THE EFFECT OF *VOICE THREAD*® INTEGRATION ON HIGH SCHOOL STUDENTS' ANXIETY AND ORAL PROFICIENCY IN THE FOREIGN LANGUAGE CLASSROOM

by

Melanie Gail Dunn

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

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Amanda Rockinson-Szapkiw, EdD, Committee Chair

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Joan Fitzpatrick, PhD, Committee

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Gloria Green, EdD, Committee

_____

Scott Watson, PhD, Associate Dean, Advanced Programs

ABSTRACT

Melanie Gail Dunn. THE EFFECT OF *VOICE THREAD*® INEGRATION ON HIGH SCHOOL STUDENTS' ANXIETY AND ORAL PROFICIENCY IN THE FOREIGN LANGUAGE CLASSROOM.

The purpose of this study was to examine the effect of the asynchronous voice-conferencing technology, *Voice Thread*®, on the anxiety and oral proficiency of high school students in their third year of studying Spanish as a foreign language. In this quasi-experimental study students' foreign language anxiety levels and oral proficiency were examined to determine if a difference existed based on the type of practice used. The treatment group used *Voice Thread*® to practice speaking. The control group used the traditional method of the language laboratory to practice speaking. The Foreign Language Classroom Anxiety Scale (FLCAS) was used to measure anxiety levels and the Performance Assessment for Language Students (PALS) level three speaking analytical grading rubric was used to measure oral proficiency. A one-way analysis of variance (ANOVA) was used to analyze the foreign language anxiety data. A multivariate analysis of variance (MANOVA) was used to analyze the oral proficiency data. Results for the FLCAS yielded no significant difference between the control and treatment groups. Results of the MANOVA yielded a significant main effect difference between the control and experimental groups. Posthoc pairwise comparisons revealed statistically significant differences for the subscales of task completion, comprehensibility, level of discourse and fluency. No statistically significant differences were found for the subscales of vocabulary and language control.

Descriptors: foreign language, anxiety, oral proficiency, voice-conferencing

Dedication

This dissertation is dedicated to my parents, Dennis and Charlene Mathis, who instilled in me the value of hard work, self-discipline, and perseverance. Thank you for the prayers, encouragement, and support throughout this process.

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List of Abbreviations

Adequate Yearly Progress (AYP)

Advanced Placement (AP)

American Council on the Teaching of Foreign Languages (ACTFL)

Analysis of Variance (ANOVA)

Bring Your Own Technology (BYOT)

Computer-Mediated Communication (CMC)

English as a Foreign Language (EFL)

Foreign Language Classroom Anxiety Scale (FLCAS)

Georgia Performance Standards (GPS)

International Baccalaureate (IB)

Media Richness Theory (MRT)

Native Language (L1)

Multivariate Analysis of Variance (MANOVA)

No Child Left Behind (NCLB)

Oral Proficiency Interview (OPI)

Performance Assessment for Language Students (PALS)

Simulated Oral Proficiency Interview (SOPI)

Standards-Based Measure of Proficiency (STAMP)

Statistical Package for the Social Sciences (SPSS)

Target Language (L2)

CHAPTER 1: INTRODUCTION

Foreign language educators face the growing responsibility of preparing students to be competitive in a global society by being able to communicate in more than one language (Poza, 2005). With the availability of new and engaging technological tools (Ravenscroft, 2009), new approaches to language teaching need further investigation. Knowledge of the most effective strategies will help foreign language educators provide maximum opportunities for language acquisition (Poza, 2005). Foreign language educators have the responsibility to assist language learners in the language acquisition process, including barriers to acquisition.

One barrier to language acquisition for many foreign language learners is the anxiety they experience in the foreign language classroom (Awan, Azher, Anwar, & Naz, 2010; Zheng, 2008). For example, anxiety has been correlated with negative academic achievement in foreign language courses (Ewald, 2007; Horwitz, 2001; Poza, 2005). Ravenscroft (2009) suggested that language educators search for ways that technology can enhance the language learning environment and minimize barriers.

The purpose of this study was to determine the ability of the asynchronous voice-conferencing technology, *Voice Thread®,* to support instructional strategies and affect student anxiety and oral proficiency in the high school foreign language classroom. In this chapter, relevant background information is discussed. The evolution of methodology and the role of technology in language learners' move toward communicative competence is highlighted. Thorough descriptions of the problem

statement, the purpose, and the significance of the study are provided. The research questions and hypotheses that guided the study are stated.

Evolution of Foreign Language Methodology

A principal responsibility of a foreign language educator is to guide students in increased levels of foreign language proficiency. The ultimate goal of the education system is to prepare students to be competent world citizens able to communicate in more than one language (Pufahl & Rhodes, 2011). Foreign language educators help learners attain competence in all the skills of a language including listening, speaking, reading, and writing that are paramount in the field of second language acquisition (Ohata, 2005; Omaggio Hadley, 2001).

Various approaches in language teaching and learning have been incorporated over time with the intention of helping learners attain this goal. In the 1970s, foreign language educators widely embraced the audio-lingual methodology characterized by a strong emphasis on linguistic competence and a student's ability to know about the language (Morett, 2009). Audiolingualism originated with the intensive language instruction used in the Army Specialized Training Program (Long, 1999). The audio-lingual methodology featured "memorization of dialogues, pattern drills, and emphasis on pronunciation" (Long, 1999, p. 389) similar to the grammar-translation approach that was used in the 19th and 20th centuries to teach Latin. This approach is still used in many second language classrooms today (Morett, 2009). The grammar-translation approach, similar to the audio-lingual methodology, views language learning as a form of "mind training" and features "memorization of verb paradigms, grammar rules, and vocabulary,

and application of this knowledge to the translation of literary texts" (Long, 1999, p. 388).

In these approaches, the learner must master linguistic competence in the target language to effectively communicate (Huifen & Yueh-chiu, 2010). The focus is on perfection in the formation of language structures, and language learners learn by repeating words, phrases, and memorized dialogues. Using these methods, learners perform extraordinarily well on discrete language assessments such as memorized dialogues and rehearsed scripts. However, learners are given few opportunities to practice communicating in the target language in a natural, conversational setting (Huifen & Yueh-chiu, 2010); thus, many students trained under these approaches fail when attempting to carry on a basic conversation in the target language (Huifen & Yueh-chiu, 2010).

In 1993, the American Council on the Teaching of Foreign Languages (ACTFL) received federal funding to develop national standards for foreign language K-12 teachers, increasing the focus of foreign language learning on communicative competence in the target language (ACTFL Standards for Foreign Language Learning, 2000). Savignon (1977) first defined communicative competence as:

> The ability to function in a truly communicative setting, that is in a dynamic exchange in which linguistic competence must adapt itself to the total informational input, both linguistic and paralinguistic, or one or more interlocutors. (p. 8)

Members of ACTFL define communicative competence as the ability to communicate in real life situations and to negotiate meaning in order to understand or to

make oneself understood through the integrated skills of listening, reading, writing, and speaking (ACTFL Standards for Foreign Language Learning, 2000). In contrast to the audio-lingual and grammar-translation methods, the focus is placed on the ability of the language learner to communicate meaningfully rather than on linguistic forms. Communicative competence is regarded as important because it enables learners to function in the target language environment and achieve mastery of standard use of the target language, the ultimate goal of language teaching (Huifen & Yueh-chiu, 2010).

Obtaining communicative competence in the foreign language classroom is difficult for some language learners. Learners face unique challenges in the foreign language classroom that create barriers to language acquisition. Anxiety is a barrier to language acquisition (Wu, 2010; Zheng, 2008). As Young (1990) observed, "Although students indicate they are most interested in developing their capacity to communicate verbally in the target language, the anxiety they experience may have a debilitating impact on their ability to speak it" (p. 14). The skill that language learners must practice to improve their communicative competence is the one skill that causes the most anxiety for learners. Researchers have identified oral production of the target language as the most substantial cause of increased anxiety levels among second language learners (Awan et al., 2010; Horwitz, Horwitz, & Cope, 1986; Kim, 2009; Wu, 2010). High anxiety negatively affects oral production and achievement in foreign language classes in general (Aida, 1994; Ewald, 2007; Horwitz et al., 1986; Young, 1990). Krashen's (1982) Second Language Acquisition Theory suggests that language acquisition cannot take place unless the learner's anxiety level is low.

Foreign language educators are thus challenged to identify strategies to aid foreign language learners in second language acquisition and to assist them in providing activities that will improve communicative competence without increasing learner anxiety (Pufahl & Rhodes, 2011).

Impact of Technology on Foreign Language Anxiety and Oral Proficiency

The effectiveness of the integration of media and technology on learning has been debated for many years (Locatis, 2007); some researchers purport that technology use in the educational setting has potential to impact learning (Kozma, 1994). However, another line of research suggests that insufficient evidence exists to support the growing use of technology in education (Clark, 1983; Jones & Paolucci, 1998), and the researchers noted that much of the evidence is unfounded. Both arguments hold truth. The generic integration of technology without differentiating by content area and specific strategies used to teach particular content knowledge is useless (Shulman, 1986). However, as Kadiyala and Crynes (2000) demonstrated in their meta-analysis of 760 studies, information technologies do enhance learning when accompanied by pedagogically sound, objective-driven techniques.

Technology is intended to build on "sound pedagogic rationale," and to "take into account the potential challenges and benefits of the medium" and ensures an "added value over more traditional forms of teaching" (Hampel, 2003, p. 34). Educators should consider whether a correlation exists between increased "technological sophistication" and increased effectiveness to "achieve pedagogical objectives" (Salaberry, 2001, p. 51). Also relevant to consider is how the technology may be purposefully and intentionally integrated into the curriculum since "the goal was not to adopt technology for

technology's sake but instead to provide technology that could easily augment effective teaching and ultimately increase student learning" (Carnicom, Harris, Draude, McDaniel, & Mathis, 2007, p. 121).

Research in the use of technology for foreign language learning reveals that sound pedagogy is of the utmost importance. A meta-analysis of technology use in language learning revealed that technology incorporation can have a positive effect on language learners (Zhao, 2001). In a qualitative study of EFL learners, Huifen and Yueh-chiu (2010) reported that the computer-mediated environment provided an environment in which "collaboration, problem solving, and scaffolding" were supported and encouraged and that technology played "an essential role in facilitating the creation of this learning environment" (p. 717).

Anxiety

Technological resources may help teachers create an environment that lowers anxiety levels for language learners (Crookall & Oxford, 1991; Pufahl & Rhodes, 2011; Ravenscroft, 2009). Research in computer-mediated communication through text-based conferencing in language learning has shown that the removal of time constraint for student responses through asynchronous communication allows learners time for a "deeper thought process" (McIntosh, Braul, & Chao, 2003). Satar and Özdener (2008) concurred that online communication has the potential to be transformative due to the experience of less pressure and anonymity that can lower the affective filter. Beauvois (1992) found that "The computer does not transmit accents or skin colors, no one is put on the spot to respond, and these elements seem to create a relatively nonthreatening atmosphere in the classroom" (p. 456). Text chat as a tool in foreign language learning

has shown to help decrease student anxiety levels (Beauvois, 1992; Blake, 2000; Poza, 2005). In the computer-mediated environment, learners who might feel marginalized in the regular classroom feel more liberated in the online environment (Beauvois, 1992; Kern, Ware, & Warschauer, 2008). The role of the instructor also changes to more of a facilitator in the online environment, which helps decrease learners' anxiety levels as the fear of negative evaluation is deep for learners when they experience the teacher constantly correcting their errors (Ewald, 2007; Horwitz, 2001).

Oral Proficiency

Text-based computer-mediated communication has been shown to improve language proficiency (Kern et al., 2008; Satar & Özdener, 2008). Though some studies show little to no improvement in oral proficiency, some studies show that learners who use online chat are more likely to take risks in the online environment (Poza, 2005; Satar & Özdener, 2008). Increased time to develop and refine comments leads to greater precision and increased sophistication of comments (Kern et al., 2008). Online chatting also improved the grammatical competence of adult native English speakers in a university Spanish class (Pelletieri, 2000).

Computer technology has enormous potential for language teaching and learning. It provides a communication medium with a reduction in social context clues, nonverbal cues, and additional time given for participation in online conversations (Sproull & Keisler, 1991). Yet, it continues to be "underutilized even though its availability, familiarity, and sophistication are steadily increasing" (Kim & Rissel, 2008, p. 61). With the current focus on increasing the communicative competence of foreign language

learners, further research was needed to determine how technology can improve language learning practices (Ravenscroft, 2009).

Though text-based computer mediated communication has been shown to improve language proficiency, voice-based computer mediated communication can help create a "powerful educational environment" for many different subject areas, especially subject areas that have a "significant amount of verbal exchange in the traditional face-to-face classroom setting" (Ross, 2003, p. 71). Founders of Media Richness Theory (MRT) support the addition of voice in online communication as voice provides a richer level of communication beyond what text alone is able to provide (Daft & Lengel, 1986). Media Richness Theory is based on the information processing theory and conveys that the more personal the communication mean, the more effective the communication will be compared to less rich media (Daft & Lengel, 1986).

Voice-based communication can also affect social presence for online learners. Social Presence Theory suggests that communication is most effective if the medium of communication has the appropriate social presence required for the level of involvement for task completion (Sallnas, Rassmus-Grohn, & Sjostrom, 2000). Tu and McIssac (2002) defined social presence as the feeling of community that learners experience in the online environment. Face-to-face communication creates the greatest amount of social presence, and text-based communication creates the least amount of social presence (Tu & McIssac, 2002). Social presence in the online environment can help increase the intimacy among learners and lower affective filters (Tu & McIssac, 2002). Krashen (1982) purported that a language learners' affective filter must be low for language acquisition to take place.

The *Wimba*© Voice Board was one of the first voice message boards created for online educational purposes, and foreign language was the one discipline that quickly latched on to the idea of voice-based online communication (Ross, 2003). Voice-based computer mediated communication can provide students the opportunity to work collaboratively and constructively to negotiate meaning and solve problems using the target language as a vehicle for communication, integral to the social constructivist learning theory (Vygotzky, 1978). Vygotzky (1978) supported the need for peers to push learners beyond their zone of proximal development to be better than they can be individually.

Foreign language educators have differing opinions as to whether synchronous or asynchronous voice-conferencing is best for language learners. Although some FL educators argue that synchronous is more representative of communication in the real world, many others advocate for the use of asynchronous voice-conferencing tools. Satar and Özdener (2008) conducted an experimental study using synchronous voice-chat with high school learners of English in Turkey. Oral proficiency scores increased based on a pretest and posttest measure, but anxiety levels also increased due to the synchronous communication (Satar & Özdener, 2008). Asynchronous communication lowers a language learner's affective filter (Krashen, 1982) by providing opportunities for learners to listen to speaking segments repeatedly, compose their own message and re-record it as often as needed before posting it (Ross, 2003). Language learners can also participate at their own pace, and participate intermittently rather than being under pressure to formulate a response rapidly in front of the instructor and peers (Ross, 2003).

Poza (2005) examined the effect of the asynchronous voice-conferencing tool *Wimba*© on the anxiety of second language learners at the university level. She found that student anxiety levels were lower for students when they used the *Wimba*© voice board to conduct discussions compared to in-class discussions. Although this study examined the variable of anxiety, it did not focus on oral proficiency but rather on learners' perceptions of empowerment and risk-taking in the voice-conferencing environment. In addition, this study was conducted with university language learners, rather than high school language learners. A limitation to the design of this study was the absence of a control or comparison group. One group of learners participated in both in-class discussions and used the *Wimba*© voice board and compared their experience with both. In the current study, the researcher utilized a control group, and the experimental group exclusively used asynchronous voice-conferencing for speaking practice. The researcher attempted to fill a gap in the literature by examining the use of asynchronous voice-conferencing for language learning, and its effect on anxiety and oral proficiency in the high school foreign language classroom. Researchers in previous studies examined the isolated variables of anxiety and oral proficiency with university level language learners (Poza, 2005; Shams, 2006). This study intended to build on previous research on the use of asynchronous voice-conferencing technologies for language learning. The communication experience in the computer-mediated environment using the asynchronous voice-conferencing tool *Voice Thread*® as the medium of communication was compared to the traditional method of language laboratory practice. This researcher also examined both anxiety and oral proficiency through pretest/posttest measures.

Few researchers have studied *Voice Thread*® as a language learning technology. *Voice Thread*® is an interactive, multimedia presentation technology that allows users to hold conversations around images, documents, videos, and audio. Easily accessible and cost-effective, it is applicable to any grade level or subject area (Brunvard & Byrd, 2011). *Voice Thread*® has the capability to provide a collaborative work space for students to practice speaking skills by allowing learners to practice as a large group, small group, or with a partner.

This researcher also attempted to fill a gap in the literature by conducting the study with upper- level high school foreign language learners. A dearth exists in the literature on studies of high school language learners (Satar & Özdener, 2008; Shams, 2006). The majority of studies on foreign language learning have been conducted with university level language learners (Beauvois; 1992; Mak, 2011; Poza, 2005).

Problem Statement

With the current initiative to improve the oral proficiency of language learners, teachers are looking for novel ways to encourage their students to practice speaking in the target language (Pufahl & Rhodes, 2011). The problem is that activities requiring students to speak in front of their peers and instructor tend to encourage student anxiety (Young, 1990). The foreign language classroom is often a strong breeding ground for student anxiety especially when connected with oral production of the language in front of the instructor and peers (Mak, 2011; Poza, 2005). Since the 1990s, negative correlations continue to be revealed between anxiety measures and students' performance in second language learning classrooms (Mak, 2011; Marcos-Llinás & Garau, 2009).

Technological resources may help teachers provide an environment that will decrease anxiety levels and be perceived as less threatening to learners (Crookall & Oxford, 1991; Pufahl & Rhodes, 2011; Ravenscroft, 2009). Researchers found that studies incorporating text-based computer-mediated communication have decreased participants' anxiety levels due to less pressure to formulate responses under a time constraint (McIntosh et al., 2003). The few studies conducted on the effect of voice-conferencing technologies on language anxiety and oral proficiency, have used a variety of voice-conferencing technologies and focused solely on the effect on anxiety or on the effect on oral proficiency (Poza, 2005; Satar & Özdener, 2008).

Mixed results from previous studies where researchers used both synchronous (Beauvois, 1992; Satar & Özdener, 2008) and asynchronous (McIntosh et al., 2003; Poza, 2005) types of communication have shown that some learners felt more comfortable speaking in the computer-mediated environment, while others viewed the computer-mediated environment as unhelpful in the fostering of communicative competence. In addition, the technology itself was found to impede some learners as they disliked the delay in communication and ideas (Satar & Özdener, 2008). Therefore, this researcher examined the integration of the Web 2.0 technology *Voice Thread*® to support instructional strategies to determine if this asynchronous voice-conferencing tool had an effect on the problem of anxiety and oral proficiency for high school upper- level foreign language learners.

Purpose Statement

The purpose of this quantitative, quasi-experimental, non-equivalent control group study is to determine if the use of the Web 2.0 asynchronous voice-conferencing

technology, *Voice Thread*®, had an effect on the anxiety and oral proficiency scores of high school upper-level foreign language learners in North Georgia. The independent variable was the medium used for practicing speaking and had two levels. The first level of the independent variable was the use of the asynchronous voice-conferencing technology *Voice Thread*® that allowed learners to hold conversations around images, documents, and video clips. The second level of the independent variable was the use of the language laboratory to practice speaking skills.

The dependent variable of anxiety was generally defined as feelings, self-perceptions, and beliefs related to the foreign language learning process (Horwitz et al., 1986). The dependent variable of oral proficiency was generally defined as the ability to communicate in a functional and accurate way in the target language (Omaggio, 1986). The researcher compared the anxiety and oral proficiency of foreign language learners who used *Voice Thread*® for practicing speaking in the target language with foreign language learners who used the traditional method of practicing speaking in the language laboratory.

Significance of the Study

The results of this study provided foreign language educators with empirical data on the effectiveness of asynchronous voice-conferencing on foreign language anxiety and oral proficiency in the high school foreign language classroom. It also helped foreign language educators determine if asynchronous voice-conferencing in an online environment really does foster collaboration and increase oral proficiency by lowering the affective filter for language learners, as suggested by Krashen's Second Language Acquisition Theory (Krashen, 1982).

Improving language proficiency and reducing student anxiety is critical to the production of successful second language learners as well as the need to focus on emerging practices that are changing the way teachers teach and the way students learn (Pufahl & Rhodes, 2011). This focus helps prepare students for lifelong learning in the information age and will continue to guide the way by promoting both independent and collaborative learning (Deniz, 2010; Wong, Li, Choi, & Lee, 2008). Ravenscroft (2009) suggested that

> it is clear that we have a new family of technology-mediated practices that are important for learning, but which need to be more thoroughly and systematically conceptualized and investigated; otherwise we might propose solutions that do not actually match identified problems. (p. 4)

Pufahl and Rhodes (2011) concurred with Ravenscroft that a need exists for more research on how teachers could maximize classroom time to obtain the best proficiency results for learners. In addition, Pufahl and Rhodes (2011) expressed the need for studies that demonstrate the effectiveness of technology in the foreign language classroom; as there is a lack of empirical findings that demonstrate exactly how technology can "enhance foreign language learning" (p. 275).

Research Questions

This study was designed to answer the following research questions:

> RQ 1: Is there a statistically significant difference in Spanish Three students' anxiety levels measured with the Foreign Language Classroom Anxiety Scale (FLCAS) for students who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

RQ 2: Is there a statistically significant difference in Spanish Three students' oral proficiency scores measured by the Performance Assessment for Language Students (PALS) level three speaking analytical grading rubric for students who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

Null Hypotheses

The following null hypotheses were provided for the research questions:

Null hypothesis as related to Research Question 1:

$N_{01:}$ There will be no statistically significant difference in Spanish Three students' anxiety levels measured by the FLCAS for students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

Null hypotheses as related to Research Question 2:

$N_{02:}$ There will be no statistically significant difference in Spanish Three students' overall oral proficiency scores as measured by the PALS level three speaking analytical grading rubric for students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

$N_{03:}$ There will be no statistically significant difference in task completion as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{04}: There will be no statistically significant difference in comprehensibility as measured by the PALS level three speaking analytical grading rubric for Spanish

Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{05}: There will be no statistically significant difference in the level of discourse as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{06}: There will be no statistically significant difference in fluency as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{07}: There will be no statistically significant difference in vocabulary as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{08}: There will be no statistically significant difference in language control as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

Identification of Variables

Foreign Language Classroom Anxiety: Foreign language classroom anxiety was a dependent variable that was operationally defined as the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986). This scale measures a learner's fear of negative evaluation, test anxiety, and communicative apprehension in the foreign

language classroom (Horwitz et al., 1986). In this study, only the composite score on the FLCAS was examined.

