore, she began to trust him.

**Creating a tandem relationship.** Both groups wanted to contribute to their counterparts’ learning. This contribution helped to unify the bond between both learners
and helped to build the foundation for their relationship. As stated earlier, it is about trust; it is about knowing your partner. In the first interview, Danielle told me about how afraid she was to make a mistake for she knew her pronunciation was so bad. Danielle said to her partner, “I have terrible Spanish” (March 25). Danielle’s partner wanted to reassure her that it would be ok, and she said, “It’s ok, I’ll catch on to what you are saying.” This was the beginning of a tandem relationship, a relationship that encouraged both parties to take ownership of not only their own learning but the learning of their counterpart as well. This is a truly win/win situation whereby both parties contribute to the greater good.

In order for a tandem relationship to flourish, each individual must allow himself or herself to be vulnerable, to make mistakes, and to trust that his or her partner is present for support. Evidence of this unselfish act is in abundance. From the weakest to the strongest student, the data supports this finding. In the following paragraphs, I continue to show how the Smith City students helped my students. I then follow it with how my students helped the Smith City students.

Danielle, a struggling Spanish student, realized early on that she could rely on her counterpart for support and help. Danielle explained, “And she helps me. I’m like ‘how do you say that one?’ And then she’d just say, I’d be like ‘oh’ I was going to say it like totally wrong.” In order for Danielle to improve her second language skills, she not only needed to take ownership of her learning, but she also needed the assistance of her expert. Danielle had to be comfortable making mistakes and asking for support. Evidence of this assistance can be found in the first video. During the first activity, Danielle had skipped
over a question. Her NS counterpart realized that she did so, and she tells her in English, “Wait, you skipped one. Did you ask ¿Cómo eres? ¿Cuáles son tus características físicas? [What are you like? What are your physical characteristics?]” (Video 1, February 2).

From the video, a viewer can see that Danielle did not want to ask the second question. She hesitated before asking the question and took a moment to ponder it. To me, because of the long, noticeable pause, it appeared obvious that she knew that she would struggle with the question and thought it would be easier to skip over it. Her partner appeared to notice this and helped her out by saying the question for her. Danielle responded to her partner by saying, “yeah, that one, what’s your answer?” (Video 1, February 2). This interaction is a way that Danielle’s partner provided a safety net for her. Linda seemed to already care for her partner and wanted to make certain that the experience was positive. Although this was not an explicit request for help, it was help. Even in the very first Skype session, Linda offered support to her counterpart. All students throughout the experience received support from their counterparts. Jackie told me during the first interview, that she eventually became comfortable requesting help. She said, “Sometimes I’ll start speaking in Spanish and I won’t know how to say something. So, I’ll ask him. Then, I’ll continue” (March 25). Jackie was no longer afraid that she would embarrass herself. She knew that she could trust and rely on her partner for help.

Erica also trusted her partner and she enjoyed the Skype sessions. She told me on a regular basis that she looked forward to Fridays, and she couldn’t wait to speak with
Enrique. Erica was comfortable with her partner, and she often would request help from him. Erica, more so than the other second language students, requested help. There are multiple examples of her requesting support from her counterpart. Erica explained her process,

If I think I am saying it wrong. I’ll be like “am I saying this right?” He’ll either say yes or no. If I’m saying it wrong he’ll say it a couple of times. Then I’ll say “so you say it like . . .” And then I’ll say it. I get more how to say it then.

(Interview 2, April 17)

She entrusted Enrique with her learning and she knew that he wanted to help her. Erica felt comfortable seeking help for she had been working exclusively with Enrique. Erica commented on the fact that she had been working with Enrique for a while. She said, “Yeah, and I feel like I am being more comfortable with him and not as nervous. I actually not really, I was nervous, but now it’s just like ‘Oh, I’m talking to Enrique again.’” She felt comfortable with him, this trust allowed her to seek assistance. Erica stated,

I’m not as nervous to say things. Like pronunciation wise I’ll say it. And, if I say it wrong, Enrique will teach me how to say it or whatever. Where at first, I wouldn’t try it. I wouldn’t say anything because I didn’t know how he was going to react to it.” (Interview 2, April 17)

Erica’s comfort with Enrique allowed her to accept his support.

I noted this assistance in the second video. Erica’s requests for help are supported by the evidence found in the video (Video 2, March 30). In it, Erica said, “How do you
say this? Verduras? [Vegetables?]” Enrique responded, “Verduras y frutas. [Vegetables and fruits].” Enrique told her how to say the word, and Erica responded, “De las verduras, cuales comes tú” [of the vegetables, which ones do you eat?]. Erica used the information to better understand the pronunciation, and she was able to pose the question properly in Spanish. Enrique offered a helping hand so that his partner could be successful in the completion of her task.

As stated earlier, the requests for help came from both sides of the computer. My students also offered assistance to the Smith City students. As Erica’s partner helped her, she also helped and encouraged her partner. I asked Erica if she could give me a specific example of how she showed support. She said, “if I know what he’s saying but he says it wrong, I’ll say ‘do you mean YOUNG?’ Because he says young weird. And so I say do you mean ‘YOUNG’ and he says “Yeah” (Interview 1, March 25). When I asked her why she offered help, she commented, “I think it helps him if I say it the right way, correcting him kind of. And he says it again like how I said it” (Interview 1, March 25). Both Erica and Enrique made explicit attempts to support each other in their learning. This tandem relationship created an opportunity for both parties to enhance their second language skills.

An additional example of this help and support can be found in the transcripts and the student journal of Kendle. Kendle hadn’t built the relationship that her classmate Erica had. She looked forward to skyping; however, she was not as animated when speaking about the experience and seeing her partner. When in the online environment, she knew what she needed to accomplish and she did so. Thus, I was surprised to some
degree that she developed a tandem relationship, a relationship where they supported each other with their learning. During an interview, when I asked Kendle if she helped her partner, she stated, “Like if she didn’t understand a word that I had said, or if I said something too fast, I’ll say it slower. Or, I’ll explain what I had said and make it easier or whatever” (Interview 1, March 25). I had read Kendle’s online journal so I knew that she did offer support. I was happy to see that she commented about this help. She wrote, “i did good. i helped my partner. she said ‘you can sun bathed’ and i helped her out and said it is sun bathe” (Online survey, March 12). Kendle felt good that she could help her partner. The tandem relationship was perhaps in its infancy, but nonetheless, it did exist.

I was so pleased to hear and see that these relationships were becoming partnerships. The students offered mutual support to each other in their quest to learn a second language. In my journal, I noted:

This adventure has been eye opening. I really thought that it would be about learning the language. It really became more about learning about their virtual pal. If I were to continue with this experience, I do think that a true tandem relationship would develop. The students could learn from and help each other. It is evident that they first must build a relationship/friendship. Then, they can work towards a learning goal. There is definitely some potential for this project. Teenage students need to be social. They need to trust their counterpart. They need to know that they can take risks and make mistakes. Building the relationship is part of their learning journey. (Teacher Journal, May 25)
The students sought to connect with their counterparts. They wanted this online experience to be more than just about second language learning. They wanted to know the person behind the screen. Furthermore, the students started to not only own their own learning, but they also started to help each other with their learning. The experience became an altruistic endeavor to help the other person improve his or her skills.

**Relationship Beyond of the Skype Environment**

The desire to build a relationship with their counterparts transcended the Skype environment. The students were determined to continue their relationships with their NS counterparts outside of the Skype environment. Although I do not have a great deal of data to illustrate this finding, I do feel it worthy of presenting for it shows the evolution of the relationship. The students realized that it, the relationship, needed to emerge from the Skype environment in order to keep on.

The wish to meet someone and learn the language eventually developed into a relationship. The students connected with their NS counterparts and wanted the relationship to continue. As the Skype sessions came to a close, I talked to the students about their counterparts and this online relationship. The students were sad that they weren’t going to see each other again. The connection, the relationship, they had built seemed to be coming to an end. Erica was concerned about this and commented, “I hope Enrique has a cellular” (Focus Group, June 2). Erica knew that she was now going to have to find a new way to connect to her new friend. She even commented that Facebook could be another way that she could connect with Enrique. Erica was looking for alternative ways to continue the relationship (Focus group, June 2).
Because the students were so sad that this experience was ending, we decided to meet one last time at a Mexican Restaurant. I commented about this trip in my teacher journal. I noted,

The students are still very excited to be part of this exchange. They have asked me if we could go out to dinner with the Smith City students. It’s evident that they are developing relationships with their counterparts. I will be checking with their teacher to find out if we can meet at the end of the exchange (May 4).

It was obvious that the students were looking forward to meeting their partner, and hoped to use the opportunity to connect with them one last time and to establish a way to continue the relationship. In the last video, Danielle asked if Linda was going to sit by her when they go to the restaurant. Linda says “yeah” and Danielle tells her friends that she will be sitting by Linda and they are “going to talk the whole time.” Danielle found a new friend (Video 3, May 25).

Others commented on the friendships that they had developed. Mia said, “we’re like good friends now.” And Kendle said in reference to her partner, “she’s nice, she’s cool” (Focus Group, June 2). All the students realized that the simple partnership blossomed into a friendship. None of the students had anticipated that this would happen. Erica said that she and the others were glad that they participated because “if we wouldn’t have tried this, we wouldn’t have the relationships we have with all of our partners” (Focus Group, June 2).

Because of the mix of joy and sorrow at the end of the project, all students requested that we continue these sessions in the Fall. In the final focus group interview,
the students offered to come in before or after school to have the opportunity to continue meeting with their counterparts. The experience proved to be enjoyable and students were willing and anxious to find even non-traditional scheduling options so that they could continue. I never expected that the students would look to carry on their relationships with their newfound friends beyond the Skype environment. The project that I created to enhance my students’ second language skills took new form as the project ended. The project became one of learning the second language through the support of their new friend, their partner.

**Summary**

I initially thought that the research project would provide the students with an opportunity to practice their second language skills with an expert, and therefore, enhance their second language skills. This indeed proved to be true, but the project offered my students so much more. The students built amicable and mutually supportive relationships with their NS partners. These relationships became the foundation for learning. The students became their own learning facilitators as they identified their own second language needs, and they supported each other in their endeavor to learn the second language.

As the researcher and teacher, my primary desire to expose students to an authentic second language experience morphed into a complicated, multilayered experience that had no boundaries. Evidence of the influence of their feelings about their own learning and their relationships were so intertwined that it was challenging to
separate and clearly define each finding. Although complicated, I hope the reader can see through the stories the evolution of the project and its interconnected nature.

I am glad that I had the chance to explore this experience and better understand how the students felt throughout the process, and I could also witness how students negotiated meaning during this experience. In Chapter 5 I present some recommendations for future studies, and I make a connection to the past research.
CHAPTER V

DISCUSSION AND IMPLICATIONS

Introduction

In this chapter, I first review the purpose, research questions, and findings of my study. Then the contributions of this study are discussed with regards to the contributions of past research. Next, implications for the research findings are highlighted and questions are posed for future research. I present the influence of these findings in my own classroom and offer suggestions to other second language educators. I close the chapter with a broad discussion about learning a second language in the 21st century.

The goal of this practitioner research study was to examine the experience of my students’ use of synchronous computer-mediated communication (CMC) as they learned a second language. This study allowed me to understand the intricacies of this type of learning so that I can provide my high school students with a safe and unique opportunity to enhance their second language skills. Furthermore, the results of this study will be shared with researchers and educators in the field of second language education. We, researchers and teachers, must share our knowledge and learn from each other to forward our understanding about learning in a video synchronous CMC environment. This study posed one main question and three sub-questions:

How do Novice Non-Native Speakers (NNSs) who are learning Spanish in a Midwestern high school experience synchronous video chatting with middle school Native Speakers (NSs) of Spanish from a neighboring community?
1. How do the high school Non-Native Speakers (NNSs) of Spanish feel throughout this process?

2. How do high school Non-Native Speakers (NNSs) of Spanish enhance their second language skills and foster comprehension in this on-line environment?

3. How do the Non-Native Speakers (NNSs) and Native Speakers (NSs) of Spanish interact in this online environment?

**Summary of Research Findings**

This practitioner research study was designed to describe the experience of six high school students learning Spanish in a video chat synchronous CMC environment. From the data, three main findings emerged:

1. The students experienced a variety of different feelings which evolved over the course of the experience, and these feelings were tied to their interactions with their NS partners and their own knowledge of the second language.