Oral Proficiency: Oral proficiency was operationally defined as the score learners receive as measured by the Performance Assessment for Language Students (PALS) level three speaking analytic grading rubric (Fairfax County Public Schools, 2004). Scores were rated by two trained language teachers who graded speaking samples of language production from learners for a pretest and posttest score. The grading rubric measured learners' oral language production based on task completion, comprehensibility, level of discourse, fluency, vocabulary, and language control (Fairfax County Public Schools, 2004).

Task Completion Subscale: measured how thoroughly the student completed the required task (Fairfax County Public Schools, 2004).

Comprehensibility Subscale: measured how much interpretation was required by the listener. It focused on the big picture and was not limited to pronunciation, language control, and vocabulary (Fairfax County Public Schools, 2004).

Level of Discourse Subscale: reflected the level of linguistic sophistication used in the communication of ideas (Fairfax County Public Schools, 2004).

Fluency Subscale: measured the ease with which the speaker completed the task (Fairfax County Public Schools, 2004).

Vocabulary Subscale: measured the quantity of the vocabulary used in the student response, along with the accuracy, and the variety of words used (Fairfax County Public Schools, 2004).

Language Control Subscale: measured the accuracy and use of basic language structures such as the use of articles, and subject/verb agreement (Fairfax County Public Schools, 2004).

Voice Thread®: *Voice Thread®* is an interactive, multimedia presentation technology that allows users to hold conversations around images, documents, videos, and audio (Brunvard & Byrd, 2011). It can be used in a large group, small group, or one-on-one. The use of *Voice Thread®* served as one level of the independent variable in the study as the experimental group used this tool to practice speaking.

Definition of Terms

Foreign Language Anxiety: Horwitz et al. (1986), defined foreign language classroom anxiety specifically as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128).

Oral Proficiency: Omaggio (1986) defined oral proficiency as the ability to verbally communicate in the target language in a functional and accurate way- including the ability to apply knowledge to various contexts.

Native Language or L1: A person's native language.

Target Language or L2: A person's second language or the foreign language of study.

Research Plan

The design of this study was a quasi-experimental non-equivalent control group research design. This was the strongest design for a quantitative study given that intact classes were used and random assignment was not possible (Gall, Gall, & Borg, 2007). Six sections of Spanish Three students from one high school in North Georgia were

invited to participate in this study. Three sections of Spanish Three formed the control group that used the traditional method of practicing speaking through the language laboratory and three different sections of Spanish Three formed the experimental group that utilized the asynchronous voice-conferencing technology *Voice Thread*® to practice speaking.

At the beginning of the study, students took the FLCAS to assess the level of anxiety they experienced. Students also took a pretest to measure their oral proficiency measured by the PALS level three speaking analytical grading rubric. Each week, both classes practiced speaking through describing cultural and situational pictures related to current Spanish Three content. Each group spent the equivalent amount of time practicing the speaking activities each week for a total of eight weeks, but the method of practice differed as the control group practiced in the language laboratory and the experimental group practiced using *Voice Thread*®. At the end of the study, students took the FLCAS again and also a second oral language proficiency test measured by the PALS grading rubric. An analysis of variance (ANOVA) was used to analyze the data on the FLCAS and a multivariate analysis of variance (MANOVA) was used to analyze the data for the oral proficiency score since there were six subscales that served as six correlated dependent variables on the PALS grading rubric.

CHAPTER 2: LITERATURE REVIEW

In this chapter, this researcher will discuss two theoretical frameworks for this study. Challenges in the achievement of communicative competence for second language learners and the effect of anxiety on foreign language learning and oral proficiency are also included. An examination of the use of Web 2.0 technologies and how they can aid teachers and students in the second language acquisition process are explored. Text-based conferencing and voice-conferencing computer-mediated communication are examined. Through examination of previous studies, the need for the present study integrating *Voice Thread*® as an instructional technology is established.

Theoretical Framework

Krashen's Second Language Acquisition Theory

Krashen's (1982) Second Language Acquisition Theory provided a theoretical framework for this study. Krashen proposed five hypotheses along with other variables to be considered in second language acquisition. The five hypotheses include (a) the acquisition-learning distinction, (b) the natural order hypothesis, (c) the monitor hypothesis, (d) the input hypothesis, and (e) the affective filter hypothesis (Krashen, 1982).

The acquisition-learning distinction hypothesis suggests that language may be either acquired or learned. Acquisition of a language happens subconsciously without a focus on grammatical forms of the language. Language learners are using the language as a vehicle for communication, similar to how a child acquires language (Krashen, 1982). On the other hand, learning of a language refers specifically to "conscious

knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them" (Krashen, 1982, p. 10).

The natural order hypothesis suggests that language learners acquire grammar structures from the most basic to increasingly complex structures (Krashen, 1982), similar to native language acquisition. This hypothesis directly affects language instruction and curriculum organization, as language teaching generally follows this natural order.

Acquisition and learning are considered two separate processes according to the acquisition-learning distinction hypothesis. However, the monitor hypothesis proposes that acquisition "initiates" second language utterances, which increases fluency, while learning acts as a "monitor" or "editor" for our language output (Krashen, 1982, p. 15). This hypothesis posits that formal learning has the purpose of monitoring the learner's output. The conscious application of grammatical structures, while incorporating the monitor hypothesis, requires that the learner has time to respond, can focus on the forms, and knows the rules of the language (Krashen, 1982). Overuse of the monitor may impede fluency due to constant self-correction (Krashen, 1982).

The input hypothesis relates to language acquisition rather than language learning. Individuals acquire language by "understanding language that contains structure a bit beyond our current level of competence ($i + 1$) (Krashen, 1982, p. 21). Comprehensible input must be provided to language learners. Then, their productive ability will develop over time. The focus is on communication and meaning, as language learners acquire the grammatical structures implicitly.

The fifth hypothesis is the affective filter hypothesis. This hypothesis is fundamental to the current study. The affective filter hypothesis specifically addresses the role of the affective factors of motivation, self-confidence, and anxiety on second language acquisition. For language learners with a high affective filter, "even if they understand a message, the input will not reach the part of the brain responsible for language acquisition, or the language acquisition device" (Krashen, 1982, p. 31). The affective filter can create a block that impedes language acquisition (Krashen, 1982).

Krashen (1982) purports the need for teachers to create a low affective filter for second language learners by providing them with comprehensible input. Krashen believed that in order for second language learners to acquire language and be able to produce output in the language, the level of language input needs to be comprehensible to them. Scovel (1978) supported Krashen's theory and stated that:

> The monitor theory should be incorporated into any model concerning the effect of affect on foreign language learning, for it deals with the intrinsic learner variables that are part and parcel of the learner's personality, and, as such, have a bearing on the individual's affective motivation. (p. 139)

In addition, Krashen believes in the Natural Approach with less focus on the rules of grammar and more focus on meaning and communication in language input (Krashen, 1982). This belief supports the current push toward the achievement of communicative competence for students in second language acquisition. Students must feel comfortable in the second language learning environment to produce output in the target language (Krashen, 1982). Also, language acquisition happens through problem solving using comprehensible input, not through drill and practice (Beauvois, 1992).

Krashen's Second Language Acquisition Theory is one of the most well known theories in foreign language education. He is one of the first people to develop theories explaining second language acquisition. His work has successfully informed teaching practices (Bahrani, 2011). However, Krashen has also faced the criticism that he has not provided sufficient empirical evidence to support his language acquisition theories (Bahrani, 2011). The focus of this study was on the affective variable of anxiety and provided empirical evidence on the effect of computer-mediated communication and its ability to lower the affective filter for language learners.

Vygotzky's Social Constructivism Theory

A second theory that guided this research study was Vygotzky's theory of social constructivism. Social constructivism is foundational to this study because it states the importance of the social environment in the construction of meaning for students (Vygotzky, 1978). Interaction between the teacher and the student, as well as between the students, helps each student to construct meaning out of ideas in the foreign language classroom. Vygotzky (1978) defined a learner's zone of proximal development as the difference between what a learner can learn independently compared to what a learner can learn with a more capable peer or adult. This type of interaction is essential for students to be able to practice and improve communicative competence in the target language of study.

Vygotzky (1978) also supports the need for the use of both physical and psychological tools that are necessary for effective learning. Computer-mediated communication allows learners to use the physical tool of the computer in conjunction with the psychological tool of language use (Vygotzky, 1978). Learners can negotiate

meaning in this medium (Blake, 2000; Pellettieri, 2000; Satar & Özdener 2008). Huifen and Yueh-chiu (2010) suggested that "Computer-mediated communication helps create a virtual social learning environment in which a foreign language is learned through interaction, negotiations, and accommodation to each individual and his or her peers" (p. 716). With the need to be able to connect ideas to experience, constructivism is often the approach of choice in instructional technology (Hussain, Iqbal, & Akhtar, 2010; Neo & Neo, 2009).

Foreign Language Education

Leaders of the American Council on the Teaching of Foreign Languages (ACTFL) have provided foreign language teachers with national standards that support and promote communicative competence for language learners. The standards are grouped under the five goal areas of Communication, Cultures, Connections, Comparisons, and Communities (ACTFL Standards for Foreign Language Learning, 2000). However, these standards do not represent the current status of foreign language education in the United States.

The standards are a goal to work toward, but they do not describe what is being attained by the majority of foreign language learners (ACTFL Standards for Foreign Language Learning, 2000). The standards do reflect supreme instructional practice, but they do not provide specific course content or a detailed curriculum guide. Therefore, the standards must be used alongside state and local school standards to meet the needs of individual school systems (ACTFL Standards for Foreign Language Learning, 2000). Thus, consistency in implementation is lacking. Pufahl and Rhodes (2011) concurred and stated, "There is a huge mismatch between what is happening in our schools and what the

country is demanding; that is, an education system that prepares all children to be competent world citizens, who can communicate in more than one language" (p. 272). Basista and Hill (2010) believed that the general approach to language teaching is "pedagogically flawed" and, therefore, failure is much more likely than success (p. 154).

Challenges in Foreign Language Education

Issues and barriers to foreign language study in the United States have contributed to the challenges of learning a foreign language (Pufahl & Rhodes, 2011). In most European countries, students not only have opportunities but also are required to learn a second and third language starting in childhood (Sigsbee, 2002). In the United States, students are not afforded the same opportunity. Intermittent study of foreign languages between grade levels and schools occurs in elementary school, in middle school, in high school, and in colleges and universities. In school systems, foreign languages are not generally considered part of the core curriculum. In times of economic difficulty, local school boards often examine areas to cut, sometimes cutting all or parts of foreign language programs (Pufahl & Rhodes, 2011; Sigsbee, 2002). Pufahl and Rhodes'(2011) national survey on foreign language instruction in US schools revealed that a majority of the written comments from schools cited a negative impact of the No Child Left Behind Act (NCLB) on foreign language education. Because of the focused attention to test scores in reading and math, some school districts have been forced to cut foreign language programs or other subjects which are not tested under NCLB.

The inconsistent offerings of foreign language education have produced poor results in language learning achievement for foreign language learners (Basista & Hill, 2010; Pufahl & Rhodes, 2011; Sigsbee, 2002). Inconsistent language offerings have

created barriers to student proficiency in the United States as students who may have studied one language throughout elementary school are met with the disappointment that the language is not offered at the middle school (Pufahl & Rhodes, 2011; Sigsbee, 2002). An additional problematic situation occurs when students who have studied a foreign language throughout elementary school are combined with beginner level foreign language learners (Pufahl & Rhodes, 2011). Students in middle schools are most vulnerable because of scheduling conflicts and the inability to create different sections of foreign language classes. Students are exposed to instruction primarily directed toward the beginner level learners when they are ready to move forward.

Students in high schools have challenging schedules. Many high schools are on a block schedule in which classes meet every other day. This schedule is counterproductive for foreign language learners since daily practice proves most beneficial (Basista & Hill, 2010).

In addition to course schedules, a lack of teacher training in foreign language education exists on how to create a communicative classroom (Basista & Hill, 2010). Although the push in foreign languages has been toward communicative competence, many foreign language educators are still teaching students about the language rather than teaching students how to communicate with the language (Basista & Hill, 2010).

Another major challenge in foreign language education is that students lack adequate classroom time to focus on oral production of the language (Bahrani, 2011; Satar & Özdener, 2008). Because the student to teacher ratio is increasing, teachers have a challenge to provide each student the opportunity to speak within one class period. In summary, issues pertaining to (a) scheduling, (b) placement, (c) foreign language

articulation among elementary, middle, and high schools, and (d) increasing student to teacher ratios rob students of critical practice time. Students are not practicing the production skills that will enable them to achieve communicative competence in the target language (Basista & Hill, 2010; Pufahl & Rhodes, 2011). The shortcomings in foreign language education contribute to American students falling short of second language proficiency (Basista & Hill, 2010).

Overcoming the Challenges in Foreign Language Education

Kim and Rissel (2008) emphasized that learners need to be pushed to produce comprehensible output. Creating situations where students can practice producing comprehensible output can be a challenge within the walls of the classroom. Students do enjoy working in groups and practicing conversations with partners. In a qualitative study of English second language learners, students said that they needed more opportunities to practice English (Wu, 2010). The incorporation of computer-mediated communication can provide learners with more opportunities to practice speaking the target language.

Many students report that because the foreign language classroom is often teacher-centered, it is a challenge to apply the target language to their real lives during speaking practice (Wu, 2010). Often, students report that they are required to focus on memorized dialogues using specified grammatical structures, vocabulary, and phrases. Students sometimes feel that learning a foreign language is "dependent heavily on the students' ability to memorize and produce the data at stated intervals" (Wu, 2010, p. 174); thus students often practice for a short time in the L2 and then revert to L1. They feel they are not really carrying on a conversation, but exchanging memorized

information. Krashen (1982) would support the effort to provide learners with activities that allow them to practice communicating and interacting without the use of memorized grammatical structures and dialogues.

Though foreign language educators have no control over federally mandated acts such as NCLB, or articulation and scheduling of foreign language courses, they do have control over what happens within their classroom and must focus on ways to enhance language proficiency skills. Pufahl and Rhodes (2011) concurred and suggested that despite certain setbacks, foreign language educators must continue to work toward initiatives that can change the trajectory of foreign language education in the United States. Sigsbee (2002) agreed and asserted, "Now we need to move to ways to remedy the situation" (p. 49).

The Challenge of Anxiety in the Educational Setting

Anxiety is an affective variable that is another challenge in the educational setting and especially in the foreign language classroom (Horwitz et al., 1986). It is important to examine how students' anxiety impacts learning. The role of anxiety in the foreign language classroom will then be further addressed.

Anxiety is an affective variable that has received much attention in educational research literature. Horwitz et al. (1986) concluded that "Anxiety has been found to interfere with many types of learning and has been one of the most highly examined variables in all of psychology and education" (p. 113). Beginning around the 1950s, researchers began to study affective variables associated with academic achievement. Variables such as personality and motivation were discovered to be just as worthy of study as students' aptitude. Because anxiety affects how learners behave and think, it can

have serious implications for achievement in a variety of subjects. Thus, research was expanded beyond the cognitive domain (Scovel, 1978).

As researchers continued to investigate anxiety and its relationship with classroom performance, more complications arose due to other variables that intervene in the learning process. According to Scovel (1978), the most important intervening variables to consider were "the subject studied or tested at school, the children's level of intelligence, the difficulty of the learning skill under investigation, and the degree of familiarity the children have with the learning task" (p. 136).

Some anxiety can be helpful and promote learning because it stimulates the learner to accomplish learning goals. However, too much anxiety can negatively affect academic performance and the overall learning process (Campbell & Ortiz, 1991; Crookall & Oxford, 1991). Zheng (2008) summarized the cognitive effects of anxiety and expressed that "anxious learners are usually more distractible, and the defense mechanism evoked by anxiety will interfere with the cognition threshold in learning" (p. 6).

Measuring Anxiety

Anxiety is typically measured through paper and pencil tests or other self-report measures, behavioral observations, or physiological tests (Scovel, 1978). In the 1950s and 1960s, a variety of questionnaires and scales were developed to measure anxiety. The development of a variety of instruments for measuring anxiety indicates the importance of the issue of anxiety in the educational setting. In the educational setting, self-report measures of anxiety are typically incorporated. For the purpose of this study, a paper and pencil self-report scale was used to measure anxiety in the foreign language

classroom. Scovel (1978) supported the use of paper and pencil self-report measures since, "they do have an advantage in that they are much more precise in focusing in on a specific affective construct" and these measures are "easy to administer to large groups of subjects" (p. 135).

Foreign Language Anxiety

One of the major challenges foreign language learners face is the anxiety they experience in the foreign language classroom (Awan et al., 2010; Wu, 2010; Zheng, 2008). Krashen (1982) suggested that high levels of anxiety will impede language acquisition. His theories on second language acquisition reflect the beliefs of many researchers and their studies on anxiety that began in the mid-twentieth century. In the 1960s, language acquisition scholars examined the relationship between anxiety and language learning and performance (Horwitz, 2001).

In the late 1970s, researchers began to understand that language anxiety was an impediment to language learning and language production. Scovel (1978) conducted an initial review of the literature on language learning and anxiety. He found that the relationship between affective variables and language learning was difficult to interpret based on previous studies and that research has yielded mixed results about the relationship between anxiety and language learning. Although some studies revealed a "consistent relationship between the academic performance of a language student in the classroom and an anxiety measure these correlations directly contradict the results obtained with other students or other languages" (Scovel, 1978, p. 132).

Chastain (1975) suggested that the problem in these previous studies was that the anxiety measures did not differentiate between the degrees of anxiety. Scovel (1978)

suggested that affective variables must be well defined and he specifically examined the affective variable of anxiety. Scovel (1978) distinguished the difference between facilitating anxiety and debilitating anxiety and expressed that:

> Facilitating anxiety motivates the learner to 'fight' the new learning task; it gears the learner emotionally for approach behavior. Debilitating anxiety, in contrast, motivates the learner to 'flee' the new learning task; it stimulates the individual emotionally to adopt avoidance behavior. (p. 139)

These two degrees of anxiety were often integrated in previous studies, which resulted in mixed and inconclusive research findings. In the present study, the Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986) was used as the self-report measure of learner anxiety. This measure accounts for facilitating and debilitating anxiety that occur as situation-specific anxieties in the foreign language classroom. It has also produced consistent findings in foreign language anxiety research and is considered the standard scale for measuring foreign language anxiety (Horwitz, 2010).

Kleinmann (1977) was one of the first researchers to distinguish between facilitating and debilitating anxiety in his study of native Arabic and Spanish university English language learners. He found that students who scored high in the area of facilitating anxiety took more risks in language and used more complicated grammatical structures than their peers. Other students who did not score high in facilitating anxiety avoided trying to use structures that were extremely divergent from Arabic and Spanish syntax (Kleinmann, 1977). This study validated the assumption that some anxiety can be good and can motivate students to perform.

Horwitz et al. (1986) differentiated foreign language classroom anxiety from the generally experienced feelings of tension, nervousness, apprehension, and worry to a situation-specific anxiety that occurs while learning a foreign language. Spielberger (1983) divided anxiety into two types: state anxiety and trait anxiety. The state anxiety described by Spielberger is similar to the situation-specific anxiety described by Horwitz et al. (1986) and MacIntyre and Gardner (1991) which is anxiety experienced based on a certain context or situation. Whereas state anxiety is situation- specific, Spielberger (1983) defined trait anxiety as "a relatively stable individual difference in anxiety-proneness as a personality trait" (p. 1). Therefore, most foreign language students experience state anxiety as their levels of anxiety increase due to the context of the foreign language classroom.

Since Horwitz et al. (1986) distinguished foreign language anxiety as a distinct variable in foreign language learning, she and her colleagues asserted that language anxiety can consist of three types of performance anxieties: "Test anxiety, fear of negative evaluation, and communicative apprehension" (p. 128). Horwitz et al. (1986) also provided the definition of foreign language anxiety that will be used for this study, which is "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128). The main goal of Horwitz and her colleagues was to advocate for foreign language anxiety as a distinct anxiety, not as general anxiety transferred to the foreign language classroom.

Abu-Rabia (2004) supported the research of Horwitz et al. (1986) and her colleagues and also described the foreign language learner who experienced anxiety as a

student who appeared "worried, physically insecure, and unable to engage in situational learning" (p. 712). MacIntyre (1998) also associated language anxiety with a "negative reaction" or a worry that was stirred up when students were learning or using a second language (p. 27).

Measuring Foreign Language Anxiety

After foreign language anxiety was clearly defined as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128), the need for a consistent measure of the anxiety level of language learners became apparent. Researchers in previous studies had incorporated a variety of measurement tools that were not sensitive to different types of anxiety. Therefore, Horwitz et al. (1986) created the FLCAS in order to consistently measure the anxiety levels of foreign language learners. This instrument has become the standard scale used to measure foreign language anxiety (Horwitz, 2010).

Effect of anxiety on secondary language learners. Language anxiety has been found to negatively affect junior high and high school language learners in Nova Scotia. In this study of junior high and high school language learners, anxiety levels were measured and found to be constant from eighth to ninth grade (MacIntyre, Baker, Clément, & Donovan, 2003). High anxiety levels correlated with a decreased willingness to communicate in a French immersion program (MacIntyre et al., 2003). Siebenhar and Plageman (1997) also found negative correlations between language learners' anxiety scores and their oral and written language proficiency. Qualitative analysis also revealed

that a major factor that contributed to language learners continuing language study to higher levels was low anxiety in the foreign language classroom (Shedivey, 2004).

Effect of anxiety on post-secondary language learners. In the first study in which the FLCAS was administered to university foreign language students, Horwitz et al. (1986) found that many university students in the study felt much more tension and nervousness in their foreign language class than in any other class. This evidence supported their research that foreign language classroom anxiety is a situation-specific anxiety that is a different type of anxiety than might be experienced in other academic courses. In addition, the development of the Foreign Language Classroom Anxiety Scale, which has been used in numerous subsequent studies of foreign language anxiety, has allowed researchers to produce abounding consistent findings related to second language anxiety and achievement (Kim, 2009; Marcos-Llinás & Garau 2009).