2. The students acquired second language skills by taking ownership of their own learning and by using specific strategies.

3. The students developed relationships with their NS partners that contributed to their feelings about the project and to their second language acquisition.

I recognized that the students’ feelings, second language acquisition, and their developing relationships with their NS partners not only evolved over the time of the project but were interconnected. This interconnectedness of the various findings helped me to create a complicated yet robust presentation of the students’ stories. Below I present an overview of the individual findings.
Research Sub-Question 1 focused on my high school Spanish students’ feelings throughout the study. The purpose of this research question was to explore the students’ experience through their feelings. The findings revealed that the students’ feelings about learning in this face-to-face on-line environment evolved over the course of the study and influenced how the students interacted with their NS partners and approached their second language learning.

Research Sub-Question 2 focused on the students’ use of the second language. The findings indicated that the students used a variety of strategies to assist them in comprehending and in being understood by their counterparts. The use of English and requests for clarification promoted comprehension. Mimicry of the second language and the students’ own desire to improve their skills also played a vital role in the students’ use of the second language. The experience fostered second language acquisition.

Research Sub-Question 3 focused on the students’ relationships with one another. The findings showed that the students enjoyed learning about each other and relied on their partners for support with the acquisition of the second language. The relationships that the students built became a motivator and a catalyst to use and learn the second language. The students’ feelings about their NS counterparts evolved and helped to foster an environment for learning. All students sought ways to continue the relationship beyond the Skype environment.

**Discussion**

In the summary of the findings, I presented an overview of the results of my study which included the students’ feelings, second language use and acquisition, and their
relationships with their NS partners. I also stated that the students’ relationships were the motivator and catalyst for learning. The relationship between the NS student and the NNS student (the ones in the study) was what made this project authentic for my students. Prior to the Skype project, the students had no reason to use the second language outside of class. This is important for we, language teachers, want to provide authentic experiences for our students. We want the students to see a reason to use the language they are learning. It is through these tandem partnerships where second language use and acquisition can be fostered.

This discussion section is divided into three sections that reflect three parts of the project, beginning, middle and end. In these sections, I discuss the evolution of the students’ relationships over the course of the project. I also discuss the students’ feelings and language use and acquisition at each stage. Past research findings about these topics are woven in to show comparisons. Although it is important to acknowledge the research that has been done, it is equally as important to highlight new insights into how we learn a second language in a video chat synchronous CMC environment.

**Beginning of the Project**

At the start of the Skype project, the students’ nervousness about meeting their NS counterparts was evident. I expected that the students would be nervous, but I hoped that this fear would dissipate over time. Past research on text-based synchronous CMC showed that over time, the students became more comfortable (Beauvois, 1992; Bradley & Lomicka, 2000; Hudson & Bruckman, 2004; Warschauer, 1995). Though, Satar and Ozdener (2008) found that fear did not subside as quickly in a synchronous video
environment. The results also indicated that the students felt protected behind the computer. Because my research incorporated video and these studies did not, I was uncertain if this would hold true.

Fortunately, my students’ fear did dissipate quickly. With each session, they became more and more comfortable with their own “social presence” (Yamada & Akahori, 2007). The students acknowledged their online identity and began to interact with their NS counterparts in a social manner. The students informed me that they looked forward to seeing their NS partners each week, and they wanted to learn about each other. The data suggests that the ability to see their NS partners helped to foster the online relationship, and in my study, helped to reduce the anxiety. Thus, the incorporation of video is vital in the development of these relationships, and therefore crucial to their learning the second language.

**Middle of the Project**

Although my students were becoming more comfortable with their “social presence” (Yamada & Akahori, 2007) and interacting with their NS partners, they struggled with their use of the second language. Because of their limited Spanish skills, the students did employ specific strategies to keep in the target language. Like past research studies (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005; Negretti, 1999; Pellettiere, 2000; Smith, 2003; Toyoda, 2002; Tudini, 2003), my research study showed that the students used requests for clarification in order to stay in the target language. My students asked their NS partners to repeat themselves and to spell out their
answers. Nonetheless, my students’ inadequate second language skills frustrated them and limited their conversations.

When communication broke down completely, the students used the English language to negotiate meaning. The NSs English skills were more advanced than my students’ Spanish skills. Thus, English became a strategy that both parties employed when comprehension was hindered by staying in Spanish. Currently, no research about the use of L1 exists in the synchronous CMC literature. I argue that the use of L1 is a legitimate strategy for it allowed my students to complete the communicative task. This strategy not only helped the students to comprehend and present the material, it also fostered a mutually supportive environment whereby the students would help each other. This show of support helped to develop the students’ relationship. The students knew that their partners were there to help them. Their developing relationships promoted the use and acquisition of the second language.

The data also revealed that English was used to learn more about their NS partners. Past researchers (Darhower, 2000; Ghani & Daud, 2006, Peterson, 2009) used the phrase “off-task discussion” to note any aspects of the communicative exchange that were not directly linked to the activity. What appeared to be irrelevant to other researchers is significant to this researcher. I argue that this “off-task discussion” is part of their learning journey. The students were learning about each other. They spoke about their likes and interests and their friendships. The students were building their relationships, and the discussion in English allowed them to get to know each other. In
the end, the strengthening of the relationship allowed for the students to challenge themselves and to take linguistic risks in a safe environment.

**End of the Project**

Week by week, the students continued to learn about each other, and they continued to build confidence in their own second language skills. My students began to mimic their NS partners’ pronunciation, and they requested activities that were more challenging and complex. Although I knew from past research that jigsaw activities promoted second language acquisition (Blake, 2000; Smith, 2003; Yilmaz, 2008), I had limited knowledge about the types of tasks to create for these online exchanges. Thus, I was pleased that my students were taking ownership of their learning and offering specific suggestions for the design of the activities. The students loved the drawing activity for their aural comprehension skills were challenged as their partner described the scene to them. They encouraged me to remove the English from their papers for they wanted to challenge themselves. I never would have thought that the students would make requests for more complicated material. It is clear to me that the students felt comfortable taking risks for they trusted their NS partners. They had created a relationship that allowed them to take risks and challenge their own linguistic abilities.

Although some research indicated that the synchronous CMC environment provided second language learners with an opportunity to be part of a community of learners (Shin, 2006) or a tandem learning environment (O’Rourke, 2005), the majority of the research ignored the relationship aspect of learning a second language in the on-line environment. My data suggests that the creation of tandem relationships,
relationships that encourage the dyads to care about their own learning as well as the learning of their counterpart, is crucial to the students’ second language acquisition. These relationships seemed to be the factor that fostered the desire to learn the second language.

**Recommendations for Future Research**

First and foremost, there is an obvious lack of research in the area K-12 setting. I address this issue upfront. Next, I recommend that future researchers view and frame their research study through an ecological perspective. I provide a definition and an overview of this perspective and its relevance to second language learning in an online environment. I then present recommendations for different types of qualitative research. I close with research questions that are directly tied to my findings and my quest to further our knowledge about learning in this environment.

**The Use of On-line Synchronous Learning in a K-12 Setting**

As most researchers work and do research at the university level, it is not surprising that all research studies, with the exception of mine and Satar and Ozdener’s study (2008), were performed at post-secondary institutions. Although these findings helped me to determine how best to approach my study and presented me with valuable information about second language acquisition in a synchronous CMC environment, they did not address some issues that pertain only to these participants.

The dynamics of learning a second language in a K-12 setting were unique. The participants were minors, and their safety and their feelings about learning in an online environment were my primary concern. Thus, as I created this opportunity to interact
with NSs, I acknowledged the safety factor and I monitored their feelings about this type of learning on a regular basis.

Although I specifically addressed the safety and comfort level of these minors, I also explored how my students attempted to negotiate meaning and interact with NSs in the synchronous online environment. The K-12 learning environment is a relatively unexplored territory. We have a great deal to learn about second language learning in a K-12 synchronous environment. I offer these research questions for future researchers to ponder:

1. How do K-12 students learning a second language in an on-line video chat environment feel about their learning experience?
2. How do K-12 students’ experience learning a second language in an on-line video chat environment?

The Ecological Perspective and Second Language Learning

From an ecological perspective, all communicative acts in a learning environment have multiple reasons, causes and interpretive potential, depending on all the relationships between and among all the participants in the setting, as well as the evolving setting itself. In this way it can be said that the pedagogical setting is an ecosystem, embedded in other ecosystems along different temporal and spatial scales (Van Lier, 2008, p. 596).

As stated in Chapter 4, as I sifted through the data, I found it difficult to define and describe the various findings for they were so tightly interconnected. See Figure 5 which illustrates the relationship of the findings.
It was from this need to identify a word or phrase that could capture this entanglement that I found a perspective that acknowledges this reality. As noted by van Lier (2000), “Ecological educators see language and learning as relationships among learners and between learners and the environment” (p. 258). The perspective builds upon the work of Vygotsky (1978) and Sociocultural Theory to present a dynamic view of learner in his or her environment. From an ecological perspective:

The learner is immersed in an environment full of potential meanings. These meanings become available gradually as the learner acts and interacts within and with this environment. Learning is not a holus-bolus or piecemeal migration of meaning to the inside of the learner’s head, but rather the development of increasingly effective ways of dealing with the world and its meaning. (van Lier, 2000, p. 247)

The ecological perspective recognizes that the whole is made up of pieces and parts, and the interaction of the pieces and parts contributes to the overall experience.

In this study, my high school NNSs of Spanish interacted with middle school NSs of Spanish in an on-line synchronous environment. The Skype environment was the ecosystem for their learning. Collectively, the participants, the activities used for the study, and the processes that were put in place to give structure to the learning, all worked in concert to create a distinctive learning opportunity for all participants. Although all participants were exposed to the same activities and comparable NS partners, each experience and learning opportunity was unique. The NS/NNS dyads were members of an exclusive learning community and ecosystem. This organic learning
environment was the immediate context within which the NNS was learning Spanish and this influenced how the students acquired and felt about the second language.

Viewing students’ learning through the ecological lens, will allow researchers to examine the dynamic nature of learning in a more robust fashion. Certainly, we can use the Interactionist and Sociocultural lenses to discuss how students make meaning of words and how their interactions create opportunities to acquire and use the second language. However, the use of these lenses present a one-dimensional view of second language learning. As there is no research in the area of synchronous CMC and second language learning from the ecological perspective, I encourage researchers to examine second language learning through this lens. It is from this lens that a new viewpoint for understanding how we acquire language can be gained. An ecological perspective can provide insight into second language learning. I predict that an ecological lens will add depth to the current body of SLA research that the current research lacks. I offer this research question:

1. How does language emerge in the video chat synchronous environment?

Use of Qualitative Approaches to Inquiry That Illumine the Students’ Experience in a Video-Based Chat Environment

As I looked to past studies to frame my findings, I was reminded that the bulk of qualitative research relied on Discourse Analysis to describe the students’ experience (Blake, 2000; Darhower, 2002; Ghani & Daud, 2006; Jepson, 2005; Kern, 1995; Lamy, 2004; Lee, 2008; Negretti, 1999; O’Rourke, 2005; Payne & Ross, 2005; Pellettieri, 2000; Smith, 2003; Sykes, 2005; Toyoda, 2002; Tudini, 2003; Warschauer, 1995; Yanguas,
2010). These studies viewed second language learning from the Interactionist theorist’s lens and provided detailed information on how learners negotiated meaning in an online environment. The aforementioned studies indicated that students made attempts for clarification and acknowledged that language barriers triggered negotiations. This qualitative method provided evidence about the students’ second language learning; however, the students’ voice about his or her experience was silenced.

It is through other forms of qualitative research that the stories of the students can be told. Shin’s (2006) ethnographic study, Wang’s (2007) case study, Okuyama’s (2005) action research study and my practitioner research study presented different angles to view second language acquisition and the students’ experience. These types of qualitative studies add to the overall understanding of second language acquisition in an on-line environment. Qualitative research can glean information regarding the students’ perceptions of their learning and the learning tasks, the use of L1 as a strategy and their relationships with their partners. To close this section, I recommend 8 research questions that will illumine these areas.

1. How do second language learners communicating with NS in a synchronous video chat environment perceive the design of activities in regards to their learning?

2. How does the use of L1 in the on-line synchronous environment influence the students’ second language learning?

3. How do second language students perceive their use of L1 in the on-line synchronous environment?
4. How do the NS/NNS relationships contribute to second language learning?

5. How do these relationships evolve?

6. How do students define their relationship with their NS counterparts?

7. How do on-line synchronous learning opportunities influence the student’s learning in the traditional classroom setting?

8. How do second language students interact in this synchronous video-chat environment?

**Implications**

In the upcoming sections, I present the implications for my classroom and for other second language classrooms. As a practitioner researcher, I look to learn from my research and improve upon my current practice. I also plan to share my findings with others so that together we can improve the current state of second language education. I will close this dissertation with a conclusion.

**Implications for Other Second Language Teachers**

This study opened my eyes to how students learn a second language in a synchronous video-chat environment and may provide insights for others who plan to use Skype, or a comparable tool, to connect with others to learn the second language. Below I present four suggestions to second language teachers to help understand some of the nuances of learning in this environment and plan.

First, Skype is a free on-line application that allows two users to connect online. With the addition of a web cam, you can hear and see each other. Although Skype is relatively easy to use, teachers should be aware that students need to be trained on how to
use this on-line application. Both parties must know how to call their counterpart and enable their web cam. I practiced using Skype with my students internally before I had them contact their NS counterparts. We performed numerous speaking activities and they were required to place and accept video calls. Therefore, once the project started, my students felt very comfortable with the tool. I did spend some time with the ESL teacher to train her on the use of Skype; however, I wish that I had encouraged her to connect her students internally before we started the project. The data indicated that the students were initially frustrated because of the NS partners’ learning curve about the use of Skype. If no training is possible, please realize that it will most likely take approximately three to four exchanges before both parties are able to place and receive video calls with minimal assistance.

Second, the activities that I had created for the Skype exchanges complemented the vocabulary and grammar of my Spanish 2 course. In hindsight, I wished that I had created activities that allowed them to learn more about their NS partners. During the interviews, my students told me that they wanted to know about their partners’ families, their school day, and how they spent their free-time. My students wanted to know who the people were behind the camera. They wanted to relate to their partners and were curious about them. The data indicated that they were building a relationship and this developing relationship influenced their second language use and acquisition. Thus, I recommend activities that will allow for these personal exchanges of information.

I also recommend that you talk to the students about the activities. I would have never thought that they would request more challenging activities. In the end, once the
students felt comfortable with the process and their partners, they wanted to challenge themselves. The conversations I had with my students, and I suggest you have with yours, opened my eyes to their personal and linguistic needs.

Third, as I stated in Chapter 4, I was shocked at the extent of English that my students used during the exchanges. I thought that if I created the activities properly, there would be minimal need to use L1. I found the use of L1 was a strategy. It allowed my students to find out more about their partners and also allowed them to negotiate meaning. I now see the use of L1 as part of their learning journey. I recommend that you monitor their use of L1 to determine why they are using it. Again, I recommend that you also talk to your students about why they are using L1.

Fourth, my findings show that students’ anxiety level dissipated rather quickly. After a three week period of time, all six of my students were not only less anxious, but they looked forward to seeing and communicating with their NS counterparts. This can be comforting as a teacher to know. I now know, and can share with my future students, that their apprehension to interact with a NS in a synchronous video environment will subside over time. I recommend that you too communicate this with your students for it will give them a feeling of comfort knowing that the feeling of fear will diminish.

All of the above recommendations require that you, the teacher, have an open line of communication with your students. There is so much more to know about how students learn in an on-line synchronous video environment, and our students can help us shape the activities and interactions so that they can achieve the linguistic goal. It is indeed exciting to be pioneers in this field.
For My Classroom

From my research, I know that my students benefited from this learning experience. The students developed mutually supportive relationships and challenged their own linguistic abilities. Because of this positive experience, and also the requests of the participants of the study, I plan to offer a conversational Spanish course. Currently, in the state that I teach, high school credit can be offered to students who seek non-traditional learning opportunities. The course will be offered in the Fall of 2011, and I will act as the liaison for this independent study course. Through Skype, I plan to reunite the NS/NNS dyads. The NSs will receive a service learning credit and my students will receive a second language credit. Again, I look to create an opportunity that benefits all participants. I look forward to giving the students another chance to continue their relationships with their NS partners while building their second language skills.

I am also exploring the use of ePals, a web-based collaborative tool for teachers and students in the K-12 environment. Through ePals I look to create a community of second language learners from all over the country. Like my study, I look to connect through Skype my students with ESL students whose native language is Spanish. I hope to create an on-line community of learners so that all students, not just a few, will have the opportunity to engage in an authentic learning experience.

Finally, I know that in order to create a community of learners, second language educators will need to be informed of the value of collaborative on-line learning. Although most second language teachers that I know use technology, they do not use it to connect with others outside of their own school. Because of this, I plan to present my
findings and share my knowledge about the use of synchronous CMC tools to others. I hope to present at my State conference and also at the National conference. In order for these dynamic learning environments to be possible, others must be made aware of their possibilities.

**Conclusion**

I am humbled by my findings. I anticipated that students would use and acquire the second language, but I underestimated the importance of the students’ relationships with each other. I am also starting to realize that this 21st century tool that we used to connect, is not just a means to practice specific second language skills. Instead, it transports them to a new environment, a new ecosystem. I did not see that Skype was a portal into another world. It was in this new world, this ecosystem, where the NNS and NS students built their relationships and shaped their learning. I began this study interpreting the potential of this 21st century tool through my 20th century lenses. Because of this, I stifled their learning.

We, second language educators, must continue to think differently about learning. Seeing the tool as a platform for learning is a step in the right direction. My experience and my research findings tell me that in order to achieve the goals outlined by the National and State Foreign Language Academic Content Standards, second language educators, myself included, must continue to think differently about how we design authentic learning experiences for our students. There is such untapped potential in how technology can be used to enhance not just second language learning, but all learning. We have so much more to learn.
APPENDICES
APPENDIX A