Researchers have consistently found that the foreign language learning environment creates anxiety for students, regardless of the language of study. Although the majority of studies have been conducted with Western languages, anxiety has been shown to also affect non-Western languages such as Japanese. Aida (1994) found that native English speakers who were learning Japanese had mean anxiety scores that were slightly higher than the scores of students learning Spanish, French, or German. However, the mean anxiety scores highly correlated with scores from various languages of study. Among the Japanese language learners in this study, a significant negative correlation was noted between final course grades and FLCAS scores. This study suggests that foreign language anxiety is a prevalent affective factor in foreign language achievement as learners struggle in many languages to overcome its debilitating effects.

Regardless of language level or target language, a negative relationship between anxiety and achievement exists. Statistical analyses of the results from the FLCAS have produced significant negative correlations between anxiety and language achievement and have been widely used to measure foreign language anxiety. International studies demonstrate the reliability of the FLCAS as similar results have been found. Coulombe (2000) found similar negative correlations between FLCAS scores and final course grades among 11 classes of French students, from beginner to advanced level, at a Canadian university. Rodriguez (1995) also found the same negative correlations among FLCAS scores and final course grades among English language learners in Venezuela. Another more recent study by Awan et al. (2010) corroborated the findings from previous studies as well when he disseminated the FLCAS to a group of 149 undergraduate English language learners. Awan et al. (2010) found a significant negative correlation between language anxiety and achievement based on final course grades. Awan et al. (2010) also found that males were significantly more anxious than females in the language classroom. Though the focus of the present study is on US education, these studies show that anxiety and achievement are linked across languages and countries.

This evidence from previous research studies supports the need for further research on how to decrease learner anxiety in the foreign language classroom to improve communicative competence. In addition, the majority of these studies have been conducted with university level language learners and this relationship needs to be explored further with younger language learners (Horwitz, 2001; Wu, 2010).

Reasons for Anxiety Related to Foreign Language Acquisition

Although many researchers concur with Horwitz et al. (1986) regarding the definition of foreign language anxiety and its negative correlation with academic achievement, other researchers believe that there are different reasons students struggle with second language acquisition.

Disparity in skills. Gregerson (2006) conducted a study on the importance of student recognition of the disparity between the four different skills of listening, speaking, reading, and writing and the effect of this disparity on student anxiety. She agreed with much of the current research that all four skills reinforce each other and must be taught simultaneously rather than separated.

Although Krashen (1982) focused primarily on comprehensible input and believed that students would recognize and acquire language structures if the language they were exposed to was comprehensible to them, other researchers disagree. Swain (1998) conducted research on a French immersion program in Canada and found that although students understood what they heard and read, their productive language skills were severely lacking. Swain (1998) believed that language learners must be pushed to produce output in order to truly internalize language structures and interact with peers and teachers in order to get feedback. Vygotzky (1978) would support this line of thinking, since his theory is focused on the importance of social interaction to negotiate meaning.

Native language influence. Other opposing views regarding reasons for foreign language anxiety related to language acquisition also exist. Although seminal articles such as Scovel (1978) and Horwitz et al. (1986) have communicated foreign language anxiety as a specific cause of negative performance in the foreign language classroom,

Sparks and Ganschow (1991) have continued to argue a different cause. They believe that there is a reason some people are inherently successful second language learners and others are not. Their research supports the idea that success in the second language or L2 classroom is directly related to success in the native language or the L1. Problems in the native language may contribute to an inability to learn a foreign language. Difficulties in the four skills of listening, speaking, reading, and writing for language in general may contribute to the anxiety that students experience in the foreign language classroom (Sparks & Ganschow, 1991).

While it is true that native language skills can impact learner anxiety, it is not the single, isolated cause of anxiety for students. Many variables, including extrinsic, intrinsic, cognitive, and affective variables influence the language acquisition process (Scovel, 1978). In addition, foreign language educators are responsible for educating all learners, regardless of the strengths and weaknesses in their native language skills. However, it is important to acknowledge this opposing view and its impact in the second language acquisition literature as it has created an ongoing debate among researchers.

The idea that native language problems could transfer to second language acquisition problems first originated with college students in the 1980s as they began to take their first foreign language courses. Students who had already been identified as having a specific learning disability as defined by IDEA enrolled in the foreign language courses to satisfy the requirements of their major. The students were not able to pass the foreign language courses giving rise "to speculation that subtle native language problems became evident primarily because of the demands that the study of a new and unfamiliar symbol system placed on these students" (Sparks and Ganschow, 1991, p. 8).

Sparks and Ganschow (1991) ultimately formulated a hypothesis called the Linguistic Code Deficit Hypothesis. This hypothesis attempts to account for foreign language learning difficulties by "focusing on the phonological, syntactic, and semantic components of language" (p. 10). A deficiency in any of the above listed components would interfere with second language acquisition.

However, Sparks and Ganschow's (1991) findings have been disputed and do not apply to all situations. For example, in a study of Korean English as a foreign language, the students had previously been screened and tested in both their native language and their second language prior to college admission. They had sufficiently high scores in their native language but still experienced high levels of language anxiety (Kim, 2009).

As a result, understanding how learners approach language learning and deal with language anxiety is fundamental to understanding their expectations for success and why they will either continue or discontinue language study (Horwitz, et al., 1986). Regardless of whether foreign language learners' success depends on their success in the first language, many other factors influence their foreign language classroom experience and their ability to acquire a second language proficiently. For the purpose of this study, a learner's ability in his or her native language was not a factor taken into account when calculating oral proficiency and anxiety levels in the second language learning environment. For the purpose of this study, foreign language anxiety was considered a unique type of anxiety not associated with native language learning difficulties (MacIntyre & Gardner, 1991).

Communication apprehension. Communication apprehension is a construct of foreign language anxiety that is situation-specific. Communication apprehension is

defined as the "level of fear or anxiety associated with either real or anticipated communication with another person" (McCrosky, 1984, p. 13). Elevated levels of communication apprehension inhibit language acquisition. Communication apprehension occurs specifically in the foreign language classroom and is measured by the FLCAS. Noormohamadi (2009) affirmed that because full comprehension of the foreign language is not possible, the potential for aborted communication is perpetual. This type of aborted communication is frustrating for language learners as they are in constant fear that they are missing out on important information they are not able to comprehend.

Communication apprehension also originates from the effect on the learner's self-concept due to the risks involved in communicating in a foreign language. Students generally perceive themselves as intelligent individuals who are socially capable, and these perceptions are not generally challenged when communicating in one's native language (Horwitz et al., 1986). However, Horwitz et al. (1986), affirmed that, "As an individual's communication attempts will be evaluated according to uncertain or even unknown linguistic and socio-cultural standards, second language communication entails risk-taking and is necessarily problematic" (p. 128).

Negative impact of communication apprehension. Communicating in the second language can cause learners to feel less competent as communicators which will in turn challenge their self-concept and can initiate fear and panic (Horwitz et al., 1986). Gregerson (2006) asserts, "Combine a learner's cognizance of the inability to present the same persona in the L2 as in the L1 with the recognition of a L1-L2 disparity in competence, and the resulting situation is primed for an affective meltdown" (p. 8). For these reasons, more research was needed to look for strategies that could help second

language learners cope with this fear and anxiety so they feel more comfortable speaking in the target language. According to Krashen (1982), if strategies to reduce anxiety are not implemented, a mental block will form which will inhibit language acquisition.

Fear of negative evaluation. In addition to being a threat to the learner's self-concept, language learning also creates high anxiety among many students due to the fear of negative evaluation (Casado & Dereshiwsky, 2001; Horwitz et al., 1986; Young, 1990). Fear of negative evaluation is another construct related to foreign language anxiety. It encompasses the apprehension of the negative evaluations of others, to the point that individuals avoid situations which are evaluative (Watson & Friend, 1969). In a survey on students' perspectives on anxiety and speaking in the foreign language, many students reported that they would be more willing to speak if they were not so afraid of making a mistake and being evaluated negatively in front of their teacher and their peers (Young, 1990). This fear of self-exposure is greatly inhibiting for students.

Negative impact of fear of negative evaluation. Fear of negative evaluation was a key contributor to the anxiety experienced by French, German, and Spanish students who were interviewed in a study by Von Wörde (2003). Students revealed their frustrations and even anger as one student learning Spanish said, "I don't want to be the focus of attention so that my errors are put on display" (Von Wörde, 2003, p. 5). In a similar qualitative study of advanced level Spanish university students, students reported feeling extremely discouraged, felt their teachers were looking for opportunities to correct them, felt that the teachers spoke down to them, and made them feel ignorant when they made a mistake (Ewald, 2007). Many students did not want to try speaking because they could not speak perfectly and error free. Other students revealed that they

did not feel as if they were being criticized; however, they felt the teacher did not offer much encouragement to increase self-confidence (Ewald, 2007). Low self-confidence due to constant error correction also raises the affective filter for students (Krashen, 1982).

Anxiety due to fear of negative evaluation is also prevalent among peers in upper-level language classrooms. Often, assumptions exist that advanced language learners feel less anxiety because they have a deeper knowledge base and are more competent. The fear of negative evaluation manifests itself in the intimidation language learners feel toward their peers. Ewald (2007) found that upper-level language students experienced an increased level of pressure to be successful because of being surrounded by classmates with language proficiency either at or superior to their own level, creating a high anxiety environment. One student in the study commented, "I do feel sure of myself, yet when I am in a classroom where I feel there are more people that are better speakers than myself, then I become unsure of my speaking skills" (Ewald, 2007, p. 128).

Similar results have also been found when comparing the anxiety levels of Spanish One and Two language learners at the university level. Casado and Dereshiwsky (2001) randomly selected 113 students enrolled in a Spanish One course and administered the FLCAS during the third week of their Spanish One course while 169 students from the same institution were administered the FLCAS during the last three weeks of their Spanish Two course. Results from the study demonstrated that anxiety was present at both levels, but students in the Spanish Two course experienced higher levels of anxiety than students in the Spanish One course. Although increased levels of anxiety are partially due to the more difficult language structures and requirements in the

upper level courses, fear of negative evaluation of peers is a prominent source of anxiety as students advance to higher levels of language study (Casado & Dereshiwsky, 2001).

Moreover, students often experience much frustration due to the anxiety they possess over making mistakes in the language; therefore, they negatively evaluate themselves (Ewald, 2007). Second language learners often feel extremely incompetent due to the recognition that they are not able to communicate as effectively as they can in their native language. Students' own realization that they will inevitably make mistakes produces much anxiety (Ewald, 2007).

In the research on perfectionism and anxiety, a difference in reactions of anxious and non-anxious students to their own oral performance recordings has been noted. Anxious learners in one study were not satisfied with their oral performance and expressed great concern over the errors they made, while non-anxious learners tended to express higher levels of satisfaction at minor accomplishments (Gregerson & Horwitz, 2002). Gregerson & Horwitz (2002) provided an example of the importance of building language learner self-confidence as lack of self-confidence can inhibit second language acquisition and cause language learners to become discouraged and reticent.

Unfounded language learner beliefs. Another factor that can contribute to foreign language anxiety, as it relates to language acquisition, is unfounded beliefs of language learners in the language learning process (Young, 1991). Often, language learners have unrealistic expectations and expect that their pronunciation will be perfect or native-like with little practice or that they will become fluent within two years of language study (Young, 1991). When the reality of the arduous process of language learning sets in and students are negatively evaluated, it sometimes causes increased

levels of anxiety and frustration. Self-conflict within L2 learners related to their own unrealistic expectations can become manifested as self-anger regarding their own poor performance (Ohata, 2005).

Due to the difference in the language learning process compared to other academic courses, students are easily frustrated that they cannot be perfect second language speakers in the amount of time they expect. It is important for language teachers to communicate the realistic expectations of language learning to students at the beginning of each new level of language study so that students will feel more at ease during the language learning process (Ewald, 2007; Von Wörde, 2003).

Oral language production. Although anxiety increases due to fear of negative evaluation and communication apprehension, the source of this increase generally originates with the productive skill of speaking in the target language. Sila (2010) asserted that, "Unlike reading and writing which allow for contemplation and correction, listening and speaking demand high levels of concentration in a time frame not controlled by the student which can create added pressure on the student" (p. 84). Turkish adolescent English language learners demonstrated this increase as they advanced to high level language courses. Their anxiety levels toward the productive skills of speaking and writing increased (Sila, 2010).

In a study of oral proficiency exam scores of 44 French university students in their third semester of language study, Phillips (1992) found a strong correlation between students' ability to perform on an oral exam and their own self-reported measure of the language anxiety they experienced. In this study, students with higher levels of anxiety tended to say less and use fewer target language structures correctly than students with

low anxiety (Phillips, 1992). High anxiety levels are debilitating to student language production. Thus, communicative competence will be a challenge if student anxiety levels remain high and students are afraid to use the target language.

English language learners at the university level also ranked anxiety as related to oral production of the language as one of their greatest challenges to overcome in the second language acquisition process (Awan et al., 2010). Speaking the second language in front of other students was a key factor that increased anxiety levels in addition to the inability to talk spontaneously, making pronunciation errors, and communication apprehension. All of the struggles that students in this study experienced are related to the processing and output stages of language learning (Awan et al., 2010). English language learners at the university level also reported that four of the top six reasons students listed as causes for their anxiety in English class were related to oral production of the language. The top four causes of anxiety as rated by students included, "fear of making mistakes, worry over not speaking and pronouncing accurately, worry over being laughed at by other students, and fear of having to speak without prior preparation" (Noormohamadi, 2009, p. 48).

Similar findings from 10 highly anxious university students in a qualitative study suggested that language learners feel extremely uncomfortable speaking in the foreign language in front of the class, feel insecure in their abilities to pronounce words correctly, and fear the rest of the class will laugh at them (Price, 1991). Therefore, more attention is needed in the area of oral language production. Strategies that will help learners feel more comfortable practicing the foreign language with the purpose of improving communicative competence need further exploration.

Effects of Foreign Language Anxiety

All of the previous studies demonstrate how language learners are deeply affected by foreign language anxiety. Regardless of the level of foreign language learning, anxiety has been proven to be a debilitating factor for many learners. Therefore, foreign language anxiety is a distinct issue that foreign language teachers must deal with on a daily basis. Summaries of the research studies in this section provide an impetus for change in the foreign language classroom in order to search for strategies that can help students cope with this very real issue. Methods that will shed light on strategies that help alleviate language learner anxiety need further exploration so that foreign language learners can achieve the level of language proficiency that is expected based on the national standards.

Role of the Teacher and Classroom Environment on Anxiety

For the purpose of this study, it is important to examine how other factors such as the role of the teacher and the classroom environment affect learner anxiety levels in the foreign language classroom. The examination of these factors illustrates how a change in the role of the teacher and the classroom environment can put learners at ease and decrease anxiety levels. This section also leads into further discussion on how technology can change the role of the teacher by creating a classroom environment where learners feel more comfortable practicing the language of study.

Challenges for the teacher. Language learners desire to be challenged in a communicative classroom where the teacher works to create comprehensible input, but also challenges the learners without making them feel anxious (Ewald, 2007). Krashen (1982) would support this practice since his theory is based on the ability to process

language and produce output in the language based on comprehensible input. If learners become discouraged due to the actions of the teacher, they may develop negative attitudes toward language learning in general. Due to the tremendous impact and influence the teacher can make, foreign language teachers should "endeavor to mitigate the effects of anxiety whenever possible" (Mak, 2011, p. 211).

In order to make the language classroom a more inviting place for foreign language learners, language teachers must challenge themselves to change their focus from that of an evaluator to more of a facilitator (Gregerson & Horwitz, 2002; Zheng, 2008). To reduce reticence in foreign language learners, teachers should provide more positive speaking opportunities which creates a more relaxed classroom environment and increases the confidence level of learners (Awan et al., 2010; Wu, 2010).

Additionally, the classroom itself must be recognized as not merely a physical space, but a socio-psychological one as well. Widdowson (1990) conveyed the importance of the social roles, especially for adolescents and young adults in the second language classroom. Second language learners have a fear of how they will be perceived in front of their peers, causing them to become reticent. In addition, learners with different learning styles, attitudes toward language learning, motivational levels, and anxiety levels all coexist in the same physical setting. Teachers must take care to understand the social roles which each different class member brings to the language learning process (Widdowson, 1990). Learners who may be reticent in the physical classroom may take on a more active role in the online environment through expression via computer-mediated communication.

Considerations for teachers when planning. Foreign language educators should not forget that learners experience stress and anxiety, which is magnified when they must conduct daily activities in a second language and give oral presentations in front of their peers (Castleberry & Evers, 2010; Noormohamadi, 2009). Thus, it is important to focus on an instructional model that is more conducive to learner-centered activities that help learners develop strategies of their own in order to foster second language acquisition. Learning strategies can make learning more effective and more efficient (Oxford & Crookall, 1989). The present study explored the strategy of practice via computer-mediated communication as a tool in second language acquisition.

One strategy that is often neglected is simply extra time to practice speaking in the target language (Bahrani, 2011). It is evident that extra time to practice speaking the second language of study plays a major role in mastery of the language (Wu, 2010). In addition, a qualitative analysis of second language learners of English revealed that as their teacher required learners to speak more in English as their primary vehicle of communication, learners' levels of anxiety decreased (Wu, 2010). While it is important to note that time is necessary to increase oral proficiency, time is not a luxury that language teachers have.

Consideration of the online environment. The online environment has the potential to provide a more relaxed atmosphere in which language learners are willing to take risks and teachers take on more of a facilitator role (Deniz, 2010; Poza, 2005). The online environment, especially Web 2.0 tools, help students create a sense of community so that they feel less anxious, without the fear of being directly negatively evaluated by the teacher (Deniz, 2010). Sense of community has also been shown to improve oral

proficiency and lower the affective filter for learners in the second language of study (Basista & Hill, 2010).

The online environment also provides the extra time learners need and want to practice speaking the target language with partners or in small groups (Horwitz, 2001; Von Wörde, 2003). Practice time also allows learners to develop relationships with each other along with a stronger sense of trust (Mak, 2011; Wu, 2010). Therefore, the online environment provides students with a medium to practice communicating in the target language for the purpose of increasing oral proficiency. This environment could also be one in which the teacher's role is more of a facilitator and learners have more freedom to talk about topics that are relevant to them instead of practicing memorized dialogues.

Phillips (1992) summed up the role of the teacher and the classroom environment on anxiety when she said, "in today's proficiency-oriented classroom, teachers must continue to view foreign language anxiety as a serious problem to be confronted in the effort to encourage learners to further their education in foreign languages" (p. 22). In light of this problem, the researcher evaluated a method of practice that allowed language learners to incorporate technology to see if they felt more comfort and less anxiety when speaking in foreign language classes.

Oral Proficiency

In this section, oral proficiency will be defined. A historical overview of how language proficiency has been measured and is currently measured will be provided. The ACTFL oral proficiency interview, along with the ACTFL speaking proficiency guidelines, will also be explained. Finally, a need for a standardized measure of language

proficiency that elicits a numerical value, rather than a proficiency level, will be examined.

Oral Proficiency Defined

Oral proficiency is the ability to verbally communicate in the target language in a functional and accurate way (Omaggio, 1986). A language learner who has a high level of oral proficiency will be able to apply his or her linguistic capabilities in a variety of contexts without prior preparation (Omaggio, 1986). The push toward communicative competence in a second language requires increased oral proficiency. Therefore, much attention has been directed toward oral proficiency assessment over the past three decades.

A Historical Overview of Oral Proficiency Assessment and Guidelines

Members of ACTFL developed the Oral Proficiency Interview (OPI) to assess second language proficiency. The OPI was based on the assessment for language proficiency that was developed by the Foreign Service Institute of the US State Department in the 1950s for the purpose of measuring second language proficiency (Liskin-Gasparro, 2003). The test and the scoring guidelines were adapted in the 1980s to use in secondary and postsecondary education (Liskin-Gasparro, 2003). These guidelines have provided foreign language educators with a "framework for understanding and measuring oral language ability" (Liskin-Gasparro, 2003, p. 483).

The Oral Proficiency Interview. Test administrators use the OPI to assess the proficiency level of second language learners. The OPI is an assessment that may be conducted by telephone or face-to-face and must be administered by a trained ACTFL tester (Fall, Adair-Hauck, & Glisan, 2007). The test is administered in an interview

format. The interviewees answer a variety of questions throughout three phases of the interview. The interview begins with a warm-up phase which helps put the interviewee at ease. This stage is followed by level checks that allow the interviewee to demonstrate his or her knowledge of the second language. The interviewer probes the language learner to "establish the ceiling or limit" of language ability (Fall et al., 2007, p.379). Then, the interview concludes gradually.

Researchers at the Center for Applied Linguistics developed an adaptation of the OPI which is called the Simulated Oral Proficiency Interview (SOPI) intended for use at the secondary level. It is easier to administer and can be administered to larger groups of students because it incorporates the use of a text booklet, and students record their responses in a language laboratory (Fall et al., 2007). For the purpose of the current study, the pretest and posttest design were similar to the SOPI format in that images were included for learners to describe and questions were provided in which learners recorded their responses in a language laboratory.

The ACTFL Proficiency Guidelines. The ACTFL Proficiency Guidelines used to rate the interviews for oral proficiency were first developed in 1982 and further modified in 1999. They have been most recently modified in 2012. The ACTFL Proficiency Guidelines are:

> Descriptions of what individuals can do with the language in terms of speaking, writing, listening, and reading in real-world situations in a spontaneous and non-rehearsed context. For each skill, these guidelines identify five major levels of proficiency: Distinguished, Superior, Advanced, Intermediate, and Novice. The

> major levels Advanced, Intermediate, and Novice are subdivided into High, Mid, and Low sublevels. (ACTFL Proficiency Guidelines, 2012, p. 3)

The ranges of proficiency for speaking are based on the criteria of "comprehensibility, comprehension, language control, vocabulary use, communication strategies, and cultural awareness" (Fall et al., 2007, p. 378). Most second language learners in level three or above generally score in the intermediate range. At the intermediate level, language learners are able to talk skillfully about topics associated with their daily lives and produce sentences and strings of sentences (ACTFL Proficiency Guidelines, 2012).