REVIEW OF LITERATURE IN TECHNOLOGY ENHANCED LANGUAGE LEARNING (TELL)
**Appendix A**


<table>
<thead>
<tr>
<th>Year</th>
<th>Name of Researcher(s)</th>
<th>Title of Article</th>
<th>Name of Journal</th>
<th>Type of Technology</th>
<th>Research Method</th>
<th>Participant Information</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>Forsdale, L., &amp; Dykstra, G.</td>
<td>An experimental method of teaching foreign languages by means of 8mm film in cartridge loading projectors.</td>
<td>Language Learning</td>
<td>8mm film (video)</td>
<td>Non-empirical (descriptive)</td>
<td>none</td>
<td>Authors discussed the use of 8mm film to simulate real-life scenarios (giving directions, traveling, etc…). The second language student viewed tape A to practice the scenario. After rehearsing, he/she would view and participate in tape B. In this tape, the second language student became a character in the scene. He/she had to ask for directions. Authors viewed this “emerging technology” as one that could revolutionize language learning (p. 10)</td>
</tr>
<tr>
<td>1966</td>
<td>Spencer, R. E.</td>
<td>The influence of disc or tape language laboratory equipment on foreign language speaking test scores.</td>
<td>Modern Language Journal</td>
<td>Discs/tapes for language laboratories</td>
<td>Quantitative (control group/ experimental group)</td>
<td>Students enrolled in a French 104 course at the University of Illinois during the Spring semester. Control group (372), Experimental group (88)</td>
<td>Discs only hold 5 minutes of recording. The flow of the test is interrupted. Results indicated that speaking scores did not differ between groups. How students recorded their speaking (tape/disc) did not have an impact on their scores.</td>
</tr>
<tr>
<td>1972</td>
<td>Morley, H., &amp; Lawrence, M.</td>
<td>The use of films in teaching English as a second language</td>
<td>Language Learning</td>
<td>Films (video)</td>
<td>Non-empirical (descriptive)</td>
<td>English Second Language (ESL) post-secondary students</td>
<td>A film program for intermediate and advanced second language students was developed to enhance the students’ listening comprehension skills. It motivated students to learn. Criteria for creating and implementing listening comprehension lessons were outlined. Listening, speaking and vocabulary building were emphasized.</td>
</tr>
<tr>
<td>1972</td>
<td>Casey, J.</td>
<td>Programmed instruction helps teach Spanish grammar</td>
<td>Modern Language Journal</td>
<td>Program-med instruction</td>
<td>Pilot Study Quantitative (control and experimental group)</td>
<td>Post-secondary elementary Spanish students 15 students – experimental group</td>
<td>Pre/post test results were used to determine if programmed instruction had a positive impact on the teaching of Spanish grammar.</td>
</tr>
<tr>
<td>Year</td>
<td>Author</td>
<td>Study Title</td>
<td>Material</td>
<td>Type</td>
<td>Notes</td>
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<tr>
<td>1972</td>
<td>Kalivoda, T</td>
<td>An individual study course for facilitating advanced oral skills</td>
<td>Cassette Player</td>
<td>Non-empirical (descriptive)</td>
<td>The cassette player can be used by the advanced language learner to practice vocabulary and pronunciation. The author suggested that this portable technology would motivate students to study the second language outside the classroom.</td>
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</table>
| 1972 | Garfinkel, A | Teaching languages via radio: A review of resources | Radio | A review of the literature on the use of radio in the second language classroom | Author states that there is a paucity of research in the use of radio in the second language classroom. He encourages other to study:  
1. The effects of using radio in combination with projected and non-projected visuals.  
2. The potential of radio broadcasts as media for the ‘preparation and follow-up’ activities that customarily accompany television broadcasts.  
3. The cost of language learning with radio supplement in comparison with other media of instruction.” |
<p>| 1975 | Huberman, G., &amp; Medish, V. | Spanish Multi-Channel instruction in operation: A progress report | Video tapes | Quantitative (control and experimental group) | Spanish language course was developed to determine if the use of videotapes and workbooks could accelerate and improve second language learning. Students in the Multi-Channel experimental group scored better in the areas of listening and pronunciation. And, were able to learn in one semester what the students in the control session learned in two semesters. These “contemporary learners” (p.51) were more motivated to learn by means of videotapes for TV and audio cassettes. |</p>
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Methodology</th>
<th>Subject</th>
<th>Description</th>
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<tbody>
<tr>
<td>1975</td>
<td>Santoni, G</td>
<td>Using videotape in the advanced conversation class.</td>
<td>Foreign Language Annals</td>
<td>Qualitative (descriptive)</td>
<td>Student interviews and transcripts from videotapes</td>
<td>Post-secondary advanced conversation French class</td>
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<tr>
<td>1978</td>
<td>Richmond, E.</td>
<td>Amateur radio as an aid to foreign language learning</td>
<td>Foreign Language Annals</td>
<td>Pilot Study</td>
<td>Post-secondary third quarter German students</td>
<td>The amateur radio (short wave radio) was used to communicate with NS of the target language. Participation increased on days when radio was used. And, there was more of an interest in learning the language within the traditional classroom setting. Motivation to learn a second language was discussed. Real-life opportunities to use the second language.</td>
</tr>
<tr>
<td>1981</td>
<td>Garber, C &amp; Holmes G</td>
<td>Video-aided written/oral assignments</td>
<td>Foreign Language Annals</td>
<td>Non-empirical (descriptive)</td>
<td>Questionnaires, discussions, analysis of content</td>
<td>Post secondary intermediate and advanced French students</td>
</tr>
<tr>
<td>1981</td>
<td>Ecklund, C., &amp; Wiese, P</td>
<td>French accent through video analysis</td>
<td>Foreign Language Annals</td>
<td>Non-empirical (descriptive)</td>
<td>Describes the use of video in the second language classroom.</td>
<td>Post-secondary French students</td>
</tr>
<tr>
<td>1984</td>
<td>Aoki, P., Eddy, P., Working group</td>
<td>Working group</td>
<td>Foreign</td>
<td>Computer-based</td>
<td>Non-empirical</td>
<td>N/A</td>
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<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Type</td>
<td>Description</td>
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<tr>
<td>1984</td>
<td>Holmes, G.</td>
<td>The computer and limitations</td>
<td>Foreign Language Annals</td>
<td>Computer (reading)</td>
<td>There is a limit to what the computer can do. Because the monitor is so small, the author suggested that the text still appear on paper. The questions and feedback can be given on the monitor. The computer alone does not have the capacity to produce sound. Discs and tapes must be used with the computer. The author stated that the computer is at times not appropriate for second language instruction and is only a tool for the second language teacher.</td>
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<tr>
<td>1984</td>
<td>Pusack, J</td>
<td>The interactive computer testing of reading proficiency</td>
<td>Foreign Language Annals</td>
<td>Computer-based reading program</td>
<td>Computer-based reading programs can detect the second language students' strengths and weaknesses in regards to reading. He states that the computer is capable of producing text, and suggested that a project be developed to create computer-based reading programs for the second language classroom.</td>
<td></td>
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<tr>
<td>1984</td>
<td>Aoki, P</td>
<td>Limitations of current micro-computers for foreign language training</td>
<td>Foreign Language Annals</td>
<td>Computer-based programs</td>
<td>DOD was looking for alternative ways to teach and enhance second language skills. The microcomputer was viewed as a tool to accomplish this task. Like other researchers, Aoki stated that the computer was a good tool to teach the skill of reading. There are limitations with the computer. It does not have the capacity to produce a quantity of</td>
<td></td>
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<tr>
<td>1984</td>
<td>Wipf, J.</td>
<td>Shortwave radio and the second language class</td>
<td>Modern Language Journal</td>
<td>Radio (shortwave)</td>
<td>The benefits of the use of the shortwave radio are presented. Motivation to learn, second language vocabulary acquisition and enhanced listening skills are mentioned. Suggestions for how to create pedagogically sound lessons are presented.</td>
<td></td>
</tr>
<tr>
<td>1984</td>
<td>Holmes, G., Pusack, J., &amp; Wyatt, D.</td>
<td>A proposal for a prototype computer-based reading course</td>
<td>Language Annals</td>
<td>reading program</td>
<td>(descriptive) Describes reading program and potential of it. Comprehension can be improved through the use of a computer-based reading program. The program can monitor the students progress and determine his/her current ability level.</td>
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<tr>
<td>Year</td>
<td>Authors</td>
<td>Title</td>
<td>Journal/Program Type</td>
<td>Methodology</td>
<td>Participants</td>
<td>Details</td>
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<tr>
<td>1987</td>
<td>Jamieson, J., &amp; Chapelle, C.</td>
<td>Working styles on computers as evidence of second language learning strategies</td>
<td>Language Learning Computers</td>
<td>Quantitative</td>
<td>33 ESL post-secondary students</td>
<td>The researchers examined the use of learning strategies by second language learners in a computer laboratory setting. During dictation tasks, students used more strategies than during spelling tasks.</td>
</tr>
<tr>
<td>1987</td>
<td>Kleinmann, H.</td>
<td>The effect of computer-assisted instruction on ESL reading achievement</td>
<td>Modern Language Journal Computer-based reading programs</td>
<td>Quantitative Pre/post test (control group/no CAI vs. experimental group/CAI) Six classes were taught by three different instructors. Each instructor taught a control and experimental group.</td>
<td>76 post-secondary ESL students</td>
<td>Researcher suggested that the software did not meet the needs of the student to assist him/her in advancing to the next level of reading proficiency. The DTLS Reading Comprehension Test was given to monitor progress.</td>
</tr>
<tr>
<td>1987</td>
<td>Aikin, J.</td>
<td>The computer as a tool in teaching translation</td>
<td>Foreign Language Annals Computer-based programs</td>
<td>Non-empirical (descriptive)</td>
<td>Post-secondary German translations students</td>
<td>The students use a word processor to enter a translation. The teacher uses a computer program to select the translation and then later present it to the class for discussion. Students stated that they felt that the use of the computer program to select the translations for discussion helped them enhance their translation skills. They were motivated by the use of this program.</td>
</tr>
<tr>
<td>1987</td>
<td>Henry, G., Hartmann, J., &amp; Henry, P.</td>
<td>Computer-controlled random access audio in the comprehension approach to second-language learning</td>
<td>Foreign Language Annals Computer-based programs (listening)</td>
<td>Non-empirical (descriptive)</td>
<td>Post-secondary second language learners</td>
<td>The authors presented the use of a program which randomly accessed audio files for use in class. Unlike audio tape, audio segments can be found instantaneously. There is no tape to rewind and time is not lost. The authors suggested using this program for creative (interactive story) as well as for drill and practice purposes. Students could hear and practice the language at their own pace.</td>
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<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Methodology</td>
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<td>1987</td>
<td>Weissenrieder, M.</td>
<td>Listening to the news in Spanish</td>
<td>Modern Language Journal</td>
<td>Videotaped news recordings from SIN (satellite channel)</td>
<td>News broadcasts, according to Weissenrieder, have a specific structure (participants/event). Second language students can use what we know about the design of news broadcasts to seek information. Students can be taught to seek manageable pieces of information in the second language. Instructional support is given to the students to assist them in comprehended the second language.</td>
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<tr>
<td>1987</td>
<td>Dunkel, P.</td>
<td>Computer-assisted instruction (CAI) and Computer-assisted language learning (CALL): Past dilemmas and future prospects for audible CALL</td>
<td>Modern Language Journal</td>
<td>CALL Computer-based programs</td>
<td>In the past, computers were in their infancy and teachers were turned off by the challenges of their use. Dunkel implored researchers to show how CALL is beneficial. This author feared that because there was a paucity of research on the effectiveness of CALL in the second language classroom, teachers might ignore the use of the computer. The author acknowledges the potential of the computer and urges others to see it as well.</td>
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<tr>
<td>1987</td>
<td>Garrett, N., &amp; Hart, R.</td>
<td>Foreign language teaching and the computer</td>
<td>Foreign Language Annals</td>
<td>CALL</td>
<td>The authors discussed the use of DRILL, a software program used by the Apple computer to create drill and practice sessions and quizzes that compliment the curriculum.</td>
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<tr>
<td>1990</td>
<td>Pelletier, R</td>
<td>Prompting spontaneity by means of the video camera in the beginning foreign language class.</td>
<td>Foreign Language Annals</td>
<td>Video</td>
<td>The author stated that the use of video motivates the second language learner to participate. Through the use of the videotaping, students were given opportunities to produce and practice the second language. The author stated that students were active, not passive, participants in their learning.</td>
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<tr>
<td>1990</td>
<td>Joiner, E.</td>
<td>Choosing and using videotexts</td>
<td>Foreign Language Annals</td>
<td>Video</td>
<td>The author suggested that second language teachers must create tiered lessons that enhance listening skills. She provided examples of pre-viewing, during viewing, and post-viewing activities that would provide the appropriate support to the second</td>
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</tbody>
</table>
1993 | Nagata, N. | Intelligent computer feedback for second language instruction | Modern Language Journal | Computer Feedback | Quantitative (pre-test/post-test) T-CALL vs. I-CALL | 34 Post-secondary Japanese language students | Unlike software of the past, software can provide specific feedback about the linguistic error. Traditional CALL (T-CALL) software was compared to the Intelligent CALL (I-CALL) software. The I-CALL group received more feedback about their errors with Japanese particles; therefore, this group performed better on the post-test. |

1993 | Yi, H., & Majima, J. | The teacher-learner relationship and classroom interaction in distance learning: A case study of the Japanese language classes at an American high school | Foreign Language Annals | Distance Learning | Qualitative Case Study (observations and interviews) | High School Japanese students | In a distance learning Japanese class, because a teacher of Japanese was not available, a facilitator was used in place of a teacher. The facilitator’s role in a distance language course was described. The students’ perceptions and their interactions with this facilitator were presented. The researchers argued that the facilitator needed to be able to work well with both her students and the second language teacher via satellite. In order to avoid the pitfalls of distance learning (student passivity and diminished teacher control) the researcher noted that the facilitator can diminish some of these negatives. The facilitator must be part of the planning process of the lesson. |

1993 | Herron, C., & Moos, M. | Electronic media in the foreign language classroom: A fusion between science and the humanities | Foreign Language Annals | Video & hypertext (interactive) | Non-empirical (descriptive) | N/A | The researchers stated that the new technology would allow students to interact with the video. Teachers/students could start and stop the video at any given time, and material could be created to scaffold the learning. The researchers were very optimistic about the possibilities for language instruction in the future. |
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Method</th>
<th>N/A</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>Arey, M.</td>
<td>French films: Pre-texts for teaching syntax</td>
<td>Foreign Language Annals</td>
<td>Video (French film)</td>
<td>Non-empirical (descriptive)</td>
<td>N/A</td>
</tr>
<tr>
<td>1996</td>
<td>Bailey, J</td>
<td>Teaching about technology in the foreign language classroom</td>
<td>Foreign Language Annals</td>
<td>Technology</td>
<td>Non-empirical</td>
<td>N/A</td>
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<tr>
<td>1996</td>
<td>Wicks, K., Postlewate, L., &amp; Lewental, M.</td>
<td>Developing interactive instructional software for language acquisition</td>
<td>Foreign Language Annals</td>
<td>Software</td>
<td>Non-empirical</td>
<td>N/A</td>
</tr>
<tr>
<td>1999</td>
<td>Kabota, R</td>
<td>Learning Japanese via satellite in an American high school: A case study.</td>
<td>Foreign Language Annals</td>
<td>Distance Learning (satellite)</td>
<td>Qualitative (Case Study)</td>
<td>8 secondary students in a beginning level Japanese course</td>
</tr>
<tr>
<td>Year</td>
<td>Author</td>
<td>Description</td>
<td>Methodology</td>
<td>Sample Size</td>
<td>Notes</td>
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<tr>
<td>1999</td>
<td>Kubota, R.</td>
<td>Word processing and www projects in a college Japanese language class</td>
<td>Qualitative (Questionnaires)</td>
<td>14 post-secondary Japanese students</td>
<td>Students used the computer to word process, create webpages and participated in a discussion forum on the <a href="http://www">www</a>. The students liked using the word processor to write for they felt it made the process easier. They also felt their skills improved. The students motivation to learn increased and their anxiety to learn decreased. There were some concerns with mastering the skills necessary to create a webpage.</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Nagata, N.</td>
<td>The effectiveness of computer-assisted interactive glosses</td>
<td>Quantitative (studied the effectiveness of two types of glosses – single gloss and multiple choice format.)</td>
<td>26 post-secondary Japanese students</td>
<td>The author presented information about Banzai Readings. This product allows the second language user to interact with the text and find the meaning of unknown words. There were two types of gloss that the author researched: single gloss and multiple choice format. The multiple choice format was significantly more effective than the single gloss format. With feedback, students’ knowledge of the vocabulary was enhanced. Designers of software need to be aware of the impact of their product.</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Chung, J.</td>
<td>The effects of using video texts supported with advance organizers and captions on Chinese college students’ listening comprehension: An empirical study</td>
<td>Quantitative (comparison of 4 different uses of video: captions, advanced organizers, combination of both and none.)</td>
<td>170 post-secondary students from Taiwan</td>
<td>The results of the study revealed that a combination of the use of an advanced organizer and captions enhanced the second language listening skills of the students.</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Markham, P.</td>
<td>Captioned videotapes and second-language listening word recognition</td>
<td>Quantitative</td>
<td>118 post-secondary ESL students</td>
<td>The use of captions helped the second language learner to recognize words that also appeared in a previous listening only activity. This study illustrated the influence of captions on second language learning.</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Journal/Annals</td>
<td>Methodology</td>
<td>Participants</td>
<td>Summary</td>
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</tr>
<tr>
<td>2002</td>
<td>Toyoda, E.</td>
<td>Categorization of text chat communication between learners and native speakers of Japanese</td>
<td>Language Learning &amp; Technology</td>
<td>Qualitative (discourse analysis)</td>
<td>5 post-secondary advanced learners of Japanese and 5 NS of Japanese</td>
<td>The results of the study indicate that the second language learners made attempts to negotiate meaning when presented with language barriers.</td>
</tr>
<tr>
<td>2002</td>
<td>Stepp-Greany, J</td>
<td>Student perceptions of language learning in a technological environment: Implications for the new millennium</td>
<td>Language Learning &amp; Technology</td>
<td>Descriptive study (questionnaire)</td>
<td>358 post-secondary beginning Spanish students</td>
<td>The researcher stated that the teacher, as a facilitator, played an important role. Overall, most students felt that they learned more about the culture as well as enhanced their language skills. They did not feel that the use of threaded discussions or epals helped them become better writers. Plus, they preferred the CDrom activities over the internet activities.</td>
</tr>
<tr>
<td>2002</td>
<td>Suh, J.</td>
<td>Effectiveness of CALL writing instruction: The voices of Korean EFL learners</td>
<td>Foreign Language Annals</td>
<td>Qualitative (journal writing)</td>
<td>19 post-secondary Korean ESL students</td>
<td>Students used the internet to find information, communicated with peers via email and revised their work on the computer. Students had a positive reaction to the use of CALL. They were motivated to learn in this environment. The students also enjoyed being able to work with partners and they liked the freedom to toggle back and forth through applications (internet to email).</td>
</tr>
<tr>
<td>2002</td>
<td>Jones, L., &amp; Plass, J.</td>
<td>Supporting listening comprehension and vocabulary acquisition in French with multimedia annotations</td>
<td>Modern Language Journal</td>
<td>Quantitative (3 groups)</td>
<td>171 post-secondary French students</td>
<td>Second language students who were exposed to pictures, words and audio were more likely to recall the passage. The researchers discuss the interconnectedness of the skills and how together they can complement each other.</td>
</tr>
<tr>
<td>2002</td>
<td>Nikolova, O</td>
<td>Effects of students’ participation in authoring of multimedia materials on student acquisition of vocabulary</td>
<td>Language Learning &amp; Technology</td>
<td>Quantitative Pretest/posttest (control group/just text, experimental group/text and pictures)</td>
<td>62 post-secondary French students</td>
<td>Researcher stated that the acquisition of vocabulary is greater when pictures were included with sound and text. The researcher posited that the students’ rate of retention of second language material is higher if they actively participated in the creation of their own web-products.</td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Methodology</td>
<td>Participants</td>
<td>Results</td>
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<tr>
<td>2002</td>
<td>Abrams, Z.</td>
<td>Surfing to cross-cultural awareness: Using internet-mediated projects to explore cultural stereotypes</td>
<td>Foreign Language Annals</td>
<td>Culture (WWW and asynchronous CMC)</td>
<td>Quantitative and Qualitative (questionnaire)</td>
<td>68 post-secondary students of intermediate German</td>
</tr>
<tr>
<td>2005</td>
<td>Taylor, G.</td>
<td>Perceived processing strategies of students watching captioned video</td>
<td>Foreign Language Annals</td>
<td>Reading and Listening</td>
<td>Quantitative</td>
<td>85 post-secondary Spanish students</td>
</tr>
<tr>
<td>2005</td>
<td>Volle, L</td>
<td>Analyzing oral skills in voice e-mail and online interviews</td>
<td>Language Learning &amp; Technology</td>
<td>Speaking (asynchronous CMC and Distance Education)</td>
<td>Quantitative</td>
<td>19 post-secondary Spanish students</td>
</tr>
<tr>
<td>2005</td>
<td>deHaan, J</td>
<td>Acquisition of Japanese as a foreign language through a baseball video game</td>
<td>Foreign Language Annals</td>
<td>Video games</td>
<td>Qualitative (interviews, self report, observation and reading and listening scores)</td>
<td>1 post-secondary student</td>
</tr>
<tr>
<td>2005</td>
<td>Ware, P., &amp; Kramsch, C</td>
<td>Toward an intercultural stance: Teaching German and English through telecollaboration</td>
<td>Modern Language Journal</td>
<td>Culture (asynchronous)</td>
<td>Qualitative</td>
<td>9 post-secondary students studying German and 12 students from Germany studying English</td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Methodology</td>
<td>Participants</td>
<td>Study Description</td>
</tr>
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<tr>
<td>2008</td>
<td>Elola, I., &amp; Oskoz, A.</td>
<td>Blogging: Fostering intercultural competence development in foreign language and study abroad contexts</td>
<td>Foreign Language Annals</td>
<td>Qualitative and Quantitative (blogs and questionnaires)</td>
<td>23 students studying Spanish at a post-secondary institution in the continental U.S. and 15 students studying Spanish abroad in Seville, Spain.</td>
<td>Students studying in the continental U.S. collaborated with students studying abroad in Spain to learn more about the Spanish culture. Topics for the blogs and discussions ranged from the elderly, pop culture, living in the city and shopping. Blog interactions impacted both language learners in a positive fashion.</td>
</tr>
<tr>
<td>2008</td>
<td>Kitade, K.</td>
<td>The role of offline metalanguage talk in asynchronous computer-mediated communication</td>
<td>Language Learning &amp; Technology</td>
<td>Qualitative (observations, questionnaires, analysis of the transcripts)</td>
<td>36 post-secondary exchange students studying Japanese and 32 post-secondary Japanese volunteers.</td>
<td>The second language students and their partners used the Bulletin Board System (BBS) to communicate with their partner once a week. The Native speakers were encouraged to engage the second language students in the Japanese language. Various topics were discussed (school, jobs). When students were offline, they discussed their encounters and linguistic difficulties with their peers and facilitator. The researcher outlined the benefits of asynchronous computer-mediated communication. The discourse structure of the exchanges were analyzed and revealed that the offline discussions assisted the language learner in acquiring the second language.</td>
</tr>
<tr>
<td>2008</td>
<td>Lord, G.</td>
<td>Podcasting communities and second language pronunciation</td>
<td>Foreign Language Annals</td>
<td>Quantitative</td>
<td>19 post-secondary Spanish students enrolled in a phonology class.</td>
<td>The students created podcasts to practice producing the target language. The results indicate that their attitudes about the second language and their pronunciation improved over the course of the project.</td>
</tr>
</tbody>
</table>
| 2008 | Schuetze, U. | Exchanging second language messages online: Developing an intercultural competence | Foreign Language Annals | Qualitative and Quantitative (Questionnaires and analysis of transcripts) | 28 post-secondary second language students (14 students studying German and 14 students living in Germany studying English) | The results of this two year study indicated that students who asked WH questions, shared personal information and gave examples and sought information that was not available through the course were more successful in this online exchange and interacted with their peers with NS great success. Students were able to learn about their counterparts’ culture. Specific
<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>Title</th>
<th>Feedback Type</th>
<th>Methodology</th>
<th>Participants</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Ware, P., &amp; O’Dowd, R</td>
<td>Peer feedback on language form in telecollaboration</td>
<td>Feedback (asynchronous)</td>
<td>Qualitative and Quantitative</td>
<td>23 students studying English in Spain and 4 American students studying in the US.</td>
<td>Post-secondary students studying Spanish and post-secondary students studying English worked together to learn the others native language. The students were assigned to one of two groups: e-tutoring and e-partnering. In the e-partnering group, the students were not required, but rather encouraged, to give feedback. Students liked receiving the feedback. But students in the e-partnering group gave less feedback.</td>
</tr>
<tr>
<td>2011</td>
<td>Vinagre &amp; Muñoz</td>
<td>Computer-mediated corrective feedback and language accuracy in telecollaborative exchanges</td>
<td>Feedback (asynchronous)</td>
<td>Qualitative and Quantitative</td>
<td>10 students studying German and Spanish at a university in Europe. (5 dyads)</td>
<td>The dyads emailed each other and discussed various common social topics: TV, literature, politics, holidays, etc… Written feedback was given to the counterpart about the error that was made and the type of error (lexical, grammatical, special). After analysis of the transcripts, the data revealed that the tutor (partner) used remediation and correction to assist their partners in error recognition. It was noted that grammar errors were more common than lexical errors.</td>
</tr>
<tr>
<td>2011</td>
<td>Kabata &amp; Edasawa</td>
<td>Tandem language learning through a cross-cultural key pal project</td>
<td>Asynchronous</td>
<td>Qualitative and Discourse Analysis</td>
<td>75 students</td>
<td>Students from two different universities</td>
</tr>
<tr>
<td>2011</td>
<td>Yang</td>
<td>Learner interpretations of shared space in multilateral English blogging</td>
<td>Language Learning &amp; Technology</td>
<td>Blogging</td>
<td>Qualitative (ethnographic)</td>
<td>24 students who were studying English from two different Asian universities</td>
</tr>
</tbody>
</table>
APPENDIX B

SYNCHRONOUS COMPUTER-MEDIATED COMMUNICATION (CMC) RESEARCH
## Appendix B

### Synchronous Computer-Mediated Communication (CMC) Research

<table>
<thead>
<tr>
<th>#</th>
<th>Researcher/Article</th>
<th>Source</th>
<th>Date</th>
<th>Type of Chat</th>
<th>Methodology</th>
<th>Participants</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Payne &amp; Ross: Synchronous CMC, Working Memory, and L2 Oral Proficiency Development</td>
<td>Language Learning &amp; Technology</td>
<td>2005</td>
<td>Text</td>
<td>Qualitative</td>
<td>Discourse &amp; Corpus Analysis</td>
<td>3rd semester university Spanish students</td>
</tr>
<tr>
<td>3</td>
<td>Smith: Computer-Mediated Negotiated Interaction: An Expanded Model</td>
<td>Modern Language Journal</td>
<td>2003</td>
<td>Text</td>
<td>Qualitative</td>
<td>Discourse Analysis (Varonis &amp; Gass, 1985)</td>
<td>Intermediate ESL learners at a university</td>
</tr>
<tr>
<td>4</td>
<td>Blake: Bimodal CMC: The glue of language learning at a distance</td>
<td>Language Learning &amp; Technology</td>
<td>2005</td>
<td>Text and oral</td>
<td>Qualitative</td>
<td>Case study</td>
<td>(university student to teacher)</td>
</tr>
<tr>
<td>5</td>
<td>Okuyama: Distance Language Learning via Synchronous Computer-Mediated Communication (SCMC): Eight</td>
<td>The JALT CALL Journal</td>
<td>2005</td>
<td>Text</td>
<td>Qualitative</td>
<td>Turn taking, greetings, closings, other utterances and emoticons</td>
<td>(11 NNS and 3 NS, not randomly selected) Intermediate Japanese course at a university</td>
</tr>
</tbody>
</table>
factors affecting NS-NNS Chat Interaction