For the present study, the Performance Assessment for Language Students (PALS) level three presentational tasks speaking rubric was used by highly qualified Advanced Placement teachers of Spanish to rate the pretest and posttest speaking samples. This grading rubric was developed starting in 1995 by Fairfax County Public Schools. Foreign Language educators in the Fairfax County school system recognized a need to rate speaking samples from students to have a numerical rating, rather than solely a description of a range as the proficiency level (P. Patrick, personal communication, November 29, 2011). Since most learners at levels three, four, and five of language study will be rated somewhere in the intermediate range (Glisan & Foltz, 1998), more specific information was needed. More insightful information regarding specific strengths and weaknesses related to the domains of the ACTFL proficiency guidelines was needed for the purpose of pedagogical modification to address the needs of language learners.

Thus, the Performance Assessments for Language Students (PALS) grading rubrics were developed by Fairfax County Public Schools foreign language educators (P.Patrick, personal communication, November 29, 2011). The PALS grading rubrics

were designed using the criteria for the ACTFL proficiency guidelines and include the subscales of task completion, comprehensibility, level of discourse, fluency, vocabulary, and language control (Fairfax County Public Schools, 2004). However, the grading rubrics yield a numerical rating that is more specific than the proficiency level rating yielded by the OPI and the SOPI.

Influence of Oral Proficiency Measurement on Foreign Language Pedagogy

When language educators first started incorporating the OPI they were shocked by the "mismatch between what they thought students knew and how little of it emerged when instructor controls on student talk were loosened" (Liskin-Gasparro, 2003, p. 484). The initial feedback from the OPI prompted foreign language educators to incorporate more performance-based assessments that allowed learners to prepare for the proficiency interview. The proficiency assessment also helped educators to reflect on how to provide maximum opportunities for learners to practice speaking in class, along with the role of teaching grammar.

The movement toward communicative competence, along with the format and design of the oral proficiency measurements, has caused the ACTFL Guidelines to be incorporated more fully within foreign language curriculum planning and within classroom assessment (Liskin-Gasparro, 2003). The expectation for language learners to be able to use the target language as a vehicle for communication has sparked educator interest in searching for ways that learners can practice oral proficiency skills. Foreign language educators are also exploring ways that technology can be incorporated to provide learners with increased opportunities for communicating in the online environment (Kim & Rissel, 2008).

Technology in Foreign Language Learning

The ongoing growth of information and communication technology (ICT), along with their implementation has placed it in the "forefront of education reforms locally, regionally, nationally, and internationally" (Wong, Li, Choi, & Lee, 2008, p.248). The infusion of multimedia technology has particularly impacted instructional content development and methods of communicating information to learners. Within the instruction-learning process, new concepts and innovative teaching techniques are changing the way teachers teach and students learn (Bonk, 2009; Neo & Neo, 2009).

In education, it has become imperative for stakeholders to see the impact and the effectiveness of technological applications (Pufahl & Rhodes, 2011). Because large amounts of money continue to be allocated toward technological equipment, there is a need to see if these technological innovations are being utilized in classrooms around the country (Wong et al., 2008). Although many researchers (Bonk, 2009; Neo & Neo, 2009; Susman, 1998) believe in the academic benefits of technology for learners, other researchers (Roblyer and Edwards, 2000) assert that results up to this point have not made a strong enough case for the impact of technology due to the lack of empirical findings.

In the past, computers were utilized in language teaching and learning in more of a behaviorist fashion. The use of technology in the language classroom was characterized by programs that offered repetitive exposure of students to the same material, such as drill and practice exercises (Egorov, Jantassova, & Churchill, 2007). In the 1980s when the communicative approach to language teaching emerged computer programs adapted to this change by teaching grammar implicitly, encouraging students to

create original language, using the target language exclusively, and focusing more on using forms rather than on the forms themselves (Egorov et al., 2007).

In the 1990s, many educators were still not content with computer assisted language teaching and learning. With the rise of multimedia capabilities and the Internet, significant changes were moving forward. Teachers discovered that multimedia could provide a more authentic language learning environment and experience where students could explore language, culture, literature, and other topics at the click of a mouse (Egorov et al., 2007).

Web 2.0 and Foreign Language Instruction

Computer technologies, especially Web 2.0 technologies, have great potential to provide rich resources for language teaching and learning (Egorov et al., 2007; Kim & Rissel, 2008). According to Castleberry and Evers (2010), "The free open-access programs found on the Web can enhance students' learning experience and are invaluable resources for teachers" (p. 203). Asselin and Moayeri (2011) agreed that Web 2.0 technologies are valuable resources and reported:

> The ease of transforming existing visual, auditory, and textual content into new multimodal content; opportunities to represent ideas and the self to new and wide audiences; and the provision of openly interactive, collaborative and supportive environments in which to build these representations and explorations are afforded by Web 2.0. (p. 46)

Learners in classrooms today not only desire but also expect the integration of technologies in classroom instruction because technology envelopes all aspects of their lives (Conole, 2008). However, underutilization continues to prevail even though many

of the technologies are readily available and their familiarity is increasing (Kim & Rissel, 2008; Satar & Özdener, 2008). Although there has been increased usage of Web 2.0 applications in education, the technologies are not being used in the open-ended, collaborative way in which they are intended (Asselin & Moayeri, 2011), and they rarely have been shown to reform education in a manner that enhances academic performance (Bonk, 2009).

How web 2.0 supports the challenges of foreign language instruction. Web 2.0 technologies offer a collaborative platform where language learners can interact with one another for the purpose of negotiating meaning and increasing oral proficiency (Huifen & Yueh-chiu, 2010). Web 2.0 technologies afford language learners the opportunity to construct meaning with one another in an environment where the teacher can act as more of a facilitator of learning (Huifen & Yueh-chiu, 2010). Vygotzky's (1978) theory of Social Constructivism is supported by Web 2.0 technologies that offer opportunities for collaboration, such as *Voice Thread*®.

One challenge in foreign language education is scheduling. Since many courses are not scheduled daily, language learners sometimes lack the daily practice they need. The incorporation of Web 2.0 technologies can help learners achieve practice time outside class since the availability of these technologies is not limited to certain classroom or school computer systems. Language educators can also easily monitor student participation.

Classroom time for learners to practice speaking is also another challenge in foreign language instruction (Bahrani, 2011; Satar & Özdener, 2008). Increasing student to teacher ratios poses a challenge for the instructor to monitor and assess the oral

proficiency skills of language learners during regular class time. Since the majority of learners bring mobile devices with them in the classroom, instructors can request that learners record responses to certain questions while in class. For oral proficiency assessments, the instructor can change from having to speak individually with each student to having the students record their responses and post them using their personal mobile devices. Then, the instructor can assess the speaking samples at his or her convenience.

Language learners need to be pushed to produce output in the target language (Kim & Rissel, 2008). Web 2.0 technologies offer a platform that allows language learners to practice pushing themselves to produce output. In the online environment, learners can express themselves, evaluate those expressions, and modify them as needed. Web 2.0 technologies can help encourage creativity, collaboration, and personalization (Ravenscroft, 2008).

Research on Foreign Language and Technology Integration

With the evolution of technology use in education, more teachers are examining ways to incorporate technology effectively in the foreign language classroom (Pufahl & Rhodes, 2011). Research on the effectiveness of computer-mediated communication in foreign language has evolved as technology is being integrated more. In the past, technology use in FL courses consisted of the use of computers for drill and practice exercises, for the purpose of practicing vocabulary, and grammar structures.

Technology integration in language learning is currently capable of supporting various ways for learners to "construct their own understanding" (Hussain, Iqbal, & Akhtar, 2010, p. 129). These skills are essential for learners as they are functioning in a

technology-driven society where social media is rampant and online collaboration is a vehicle for communication.

Technology integration now offers the possibility to practice productive skills, such as speaking in the target language. Communication has evolved from simply face-to face to using media that allows people to communicate both synchronously and asynchronously. This helps learners develop their ability to produce language as well as develop confidence without the pressure of performing for an audience (Castleberry & Evers, 2010; Kim & Rissel, 2008). One of the major aims of incorporating computer technologies is that online environments can be easily created and monitored for the purpose of promoting learner participation and output in the target language (Kim, & Rissel, 2008).

An important factor for language educators to consider is the perception of the effectiveness of technology incorporation according to teachers and learners. In one study, 156 Japanese language learners participated in computer-assisted language learning activities using the asynchronous voice-conferencing technology *Wimba*©. In a survey on the perception of the effectiveness of the technology given to both teachers and students, 67% of the teachers felt it was very useful, although only 17% of the students found it to be very useful (Weibe & Kabata, 2010). Some language learners in the study reported that they were unclear of the purpose for using the technology. Further study is needed in order to ensure that technology is woven into the curriculum in purposeful and intentional ways so that learners value and comprehend the usage of technological tools.

Some K-12 teachers and college foreign language professors express that they do not want to lose social interaction with students and fear that technology will isolate them

from their students (Spodark, 2005). Often, teachers tire of constant technologies presented to them with no proof that the tools actually improve or enhance learning for students. Thus, the need exists to examine the effectiveness of technology tools and their ability to foster communication and collaboration for language learners.

Kang-Mi and Shen (2006) agreed that more research is needed and found that when traditional instruction is compared with technology-integrated instruction in language learning, technology integration does not consequently lead to improved performance. They found that it only improved the learners' perception of the learning environment (Kang-Mi & Shen, 2006).

Research in the area of foreign language technology integration compared to traditional methods of language teaching and learning is limited. The majority of studies have been conducted in postsecondary education foreign language courses. In addition, more studies have been conducted with English language learners rather than learners of other foreign languages.

Computer-Mediated Communication and Foreign Language Anxiety

Due to the anxiety that is present in the foreign language classroom, it is important to examine the ability of the computer-mediated environment to reduce the anxiety of language learners (Blake, 2000). Though the present study incorporated asynchronous technology, equally important is the examination of how both synchronous and asynchronous technologies, including text and voice conferencing, have had an effect on language learners and where the gaps in the literature exist.

Text-based conferencing. Text-based asynchronous technology has been found to decrease language learner anxiety (McIntosh et al., 2003). Learners who used text-

based asynchronous technology for the purpose of discussion in the language classroom felt as if they had more time to process their responses. This extra time decreased the learners' anxiety levels. Less pressure in the online environment, coupled with the anonymity that learners experience, lowers the affective filter (Satar & Özdener, 2008). Language learners who are typically shy and reticent tend to participate more frequently in online synchronous discussions than they do in the face-to-face environment (Beauvois, 1992). In addition, text-based asynchronous discussion boards helped learners in English language classes to feel less fear due to additional response time, especially students who were less proficient (Sotillo, 2000). Language learners participating in text-chat have also been shown to be more willing to take risks due to the liberty they feel in the online environment, along with the decreased sense of negative evaluation by peers and the instructor (Poza, 2005).

Although text-chat can increase learner output in written form, it does not account for oral output in the target language (McIntosh et al., 2003). On language examinations language learners will be assessed on their speaking abilities; thus, more time is needed for them to practice speaking rather than solely communicating via text-chat. Although it is important to note that text-based communication has been shown to affect anxiety levels of learners, few studies have been conducted that incorporate voice-conferencing technologies. In addition, the majority of these studies have been conducted with university level language learners. A gap exists in the literature on the effect of technologies on high school level language learners.

Voice-based conferencing. Since speaking in the target language creates increased levels of anxiety among foreign language learners (Awan et al., 2010; Bailey,

Daley, & Onwuegbuzie, 1999; Horwitz et al., 1986; Kim, 2009), it is important to determine if voice-conferencing technology can help decrease anxiety levels and improve the oral proficiency of language learners. Voice-conferencing technologies provide a richer level of communication beyond what text-chat is able to provide based on Media Richness Theory (Daft & Lengel, 1986). According to Media Richness Theory, communication will be more effective if the mean of communication is more personal (Daft & Lengel, 1986). Another communication theory that supports the richness of voice over text communication is the Social Presence Theory. Social presence in the online environment can help learners create a sense of community which could lower the affective filter for language learners (Tu & McIssac, 2002). Text-chat creates the least amount of social presence (Tu & McIssac, 2002), whereas voice-conferencing creates a higher level of social presence.

Evidence from research demonstrates that voice-conferencing technologies decrease language learner anxiety. Fourth semester Portuguese language learners who participated in synchronous conversations using the software *Interchange* felt they were in a less threatening environment where they felt anonymous and worried less about making mistakes (Beauvois, 1992). The language learners in Beauvois's (1992) study felt that the pressure to respond quickly decreased because in the computer-mediated environment, other learners were not staring at them and waiting for them to respond. In addition, she noticed that learners who were typically reticent participated more often than in the regular classroom.

However, Beauvois's (1992) study was conducted with university level language learners of Portuguese, and the technology used was synchronous. Language learners

also participated in a computer lab when they practiced using the *Interchange* program. Language learners in the current study will have the opportunity to post comments asynchronously at school, but also at their leisure, and at home where they might feel even more comfort and less pressure than being in a computer lab surrounded by their peers. Additionally, since this study was conducted in 1992, more current technology tools need to be evaluated for language learning.

Poza (2005) incorporated the use of *Wimba*© with university intermediate Spanish language learners. Language learners participated in both in-class discussions and discussions using *Wimba*© and then took surveys to determine if the use of *Wimba*© had an effect on their foreign language anxiety and computer anxiety. Results from the study indicated that students experienced an overall reduction in their anxiety levels and felt the online environment decreased the pressure of the time constraint to respond (Poza, 2005). Learners in the study also felt they were more willing to take risks in the *Wimba*© environment because their fear of being negatively evaluated had decreased (Poza, 2005). Though this study does show the effect of asynchronous voice-conferencing on anxiety, it does not focus on the improvement of oral proficiency. The goal of second language education is to improve the oral proficiency of language learners. With increased oral proficiency, the communicative competence of language learners will naturally improve. It is crucial to examine further the effect of voice-conferencing technologies on oral language proficiency.

Several voice-conferencing studies have incorporated the use of the voice-conferencing tool *Wimba*© (McIntosh et al., 2003; Poza, 2005; Satar and Özdener, 2008).

However, other voice-conferencing technologies need further exploration since newer technologies with enhanced capabilities are now available.

Pufahl and Rhodes (2011) also suggested that the computer-mediated environment may be less threatening to language learners. Satar and Özdener (2008) believed that the computer-mediated environment provided a "test environment" where learners could try speaking the language and then reflect and evaluate their own performance through authentic interaction (p. 595). Thus, more research is needed to point out that these suggestions regarding the potential of the computer-mediated environment are true. Empirical findings in the literature that demonstrate the actual benefits of computer-mediated communication, especially for high school level language learners, are lacking. In addition, the rise of voice-conferencing technologies makes an examination of the effectiveness of such technologies necessary.

Computer-Mediated Communication and Language Proficiency

Although computer-mediated communication has consistently shown to decrease anxiety levels of foreign language students (Beauvois, 1992; Poza, 2005), mixed results exist in the literature for its effect on the improvement of proficiency for language learners. In this section, studies on text-based conferencing and voice-based conferencing will be examined. These studies will reveal how computer-mediated communication has affected language proficiency.

Text-based conferencing. Over the past 10 years, text-based synchronous and asynchronous technologies have been incorporated as a teaching tool in language instruction. According to McIntosh et al. (2003), two major benefits of text-based asynchronous communication based on prior research studies included, "a deeper thought

process manifested in the discussion threads, and the facilitation of collaborative learning" (p. 63).

In Taiwan, 96 English language learners at the university level used text-based synchronous and asynchronous technologies to text-chat and post comments on discussion boards and via emails. The language learners in the study reported that text-based communication helped them organize their ideas and increased their confidence when they had to write essays (Huifen & Yueh-chiu, 2010). The text-chat also helped them with their oral skills as one participant noted, "Although chatting is not really using the mouth to speak, I did type what I intended to say. I think it is "speaking in slow motion" (Huifen & Yueh-chiu, 2010, p. 718). In a third semester German course at the university level, no difference was found in the syntactic complexity or the lexical richness of sentences produced via text-based synchronous and asynchronous technologies (Abrams, 2003).

These studies illustrate that text-based conferencing has not shown consistent results for improving language learner proficiency. Consistent results are lacking due to inconsistent measures and varying types of technologies used. Several text-based studies have used self-report measures in which learners reported on how they believed the use of text-based conferencing affected their language proficiency (Huifen & Yeuh-chiu, 2010). Additional studies have examined different elements of written discourse, while others have focused solely on affective factors such as anxiety, or participation via text-based conferencing compared to face-to-face discussions (Poza, 2005). Still other studies on text-based conferencing simply have not focused on oral proficiency, but rather the

quantity of comments made by participants (Kelm, 1992), without specific focus on how that participation affected learner proficiency and quality in language output.

Language learners stated that a disadvantage to the text-based conferencing environment is that strict use of the target language is extremely challenging especially since their English linguistic competence was limited and the instructor was not present for immediate help. Lack of teacher presence was also a factor for language learners in a synchronous text-based study in which learners also reported no improvement in grammar skills and much incoherence in discussions (Kern, 1995).

Although text-based computer-mediated communication is advantageous, it is restricted to "written words" and may be "impedimental in language instruction where oral skills are essential for communicative competency" (McIntosh et al., 2003, p. 63). Kern et al. (2008) concurred and reported that the majority of the research has been conducted using text-based conferencing, but now "image and voice are becoming integral parts of how we interact and represent ourselves online" (p. 288).

Kern et al. (2008) researched the benefits of synchronous technologies compared to face-to-face discussion for language learners and summarized the following benefits they found in previous studies:

> Increased and more democratically distributed student participation; more time to develop and refine comments-possibly leading to greater precision and sophistication of expression; encouragement of a collaborative spirit among students; enhanced motivation for language practice and, in particular, greater involvement of students who rarely participate in oral discussions; reduction of

anxiety related to oral communication in a foreign language; and positive effects on students' writing ability and perhaps speaking ability as well. (p. 282)

Voice-based conferencing. More research is needed regarding how both synchronous and asynchronous technologies actually improve learners' writing and speaking abilities (Pufahl & Rhodes, 2011). Many of the previous studies have not measured oral proficiency, but rather affective factors such as anxiety and risk-taking in the computer mediated environment. Measures of language learner perceptions of the effectiveness of voice-conferencing for language learning have been more prevalent in the research literature. In addition, voice-conferencing technologies have been incorporated in higher education, but further exploration is needed at the secondary level. The present study attempted to fill this gap by examining how asynchronous voice-conferencing affects the oral proficiency of high school foreign language learners.

Researchers that have incorporated oral proficiency as a variable do report that online voice-chat (Pellettieri, 2000) and the use of synchronous software to practice speaking (Blake, 2000; Payne & Whitney, 2002) improved the grammatical competence, negotiation of meaning skills, and oral proficiency for university level language learners.

Learners who participate in asynchronous voice-conferencing do feel more comfortable with speaking due to the ability to record and listen to their own voices (McIntosh et al., 2003). McIntosh et al. (2003) noted that English language learners at a university in Canada reported that the online environment provided a "non-threatening setting" (p. 68). In the study, 56% of the participants reported feeling more confident speaking in class and 57% reported that their speaking skills had improved after participation in the asynchronous discussions. Participants also believed that the "less

intimidating environment" provided by *Wimba*© helped them overcome the anxiety they had felt toward speaking in the classroom (McIntosh et al., 2003, p. 68). However, no empirical data was gathered in this study that actually demonstrated increased oral proficiency levels. Again, emphasis in this study was focused on learner perceptions of the *Wimba*© environment. Some learner perceptions were also negative as some learners felt there were too many delays that caused an impediment to the exchange of ideas. Other voice-conferencing technologies need to be examined, along with their effect on oral proficiency skills for high school language learners.

Hampel (2003) conducted a study at the Open University in England using *Lyceum*, an audio-graphic conferencing system. Although 83% of the learners in the study reported increased levels of oral communicative competence, one negative aspect learners listed was the "lack of body language in the virtual medium" (Hampel, 2003, p. 30). In contrast to other studies such as Beauvois's (1992), in which reticent learners seemed more willing to participate in the online environment, Hampel (2003) found that due to the lack of body language and other paralinguistic cues which could be observed in face-to-face conversation, shy learners had more difficulty participating.

Previous studies (Hampel, 2003; McIntosh et al., 2003) show that technology has consistently reduced student anxiety but with mixed results regarding actual improvement of oral and written proficiency skills. The previous studies were also conducted with university level language learners. This researcher added to the literature on the effect of asynchronous voice-conferencing on the oral proficiency of language learners at the high school level.

Voice Thread® as a voice-conferencing technology in language learning.

Voice Thread® is an interactive, multimedia presentation technology that allows users to hold conversations around images, documents, videos, and audio. It is easily accessible, cost-effective, and applicable to any grade level or subject area (Brunvard & Byrd, 2011). Users can leave audio comments around (a) images, (b) documents, (c) video or sound clips with a microphone or telephone, (d) uploaded audio or video file, or (e) a text (Millard, 2010). This technology can be used in a large group, small group, or one-on-one. Since *Voice Thread*® is a relatively new technology, minimal studies exist in the literature that provide empirical findings on how it has been used in the educational setting. This is true for most of the Web 2.0 technologies as these technologies were not originally created to be used for educational purposes but rather for data processing and transmission of information (Millard, 2010).

This researcher found few studies in which *Voice Thread*® has been incorporated as a language learning technology. Graduate level English language learners in Japan used *Voice Thread*® to help increase student confidence in oral presentation skills as students were asked to practice conducting their oral presentations using *Voice Thread*® before they presented in front of their peers (Pallos, 2011). Overall, *Voice Thread*® improved student self-confidence in this study.

At the elementary level, Bush (2009) presented uses of *Voice Thread*® for the elementary classroom showing how it could extend the language classroom beyond the physical walls of a building to teach students about culture. Pop, Tomuletiu, and David (2011) found that *Voice Thread*® increased the motivation of adult English language learners, and qualitative analysis revealed that adult learners felt communication through

asynchronous voice-conferencing increased their motivation to improve in the language. However, none of the literature searches, including searches for secondary studies incorporating *Voice Thread*®, second language learning and technology, and high school foreign language learning and *Voice Thread*®, have rendered studies that have been conducted using *Voice Thread*® as a language learning technology. The use of *Voice Thread*® in the high school foreign language classroom and its effect on foreign language anxiety and oral proficiency needs further exploration.

Although a gap exists in the literature on studies that have implemented *Voice Thread*®, it is evident that technology integration and implementation is important to digital natives and millennial students (Carnicom et al., 2007). Use of the latest Web 2.0 technologies can increase learner engagement and motivation, while encouraging multimodal learning including visual and aural, permit learning opportunities outside the classroom, and lastly, promote technological literacy (Carnicom et al., 2007).