<table>
<thead>
<tr>
<th></th>
<th>Authors</th>
<th>Journal</th>
<th>Year</th>
<th>Text Type</th>
<th>Data Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Beauvois</td>
<td>CALICO Journal</td>
<td>1995</td>
<td>text</td>
<td>Quantitative &amp; Qualitative (interviews, questionnaires, MBTI) 19 students second semester French conversation and composition class at a university Students of varying personality types (as identified by the Myers Briggs) respond favorably to SCMC activities. Both extroverts and introverts participate equally online</td>
</tr>
<tr>
<td>7</td>
<td>Darhower</td>
<td>CALICO Journal</td>
<td>2002</td>
<td>text</td>
<td>Qualitative - Discourse Analysis 33 students, 1 teacher Fourth semester University Spanish Class Darhower focused on the interactional features within the chatlogs: intersubjectivity, off-task discussion, social cohesiveness (including greetings and leave takings, use of humor and sarcasm) exploration of alternate identities and role plays, and the use of the student’s first language. Students felt like they belonged to a community</td>
</tr>
<tr>
<td>8</td>
<td>Warschauer</td>
<td>CALICO Journal</td>
<td>1995</td>
<td>Face-to-face, text</td>
<td>Quantitative – quasi experimental (2 groups of face-to-face, 2 SCMC groups Qualitative – Discourse analysis 16 students Advanced ESL composition class at a university Equal participation in the classroom. Quiet students increased participation 10 fold. More complex and formal language was used during synchronous CMC</td>
</tr>
<tr>
<td>9</td>
<td>Hudson &amp; Bruckman</td>
<td>The Journal of the Learning Sciences</td>
<td>2004</td>
<td>text</td>
<td>Qualitative – case study 2 students, 1 teacher Online French class at a university Students feel protected by the computer. Self-awareness, social cues, blocking, and the ability to diffuse responsibility help the learner to create a comfortable environment. This can also help the teacher better comprehend how students interact and must consider this when creating an online learning</td>
</tr>
<tr>
<td></td>
<td>Authors</td>
<td>Title</td>
<td>Year</td>
<td>Type of Analysis</td>
<td>Participants</td>
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<tr>
<td>10</td>
<td>Ghani &amp; Daud</td>
<td>Synchronous Online Discussion: Its Contributions to Language Learning</td>
<td>2006</td>
<td>text</td>
<td>70 students Intermediate ESL students at a Malaysian university</td>
</tr>
<tr>
<td>11</td>
<td>Chun</td>
<td>Using Computer Networking to Facilitate the Acquisition of Interactive Competence</td>
<td>1994</td>
<td>(no specific mention of method)</td>
<td>15 students First year German students at a university</td>
</tr>
<tr>
<td>12</td>
<td>O’Rourke</td>
<td>Form-focused Interaction in Online Tandem Learning</td>
<td>2005</td>
<td>text</td>
<td>52 students 2nd year students studying German or English from two different universities in Ireland and Germany.</td>
</tr>
<tr>
<td>13</td>
<td>Wang</td>
<td></td>
<td>2007</td>
<td>oral</td>
<td>5 students, 1 teacher</td>
</tr>
<tr>
<td>Task Design in Videoconferencing supported Distance Language Learning</td>
<td>Approach</td>
<td>Beginning-Intermediate Chinese class students. In this study the students were able to verbally communicate with their counterparts. A video component was also present. The students stated that they liked being able to see their counterpart and felt that it helped them with pronunciation. The participants also enjoyed being able to interact with their partners as if it were a face-to-face encounter.</td>
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<tr>
<td><strong>15</strong> Fiori The Development of Grammatical Competence through Synchronous Computer-mediated Communication</td>
<td>CALICO Journal</td>
<td>Text</td>
<td>Quantitative - (pre-post test)</td>
<td>44 students Intermediate Spanish students at a university</td>
<td>Conscious Raising (CR) was a technique employed by the researcher to determine if students would focus more on form if the group was told that it was important. Two groups were created: Form and Meaning Focus (FMF) and Meaning Focused (MF). Both group received feedback from their counterpart; however the FMF group produced more mature and grammatically correct language. Students in the FMF group stayed in the target language and helped their peers more than the MF group.</td>
</tr>
<tr>
<td><strong>16</strong> Payne &amp; Whitney Developing L2 Oral Proficiency through</td>
<td>CALICO Journal</td>
<td>Text</td>
<td>Quantitative Pre-test/Post-test Quasi-</td>
<td>58 students 3rd semester Spanish class at</td>
<td>Students who were participants in the synchronous CMC online chat did better</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Journal</td>
<td>Year</td>
<td>Methodology</td>
<td>Participants</td>
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<tr>
<td>Blake</td>
<td>Synchronous CMC: Output, Working Memory, and Interlanguage Development</td>
<td>Qualitative – Discourse Analysis</td>
<td>2000</td>
<td>50 students</td>
<td>The University on the oral proficiency exam than students who did not participate. The researcher showed evidence to suggest that there is a direct transfer of skills from writing to speaking.</td>
</tr>
<tr>
<td>Sykes</td>
<td>Synchronous CMC and Pragmatic Development: Effects of Oral and Written Chat</td>
<td>Quantitative (pre-test/post test) Qualitative Discourse Analysis – article focused on the qualitative results because of the small sample size</td>
<td>2005</td>
<td>27 students</td>
<td>Of the three groups, written chat groups performed better than the other groups in terms of the complexity of the language and language production. Oral and face-to-face groups were able to use their tone of voice to accomplish the goal of the lesson. More complex strategies had to be used with the written chat groups because they were not able to convey meaning through body language or tone.</td>
</tr>
<tr>
<td>Pellettieri</td>
<td>Negotiation in Cyberspace: The Role of Chatting in the Development of Grammatical Competence</td>
<td>Qualitative – Discourse Analysis (looked at trigger types)</td>
<td>1999</td>
<td>20 students</td>
<td>Task-based interaction encourages the negotiation of language. Oral and written chat resemble each other in their linguistic style and the complexity of its use.</td>
</tr>
<tr>
<td>Toyoda</td>
<td>Categorization of Text Chat Communication Between Learners and Native Speakers of Japanese</td>
<td>Qualitative – Discourse Analysis</td>
<td>2002</td>
<td>5 students</td>
<td>Students did negotiate meaning in this unique online environment. Students used avatars to interact with each other. With the use of the avatar, the students were able to mimic face-to-face features, such as</td>
</tr>
</tbody>
</table>
waving. As the conversation became more complicated, the ability to negotiate meaning was difficult. It is not certain if students were always able to discern the meaning before moving on.

21 Sauro Computer Mediated Corrective Feedback and the Development of L2 Grammar

2009 Text Quantitative Pre-test/post-test

23 students Advanced learners of English at a University

210

22 Vandergriff Negotiating Common Ground in Computer Mediated Versus Face-to-Face Discussions

2006 Text Quantitative Qualitative

18 students Advanced German students at the university

23 Arnold Reducing foreign language communication apprehension with computer-mediated communication: A preliminary study

2007 Text, oral Quantitative – quasi experimental (F2F, SCMC, ASCMC)

56 students 3rd semester German class at a university

2 different types of correct feedback were given students via synchronous CMC. With the one form of feedback, the error was reformulated; the other form of feedback supplied the learner with linguistic clues to aid the learner in his/her quest for meaning. No significant advantage was indicated over one type of feedback over the other.

Although there were no significant quantitative findings, the researcher suggests that the learner was able to adapt and adjust with the goal of the lesson as the impetus for learning.

A permanent reduction in the anxiety levels of students was revealed in the quantitative study. Student centered lessons decrease the apprehension levels of the students. The data also showed no significant difference in reduction of anxiety between the control and experimental
<table>
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<tr>
<th>No.</th>
<th>Authors</th>
<th>Journal</th>
<th>Year</th>
<th>Type</th>
<th>Participants</th>
<th>Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Satar &amp; Ozdener</td>
<td>Modern Language Journal</td>
<td>2008</td>
<td>Text, oral</td>
<td>Quantitative Quasi-experimental (pre-post test) 3 groups (oral, text, control) Qualitative questionnaires</td>
<td>30 students Novice learners of English at a secondary school in Turkey.</td>
<td>The results showed that the speaking proficiency of both experimental groups increased, whereas there was a decrease in the anxiety levels only for the text-based chat group.</td>
</tr>
<tr>
<td>25</td>
<td>Lamy</td>
<td>ReCALL</td>
<td>2004</td>
<td>Oral</td>
<td>Qualitative – discourse analysis</td>
<td>24 students High-intermediate French students at a university</td>
<td>With the advent of audio linguist online tools, second language learners can interact in real-time. Oral conversations can be had and used to work collaboratively with their peers. How students interact with each other in this online environment is explored. According to the researcher “forms and modes of knowing affect both content knowledge and procedural knowledge.”</td>
</tr>
<tr>
<td>26</td>
<td>Negretti</td>
<td>Language Learning &amp; Technology</td>
<td>1999</td>
<td>Text</td>
<td>Qualitative Conversation Analysis</td>
<td>8 students (connected with 36 NS and NNS) Advanced ESL students at a university</td>
<td>Some students lose interest and leave the chatroom because they become frustrated about the complexities of turn-taking. It is difficult to jump into a conversation that has already started. The medium itself (online chat) forced students to interact in different ways than in a traditional face-to-face setting. Rules for turn-taking should be discussed when introducing students to the online environment.</td>
</tr>
</tbody>
</table>
| 27  | Tudini | Language Learning & Technology | 2003 | Text | Qualitative Discourse analysis | 9 NNS students (49 NS of Italian) 3rd year Italian students at a university | During a NS to NNS conversation, chat logs indicate that learners do work to understand their counterpart and do make changes to their interlanguage when paired with an unfamiliar partner. The use of open-
<table>
<thead>
<tr>
<th>Reference</th>
<th>Study Title</th>
<th>Journal</th>
<th>Year</th>
<th>Method</th>
<th>Participants</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kern</td>
<td>Restructuring classroom interaction with networked computers: effects on quantity and characteristics of language production.</td>
<td>Modern Language Journal</td>
<td>1995</td>
<td>Qualitative Discourse analysis (compared quantity and characteristics between oral group and text-based CMC group)</td>
<td>40 students</td>
<td>2nd semester French at a university</td>
</tr>
<tr>
<td>Lee</td>
<td>Focus-on-Form through collaborative scaffolding in expert-to-novice online interaction</td>
<td>Language Learning &amp; Technology</td>
<td>2008</td>
<td>Qualitative Discourse analysis (3 different types of activities: jigsaw, spot-the-difference, open-ended questions)</td>
<td>30 students</td>
<td>30 novice speakers of Spanish were paired with 15 advanced students of Spanish at a university.</td>
</tr>
<tr>
<td>Shin</td>
<td>ESL students’</td>
<td>Language Learning &amp; Technology</td>
<td>2006</td>
<td>Qualitative–ethnographic study</td>
<td>17 students</td>
<td>ESL students at a university</td>
</tr>
</tbody>
</table>

InterChange (a text-based chat application) allowed for more interaction and the production of the French Language than did the traditional face-to-face classroom setting. Language production increased and was more complex during the InterChange online environment. The students were noted to be less anxious when using InterChange than in the traditional classroom. However, InterChange also reduced teacher control, created aBecause of InterChange, the class became less teacher centered and more student centered. It was also noted that the discussions were fast-paced discussion and concern about grammatical inaccuracy was identified as a possible concern. The findings reveal that more repair moves were made with jigsaw and open-ended questions. Although students were given ample feedback about their errors, the students felt that the feedback was distracting at time. Students reported that the goals of the tutor/partner often interfered with his/her own goals for language learning.
<table>
<thead>
<tr>
<th>Study</th>
<th>Author(s)</th>
<th>Journal</th>
<th>Year</th>
<th>Methodology</th>
<th>Participants</th>
<th>Findings</th>
</tr>
</thead>
</table>
| 31    | Kenning   | ReCALL  | 2010 | Oral (Wimba Voice) Qualitative – discourse analysis | 6 students 3 NNS dyads at a university | The findings indicate that when comprehension was hindered between the Non-native speaking advanced second language learner dyads, there were few language-related episodes. These dyads made few attempts to negotiate meaning.
|       |           |         |      |             |              | It was stated that peers tend not to negotiate for meaning. Foster and Ohta (2005) reported similar findings with intermediate second language students. |
| 32    | Peterson  | Computer Assisted Language Learning | 2009 | text Qualitative – discourse analysis | 14 students 7 NNS dyads NNS of English (majoring in English at a foreign university) | The findings revealed that students used a variety of “discourse management strategies” (p. 305) during their exchanges. The students requested clarification to negotiate meaning. They also had “off-task” discussion. These students self-corrected and received peer feedback to correct their mistakes. |
| 33    | Yamada & Akahori | Computer Assisted Language Learning | 2007 | Text based chat (w/wo speakers Picture) video conferencing and audio conferencing Mixed Methods Quantitative – experimental design (4 groups) – questionnaire Qualitative – discourse analysis | 40 students NNS of English at a university (4 groups… each group represented a type of chat w/o voice/picture) | The findings revealed that the students’ image motivated their partner to communicate. In video conferencing, students were more aware of their language use and their own social presence. Also, students in the video group produced more language. The use of video engaged “the learner more fully, intellectually
and emotionally” (p. 61). These students relied on their partners for verbal and non-verbal clues. Text based learners produced less for there was wait time in between each message. These students were more aware of their mistakes for they could see them. Students in text based chats were able to correct/identify their errors.

Students in text based chats were able to correct/identify their errors.

The results indicated that second language students were receptive to receiving feedback in the online environment and were able to correct their errors. The NNSs did not initiate the topic of the conversation, but they did produce as many turns as their NS partners. Plus, the NNSs produced elaborate turns. NNSs were motivated to learn in this social and educational setting. The results of the study revealed that all groups negotiate for meaning. F2F and video groups used non-verbal cues to promote comprehension. Turn taking patterns for F2F and video groups were found to be comparable. The results indicated that text based interaction can be used to foster oral language production.

<table>
<thead>
<tr>
<th>34</th>
<th>Dekhinet</th>
<th>Online enhanced corrective feedback for ESL learners in higher education</th>
<th>2008</th>
<th>Text</th>
<th>Mixed Methods</th>
<th>20 students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Computer Assisted Language Learning</td>
<td></td>
<td></td>
<td>Quantitative – survey</td>
<td>10 NS/NNS dyads at a university in Europe. The NNSs were ESL students at that university.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(MSN messenger)</td>
<td></td>
<td></td>
<td>Qualitative – Conversation Analysis</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>35</th>
<th>Yanguas</th>
<th>Oral computer-mediated interaction between L2 learners: It’s about time!</th>
<th>2010</th>
<th>Oral</th>
<th>Qualitative</th>
<th>30 students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Language Learning &amp; technology</td>
<td></td>
<td></td>
<td>Discourse Analysis</td>
<td>15 dyads from a university assigned to one of three groups: Audio group, video group, F2F group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Skype)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>36</th>
<th>Blake</th>
<th>Potential of text based internet chats for improving oral fluency in a second language.</th>
<th>2009</th>
<th>text</th>
<th>Quantitative (ANOVA)</th>
<th>34 students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Modern Language Journal</td>
<td></td>
<td></td>
<td>34 ESL students were placed in one of three environments: F2F, text-based chat, no interaction</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

IRB APPROVAL LETTER
December 22, 2009

Colleen Blaurock
TLCS

Re: # 09-474: “Skype: A Portal into the 21st Century in a High School Language Classroom”

Dear Ms. Blaurock:

I am pleased to inform you that the Kent State University Institutional Review Board has reviewed and approved your protocol through the expedited (Level II) review process. Approval is effective for a twelve-month period, December 21, 2009 through December 20, 2010.

Federal regulations and Kent State University IRB policy require that research be reviewed at intervals appropriate to the degree of risk, but not less than once per year. The IRB has determined that this protocol requires an annual review and progress report. The IRB will forward an annual review reminder notice to you by email as a courtesy. Please note that it is the responsibility of the principal investigator to be aware of the study expiration date and submit the required materials. Please submit review materials (annual review form and copy of current consent form) one month prior to the expiration date.

HHS regulations and Kent State University Institutional Review Board guidelines require that any changes in research methodology, protocol design, or principal investigator have the prior approval of the IRB before implementation and continuation of the protocol. The IRB must also be informed of any adverse events associated with the study. The IRB further requests a final report at the conclusion of the study.

Kent State University has a Federal Wide Assurance on file with the Office for Human Research Protections (OHRO): FWA Number: 00001853.

If you have any questions or concerns, please contact me at 330-672-2704 or Pwashko@kent.edu.

Sincerely,

Paulette Washko
Manager, Research Compliance, Communications and Initiatives
cc: Dr. Alicia Crowe

Division of Research and Sponsored Programs
Office of Research Safety and Compliance
(330) 672-2704 Fax: (330) 672-2668
P.O. Box 3190, Kent, Ohio 44242-0390
APPENDIX D

CONSENT FORM
Appendix D

Consent Form

Skype: A Portal into the 21st century high school language classroom

I want to do research on how high school students feel about the use of Skype in the second language classroom. Skype is an application that allows individuals to connect and communicate over the internet. The students will be using Skype to speak with local students whose native language is Spanish. Through Skype, the students will use Spanish to practice the vocabulary of the unit and to ask and answer simple questions (i.e., What is your favorite color?). I would also like to explore how the language skills of the high school language student evolve over the course of time because of the use of Skype. As a second language teacher, I hope to be able to provide and create authentic opportunities for students studying a second language. Thus, this examination of Skype and its potential for second language acquisition is a worthy endeavor.

As part of the data collection process, class documents, video and audio recordings will be collected throughout the semester. Confidentiality will be maintained as far as legally possible through the use of pseudonyms and the elimination of other identifying information from transcripts and other documents. I can think of no possible risks to your son/daughter as a participant in this project. The only inconvenience to your son/daughter will be the time involved for the interviews. Participation is completely voluntary and your son/daughter may withdraw at any time without penalty. Participation, or lack of participation in this project will not affect your child’s grade in my class. The research will be of benefit to the World Language Department and future language students.

Taking part in this project is entirely up to your son/daughter, and no one will hold it against your son/daughter if he/she decides not to do it. If your son/daughter does take part, he/she may stop at any time without penalty.

If you want to know more about this research project, please call me at ________ or email me at blaurockc@perry-lake.k12.oh.us. You may also email my advisor, Dr. Alicia Crowe at acrowe@kent.edu. The project has been approved by Kent State University. If you have questions about Kent State University's rules for research, please call Dr. John West, Vice President of Research, Division of Research and Graduate Studies (Tel. 330.672.2704).

You will get a copy of this consent form to keep for your records.

Sincerely,

Colleen A. Blaurock,
PhD. Candidate
B. CONSENT STATEMENT

Signature of Parent _______________________________ Date _______________________________

____ Yes, I agree to take part in this project. I know what I will have to do and that I can stop at any time.

____ No, I do not wish to take part in this project.

Signature of student _______________________________ Date _______________________________

Printed Name of student ______________________________
AUDIO AND VIDEO RECORDING CONSENT FORM

I agree to the audio and video recording
at________________________________________________________
on______________________________________________.

________________________________________________________________________________
Signature      Date
________________________________________________________________________________

I have been told that I have the right to see and hear the audio and video recordings before they are
used. I have decided that I:

___want to see and hear the recordings.  ___do not want to see and hear the recordings.

Sign now on the line below if you do not want to see or hear the recordings.
If you want to see or hear the recordings, you will be asked to sign after reviewing them.

Colleen A. Blaurock may / may not use the recordings made of me for:

____ this research project   _____presentation at professional meetings

_____publication in a professional journal

_______________________________________________________________________________
Signature of student    Date
_______________________________________________________________________________

Printed Name
APPENDIX E

FORMULARIO DE CONSENTIMIENTO
Appendix E

Formulario De Consentimiento

Skype: Un portal en el siglo 21 en un salón de lenguas en un colegio

Mi nombre es Colleen Blaurock y soy estudiante de doctorado en la Universidad de Kent. Me gustaría explorar los conocimientos lingüísticos de los estudiantes de lengua secundaria y preparatoria y como estos mejoran con el transcurso del tiempo debido al uso de Skype, una aplicación de Internet que permite la comunicación entre dos estudiantes. Los estudiantes estarán utilizando Skype para hablar con estudiantes locales cuya lengua materna es inglés. Por Skype, los estudiantes utilizarán inglés para practicar el vocabulario de la unidad y para preguntar y contestar preguntas sencillas (i.e. ¿Cuál es tu color preferido?). Como profesora de idiomas, espero ofrecer y crear auténticas oportunidades para los estudiantes que estudian un segundo lenguaje.

Como parte del proceso de recogida de datos, documentos de clase, el video y las grabaciones en audio serán coleccionados a través del semestre. La participación de su hijo/hija en este programa será completamente confidencial. Se mantendrá la confidencialidad usando seudónimos y eliminando toda información de identificación de las transcripciones y otros documentos. No hay ningún riesgo posible para su hijo/hija como participante en este proyecto. La participación es completamente voluntaria y su hijo/hija puede retirarse en cualquier momento sin penalización. La participación, o falta de participación en este proyecto no afectará la nota de su hijo/hija en la clase. La investigación será para el beneficio del Departamento de Idiomas Mundiales y estudiantes de idiomas en el futuro.

Si desea saber más sobre este proyecto de investigación, me puede llamar al ____ o por correo electrónico a blaurockc@perry-lake.k12.oh.us. Tambien se puede comunicar con mi consejera universitaria la profesora Dra. Alicia Crowe en acrowe@kent.edu. El proyecto ha sido aprobado por Kent State University. Si usted tiene preguntas acerca de las reglas de la Universidad de Kent para la investigación, por favor llame al Dr. John West, Vice President de Investigación, División de Investigación y Estudios de Posgraduados (Tel. 330.672.2704).

Va a obtener una copia de este formulario de consentimiento.

Sinceramente,

Colleen A. Blaurock,
B. DECLARACION DE CONSENTIMIENTO

Firma de padre/guardián __________________________________________________________________________ Fecha __________

Deseo participar en este proyecto. Compreno lo que tengo que hacer y que puedo dejar de participar en cualquier momento.

No deseo participar en este proyecto.

Firma de estudiante __________________________________________________________________________ Fecha __________

Imprima Nombre __________________________________________________________________________
GRABACIÓN DE VIDEO Y AUDIO FORMULARIO DE CONSENTIMIENTO

Estoy de acuerdo con la grabación de video y audio en _________________________________
el ______________________________________________.

_____________________________________________________________________________
Fecha          Firma

Me han dicho que tengo el derecho a escuchar y ver las grabaciones de audio y video antes de su utilización. He decidido que deseo:

____ deseo escuchar y ver las grabaciones. ____no deseo escuchar ni ver las grabaciones

Regístrate ahora en la línea de abajo si no quieres escuchar las grabaciones.

Si desea escuchar y ver las grabaciones, se le pedirá que firme después de revisarlos.

Le doy permiso a Colleen A. Blaurock a utilizar o no utilizar mis grabaciones.

____ Esta investigación _____presentación en las reuniones profesionales
____.publicación profesional

_____________________________________________________________________________
Fecha          Firma

Imprima Nombre
APPENDIX F

MEET AND GREET (ENGLISH)
# Appendix F

## Meet and Greet (English)

### Activity 1a – Meet & Greet

Name……………………….……………………..

**Objective:** Express and exchange personal information and preferences.  
**Task:** Application of common phrases/questions.

Primero, traduce la frase. Entonces, contesta la pregunta en una frase completa en inglés. Finalmente, escribe la respuesta de tu compañero en el espacio indicado. Las dos últimas líneas tienen que ser escritas en inglés.

<table>
<thead>
<tr>
<th>Question/Phrase</th>
<th>Translation</th>
<th>Response (tu respuesta)</th>
<th>Partner (la respuesta de tu compañero)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pleased to meet you.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. What is your name?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. How are you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Where are you from?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Who is your best friend?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. How old are you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Describe yourself. What are you like?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. What is your family like? Do you have a big or a small family?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Do you have a pet?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Good-bye.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix G

Meet and Greet (Spanish)

Activity 1b – Meet & Greet

Nombre…………………………………………..

Objective: Express and exchange personal information and preferences.
Task: Application of common phrases/questions.

First, translate the question into English. Next, answer the question in a complete sentence in Spanish. Finally, put your partner’s (compañero’s) response in the indicated spot. Yes, the last two columns must be in Spanish.

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>Traduce</th>
<th>Respuesta (your personal response)</th>
<th>Compañero (your partner’s response)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mucho gusto</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ¿Cómo te llamas?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ¿Cómo estás?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ¿De dónde eres?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ¿Quién es tu mejor amigo? ¿Cómo se llama?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ¿Cuántos años tienes?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ¿Cómo eres? ¿Cuáles son tus características físicas?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. ¿Cómo es tu familia? ¿Tienes una familia grande o pequeña?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. ¿Tienes una mascota?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

Question and Answer Activities: Vacation (English)

**Travel**

**Nombre…………………………………………………..**

**Objective 1.1.2. Express and exchange personal information and preferences.**

**Task:** Application of common phrases/questions.

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>Respuesta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ¿Te gusta viajar?</td>
<td></td>
</tr>
<tr>
<td>2. ¿Prefieres nadar en la piscina o el lago?</td>
<td></td>
</tr>
</tbody>
</table>
| 3. Durante las vacaciones, ¿qué te gusta hacer? (puedes seleccionar más de uno – you can select more than one) | Descansar  
Sacar fotos  
Nadar  
Construir castillos de arena  
Recorrer la ciudad  
Tomar el sol  
Ir de compras  
Leer  
Comer en un restaurante  
Pasar un rato con familia  
Ir de pesca  
Visitlar lugares de interés  
Ir a la playa  
Ir a la piscina  
Jugar con los amigos |
| 4. ¿Cuál es tu destino* ideal para las vacaciones? (destination) | |
| 5. ¿Qué tiempo hace en este lugar? (weather) | |
| 6. ¿Con quién quieres viajar? | |

**Useful phrases:** Repite por favor – Repeat please, No comprendo – I don’t understand
APPENDIX I

QUESTION AND ANSWER ACTIVITIES: VACATION (SPANISH)
Appendix I

Question and Answer Activities: Vacation (Spanish)

**Travel**

<table>
<thead>
<tr>
<th>PREGUNTA</th>
<th>Respuesta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you like to travel?</td>
<td></td>
</tr>
<tr>
<td>2. Do you prefer to swim in the lake or in the pool?</td>
<td></td>
</tr>
</tbody>
</table>
| 3. What do you like to do on vacation? (puedes seleccionar más de uno – you can select more than one) | Rest  
Take pictures  
Swim  
Build sand castles  
Tour the city  
Sunbathe  
Go shopping  
Read  
Eat at a restaurant  
Spend time with family  
Go fishing  
Visit places of interest  
Go to the beach  
Go to the pool  
Play with friends |
| 4. What is your ideal destination for a vacation? | |
| 5. What’s the weather like in this place? | |
| 6. Who would you like to take with you? | |

**Frases útiles:** Repite por favor – Repeat please, No comprendo – I don’t understand
APPENDIX J

INFORMATION GAP ACTIVITY—SPANISH
Appendix J

Information Gap Activity—Spanish

**Duke Students:**
Situation: You have been hired by a travel service to organize a trip abroad. Find out the needed information about these travelers so that you can book their trips accordingly.