The 2009 K-12 edition of the *Horizon Report*, created by the New Media Consortium and the Consortium for School Networking, listed *Voice Thread*® as a tool to watch because of the opportunities it provides as an online collaborative learning environment (Johnson, Levine, Smith, & Smythe, 2009). *Voice Thread*® gives students the opportunity to literally share their voice and express their opinion in a collaborative attempt to construct knowledge and meaning.

The 2011 K-12 edition of the *Horizon Report* also listed trends that included emerging practices in teaching and learning. The incorporation of technology as a collaborative learning tool continues to rank high on the list of emerging trends. Other trends listed include the continuing use of cloud-based applications. The location of the

stored work does not matter, "what matters is that our information is accessible no matter where we are or what device we choose to use" (Johnson, Adams, & Haywood, 2011, p. 4). Language learners can create and comment using *Voice Thread*® and then publish the thread via a link. As long as learners have Internet access, they can share the recorded comments. Another highly ranked trend in the 2011 *Horizon Report* is that learners expect to be able to "work, learn, and study whenever and wherever they want to" (Johnson et al., 2011, p. 4). *Voice Thread*® can also be downloaded as an application on mobile devices. Learners may comment on threads or post new threads using their mobile devices wherever they are.

In addition, Brunvard and Byrd (2011) asserted that students who are typically shy or less confident may benefit from using *Voice Thread*®. Without having to feel as if they must compete with classmates in order to respond to an activity, this technology provides them the opportunity to participate and contribute in a meaningful way. In a study by Zorigan (2009), students in a high school literature course who had used *Voice Thread*® to complete reading projects reported that they enjoyed being able to hear other people's comments on their projects and in some ways they felt as if they got to play the role of the teacher while giving feedback to their peers. Asselin and Moayeri (2011) summed it up best, "Ultimately we must recognize Web 2.0 and its infinite iterations and transformations is here to stay even in the face of new web developments, and that young people will inhabit these worlds with or without acknowledgement in schools" (p. 50).

Summary

In the literature review chapter, the study was situated within the theoretical frameworks of Krashen (1982) and Second Language Acquisition Theory and also

Vygotzy's (1978) Social Constructivist Theory. A review of the challenges teachers and learners face in the foreign language classroom was presented, namely the challenge of foreign language anxiety and its correlation with academic achievement. Although foreign language anxiety is a key factor, little research exists on methods to help learners feel more competent in the foreign language classroom. This lack of research is a significant problem due to the current push toward communicative competence and increased oral proficiency for foreign language learners.

The use of synchronous and asynchronous computer-mediated communication technology was also discussed. Mixed results have been found regarding the improvement of oral proficiency skills and anxiety using text and voice-conferencing technologies. The use of the Web 2.0 technology *Voice Thread*® can help teachers and learners face the challenges that come along with learning another language by providing increased opportunities for learners to practice speaking the target language in an online, collaborative environment. Since *Voice Thread*® is a relatively new technology, few studies have been done on its benefits in the foreign language classroom. Therefore, this researcher attempted to fill the gap in the literature regarding the voice-conferencing technology, *Voice Thread*®, and the effect it has on foreign language anxiety and oral proficiency in the high school foreign language classroom.

CHAPTER 3: METHODOLOGY

Speaking in the foreign language classroom has been shown to cause increased anxiety levels for foreign language learners (Awan et al., 2010). High levels of anxiety have been correlated with negative achievement in foreign language learning (Ewald, 2007). A need exists to research teaching and practice methods to help alleviate anxiety so students can become more proficient in second languages (Shams, 2006). Thus, the purpose of this study was to determine if the use of the Web 2.0 asynchronous voice-conferencing technology, *Voice Thread*®, had an effect on the anxiety and oral proficiency of high school upper-level foreign language learners. In this chapter the research design, participants, and setting are described. The instrumentation and data analysis procedures are also discussed.

Research Design

A quasi-experimental, non-equivalent control groups design was used for this study. This design utilizes intact groups and lacks random assignment (Campbell & Stanley, 1963). Although random assignment strengthens internal validity, it is often not possible in educational settings in which classes have previously been established (Gall et al., 2007; Glatthorn & Joyner, 2005). For this reason, random assignment was not possible in this study; thus, a quasi-experimental non-equivalent control groups design was deemed most appropriate.

Similar foreign language studies have used this same research design. Shams (2006) incorporated a quasi-experimental design in her study of 65 students in four second- semester French courses at the university level. In her study, she measured

student foreign language anxiety levels as related to method of practicing French pronunciation. She compared the use of a language pronunciation software program with cassette tapes in the language laboratory. Poza (2005) also used a quasi-experimental design in her study of 35 university students enrolled in two sections of intermediate Spanish Two. She sought to determine if there was a difference in students' anxiety levels when they used the asynchronous voice conferencing technology *Wimba*© compared to speaking practice through in-class discussions.

These studies provided further evidence that this design is effective and appropriate for the present study. This design allowed for three intact Spanish classes to comprise the experimental group that used *Voice Thread*® for speaking practice. The control group consisted of three intact Spanish classes that used the language laboratory for speaking practice. A pretest and posttest anxiety and oral proficiency measure was given to all participants to determine if the method of speaking practice affected the anxiety and oral proficiency of the participants. The pretest was used as a control variable to control for the selection threat to validity.

The study answered the following proposed research questions:

Research Question 1: Is there a statistically significant difference in Spanish Three students' anxiety levels measured with the Foreign Language Classroom Anxiety Scale for students who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

Research Question 2: Is there a statistically significant difference in Spanish Three students' oral proficiency scores measured by the Performance Assessment for Language Students level three speaking analytical grading rubric for students

who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

Participants

This researcher recruited participants from a sample of six intact classes of Spanish Three from one public high school in North Georgia. A total of 174 students were invited to participate in the study. From this group, 149 students returned their signed parent/guardian consent and student assent forms. Throughout the study, five students dropped out due to schedule changes. Thus, the total number of students that comprised the sample for this study was 144. The volunteer rate was 83%.

The participants were in their third year of Spanish language study after completion of Spanish One and Spanish Two as prerequisite courses. The study took place during the first nine weeks of the 2012-2013 school year. The experimental group using *Voice Thread*® to practice speaking consisted of 73 students, with 31 males and 42 females. There were 68 sophomores, three juniors and two seniors. The participants in the experimental group were (a) 81% Caucasian, (b) 1.3% Hispanic, (c) 12% Asian, (d) 1.3% African American, and (e) 4% Multiracial. The control group using the language laboratory to practice speaking consisted of 71 students, with 36 males and 35 females. There were 65 sophomores, and six juniors. The participants in the control group were (a) 82% Caucasian, (b) 2.7% Hispanic, (c) 9.5% Asian, and (d) 4% African American.

Students in these courses had chosen Spanish Three as an elective course because they had completed the minimum two years of foreign language study required for high school graduation. In addition, many of the advanced level students who participated in this study were students that planned to take Spanish Four during the following school

year. Some would also move on to Advanced Placement language courses. These third year Spanish students were chosen based on the proficiency of their vocabulary and grammar; thus, enabling them to carry on a conversation in the target language (Pufahl & Rhodes, 2011). All students were nonnative Spanish speakers.

The six intact sections of Spanish were taught by two different teachers. The two Spanish teachers had between two and nine years of experience teaching upper-level Spanish courses at the high school level. Both teachers taught all Spanish Three year long courses and used the same curriculum that is based on the Georgia Performance Standards for foreign languages. Their methodology was strongly founded in the communicative approach to language teaching. The two teachers were randomly assigned to lead the control or experimental group.

Setting

Overview of the School

The setting for this study was one high school in North Georgia. This high school is part of a school system that serves over 38,000 students in 35 schools. The school where the study took place had 2,144 students enrolled during the 2012-2013 school year with a ratio of 51% female to 49% male. The school demographics consisted of this (a) 10% Hispanic, (b) 0.3% American Indian or Alaska Native, (c) 12% Asian, (d) 4% African American, (e) 0.04% Native Hawaiian or Pacific Islander, (f) 71% Caucasian, and (g) 2.8% Multiracial. In 2011, 91.4% of the schools in the system made Adequate Yearly Progress (AYP) compared to the Georgia average of 72.7% of schools that made AYP (Georgia Department of Education, 2011).

This high school is also located in a school district that is at the forefront of technology integration in the state of Georgia. The district is known for hosting annual digital schoolhouse conferences in which teachers from various schools within the district demonstrate how they are integrating technology daily within their classrooms. Several high schools in the district where the study took place have also served as pilot schools for the new district policy of Bring Your Own Technology (BYOT) in which students are allowed and encouraged to bring their cell phones, laptops, I-pads, and other technologies into the classroom for academic purposes.

The high school in which the study took place has received local, state, and national recognition as a top high school due to the Advanced Placement course offerings and course participation. This high school also has the International Baccalaureate (IB) diploma program in which students can enroll in the IB program during their junior and senior year. The study of world languages is a key element in the IB program as students must be enrolled in a foreign language class all four years in high school. Students in this high school can also choose to take numerous Advanced Placement (AP) courses such as AP Language and AP Literature courses in Spanish, French, German, and Latin.

Students must demonstrate oral proficiency to pass the IB language examination and the AP language examination. Many students at this high school enroll in foreign language classes to earn as many foreign language credits as possible due to the importance foreign language study has on the college admissions process. Several students continue foreign language study in college and minor in the foreign language of study.

Spanish Classroom

Students in the Spanish Three, year-long course sections who returned signed parent/guardian consent and student assent forms participated in this study. In Spanish Three courses, language learners intensely study the language and are expected to use the target language as a vehicle for communication during class. Teachers conduct Spanish Three classes 100% in the target language and the teacher only speaks English if clarification of a difficult grammar concept is needed. Because of their knowledge of vocabulary and grammar structures acquired from their Spanish One and Spanish Two courses, students in Spanish Three are better able to communicate in the target language.

The Spanish Three curriculum provided a framework for the activities that students used to practice speaking for this study. Throughout the Spanish Three year-long course, the topics include family, technology, pop culture, history of Latin America (including the Aztecs, Incas, and Mayas, to the Spanish conquest and colonization), and a study of Don Quijote. A study of art, literature, culture, and current events is also blended into the units. In each unit, students are given approximately 150 new vocabulary words to learn and they are assessed based on their ability to define the words orally and in written form in Spanish, using them in the appropriate situational context. Grammatical concepts covered in the Spanish Three curriculum include continued practice with the present, future, and conditional verb tenses along with introduction and extensive practice of the preterite and imperfect past tenses, and the subjunctive tense.

For this study, the curriculum was held constant across all classrooms involved with the study. However, the method students used to practice speaking was altered to determine if the method of practicing speaking had an effect on student anxiety levels and oral proficiency. The experimental group practiced speaking using the asynchronous

voice-conferencing technology *Voice Thread*®. The control group practiced speaking using the traditional method of the language laboratory.

Experimental Group Setting

Speaking practice activities for the experimental group were held via *Voice Thread*®. *Voice Thread*® is an asynchronous voice-conferencing technology that allows learners to communicate by posting voice recordings to a web page using cell phones or microphones to record their voices from a computer. This technology allows students to post comments in Spanish around an image, a video or sound clip, or a question or series of questions provided by the teacher. A screen shot of *Voice Thread*® can be viewed below.

Figure 1. *Voice Thread*® Screenshot

Voice Thread® is a Web 2.0 technology that is free to use. Students created their own account and were required to have a username and password to access the account.

During the summer before the study, the school district purchased the rights for students and teachers to be able to integrate this website as an instructional technology "as long as students signing up did not violate that service's terms" (J. White, personal communication, March 16, 2012). With *Voice Thread*® the teacher can simply email a link of a previously created *Voice Thread*® and have students record their comments to the question or image. Alternatively, the teacher can have the students start their own conversation and publish the link to the rest of the class. Once a link has been sent, students may open the link and begin posting their comments to add to the conversation.

Students had the option of calling in using their cell phones or using headsets with microphones in the school computer laboratory, or the four available classroom computers. Students have the opportunity to think through their response before they post comments due to the asynchronous communication via *Voice Thread*® (Brunvard & Byrd, 2011). The teacher who facilitated the experimental group reserved a computer laboratory for 30 minutes each week and provided headsets with microphones for students to make initial posts for each weekly speaking activity. Then, students were required to post a minimum of two responses to classmates, which occurred throughout the week outside of class in the online environment. Ten additional minutes per week of speaking practice in the online environment were added to the experimental group to maintain equality in practice time between the two groups.

Control Group Setting

The control group setting was the foreign language laboratory which is a separate classroom located on the foreign language hallway within the high school. The teacher who facilitated the control group scheduled a 40 minute segment of time each week to

bring the control group classes to the language laboratory. Students participated in the same speaking activities as the experimental group to practice their speaking skills. The language laboratory in the school contains 32 separate stations with partitions dividing each station. Each station includes a headset with a microphone, and a control panel for each student. Students practiced speaking skills individually, with one partner, and in groups of three in the language laboratory. In the language laboratory, the teacher has the ability to listen to each student and hear what they are saying and provide feedback if necessary.

Explanation of Speaking Activities

The speaking activities created for this study covered topics from the first two units of the Spanish Three curriculum. These units included an introductory review regarding descriptions of oneself and others and technology and the future. The same activities were used for the control and experimental groups, however the presentation of the activities was different. Videos, pictures, and songs were viewed by the control group via the interactive whiteboard located in the language laboratory. Videos, pictures, and songs for student commentary were uploaded to *Voice Thread*® for the experimental group. Students in both groups received a copy of the weekly activity instruction sheet. This sheet contained the questions and any resources students used for speaking practice.

Students in both groups were scheduled to practice speaking for 40 minutes each week. This practice occurred on Wednesdays or Thursdays when the duration of classes was 90 minutes. Students in the control group conducted all practice in the language laboratory. Students in the experimental group conducted 30 minutes of practice in the computer laboratory where they completed their initial posts for the speaking activities

via *Voice Thread*®. The additional 10 minutes of practice for the experimental group took place outside of class in the online environment. Students were able to finish posting their comments on the weekly speaking activities from their home computers, from their cell phones, i-pads, from school computers, or from any device with Internet access. Resource materials used for the speaking activities were covered under fair use copyright laws for educators and include reference citations. The speaking activities are found in the Appendix.

Speaking pretest. The speaking pretest was administered in the language laboratory for both the control and experimental groups. Students were given the pretest resources including the questions and pictures for description upon arrival in the language laboratory (See Appendix C). Pretest responses were audio recorded. For the pretest, students were first asked to describe two paintings by Carmen Lomas Garza, a contemporary Mexican-American artist. Students had a copy of the paintings and were also able to view the paintings via power point slides shown on the interactive whiteboard in the language laboratory. Students were asked to describe the two paintings *Cumpleaños* and *Barbacoa para cumpleaños* (Boyles, Contreras, Pino, Met, Sayers, & Wargin, 2005). Both paintings were of birthday party celebrations in Mexico. Students were asked to describe what they saw and to talk about what was happening in each of the paintings in as much detail as possible. A minimum of five to ten sentence responses was desirable and the teacher communicated this in the directions.

For the second part of the speaking pretest, students were given five written questions in Spanish and were asked to answer the questions in Spanish to the best of their ability. The questions asked students to discuss their own birthday party

celebrations and family activities. In addition, students were asked to compare and contrast their own birthday celebrations with the ones in the paintings.

Speaking activity one. For the first speaking activity (See Appendix D), students were given lyrics to the song "Esta es mi vida*"* (This is my life) by the group Jesse and Joy from Mexico City, Mexico (Huerta & Huerta, 2007). The lyrics were divided in ten sections and students listened to the song while numbering the sections of the lyrics in the correct order. Students had the opportunity to listen to the song three times. Students then watched the music video of the song. The song is about the importance of being oneself regardless of what other people think. Students were reviewing adjectives that describe themselves in the introductory unit. Students were asked to choose one section of the song they could identify with and compared their lives to that of the singer. Students also expressed if they liked or disliked the song and why. Students also responded to a question asking them why it is important for them to be who they are without worrying what others think.

For part two of speaking activity one activity, students answered three questions orally asking them to describe what they are like physically and emotionally, what types of activities they like to do, and to describe their friends or their best friend.

The control group completed this activity in the language laboratory, and the teacher allowed students time to practice their individual responses and then randomly connected two student stations so students could share responses. The teacher then randomly switched student partners two additional times so students could share responses with different class members.

The experimental group viewed the video via *Voice Thread*® and posted initial comments directly on the page while in the computer laboratory using headsets and microphones. For the second part of the activity, three additional pages were added by the teacher within *Voice Thread*®. On the second page of the *Voice Thread*®, students posted responses describing themselves. On the third page they described what they like to do, and on the fourth page they described their friends or their best friend. Students finished posting at least two additional responses to classmates for homework. Students in the experimental group also listened to their classmates' responses to the questions.

Speaking activity two. This activity consisted of two parts where students described themselves and their family members (See Appendix E). For part one of the activity, students were asked to bring in a picture of their family and introduce their family to the class. They stated the names, ages, and physical characteristics of each family member. They also described the clothing and scenery where the family picture was taken. They described what activities the family enjoys doing together and discussed why family is important in their lives. The facilitating teachers also provided extra family pictures for students who may have forgotten to bring a picture.

Students in the control group described the family picture they brought to class. The teacher placed students in groups of four in the language laboratory so students could share their descriptions within a small group. Group members listened to descriptions and then responded to the descriptions of other students' families. Students using *Voice Thread*® created their own *Voice Thread*® page and uploaded a family picture the day before the speaking practice. While in the computer laboratory, they posted their family description to the page. Students then emailed the teacher the link to their created *Voice*

Thread® and the teacher gathered all the links of students' family descriptions. The teacher emailed the class a list of all the individual *Voice Thread*® links. Students then selected four other students' descriptions to listen to and posted a comment to four students' family descriptions.

For part two of this activity, students in both groups viewed a power point slide of a collage of celebrities. They created a new celebrity family for themselves by choosing famous people from the collage to be a mother, father, sister, brother, grandmother, grandfather, and future spouse. They shared the selections of their celebrity family members with the class and described if they would like to be a member of a celebrity family or not.

For part two of this activity, the control group viewed the celebrity collage on the interactive whiteboard in the language laboratory and was given time to choose their new celebrity family members. Then, the teacher connected students with a partner so they could present their new family members. The teacher then switched partners so students could share with at least five different partners. For the experimental group, students posted the presentation of their new family to one *Voice Thread*® page while in the computer laboratory so that all students could see all student responses. Then, students were asked to comment on at least five class members' presentations of their celebrity families.

Speaking activity three. For this speaking activity, students completed a vocabulary practice using descriptive adjectives from their vocabulary list (See Appendix F). Students practiced using circumlocution to explain the adjectives they chose to describe family members. For part one of this activity, students again described family

members individually. However, this time they had to explain each adjective in Spanish using circumlocution. For example, a student could have said that their brother or sister was lazy and then explained why. They could say the brother or sister watched television all the time or played videogames, or sat on the couch too much. Students had to choose three family members and explain three adjectives to describe those family members using circumlocution in Spanish.

For part two of this activity, students had to share their descriptions with a classmate and respond to the descriptions of two classmates. In the response, students had to tell which description of their classmate's family members they liked the best.

Students in the control group recorded their responses in the language laboratory for part one of the activity and part two of this activity. Then, the teacher randomly paired students two different times to share the descriptions and explanations of family members and to share comments on favorite descriptions. Students in the *Voice Thread*® group recorded their descriptions on the *Voice Thread*® page for part one and part two of the activity and responded directly to two other classmates.

Speaking activity four. For this speaking activity, students discussed five different types of parents (See Appendix G). First, students in both groups read five short descriptions of different types of parents (See Appendix G.1). For the first part of the activity, students described their own parents and the parents' preferred parenting style. Students also discussed whether or not their parents were strict and whether or not they had a positive relationship with their parents. Students discussed if their parents were as strict as their friends' parents.

For part two of this activity, students shared their responses with two different partners. Students described the type of parents they had and also discussed their opinion on the importance of a positive relationship between teens and their parents. Students also predicted what type of parent they thought they would be one day when they have children.

Students in the control group received a copy of the descriptions on the back of their speaking activity sheet. Students read the descriptions in the language laboratory. The teacher allowed time for individual responses from students. The teacher randomly paired students two different times to allow them to share their answers to the questions from part two of the activity.

The description of the five different types of parents was uploaded to a *Voice Thread*® page where students in the experimental group viewed and read the descriptions. Students first recorded their answers for part one of the activity. Then, students added two additional comments in response to other students' comments by uploading their comments to the same *Voice Thread*® page.

Speaking activity five. For this speaking activity, students discussed personal relationships in their lives, especially friendships (See Appendix H). Students discussed questions related to (a) whether or not students preferred to have one best friend or many different friends, (b) whether or not they preferred to have friends who were similar to or different from them, and (c) whether or not having a boyfriend or girlfriend in high school was positive or negative. For part two of this activity, students shared with two classmates characteristics of their friends. Again, students recycled vocabulary from the unit on personal descriptions to complete this activity.

Students in the control group recorded their answers to part one of the activity in the language laboratory. The teacher randomly paired two students to share their responses. Then, students described their friends to their classmates. Students in the experimental group recorded their responses to the questions from part one of the activity directly on the *Voice Thread*® page. Then, they replied directly to two other students and shared descriptions of their friends within the *Voice Thread*® page.

For part two of the activity, students shared their opinions from the questions they responded to in part one of the activity. Then, students described their friends and boyfriend or girlfriend. If students did not have a boyfriend or girlfriend, they were asked to describe their ideal boyfriend or girlfriend. The teacher placed students in the control group in groups of three students for them to share and discuss their descriptions. The teacher in the experimental group placed students in groups of three, assigning each group of three a separate *Voice Thread*® link so they could discuss their descriptions of their friends, boyfriends or girlfriends on a separate page.

Speaking activity six. For activity six, students were learning about the theme of technology and the role technology plays in everyday life (See Appendix I). The first part of activity six included questions students answered in Spanish related to the importance of technology in their lives and discussed three specific ways they use technology. Then, they discussed the benefits of using technology for those activities.

Students in the control group practiced their responses individually. The teacher then randomly assigned partners and students discussed their answers with a partner. The teacher switched student partners three times. Students in the experimental group posted

the answers to the questions on the *Voice Thread*® page. They listened to classmate responses to the questions and then posted responses to three class members.

For the second part of the activity, students in both groups watched a video on YouTube (See Appendix I) about the evolution of communication technologies in Spanish. They described what they understood in the video and summarized video content regarding the impact technology has on future communication. Next, students stated and defended their opinions on whether or not technology is a necessity in their lives.

Students in the control group watched the YouTube video in the language laboratory on the interactive white board. They practiced their responses to the questions about the video individually. The teacher randomly assigned students to groups of three who then shared their opinions on the necessity of technology with two other students. The teacher listened to each group of three and chose one student in each group to share the majority opinion of the group. The experimental group watched the video uploaded to *Voice Thread*®. Students recorded their responses to that page and responded to three other students' opinions by either agreeing or disagreeing and defending their opinion.

Speaking activity seven. For this speaking activity, students discussed the role of social media and social networking in their lives (See Appendix J). For part one of the activity, students answered questions regarding how often they use social media, and what kinds of social media they utilize most for communication with family and friends. In addition, they discussed whether they believe student use of technology in the classroom helps or distracts them. Students also discussed what they would do if they did not have a cell phone.

For part one of this activity, students in the control group received a copy of the questions in Spanish and practiced their responses to the questions individually. The teacher then randomly assigned speaking practice partners and students shared their responses. The teacher switched partners with students three times so students could discuss their answers and differing opinions. For the experimental group, the questions were uploaded to the *Voice Thread*® page and students posted their responses directly to the page. Students replied to three other students and discussed their answers to the questions regarding the use of social media.

For the second part of this activity, students discussed a serious issue with social media. The issue of cyberbullying was analyzed through a video clip of a girl named Phoebe Prince who committed suicide because of cyberbullying. Students viewed the YouTube video clip of Phoebe Prince's story (See Appendix J) and then answered a series of questions regarding the video and the issue of cyberbullying. Students answered questions about what they would do if they were in a similar situation, and their reaction if this happened to someone they knew.

The control group viewed this video in the language laboratory via the interactive whiteboard. They were given a copy of the questions to answer and had time to practice their responses. Then the teacher placed students randomly in groups of three in the language laboratory to discuss their answers and reactions to the video clip. The experimental group watched the uploaded video on the *Voice Thread*® page and posted answers to the questions on the second page. Students responded to three other class members.

Speaking activity eight. For the final speaking activity (See Appendix K), students practiced using the verb *gustar* (to like) and a list of other verbs that conjugate like *gustar* (See Appendix K.1). For part one of the activity, students in both groups watched the music video of the song "Quién te quiere como yo" by the Spanish singer Carlos Baute (Baute, 2010). Students were asked to use the verb *gustar* and other verbs from the list that have similar conjugations to express their opinions about the music video. Students could write down their thoughts as they watched the video before they shared their opinions with two partners. They could discuss the scenery in the video, the clothing, hairstyle, or other elements related to the characters in the video, or other topics.

For part two of this activity, students in both groups answered three questions using *gustar* or other verbs like *gustar*. These questions pertained to students' opinions on current topics such as music videos of Lady Gaga, reality television shows, and the use of Twitter. Students first formulated their responses individually and then shared responses with two classmates.

For the first part of the activity, students in the control group watched the music video on the interactive whiteboard in the language laboratory. Then, they practiced saying their five sentences using *gustar* or *gustar*-like verbs individually. The teacher randomly paired students with two different classmates to share the five opinions of the music video. Students in the experimental group watched the uploaded music video via *Voice Thread*®. Then, they recorded their five individual responses to the music video using *gustar* or *gustar*-like verb to the *Voice Thread*® page. Students then responded to two other classmates.

For the second part of this activity, students in the control group recorded their individual responses in the language laboratory. Then, students were placed in groups of three and shared their responses to the three questions regarding current topics and using the verb *gustar*. Students in the experimental group recorded their responses to the three questions on the second *Voice Thread*® page. Students responded to two additional classmates.

Speaking posttest. The speaking posttest was administered in the same format as the pretest. Students in both groups took the posttest in the language laboratory (See Appendix L). Responses were recorded and saved to a jump drive for scoring. For part one of the posttest, students were given two images of two different families using technology. The images were similar like the two paintings of birthday party celebrations students described for the pretest proficiency score. Students were given guided phrases suggesting how they should describe the images. Students were also reminded to say five to ten sentences about the images as a minimum.

For part two of the posttest, students were asked to compare the use of technology within their own families to the use of technology of the families in the two images from part one. Students were given five questions to answer regarding the role of technology within their own families and the effect they believe technology use has on family relationships. Again, students were reminded to answer part two with a minimum of five to ten sentences.

Instrumentation

This researcher used two measurements which served as both the pretests and posttests. The Foreign Language Classroom Anxiety Scale (FLCAS) was used to

measure students' anxiety levels (Horwitz et al., 1986). This instrument has been used in numerous research studies on foreign language anxiety and has been proven to be a reliable and valid measure of foreign language anxiety (Horwitz, 2001).

The FLCAS (Horwitz et al., 1986) was designed for the specific purpose of identifying and measuring the situation-specific anxiety caused by the distinct feelings students experience while learning a foreign language. The scale consists of 33 statements that assess communication apprehension, test anxiety, and fear of negative evaluation in the foreign language classroom. Each of the 33 items is rated on a 5-point Likert-type scale that ranges from strongly agree to strongly disagree (Horwitz et al., 1986). Students are asked to respond to statements such as, "I start to panic when I have to speak without preparation in language class" and "In language class, I can get so nervous I forget things I know" (Horwitz et al., 1986). To identify the anxiety levels of students, scores of between one and five points were assigned to the Likert-type responses. Responses that indicated high anxiety received five points, while responses indicating low anxiety received one point. Therefore, the range of scores was 33 to 165 (Shams, 2006).

Horwitz et al. (1986) initially used the FLCAS in a study of 108 university language learners. Horwitz et al. (1986) reported that the FLCAS had an internal consistency of $r = .93$. In the same study, test-retest reliability was demonstrated with $r = .83$ over a period of eight weeks. The FLCAS has also demonstrated validity through criterion-related studies (Horwitz et al., 1986).

Recent studies show the FLCAS to have construct validity. Based on Cronbach's alpha (.94), scales are highly reliable (Marcos-Llinás, & Garau, 2009). The FLCAS also

demonstrates predictive validity in that significant negative correlations have been found between scores on the anxiety measure and end of term grades (Horwitz, 2001). Cronbach's alpha was used to test reliability in the present study. Cronbach's alpha was .80, indicating that internal consistency of the FLCAS is good (Howell, 2011).

The second instrument this researcher used in this study to measure the variable of oral proficiency in the target language of Spanish was the Performance Assessment for Language Students (PALS) level three speaking analytical grading rubric (Fairfax County Public Schools, 2004). Stiggins (2008) expressed that analytical grading rubrics are best for classroom evaluation of language learning because they contain multiple scales that are used to evaluate various dimensions of performance, along with the assignment of sub-scores for each dimension.

The grading rubrics were designed based on the domains within the American Council on the Teaching of Foreign Languages (ACTFL) standards for oral proficiency. The grading rubric rates students from one (minimal completion) to four (superior completion) in the following six categories (a) task completion, (b) comprehensibility, (c) level of discourse, (d) fluency, (e) vocabulary, and (f) language control. The grading rubric includes descriptions for each level of the subscale. For example, if a student scored a one on the subscale of comprehensibility, this would be described as "Content barely comprehensible, requiring frequent interpretation; pronunciation may frequently interfere with communication" (Fairfax County Public Schools, 2004). It also includes a conversion chart for easily turning the performance rating into an actual score representative of each student's ability to meet the level of oral proficiency standards. A student's score can range from six to 24.

To check for reliability of the proficiency grading rubrics, each summer Fairfax County Public Schools form three committees of foreign language teachers. These teachers rate speaking samples of students collected throughout the school year from various high schools within the district. Two committees will listen to the same sample and give an overall proficiency rating to the sample. Since the grading rubrics allow for one-half point differences, the two committees also allow for a difference of one-half a point. However, if there is a difference of one point in the rating of the speaking sample by the two committees, the sample must be sent to a third committee for rating. This process allows the district to ensure that the rubrics are producing reliable results and that teachers are rating students accurately (P. Patrick, personal communication, November 29, 2011).

To ensure the validity of the PALS grading rubric, teachers randomly select students from various high schools in the Fairfax County school district to take the Standards-Based Measure of Proficiency (STAMP) test. This is a standardized oral proficiency measure similar to the ACTFL oral proficiency interview. Students are rated on an oral proficiency scale of novice-low to superior. No standardized test provides an actual oral proficiency rating number besides the PALS grading rubric; however, the PALS grading rubric covers the same six domains that are assessed using the STAMP test. Upon receipt of the STAMP scores for oral proficiency, foreign language teachers compare the proficiency level with the numerical proficiency score based on the PALS grading rubric to examine if there is a high correlation between the proficiency level and the proficiency rating (P. Patrick, personal communication, November 29, 2011).

In the 2011 Report of the Central States Conference on the Teaching of Foreign Languages, Koubek (2011) listed the PALS analytical grading rubric for performance assessment as an example of a valid and reliable grading rubric and resource for foreign language educators. Fairfax County Public Schools is a leading school system in the nation in foreign language programs of study. The school system has been perfecting performance assessment rubrics for foreign language teachers since 1995. The grading rubrics have been field-tested for reliability and modified in order to accurately reflect student proficiency levels (Fairfax County Public Schools, 2004).

For reliability purposes in the present study, two raters used the PALS rubric to rate the oral proficiency scores of the participants. Inter-rater reliability was calculated using SPSS to determine Pearson's correlation coefficient (Howell, 2011). Inter-rater reliability for the composite oral proficiency posttest was $r = .57$, indicating moderate agreement (George & Mallery, 2003). The raters each listened to the speaking samples of the participants and rated them individually. The researcher used the average scores of the two raters for the pretest and posttest overall scores and subscale scores.

Procedures

After gaining approval from the IRB for the study, this researcher received approval from the superintendent of the school system. In order to receive approval to conduct the study in the target high school, the researcher sent a packet to the superintendent. The following documents were included: (a) a description of the study, (b) the IRB approval form, (c) the FLCAS survey questions, (d) the PALS speaking analytical grading rubric (e) the consent/assent form for participants, (f) a letter of approval from the principal of the high school where the study took place, (g) a signed

letter stating that no students, staff, or schools would be identified in the report of the study, and (h) an agreement to provide the school system with a copy of the completed research.

Teacher Training

Once the superintendent approved the study, two colleagues of the researcher were recruited for the study, and were randomly assigned to the control and experimental groups. The colleagues willingly agreed to participate and were aware that they would be randomly assigned to lead the control and experimental groups. At the end of the 2011-2012 school year, the researcher met with the two teachers to create the pretest, eight speaking activities, and the posttest for the study. The researcher provided additional trainings for the two participating Spanish teachers during the teacher preplanning week for the 2012-2013 school year. In the first training, the researcher explained the steps of the study to ensure that each teacher clearly comprehended the various elements in the study and the role they would play.

The goal of the first training was also to ensure that the speaking activities aligned with the Spanish Three curriculum for the first nine weeks of the school year in which the study took place. Information regarding the dissemination of the consent/assent forms and student coding was also discussed with the two teachers.

In the second training, the teacher of the experimental treatment group was trained to use *Voice Thread*® in order to integrate speaking practice using this tool during the study. The teacher practiced posting comments and replying to comments by calling in using a mobile device and by using a headset plugged into the computer. The teacher assigned to the experimental group also learned how to publish the link of the

conversation so that other students would be able to access it. After the teacher had attained a comfort level with this tool, the researcher reviewed language laboratory procedures with both teachers to ensure that they felt confident in their abilities to use the language laboratory. Most foreign language teachers in this school system are comfortable with the operation of the language laboratory because it is common practice for foreign language teachers to take students weekly to the language laboratory for the purpose of practicing speaking skills.

The researcher prepared typed instructions for both teachers for recording and collecting the pretest and posttest speaking samples in the language laboratory. The researcher provided a training session in the language laboratory and demonstrated the steps for having students type in their code numbers and then collect the audio files at the end of pretesting and post testing. After pretests and posttests were complete, the researcher saved the recordings to jump drives for the two individuals who would grade the speaking pretest and posttest.

An additional training was held for the two teachers at the researcher's high school who rated the oral proficiency levels using the PALS speaking analytical grading rubric. Stiggins (2008) advised teachers who are evaluating students for oral proficiency using a grading rubric to use descriptive language and to use samples of student work to practice rating and scoring to insure inter-rater reliability. The two teachers were highly qualified Advanced Placement Spanish teachers who have attended workshops instructing them on how to grade speaking samples of students. The two teachers and the researcher carefully examined the specific requirements that needed to be mastered in order for them to assign certain scores under each of the six subscales of the grading

rubric. Pilot testing was conducted in which the two graders and the researcher listened to several speaking samples and assigned a score. During the training, the two graders consistently assigned the same score. Inter-rater reliability was calculated after all speaking samples were scored.

Initial Steps to Conduct the Study

At the conclusion of teacher training during preplanning, the researcher visited the six classes involved, informed the students of the research study, and invited students to participate in the study on the second day of school of the 2012-2013 school year. The two teachers sent consent/assent forms home with students that informed parents about the study (See Appendix M), asked for their consent, and requested that they return the signed parental consent and signed student assent form to the teacher. Only students who returned signed consent/assent forms were allowed to participate in the study. The two facilitating teachers assigned each participating student a code number to protect anonymity and to collate data appropriately. Then, the teachers administered the pretest. Students not participating in the study completed the speaking activities in class, but no data was collected from these students.

Pretesting for both groups was divided over a period of two days. The teachers of the six intact classes gave their students who participated in the study the FLCAS as a pretest at the beginning of the Spanish class period (Horwitz et al., 1986). It took students approximately 10 to 15 minutes to fill out the 33 item scale. Demographic data on the participants was collected as part of the FLCAS, and demographic questions were inserted at the beginning of the FLCAS survey. Spanish Three teachers collected the scale once it had been completed by all study participants and locked it in the file cabinet

in the classroom until the researcher collected the scales from both teachers after completion of pretesting. The researcher also locked up the information in a file cabinet until time for data analysis.

On day two, participants took the Spanish oral proficiency pretest in the language laboratory. Once students were in the language laboratory with headsets ready and equipment prepped for recording their responses, teachers asked students to type in their student code numbers on their student control panels. A sound check was conducted before the teacher administered the pretest. Students responded in Spanish with no use of English. Student responses were audio-recorded and saved to the hard drive in the language laboratory. After pretesting was complete, the researcher saved the audio files to two different jump drives to be given to the trained graders for the initial oral proficiency score.

Student Training

The following week, the teachers trained the participants on the particular method they would use to practice speaking during the eight week study; either *Voice Thread*® or the language laboratory. Students in the experimental group were introduced to *Voice Thread*® and were shown how to make an initial post and how to reply to a classmate. They watched sample *Voice Threads*® to see how the forum looked after several posts had been made, along with samples of how their forums should look. They practiced calling in using their cell phones to post audio comments, and they practiced posting comments using headsets with microphones. Participants were asked to go home and practice until they felt comfortable using this tool.

During the same week, students in the control group were taken to the language laboratory to practice using the control panel and headsets to ensure they were comfortable with the equipment. Most students were very familiar with the equipment as they had been to the language laboratory to complete speaking practices during their Spanish One and Spanish Two courses. However, sample activities helped them understand what they would be doing during the weeks of the study as they responded to various images, picture sequences and questions.

Execution of the Study

Students in both groups then participated in the study over an eight week period. They explicitly practiced speaking skills through various activities including pronunciation practice that promotes fluency and communicative competence through open ended responses based on cultural pictures, images, and video clips.

Though the forums for practice were different, students spent the same amount of time weekly practicing speaking skills. Students in the control group spent 40 minutes weekly practicing speaking in the language laboratory. Students in the experimental group spent 30 minutes in the computer laboratory using *Voice Thread*® and 10 additional minutes outside of class in the online environment. A limitation to the study was that experimental group participants conducted some of the practice outside of class as homework. However, the use of advanced students who typically complete homework assignments minimized this limitation.

Final Data Collection

At the end of the eight week period of the study, posttest data was collected from the participants. Posttest data was collected over a two day period in exactly the same

method as the pretest data. The first day, the teachers gave the FLCAS to participants at the beginning of the Spanish class period as a posttest. The second day, the teachers gave the posttest for oral proficiency to students in the language laboratory. For the oral proficiency posttest, students were assigned the same number as the pretest and completed a parallel version of the pretest, but with different images and questions to answer than the pretest. The responses were audio recorded and saved to a jump drive and again graded by two AP trained Spanish teachers at the researcher's high school using the PALS upper-level speaking analytical grading rubric.

Data Analysis

This study was designed to answer the following research questions:

RQ 1: Is there a statistically significant difference in Spanish Three students' anxiety levels measured with the Foreign Language Classroom Anxiety Scale (FLCAS) for students who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

RQ 2: Is there a statistically significant difference in Spanish Three students' oral proficiency scores measured by the Performance Assessment for Language Students (PALS) level three speaking analytical grading rubric for students who use *Voice Thread*® compared to students who use the language laboratory to practice speaking skills?

The following corresponding hypotheses were tested in this study:

Null hypotheses as related to Research Question One:

$H_{01:}$ There will be no statistically significant difference in Spanish Three students' anxiety levels measured by the FLCAS for students who use *Voice Thread*®

compared to students who use the language laboratory for practicing speaking skills.

Null hypotheses as related to Research Question Two:

H_{02}: There will be no statistically significant difference in Spanish Three students' overall oral proficiency scores as measured by the PALS level three speaking analytical rubric for students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

N_{03}: There will be no statistically significant difference in task completion as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

H_{04}: There will be no statistically significant difference in comprehensibility as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

H_{05}: There will be no statistically significant difference in the level of discourse as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

H_{06}: There will be no statistically significant difference in fluency as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

H_{07}: There will be no statistically significant difference in vocabulary as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

H_{08}: There will be no statistically significant difference in language control as measured by the PALS level three speaking analytical grading rubric for Spanish Three students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills.

To test the research hypotheses for Research Question One, the researcher first determined if there was a statistically significant difference in the means of the pretest scores on the FLCAS of the experimental and control groups using an independent *t*-test. There was no statistically significant difference in the pretest FLCAS scores for the control and experimental groups; thus an analysis of variance (ANOVA) was used to evaluate the posttest FLCAS scores. Since there were no significant pretest differences, any posttest differences could more clearly be attributed to the treatment (Howell, 2011; Tabachnick & Fidell, 2007).

To test the hypotheses for Research Question Two, the researcher first determined if there was a statistically significant difference in the means of the pretest oral proficiency scores of the control and experimental groups using the PALS level three speaking analytical grading rubric with an independent *t*-test. There was no statistically significant difference in the pretest oral proficiency scores for the overall score and the six subscale scores; thus, a MANOVA was used to evaluate posttest scores. Tabachnick and Fidell (2007) affirmed that a MANOVA asks if there are "statistically significant

mean differences among groups after adjusting the newly created DV for differences on one or more covariates" (p. 245). A one-way MANOVA was used because the groups were defined on one independent variable and six correlated dependent variables (Howell, 2011; Tabachnick & Fidell, 2007). Posthoc pairwise comparisons using the Bonferonni procedure were conducted to evaluate significant differences for the posttest subscale scores to evaluate hypotheses two through eight. The Bonferonni procedure will be used to adjust the alpha level for the multiple-comparison correction.

Preliminary analyses were conducted to assess the assumptions for the ANOVA analysis for this study. For the ANOVA, the analyses tested the assumptions of normality and homogeneity of variance (Howell, 2011). The assumption of normality was tested through a One-Sample Kolmogorov-Smirnov test with Lilliefor's correction using SPSS software version 20. Homogeneity of variance was assessed using Levene's test.

Preliminary analyses were also conducted for the MANOVA analysis. These analyses tested the assumptions of multivariate normality, no extreme outliers, multicollinearity and singularity, homogeneity of variance for each of the dependent variables, and linearity among "all pairs of DVs, all pairs of covariates, and all DV-covariates pairs in each cell" (Green & Salkind, 2011; Tabachnick & Fidell, 2007, p. 252). The assumption of multivariate normality was checked through a visual inspection of a normal probability plot. The assumption of no extreme outliers was checked through an analysis of a scatter-plot and the Mahalanobis distance, which should reveal no outliers + / - 3.3 (Tabachnick & Fidell, 2007). Correlation among the dependent variables was examined to check for multicollinearity and singularity. For the

assumption of linearity, statistics on skewness was used to screen combinations of variables that were likely to depart from linearity (Tabachnick & Fidell, 2007). The homogeneity of variance-covariance assumption was examined using Box's M test and Levene's test.

The alpha level was set at $p < .05$ to determine if there was a significant statistical difference to reject the null hypotheses. The Eta squared statistic was used to compute the effect size and was interpreted using Cohen's *d* (1988). The minimum number of participants for the control and experimental groups was determined to insure the appropriate level of statistical power and to show if there was a statistical significance between the control and experimental groups for the anxiety levels and oral proficiency scores. According to Cohen (1988), in order to have a power level at .80, a minimum of 30 participants per group is necessary to conduct an ANOVA or a MANOVA with a medium effect size (0.05) and alpha level at 0.05. Tabachnick and Fidell (2007) also recommend that the number of cases or participants in each group be more than the number of dependent variables when conducting a MANOVA. For the present study, the groups were comprised of 71 and 73 participants.

Summary

In this chapter, the research design for this study was presented. The participants were described along with the setting for the study. The instruments for the study which include the FLCAS and the PALS speaking analytical grading rubric were defined and discussed. The procedures for the study were communicated including initial steps to train participants and classroom teachers, steps involved in the pretest and posttest

process, and an overview of the speaking activities utilized during the eight week study. In this chapter the data collection and data analysis procedures were also explained.

CHAPTER FOUR: RESULTS

The purpose of this study was to determine if the use of the Web 2.0 asynchronous voice-conferencing technology, *Voice Thread*®, had an effect on the anxiety and oral proficiency scores of high school Spanish Three foreign language learners in North Georgia. In this chapter, results of this research study are presented.