<table>
<thead>
<tr>
<th></th>
<th>Jorge Gomez</th>
<th>La familia Romero</th>
<th>la mujer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>¿Adónde va ...........?</td>
<td>Barcelona</td>
<td>Cancun</td>
</tr>
<tr>
<td>2.</td>
<td>¿Cuándo va ...........?</td>
<td>The fall</td>
<td>The spring</td>
</tr>
<tr>
<td>3.</td>
<td>¿Con quién va ...........?</td>
<td>With the family</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>¿Por qué viaja .......?</td>
<td>To work</td>
<td>To rest</td>
</tr>
<tr>
<td>5.</td>
<td>¿Qué quiere hacer .......?</td>
<td>To go to the museums</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>¿Cómo quiere viajar .......?</td>
<td>By train</td>
<td>By boat</td>
</tr>
</tbody>
</table>

Duke students must ask in Spanish and record the answers in Spanish.

**Frases útiles:**
- Repite, por favor
- Please repeat.
- ¿Cómo se pronuncia? How do you pronounce that?
- Más despacio
- Slower please.
- No comprendo
- I don’t understand.
- ¿Cómo se deletrea eso? How do you spell that?
- Más fuerte, por favor
- Louder please.
- ¡A tu toca! It’s your turn.
- Sí
- No
- Más o menos
- More or less
- No sé
- I don’t know.
- ¿Qué es .......? What is .......?
- Dime más.
- Tell me more.
- ¿Quién es?
- Who is he/she?
APPENDIX K

INFORMATION GAP ACTIVITY—ENGLISH
## Appendix K

Information Gap Activity—English

### Smith Students

**Situation:** Trabajas para una agencia de viajes. Pregúntale a tu compañero para saber la información necesaria para que tú puedas planear el viaje.

<table>
<thead>
<tr>
<th></th>
<th>Jorge Gomez</th>
<th>La familia Romero</th>
<th>la mujer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Where is .... going to?</td>
<td>Madrid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. When is ........ going?</td>
<td>el verano</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Who is..... going with?</td>
<td>sólo</td>
<td></td>
<td>con su amor</td>
</tr>
<tr>
<td>4. Why is .... traveling</td>
<td>Visitar a los parientes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. What is .... going to do?</td>
<td>jugar al golf</td>
<td></td>
<td>ir de compras</td>
</tr>
<tr>
<td>6. How does... plan to travel?</td>
<td>en tren</td>
<td></td>
<td>en avión</td>
</tr>
</tbody>
</table>

*Smith students must ask in English and record the answers in English.*

### Frame title.

- Repite, por favor
  - Please repeat.

- ¿Cómo se pronuncia?
  - How do you pronounce that?

- Más despacio
  - Slower please.

- No entiendo
  - I don’t understand.

- ¿Cómo se deletrea eso?
  - How do you spell that?

- Más fuerte, por favor
  - Louder please.

- A tí toca.
  - It’s your turn.

- Sí
  - Yes.

- No
  - No.

- Más o menos
  - More or less.

- No sé
  - I don’t know.

- ¿Qué es ....?
  - What is ....?

- Dime más.
  - Tell me more.

- ¿Quién es?
  - Who is he/she?
APPENDIX L

DRAWING ACTIVITY—SPANISH
Appendix L
Drawing Activity—Spanish

Smith Students – please read to your Duke partner.

Léele estas frases a tu compañero. Él/Ella tiene que dibujar lo que tú le describes. Read these sentences to your classmate. He/she has to draw what you describe to him/her.

1. La familia Martínez está en la playa. Hace sol y calor.
2. Hay 6 personas en la familia. También, la familia tiene una mascota.
3. Los dos hijos, Marta y Raúl, están jugando al voleibol.
4. El padre está leyendo un libro y está descansando.
5. La madre está tomando el sol.
7. La abuela está nadando en el océano.
8. El perro está corriendo en la playa.

Frases útiles.

Repita, por favor
Please repeat.

¿Cómo se pronuncia?
How do you pronounce that?

Más despacio
Slower please.

No comprendo
I don’t understand.

¿Cómo se deletrea eso?
How do you spell that?

Más fuerte, por favor
Louder please.

A ti te toca.
It’s your turn.

Sí
Yes

No
No

Más o menos
More or less

No sé
I don’t know.

¿Qué es ....?
What is....?

Dime más.
Tell me more.

¿Quién es?
Who is he/she?
APPENDIX M

DRAWING ACTIVITY—ENGLISH
Appendix M

Drawing Activity—English

Duke Students – please read to your Smith partner.

Léele estas frases a tu compañero. Él/Ella tiene que dibujar lo que tú le describes. Read these sentences to your classmate. He/she has to draw what you describe to him/her.

1. The Smith family is going on a hike in the mountains.
   It is cloudy and cool.

2. There are 6 people in the Smith family. There is a mom, dad, twin boys, an older sister and a grandpa. There is also a pet dog.

3. The dad is reading the map.

4. The mom is looking for food in her backpack.

5. The twin boys are fighting and screaming.

6. The older sister is talking to her boyfriend on her cell phone.

7. The grandpa is taking pictures with his camera.

8. The dog is jumping on the father.

Frases útiles.

Repite, por favor
Please repeat.

¿Cómo se pronuncia?
How do you pronounce that?

Más despacio
Slower please.

No comprendo
I don’t understand.

¿Cómo se deletrea eso?
How do you spell that?

Más fuerte, por favor
Louder please.

A ti te toca.
It’s your turn.

Sí
Yes

No
No

Más o menos
More or less

No sé
I don’t know.

¿Qué es ....?
What is….?

Dime más.
Tell me more.

¿Quién es?
Who is he/she?
APPENDIX N

INTERVIEW QUESTIONS #1
Appendix N

Interview Questions #1

1. Before we started using Skype, had you ever used Skype before? In school or out of school. If so, why did you use it?

2. What do you like about Skype?

3. What do you not like about Skype?

4. You also have the opportunity to connect with your peers on Tuesdays. How is this experience alike or different?

5. In school do you use the texting option within Skype? Why do you or don’t you choose to use it?

6. How do you normally feel about speaking with someone you don’t know? How do you feel about speaking with someone that you had never met before?

7. How do you feel about speaking with a Native Speaker of Spanish?

8. Do you make use of a dictionary or other resources (books, notes, etc.) during the Skype exchange?

9. During your Skype conversation, do you ever have trouble understanding your counterpart? What do you do?

10. Does your counterpart ever have trouble understanding you? What do you do?

11. When communicating in Spanish, do you ever switch and speak in English. Why? When?

12. With each session, do you feel more comfortable with the Skype and your counterpart?

13. Why did you volunteer for this project?
Appendix O

Interview Questions #2

1. We have been Skyping for 6 weeks. How’s it been going?

2. As far as the actual use of Skype, have you had any problems?

3. What are your thoughts about Skype? What do you like/don’t like about this tool?

4. Usually, you communicate with the same person. Do you like working with the same person? How would you describe your most recent session with your first session? When you know that we will be Skyping, how do you feel? Do you look forward to the sessions? Is there anything you don’t look forward to? Do you dread it? Why/Why not?

5. Talk to me about your last session? How much English does your partner know? Does he/she understand everything you say? What do you do when he/she doesn’t understand you?

6. Do you understand everything that your partner is saying? Do you refer to the “useful phrases” when you are confused? What do you do when you don’t understand him/her? Do you ever use English? *When* do you use English? Why?

7. I’ve noticed that you use English during transitions (going from one activity to the other). You also seem to use English when you are confused, how can I help you to stay in the target language? What do you think the purpose of this exchange is?

8. Do you think that your use of Spanish has improved? How? Can you give me an example? Why do you think it has improved?

9. We have used a variety of activities during the exchanges (show them all of the activities that we have done). Which activity (activities) did you like the best/least? Why? Which activities do you think were the most challenging? Which activities made you use the most Spanish? If you only could pick one activity to do, which one would it be and why? My purpose is to get you to speak in the target language as much as possible, which one would be the best for this?

10. If your friends were to ask you about this experience, what would you say?
APPENDIX P

FOCUS GROUP QUESTIONS
Appendix P

Focus Group Questions

Let’s first talk about the technology that we used to communicate with our Smith counterparts. What are your thoughts about Skype? Tell me more about that?

Let’s look at all the different types of activities that we used. What did you think about these activities?

At the start of the Skype project, how did you feel about speaking with Native Speakers? Do you still feel this way?

What did you think you were going to learn from this experience? What did you learn from this experience?

Based on the conversations that we had during the second round of interviews, I included more useful phrases (example: I can’t see you? Tell me more). Did you use those phrases? Which ones did you use?

If I were to watch the Vodburner videos of your first Skype session, what would I see?

If I were to watch the Vodburner videos of your last Skype session, what would I see? How did the interaction between you and your counterpart change? Or did it? Generally, the Skype sessions took 40 minutes. How would you describe that time? How were the minutes filled? How would you describe the first one. How did you interact. How did you feel? How did it change during the semester.

When I had told you that we would be communicating with Native Speakers of Spanish, what did you think? What did you think your counterpart would be like? What were your initial thoughts/perceptions? Have your thoughts changed?

Although you were able to see your counterpart via Skype, all of you have requested to see/meet your counterpart in person. How is seeing them in person different seeing them over the camera? Why?

If you could change one thing about this project, what would it be?

Closing comments.
APPENDIX Q

STUDENT ONLINE JOURNAL (MEET AND GREET)
Appendix Q

Student Online Journal—(Meet and Greet)

Answer the questions below honestly.

Name: ____________________________________

A red asterisk (*) indicates required questions.

1. I stayed in the target language... *
   - the entire time
   - most of the time
   - some of the time
   - I had a great deal of difficulty

2. I felt my pronunciation was ...
   - great
   - good
   - fair
   - poor, I need help

3. I felt that my grammar use was...
   - great
   - good
   - fair
   - poor, I need help

4. I understood...
   - everything my partner said
   - most of what my partner said
   - some of what my partner said
   - a little bit of what my partner said
5. When I was confused or didn't understand my partner's responses, I referred to the common question/phrase sheet (i.e. Repeat please, Can you spell that?, Louder please)*

☐ Yes
☐ No
☐ Sometimes
☐ I didn't need to

6. I was able to respond in ... (you can check multiple answers)*

☐ complete sentences
☐ just answers
☐ I couldn't respond to the question

7. I liked using Skype because.... *

8. Or, I didn't like using Skype because....

9. I used the texting option within Skype.*

☐ Yes
☐ No

10. Check ALL of the responses that you consider to be TRUE.*

☐ I learned from my partner (pronunciation, vocab, grammar)
☐ My partner learned from me (pronunciation, vocab, grammar)
☐ I helped my partner.
☐ My partner helped me.

11. Did you learn any new words or phrases from your Native Speaking partner? If so, what did you learn?*
12. Did you discover anything about your partner's cultural? If so, what did you learn?*
REFERENCES
REFERENCES


*Ohio foreign language academic content standards.* (2003). Columbus, OH: Department of Education.