This chapter is divided into four sections. In the first section, the researcher presents the descriptive statistics and results of the independent *t*-tests for the FLCAS and the oral proficiency pretests. In the second section, the researcher provides the descriptive statistics for the disaggregated data set of FLCAS scores and oral proficiency scores for the posttests of the control and experimental groups. In this section, the researcher also presents the results of the ANOVA for Research Question One and examines the differences between students' anxiety posttest scores on the FLCAS for students who used *Voice Thread*® to practice speaking compared to students who used the language laboratory to practice speaking. In this section, the researcher presents the results of the MANOVA for Research Question Two and examines the differences between the oral proficiency scores for students who used *Voice Thread*® to practice speaking compared to students who used the language laboratory to practice speaking.

In the third section, the researcher provides the inter-rater reliability analyses for the two raters grading the speaking samples for the pretest and posttest oral proficiency scores using the PALS speaking analytical rubric (Fairfax County Public Schools, 2004). In the fourth section, the researcher provides a summary of the results.

Pretest Descriptive Statistics and Results

The total number of participants in the study was 144. The pooled means and standard deviations for the FLCAS (Horwitz et al., 1986) pretests were $M = 100.01$ ($SD = 22.58$). One composite score was used to calculate the anxiety scale pretest score. The pooled means and standard deviations for the PALS (Fairfax County Public Schools, 2004) oral proficiency pretest subscales of task completion were $M = 1.44$ ($SD = 0.41$), comprehensibility $M = 1.51$ ($SD = 0.44$), level of discourse $M = 1.45$ ($SD = 0.44$), fluency $M = 1.48$ ($SD = 0.41$), vocabulary $M = 1.58$ ($SD = 0.41$), and language control $M = 1.14$ ($SD = 0.27$). These subscales were combined to create a total oral proficiency pretest score with $M = 8.62$ ($SD = 1.94$). Table 1 lists the descriptive statistics for the dependent variables disaggregated by control (language laboratory) and experimental (*Voice Thread*®) groups. The researcher used SPSS version 20 for the statistical analyses.

Table 1

Pretest Descriptive Statistics for the Dependent Variables Disaggregated by Group

	Language Laboratory (n= 71)		*Voice Thread*® (n= 73)	
Variable	*M*	*SD*	*M*	*SD*
FLCAS	98.55	25.53	101.60	19.62
Oral Proficiency Scores	8.51	1.93	8.72	1.95
Task Completion	1.44	0.40	1.44	0.41
Comprehensibility	1.45	0.42	1.56	0.45
Level of Discourse	1.42	0.43	1.48	0.44
Fluency	1.46	0.41	1.49	0.40
Vocabulary	1.55	0.41	1.60	0.41
Language Control	1.11	0.24	1.16	0.30

Pretest Results for Hypothesis One

An independent *t*-test was conducted on anxiety pretest scores for the control and experimental groups to evaluate the null hypothesis that there is no statistically significant difference in foreign language learners' anxiety levels using the FLCAS prior to implementation of the treatment (Horwitz, et al., 1986). The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was not

tenable, F (1, 142) = 6.21, p = .01. Thus, the SPSS output for the t-test in which variance cannot be assumed was reported.

The results of the independent t-test were not significant, t (131.35) = -.80, p = .42, indicating that there was no significant difference in pretest FLCAS scores for the control group (M = 98.55, SD = 25.53, n = 71) and the experimental group (M = 101.60, SD = 19.62, n = 73). The effect size was .004 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -3.1. The 95% confidence interval for the difference between the means was -10.57 and 4.47. Since there was no significant difference in the pretest FLCAS scores, the researcher assumed that the groups were similar and the pretest was not used as a covariate (Howell, 2011).

Pretest Results for Hypotheses Two through Eight

An independent t-test was conducted on the oral proficiency pretest scores for the control and experimental groups to evaluate the null hypothesis that there is no statistically significant difference in foreign language learners' oral proficiency scores using the PALS grading rubric (Fairfax County Public Schools, 2004). The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .41, p = .52.

The results of the independent t-test were not significant, t (142) = -.64, p = .53, indicating that there was no significant difference in pretest oral proficiency scores for the control group (M = 8.51, SD = 1.93, n = 71) and the experimental group (M = 8.72,

SD = 1.95, *n* = 73). The effect size was .003 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.21. The 95% confidence interval for the difference between the means was -.84 and .43. Since there was no significant difference in the pretest oral proficiency scores, the researcher assumed that the groups were similar and the pretest was not used as a covariate (Howell, 2011).

An independent *t*-test was also conducted for each of the six subscales of the PALS grading rubric. Assumption testing was conducted for hypothesis three on the subscale of task completion. The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). However, when sample sizes are large and approximately the same size, the *t*-test is robust to violations of normality assumptions (Diekhoff, 1992). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .1, p = .76.

The results of the independent *t*-test for the task completion subscale were not significant, t (142) = .08, p = .94, indicating that there was no significant difference in pretest task completion scores for the control group (M = 1.44, SD = .44, n = 71) and the experimental group (M = 1.44, SD = .41, n = 73). The effect size was .45 (η_2 = .01) indicating a large effect size based on Cohen (1988). The mean difference was .01. The 95% confidence interval for the difference between the means was -.13 and .14.

Assumption testing was conducted for hypothesis four on the subscale of comprehensibility. The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with

Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .35, p = .56.

The results of the independent t-test for the comprehensibility subscale were not significant, t (142) = -.44, p = .66, indicating that there was no significant difference in pretest comprehensibility scores for the control group (M = 1.45, SD = .42, n = 71) and the experimental group (M = 1.56, SD = .45, n = 73). The effect size was .001 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.03. The 95% confidence interval for the difference between the means was -.18 and .12.

Assumption testing was conducted for hypothesis five on the subscale of level of discourse. The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .15, p = .70.

The results of the independent t-test for the level of discourse subscale were not significant, t (142) = -.98, p = .33, indicating that there was no significant difference in pretest level of discourse scores for the control group (M = 1.42, SD = .43, n = 71) and the experimental group (M = 1.48, SD = .44, n = 73). The effect size was .007 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.07. The 95% confidence interval for the difference between the means was -.21 and .07.

Assumption testing was conducted for hypothesis six on the subscale of fluency. The assumption of normality for the control and experimental groups was evaluated using

the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .08, p = .78.

The results of the independent t-test for the fluency subscale were not significant, t (142) = -.53, p = .60, indicating that there was no significant difference in pretest fluency scores for the control group (M = 1.46, SD = .41, n = 71) and the experimental group (M = 1.49, SD = .4, n = 73). The effect size was .002 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.04. The 95% confidence interval for the difference between the means was -.17 and .10.

Assumption testing was conducted for hypothesis seven on the subscale of vocabulary. The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = .90, p = .35.

The results of the independent t-test for the vocabulary subscale were not significant, t (142) = -.48, p = .63, indicating that there was no significant difference in pretest vocabulary scores for the control group (M = 1.55, SD = .41, n = 71) and the experimental group (M = 1.6, SD = .41, n = 73). The effect size was .002 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.03. The 95% confidence interval for the difference between the means was -.17 and .10.

Assumption testing was conducted for hypothesis eight on the subscale of language control. The assumption of normality for the control and experimental groups was evaluated using the One-Sample Kolmogorov-Smirnov test for normality with Lilliefor's correction and normality for both groups was not found tenable at the .05 alpha level (Howell, 2011). The SPSS output for homogeneity of variances, evaluated using Levene's test for equality of variance, was found tenable, F (1,142) = 4.98, p = 03.

The results of the independent t-test for the language control subscale were not significant, t (-142) = -1.13, p = .26, indicating that there was no significant difference in pretest language control scores for the control group (M = 1.11, SD = .24, n = 71) and the experimental group (M = 1.16, SD = .3, n = 73). The effect size was .01 (η_2 = .01) indicating a small effect size based on Cohen (1988). The mean difference was -.05. The 95% confidence interval for the difference between the means was -.14 and .04.

Posttest Descriptive Statistics

The pooled means and standard deviations for the FLCAS (Horwitz et al., 1986) posttests were M = 93.58 (SD = 24.11). One composite score was used to calculate the anxiety scale posttest score. The pooled means and standard deviations for the PALS (Fairfax County Public Schools, 2004) oral proficiency posttest subscales of task completion were M = 2.41 (SD = 0.46), comprehensibility M = 2.30 (SD = 0.41), level of discourse M = 2.11 (SD = 0.47), fluency M = 2.49 (SD = 0.41), vocabulary M = 2.51 (SD = 0.45), and language control M = 2.11 (SD = 0.49). These subscales were combined to create a total oral proficiency posttest score with M = 13.91 (SD = 2.24). Table 2 lists the descriptive statistics for the dependent variables disaggregated by control (language

laboratory) and experimental (*Voice Thread*®) groups. The researcher used SPSS version 20 for the statistical analyses.

Table 2

Posttest Descriptive Statistics for the Dependent Variables Disaggregated by Group

	Language Laboratory (n= 71)		*Voice Thread*® (n= 73)	
Variable	*M*	*SD*	*M*	*SD*
FLCAS	92.97	25.53	94.16	22.81
Oral Proficiency Scores	13.02	2.03	14.80	2.18
Task Completion	2.14	0.50	2.68	0.41
Comprehensibility	2.13	0.39	2.46	0.43
Level of Discourse	1.92	0.47	2.29	0.46
Fluency	2.31	0.38	2.67	0.43
Vocabulary	2.46	0.45	2.55	0.45
Language Control	2.05	0.46	2.16	0.52

Posttest Inferential Statistics for Hypothesis One

The null hypothesis for Research Question One states that there will be no statistically significant difference in Spanish Three students' anxiety levels measured by the FLCAS (Horwitz et al., 1986) for students who use *Voice Thread*® compared to students who use the language laboratory for practicing speaking skills. The researcher first conducted an independent *t*-test using the pretest FLCAS scores to determine if a statistically significant difference existed between the control and experimental groups.

A statistically significant difference was not found. Thus, the pretest was not considered as a covariate and a one-way ANOVA was conducted to test the null hypothesis for Research Question One (Howell, 2011).

Preliminary analyses were conducted to assess the assumptions for the ANOVA analysis for hypothesis one. The analyses tested the assumptions of normality for the control and experimental groups on the FLCAS posttest through a One-Sample Kolmogorov-Smirnov test with Lilliefor's correction using SPSS software version 20. Normality was found tenable for the control and experimental groups at the .05 alpha level. The SPSS output for homogeneity of variance, evaluated with Levene's test for equality of variance, was found tenable, F (1,142) = 1.3, p = .26.

The results of the ANOVA yielded no statistically significant difference between the anxiety scale scores of students who used *Voice Thread*® to practice speaking and students who used the language laboratory to practice speaking, F (1,142) = .09, p = .77. Partial eta squared, as calculated by SPSS, was used to determine the effect size. The effect size was .001 (η_2 = .01) indicating a small effect size based on Cohen (1988) and a very small effect of variance in anxiety posttest scores explained by method of speaking practice. The observed power was .06 which indicates that a Type I error is possible (Cohen, 1992).

Therefore, students who used *Voice Thread*® to practice speaking compared to students who used the language laboratory to practice speaking did not show a statistically significant difference in their overall anxiety scores as measured by the FLCAS. The researcher failed to reject the null hypothesis for Research Question One.

Posttest Inferential Statistics for Hypotheses Two through Eight

Null hypothesis two for Research Question Two states that there will be no statistically significant difference in Spanish Three students' overall oral proficiency scores. Null hypotheses three through eight state that there will be no statistically significant difference among the subscales of task completion, comprehensibility, level of discourse, fluency, vocabulary, and language control as measured by the Performance Assessment for Language Students (PALS) speaking analytical rubric for students who use *Voice Thread*® to practice speaking compared to the language laboratory to practice speaking.

The researcher first conducted an independent *t*-test on the means of the oral proficiency pretest scores as measured by the PALS level three speaking analytical grading rubric for students who used *Voice Thread*® compared to students who used the language laboratory to practice speaking. The researcher found no significant difference and assumed no initial differences existed in the groups (Howell, 2011). Thus, a one way multivariate analysis of variance MANOVA was used to analyze the posttest data.

Preliminary analyses were conducted to assess the assumptions for the MANOVA analysis for this study. These analyses tested the assumptions of normality, no extreme outliers, multicollinearity and singularity, and homogeneity of variance. To evaluate the presence of multivariate outliers and multivariate normality, Mahalanobis distance values were assessed. Mahalanobis distance revealed no extreme outliers + / - 3.3; Mahalanobis distance values for the data set did not exceed the critical value of 22.46 (Tabachnick & Fidell, 2007). Therefore, the assumption of no multivariate outliers and normality was found tenable.

The assumption of bivariate normality was assessed with the Kolmogorov-Smirnov test with Lilliefor's correction. Normality on the dependent variables of task completion, comprehensibility, level of discourse, fluency, vocabulary, and language control was not found tenable for any group. Normality for the composite posttest score was also assessed with the Kolmogorov-Smirnov test with Lilliefor's correction. Normality was not found tenable for the control group composite posttest score. Normality was found tenable for the experimental group composite posttest score. Even with violations to normality, Tabachnick & Fidell (2007) state that as long the sample size has at least 20, this should ensure robustness.

Correlation among the dependent variables was examined to check for multicollinearity and singularity (See Table 3). The assumptions of multicollinearity and singularity were found tenable. All correlations were significant with no values above a .8 or.9 (Tabachnick & Fidell, 2007), thus the assumptions were found tenable.

Table 3

Correlation Matrix for Posttest Oral Proficiency Subscales

	TC	CO	LD	FL	VO	LC
TC	-	.69*	.70*	.60*	.56*	.59*
CO	.70*	-	.71*	.56*	.59*	.66*
LD	.70*	.71*	-	.60*	.55*	.63*
FL	.60*	.56*	.60*	-	.55*	.48*
VO	.56*	.59*	.53*	.55*	-	.67*
LC	.59*	.66*	.63*	.48*	.67*	-

Note. The subscales are identified in the table as follows: TC = Task Completion, CO = Comprehensibility, LD = Level of Discourse, FL = Fluency, VO = Vocabulary, and LC = Language Control. In the table, $N = 144$ for all subscales. * $p < .05$

For the assumption on linearity, statistics on skewness were used to screen combinations of variables that were likely to depart from linearity. Linearity was found tenable. The homogeneity of variance-covariance assumption was examined using Box's M test. The assumption of homogeneity of variance-covariance was found tenable, $M = 27.75$, F (21, 70148) = 1.22, $p = .22$. The assumption of homogeneity of variance for each subscale was examined using Levene's test for equality of variance. For the subscale of task completion, homogeneity of variance was found tenable, F (1,142) = 2.10, $p = .14$. For the subscale of comprehensibility, homogeneity of variance was found tenable, F (1,142) = .001, $p = .98$. For the subscale of level of discourse, homogeneity of variance was found tenable, F (1,142) = .87, $p = .35$. For the subscale of fluency, homogeneity of variance was found tenable, F (1,142) = .55, $p = .46$. For the subscale of

vocabulary, homogeneity of variance was found tenable, F (1,142) = .00, p =.99. For the subscale of language control, homogeneity of variance was found tenable, F (1,142) = 2.34, p = .13.

The results of the MANOVA yielded a statistically significant main effect difference between the two groups on the composite posttest score. The Wilks' Λ of .61 was significant, F (7,136) = 14.53, p < .01, partial η_2 = .39. The observed power was 1. Posthoc pairwise comparisons were conducted. The researcher used the Bonferonni procedure to control for a Type 1 error due to multiple comparisons and used the adjusted alpha level of .008 (Tabachnick & Fidell, 2007) to determine the source of the significant difference while also determining if there was a significant multivariate interaction effect.

Results of the posthoc pairwise comparison for hypothesis three on the subscale of task completion were statistically significant, F (1, 142) = 49.54, p < .01, η_2 = .26. The observed power was 1. Results of the posthoc pairwise comparison for hypothesis four on the subscale of comprehensibility were statistically significant, F (1, 142) = 23.27, p < .01, η_2 = .14. The observed power was 1. Results of the posthoc pairwise comparison for hypothesis five on the subscale of level of discourse were statistically significant, F (1, 142) = 22.50, p < .01, η_2 = .14. The observed power was 1. Results of the posthoc pairwise comparison for hypothesis six on the subscale fluency were statistically significant, F (1, 142) = 28.66, p < .01, η_2 = .17. The observed power was 1. Results of the posthoc pairwise comparison for hypothesis seven on the subscale of vocabulary were not statistically significant, F (1, 142) = 1.65, p =.20, η^2 = .01. The observed power was .25 indicating the possibility of a Type 1 error. Results of the posthoc pairwise comparison for hypothesis eight on the subscale of language control were not statistically

significant, F (1, 142) = 49.54, p = .19, η_2 = .01. The observed power was .26, indicating the possibility of a Type 1 error.

Based on these findings, there is sufficient evidence to reject the null hypothesis for Research Question Two. Spanish Three students who use *Voice Thread*® to practice speaking do have oral proficiency composite scores that are statistically significant compared to students who used the language laboratory to practice speaking. In addition, students in the *Voice Thread*® group had statistically significant posttest scores on the subscales of task completion, comprehensibility, level of discourse, and fluency.

Inter-Rater Reliability

The researcher trained the two independent graders of the speaking pretest and posttest using the Performance Assessment for Language Students speaking analytical grading rubric for level three. The researcher emphasized the importance of consistency in grading and provided several speaking samples for the two raters to practice. The raters discussed how they would evaluate and rate each subscale. Inter-rater reliability was calculated with Pearson's *r* to measure level of agreement between raters on the posttest oral proficiency composite and subscale scores (See Table 4).

Table 4

Inter-Rater Reliability Statistics

	Pearson's *r*	Rater 1		Rater 2	
		M	*SD*	*M*	*SD*
Oral Proficiency Posttests	.57	14.70	2.76	13.21	2.64
Task Completion	.54	2.32	.68	2.51	.54
Comprehensibility	.23	2.47	.59	2.13	.54
Level of Discourse	.32	2.19	.62	2.03	.61
Fluency	.34	2.65	.49	2.30	.58
Vocabulary	.42	2.54	.53	2.52	.55
Language Control	.38	2.54	.51	1.66	.67

Inter-rater reliability is considered moderate for the overall oral proficiency posttest scores, $r = .57$, for the task completion subscale, $r = .54$, and for the vocabulary subscale, $r = .42$ (George & Mallery, 2003). Inter-rater reliability is considered weak for the subscales of comprehensibility, $r = .23$, level of discourse, $r = .32$, fluency, $r = .34$, and language control, $r = .38$.

Summary of the Results

The purpose of this study was to determine if the integration of the Web 2.0 technology *Voice Thread*® had an effect on the anxiety and oral proficiency of high school Spanish Three students. The differences in anxiety scores using the FLCAS (Horwitz et al., 1986) were examined to determine if there was a significant difference in the mean anxiety scores of students who used *Voice Thread*® to practice speaking

compared to students who used the language laboratory to practice speaking. The researcher found no statistically significant differences in anxiety scale scores between the control and experimental groups. Oral proficiency scores were also examined to determine if there was a statistically significant difference in students' speaking proficiency using the PALS (Fairfax County Public Schools, 2004) grading rubric. The researcher found a statistically significant difference in the composite oral proficiency scores between the control and experimental groups. Posthoc pairwise comparisons revealed significant differences on the subscales of task completion, comprehensibility, level of discourse, and fluency. No statistically significant differences were found in the subscales of vocabulary and language control.

CHAPTER FIVE: DISCUSSION

The purpose of this chapter is to review and discuss the results of this quantitative research study. This chapter is organized into the following sections: statement of the problem, summary of the findings, discussion of the findings, theoretical implications, methodological and practical implications, limitations, and recommendations for further research.

Statement of the Problem

The development of the national standards for foreign language K-12 teachers by ACTFL in 1993 included an increased focus on communicative competence in the target language (ACTFL Standards for Foreign Language Learning, 2000). ACTFL's focus on communicative competence originated from the desire to increase language learners' ability to communicate and negotiate meaning in real life contexts, rather than the memorization of language forms and dialogues (ACTFL Standards for Foreign Language Learning, 2000).

Obtaining communicative competence in the target language is difficult for some language learners who are faced with unique challenges in the foreign language classroom such as anxiety (Horwitz et al., 1986). Anxiety has created a barrier to language acquisition for some language learners (Wu, 2010; Zheng, 2008). Specifically, oral production of the target language has caused the most substantial increase in anxiety levels among foreign language learners (Awan et al., 2010; Kim, 2009; Wu, 2010). Krashen's (1982) Second Language Acquisition Theory suggests that language acquisition cannot take place unless the learner's anxiety level is low.

With the initiative to improve oral proficiency in the target language, more research was needed to examine how the integration of technological resources might provide a less threatening environment for language learners to practice speaking in the target language (Pufahl & Rhodes, 2011; Ravenscroft, 2009). The studies reviewed by the researcher revealed mixed results regarding the effect of synchronous and asynchronous technologies such as text-chat and voice-conferencing on language learners' anxiety levels and oral proficiency (Kern et al., 2008; Poza, 2005; Satar & Özdener, 2008). In addition, the majority of the studies reviewed by the researcher were conducted with university level language learners (Beauvois, 1992; McIntosh et al., 2003; Poza, 2005; Shams, 2006). Thus, the purpose of this study was to determine if the asynchronous voice-conferencing tool *Voice Thread*® had an effect on the anxiety and oral proficiency of high school Spanish Three foreign language learners.

Summary of the Findings

Research Question One

For Research Question One, the researcher examined differences in the FLCAS scores of students in the control group and the experimental groups. Over an eight week period during the 2012-2013 school year, students in the control group practiced speaking using the traditional method of the language laboratory. Students in the experimental group practiced speaking using the asynchronous voice-conferencing technology *Voice Thread*®. Students in both groups practiced with the same eight speaking activities designed by the researcher and foreign language colleagues. Students in both groups took the FLCAS (Horwitz et al., 1986) as a pretest and posttest.

The participants in this research study included 144 Spanish Three students from a public high school in North Georgia. The control group consisted of 71 students and the experimental group consisted of 73 students.

The researcher conducted an independent *t*-test on the pretest FLCAS scores. No significant difference was found in the pretest FLCAS scores. The researcher assumed that no initial differences between the students in the control and experimental groups existed and it was unnecessary to use the pretest FLCAS scores as a covariate for the posttest data analysis (Howell, 2011). Thus, the researcher used an ANOVA analysis to examine differences in the posttest FLCAS scores. Results of the posttest FLCAS scores revealed no significant differences in anxiety levels between students in the control and experimental groups based on method of speaking practice. The significance level was $p = .77$.

Research Question Two

For Research Question Two, the researcher examined differences in oral proficiency scores using the PALS (Fairfax County Public Schools, 2004) speaking analytical grading rubric between students in the control and experimental groups. Students in both groups took a pretest and posttest oral proficiency assessment. The pretest and posttest assessments were the same in structure and format (See Appendix C and Appendix L). The researcher conducted an independent *t*-test to examine initial differences between the groups for the pretest oral proficiency scores. No statistically significant differences were found between the groups on the pretest oral proficiency overall scores. In addition, no statistically significant differences were found on any of the subscale scores of a) task completion, b) comprehensibility, c) level of discourse,

d) fluency, e) vocabulary, or f) language control.

To examine differences between the posttest oral proficiency scores for the overall score and the six subscale scores, the researcher conducted a MANOVA analysis. The researcher found a statistically significant difference in the overall oral proficiency scores of the control and experimental groups. The researcher conducted posthoc pairwise comparisons using the Bonferonni procedure to adjust the alpha level to .008 to control for a Type 1 error due to multiple comparisons (Tabachnick & Fidell, 2007). A significant difference was found on the subscales of task completion ($p < .01$), comprehensibility ($p = <.01$), level of discourse ($p = <.01$), and fluency ($p < .01$). No significant difference was found for the two subscales of vocabulary ($p = .20$) and language control ($p = .19$).

Discussion of the Findings

Research Question One

Results showed no statistically significant differences in anxiety scores based on method of speaking practice. These results are consistent with the results from Shams (2006) study where she compared the anxiety levels of university students who practiced French pronunciation in the online environment to those who practiced in a language laboratory setting with cassette tapes. In the study by Shams (2006), results indicated that students experienced an overall reduction in anxiety, but data analysis revealed no statistically significant differences between the methods of pronunciation practice used by both groups.

Results from the present study are inconsistent with the findings from the previous research studies that have incorporated voice-conferencing technologies and

their effect on language anxiety. Poza (2005) did find significant differences in student anxiety levels in her study where she compared the anxiety levels of students who practiced speaking using the technology *Wimba*© compared to in-class discussions. McIntosh et al. (2003) also found the *Wimba*© environment helped decrease student anxiety toward speaking. Beauvois (1992) found a decrease in student anxiety when she conducted her study using the *Interchange* software as language learners reported feeling less pressure to respond quickly in the computer-mediated environment compared to the regular classroom. However, it is important to note that in the previous studies mentioned, there were no control or comparison groups.

Although this research confirms results from one study (Shams, 2006) and contradicts results from previous research studies (Beauvois, 1992; Poza, 2005) there is insufficient evidence to argue for or against the further integration of *Voice Thread*® as an instructional technology to help reduce foreign language learner anxiety. There are too few previous studies that exist for comparison and limitations for these studies as well. In addition, the present study was unique in that it examined both anxiety and oral proficiency. The majority of the previous studies in language learning that incorporated anxiety as a variable typically correlated anxiety levels with final course grades (Awan et al., 2010; Coulombe, 2000; Rodriguez, 1995) and found significant negative correlations between language anxiety and language achievement.

Although no statistically significant differences were found between the control and experimental group scores on the FLCAS, the anxiety levels for both groups decreased from the pretest to posttest scores. The mean anxiety score for the control group decreased 5.58 points from 98.55 to 92.97. The mean anxiety score for the

experimental group decreased 7.44 points from 101.60 to 94.16. These results do indicate the comparability of the two methods for speaking practice in their capacity to decrease foreign language anxiety.

Although the FLCAS is a recognized and reliable measure of anxiety, it is still challenging to quantifiably assess anxiety (Shams, 2006). While the FLCAS does measure communication apprehension, test anxiety, and fear of negative evaluation (Horwitz et al., 1986), it may not have been sensitive enough to the specific issue of online interaction compared to language laboratory practice to measure a difference. Inherently with a self-report measure, there is also the issue of subjectivity and variability (Shams, 2006). The different degrees on the Likert-type scale could have been interpreted uniquely by each student (Shams, 2006).

Research Question Two

Results from the oral proficiency posttest revealed a statistically significant difference in the oral proficiency scores of students in the control and experimental groups based on method of speaking practice. Students who used *Voice Thread*® scored significantly higher on the posttest oral proficiency measure. Posthoc pairwise comparisons revealed statistically significant differences on the four subscales of task completion, comprehensibility, level of discourse, and fluency. Results of Research Question Two are examined in comparison to previous studies that have incorporated both text-chat and voice-conferencing technologies since few studies have examined solely voice-conferencing technologies and their effect on language proficiency. Results of McIntosh et al. (2003) found that language proficiency did improve in his study where students at the university level used asynchronous text-based communication. However,

his study was not based on a language proficiency pretest-posttest. Results were based on student input of how they believed the online environment improved their speaking interactions.

Huifen and Yueh-chiu (2010) incorporated text-chat synchronous and asynchronous technologies in their study with English language learners at the university level and found that it did help with the organization of ideas and increase of student confidence in their writing and speaking ability. However, no measure of oral or writing proficiency was given to participants except a self-report measure of language proficiency improvement (Huifen & Yeuh-chiu, 2010). Therefore, it is difficult to compare the present study to these studies since a component of the present study was an oral proficiency pretest and posttest and not a self-report measure.

Results from the present study do contradict results from a study by Abrams (2003) where students incorporated text-based synchronous and asynchronous technologies. Syntactic complexity and lexical richness of sentences was examined in a third semester university level German course and no differences were found between students who incorporated text-based technologies compared to students who practiced writing in the traditional classroom setting (Abrams, 2003). However, the present study examined speaking skills rather than writing skills.

Many of the previous studies have not provided measures of oral proficiency, but rather perceptions of language learners regarding the effectiveness of the integration of technologies. However, two studies that support the results of the present study were conducted by Pellettieri (2000) and Payne and Whitney (2002) where they found improved negotiation of meaning, oral proficiency, and grammatical competence for

university language learners. In these two studies, students used online voice-chat and synchronous software for speaking practice and a pretest – posttest measure was given.

Results from this study support the need for additional research on the effect of voice-conferencing technologies on oral language proficiency. There have been too few studies conducted to test results on oral proficiency. More research is needed since results have been inconsistent. Increased oral proficiency in foreign language learning is a goal that language educators are consistently working toward and more empirical evidence is needed on the effect of voice-conferencing technologies on the oral proficiency of language learners. Results from this study do indicate that the asynchronous voice-conferencing technology *Voice Thread*® does compare to the traditional method of speaking practice conducted in a language laboratory and that it has the capacity to improve the composite oral proficiency score along with the task completion, comprehensibility, level of discourse, and fluency subscale scores based on the PALS speaking analytical grading rubric.

Inter-rater reliability, calculated using SPSS output for Pearson's *r* between the two graders on the speaking proficiency results using the PALS (Fairfax County Public Schools, 2004) analytical grading rubric were found to be moderate for the overall oral proficiency posttest scores, $r = .57$. Moderate correlations were also found for the subscales of task completion, $r = .54$, and vocabulary, $r = .42$ (George & Mallery, 2003). However, inter-rater reliability is considered weak for the subscales of comprehensibility, $r = .23$, level of discourse, $r = .32$, fluency, $r = .34$, and language control, $r = .38$ (George & Mallery, 2003).

The statistics on inter-rater reliability could affect the internal validity of the study. Training was provided for the two raters at the beginning of the eight week study to help increase reliability. However, reliability was still a concern. Scores from each rater on each subscale and on the composite score were recorded individually. Then the researcher averaged the scores from each subscale and the composite score from both raters. The researcher used the average score for each subscale and the average composite score for data analysis of the oral proficiency scores.

Theoretical Implications

In the present study, the researcher found that anxiety decreased for students who used *Voice Thread*® and for students who used the language laboratory for speaking practice. Support for Krashen's (1982) Second Language Acquisition Theory was evident in this study. Participants in both the control and experimental groups had the freedom to participate and practice their speaking skills in an environment without the fear of negative evaluation from the teacher. Evidence from this study showed that study participants in both groups experienced a lowered affective filter. According to Krashen (1982), when the affective filter is raised it can impede language acquisition.

Students discussed topics relevant to their lives during the eight weeks of the study and grew increasingly comfortable in their learning environments. In addition, the speaking activities supported Krashen's Natural Approach (Krashen, 1982) to language learning in that the activities were not driven by a focus on the rules of grammar. The speaking activities focused on meaning and communication which also supports ACTFL's push toward communicative competence (ACTFL Standards for Foreign Language Learning, 2000).

This study also supported the theory of Vygotzky (1978) and the importance of the social environment. In the study, social interaction was key in both the control and experimental groups as students were asked to express their opinions with other class members in the exchange of ideas. Over the eight week period of the study, the speaking activities required students to first reflect on the provided questions individually and then students responded and discussed additional questions with their classmates. This exchange of ideas and information supported Vygotzky's zone of proximal development where he believes in a difference between what learners can accomplish individually compared to what learners can learn with either an adult or a more capable peer (Vygotzky, 1978). Peer interaction was a vital element to the present study.

Practical Implications

This study demonstrated that there was no statistically significant difference in anxiety levels for students based on method of speaking practice. However, posttest FLCAS scores for both groups did show a decrease in student anxiety levels. The experimental group practiced speaking using the asynchronous voice-conferencing technology *Voice Thread*® while the control group practiced speaking using the traditional method of the language laboratory. Although the method of speaking practice was different, the results from this study show that the online environment can provide comparable results to the language laboratory in the capacity to decrease anxiety for language learners.

Previous studies show that excessive anxiety can have a negative effect on academic performance (Campbell & Ortiz, 1991; Crookall & Oxford, 1991).

Sila (2010) communicated that the source of the highest levels of anxiety originates from the skill of speaking in a foreign language. Therefore, results from this study offer empirical evidence on the effectiveness of the integration of *Voice Thread*® as a technology to decrease anxiety levels. Results from this study may influence foreign language educators to try integrating *Voice Thread*® as an additional resource to use in and outside of the classroom so students have sufficient time to practice speaking skills. Additionally, since many schools do not have language laboratories, the integration of a technology such as *Voice Thread*® could provide many school systems with an additional resource to provide this vital practice for language learners and to help decrease learner anxiety levels.

In addition, many secondary schools are looking to increase student enrollment in foreign language programs (Pufahl & Rhodes, 2011; Sigsbee, 2002). However, language learners' continued participation in language study depends greatly on their anxiety levels in the foreign language classroom (Shedivey, 2004). Students with lower anxiety levels will be more inclined to continue enrolling in upper level language courses (Shedivey, 2004).

Results from this study also yielded a significant difference in the composite oral proficiency scores of students in the experimental group, along with a significant difference in the subscales of task completion, comprehensibility, level of discourse, and fluency. These results also provide empirical evidence that the technology *Voice Thread*® can provide results in increased levels of oral proficiency compared to the traditional method of practicing speaking in the language laboratory. A main goal is to give students the time and space they need to be able to effectively and efficiently

practice speaking (Bahrani, 2011). Language learners may be more willing to take risks in the online environment (Deniz, 2010; Poza, 2005) as it may provide an atmosphere that is more relaxed. In addition, due to class size increases that continue to grow, consideration of the online environment for speaking practice may become more of a necessity (Pufahl & Rhodes, 2011).

In education, it is important for stakeholders to see the effectiveness of the integration of certain technological applications (Pufahl & Rhodes, 2011). This study provides some empirical evidence that shows that the integration of the Web 2.0 technology *Voice Thread*® can increase student oral proficiency in a second language.

Limitations

Several limitations should be considered in this study. The generalizability of the findings in this study is limited. Students from one public high school in North Georgia participated in this study; therefore the results may not be applicable to students in other school districts with varying demographics since the majority of participants in this area come from affluent families.

A selection threat due to non-equivalent groups should be considered. It was not possible to randomly assign participants to the control and experimental groups since participants had already been assigned to the classes. The facilitators were assigned to the control and experimental groups based on level of comfort with the technology. One teacher felt much more comfortable with technology; thus, she was assigned to the experimental group and used *Voice Thread*® with her students. The other teacher felt less confident with technology; thus, she was assigned to use the language laboratory with her students.

An implementation threat should also be considered in this study. Two facilitators participated in this study using two different methods for practicing speaking. The researcher addressed the implementation threat by maintaining constant communication with the two facilitators. The researcher initially met with the two facilitators and reviewed the speaking activities. The researcher reviewed the activities each week with both facilitators to ensure clear understanding of how to consistently conduct the activities with both groups of students. However, it was impossible for the researcher to be present during the conduction of the speaking activities since the researcher was teaching classes at the same time.

Attempts to avoid researcher bias were also made. The researcher places much value on the use of technology in the foreign language classroom. However, the researcher did not hold conversations with any of the participants or try to influence them regarding the benefits of *Voice Thread*® to practice speaking. The researcher also participated in the creation of the speaking activities, along with the pretest and posttest. The researcher and the two facilitators created the speaking activities and the pretest / posttest in May 2012. To reduce researcher bias and the threat to internal validity, the researcher worked with the two facilitators to create the activities as a team and ensure the activities supported the Spanish Three curriculum.

The use of the FLCAS as a self-report measure of anxiety should also be considered a limitation. Although it has proven to be a valid and reliable measurement of foreign language anxiety (Horwitz, 2002), it is still a self-report measure and students could have responded based on what they believed the researcher wanted to hear. In addition, although paper and pencil self-report measures are the most common way of

measuring anxiety, it is still challenging to quantifiably assess anxiety (Shams, 2006). In addition, the FLCAS may have been too sensitive of a measurement to detect any differences between the groups based on method of speaking practice.

The FLCAS was not altered from its pretest to posttest form as only one version exists. This could be a threat to the external validity of the study due to pretest sensitization (Gall et al., 2007). The Hawthorne Effect could also have affected the external validity of the study since students were aware that they were participating in a research study and may have received special attention and knowledge of the research hypotheses, which could have influenced their behavior (Gall et al., 2007). This could have impacted the study because students may have unconsciously reported changes in their anxiety levels because they believed they should feel less or more anxious based on the method used to practice speaking.

The researcher invited participants from six classes of Spanish Three to participate in the study. This increased the sample size so that experimental mortality did not affect the study. Results from the survey data of the FLCAS along with the oral proficiency score were reported only for participants who completed both the pretest and posttest measures for anxiety and oral proficiency. A total of five participants dropped out of the study shortly after it began due to schedule changes. The researcher introduced the study and distributed parent consent and student assent forms to students during the first week of school; thus some student schedule changes were unavoidable. However, 144 participants comprised the study population for the duration of the eight week study.

Another threat to the internal validity of the study may be results of the inter-rater reliability between the two graders using the PALS (Fairfax County Public Schools,

2004) speaking analytical grading rubric. Although inter-rater reliability was considered acceptable for the overall posttest oral proficiency scores and the task completion subscale score, inter-rater reliability was considered poor on the subscales of comprehensibility, level of discourse, fluency, vocabulary, and language control (George & Mallery, 2003). To help control for this threat, the researcher initially met with the two graders and trained them on scoring oral proficiency speaking samples using the grading rubric. The teachers and the researcher discussed the rationale for assigning a particular score for each of the subscales in an effort to bring more consistency in grading.

Recommendations for Further Research

Due to the study limitations and the dearth of previous research on this topic, more research is needed. A similar study with a more rigorous research design, including random sampling and a larger sample size should be utilized. Replication of this study is also recommended and should be extended over an entire school year. The present study lasted from August through October 2012 for the duration of eight weeks. A study measuring the long-term effects of the integration of voice-conferencing technologies could also examine student enrollment in foreign languages to determine if a decreased level of anxiety encouraged students to continue language study.

Replication of this study with different levels of Spanish, from level one all the way to Advanced Placement courses, should be considered to examine if the use of voice-conferencing for language learning benefits one group more than another or if anxiety levels vary from one level to another. Additionally, it is suggested that the study

be conducted with other foreign languages in addition to Spanish to assess the effects voice-conferencing has on oral proficiency and anxiety in other languages.

Future research should also include qualitative inquiry regarding students' perceptions of the use of voice-conferencing for language learning. Student perceptions of the use of voice-conferencing could provide teachers with a more holistic view of the potential benefit of integrating *Voice Thread*® in the foreign language classroom from the student's perspective. Noormohamadi (2009) suggested the need for a qualitative study of students' affective reaction to using strategies in language learning and communicated the importance of qualitative data, through interviews and observations, to provide rich detail from the students' point of view. A future study could also incorporate teachers' perceptions of the use of the voice-conferencing technology *Voice Thread*® for language learning. More research is needed to further examine the quality, content, and frequency of the *Voice Thread*® posts. In addition, groups could be specifically assigned to work with certain other people. In the present study, all students could view all posts and respond to whomever they chose.

Research could also be furthered by examining the effect of teacher presence in the online environment of *Voice Thread*®. In the current study, the teacher for the experimental group did not interact in the discussions or post in response to student comments. Further research might reveal if teacher presence affects student anxiety and proficiency in the online environment.

Foreign language educators could also benefit from more research on gender differences and the integration of technological tools in order to examine their effect on anxiety and oral proficiency. For the present study, there was a fairly even split of males

versus females in the control and experimental groups, thus exhibiting homogeneity between groups regarding gender. Future research could include gender as an additional independent variable in a research study.

Finally, foreign language teachers constantly need further information and research on the integration of technological tools and the resulting effect on oral proficiency for students with the push toward communicative competence (Pufahl & Rhodes, 2011). Additional studies can provide empirical data to help guide foreign language educators in their endeavors to improve the communicative competence of foreign language students.

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APPENDIX A

Foreign Language Classroom Anxiety Scale (FLCAS)

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal, 70*(2), 125-132.

I. Before responding to the items on the FLCAS, please circle the following demographic information about yourself.

Gender: Male or Female

Age: 15 16 17 18

Race: Caucasian Hispanic Asian African American Multiracial

American Indian or Alaska Native

II. Please respond to the following items on the Foreign Language Classroom Anxiety Scale. Circle your answer in response to each statement.

1. I never feel quite sure of myself when I am speaking in my foreign language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

2. I don't worry about making mistakes in language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

3. I tremble when I know that I'm going to be called on in language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

4. It frightens me when I don't understand what the teacher is saying in the foreign language.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

5. It wouldn't bother me at all to take more foreign language classes.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

6. During language class, I find myself thinking about things that have nothing to do with the course.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

7. I keep thinking that the other students are better at languages than I am.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

8. I am usually at ease during tests in my language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

9. I start to panic when I have to speak without preparation in language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

10. I worry about the consequences of failing my foreign language class.

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

11. I don't understand why some people get so upset over foreign language classes.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

12. In language class, I can get so nervous I forget things I know.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

13. It embarrasses me to volunteer answers in my language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

14. I would not be nervous speaking the foreign language with native speakers.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

15. I get upset when I don't understand what the teacher is correcting.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

16. Even if I am well prepared for language class, I feel anxious about it.
Strongly agree
Agree
Neither agree nor disagree
Disagree

Strongly disagree

17. I often feel like not going to my language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

18. I feel confident when I speak in foreign language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

19. I am afraid that my language teacher is ready to correct every mistake I make.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

20. I can feel my heart pounding when I'm going to be called on in language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

21. The more I study for a language test, the more confused I get.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

22. I don't feel pressure to prepare very well for language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

23. I always feel that the other students speak the foreign language better than I do.
Strongly agree

Agree
Neither agree nor disagree
Disagree
Strongly disagree

24. I feel very self-conscious about speaking the foreign language in front of other students.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

25. Language class moves so quickly I worry about getting left behind.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

26. I feel more tense and nervous in my language class than in my other classes.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

27. I get nervous and confused when I am speaking in my language class.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

28. When I'm on my way to language class, I feel very sure and relaxed.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

29. I get nervous when I don't understand every word the language teacher says.
Strongly agree
Agree
Neither agree nor disagree
Disagree

Strongly disagree

30. I feel overwhelmed by the number of rules you have to learn to speak a foreign language.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

31. I am afraid that the other students will laugh at me when I speak the foreign language.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

32. I would probably feel comfortable around native speakers of the foreign language.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

33. I get nervous when the language teacher asks questions which I haven't prepared in advance.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

APPENDIX B

PALS Presentational Tasks Speaking Analytic Grading Rubric

Fairfax County Public Schools (2004). *Performance assessment for language students (PALS) upper level speaking analytical rubric*. Fairfax, VA. Retrieved from http://www.fcps.edu.

Level 3 Presentational Tasks (Speaking)
Analytic Rubric

Task Completion

1. Minimal completion of the task; content frequently undeveloped and/or somewhat repetitive.
2. Partial completion of the task; content somewhat adequate and mostly appropriate; basic ideas expressed but with very little elaboration or detail.
3. Completion of the task; content appropriate; ideas adequately developed with some elaboration and detail.
4. Superior completion of the task; content rich; ideas developed with elaboration and detail.

Comprehensibility

1. Content barely comprehensible, requiring frequent interpretation; pronunciation may frequently interfere with communication.
2. Content mostly comprehensible, requiring interpretation; pronunciation may occasionally interfere with communication.
3. Content comprehensible, requiring minimal interpretation; pronunciation does not interfere with communication.
4. Content readily comprehensible, requiring no interpretation; pronunciation enhances communication.

Level of Discourse

1. Predominant use of complete yet repetitive sentences; no or almost no cohesive devices.
2. Use of complete sentences, some repetitive; few cohesive devices.
3. Emerging variety of complete sentences; some cohesive devices.
4. Variety of complete sentences and of cohesive devices.

Fluency

1. Speech halting and uneven with long pauses or incomplete thoughts; little sustained speech.
2. Speech choppy and/or slow with frequent pauses; few or no incomplete thoughts; some sustained speech.
3. Speech sustained most of the time; some hesitation but manages to continue and complete thoughts.
4. Speech sustained throughout with few pauses or stumbling.

Vocabulary

1. Inadequate and/or inaccurate use of vocabulary.
2. Somewhat inadequate and/or inaccurate use of vocabulary and too basic for this level.
3. Adequate and accurate use of vocabulary for this level.
4. Rich use of vocabulary with some idiomatic expressions.

Language Control

1. Emerging use of basic language structures.
2. Emerging control of basic language structures.
3. Control of basic language structures.
4. Control of basic language structures with occasional use of advanced language structures

Note: *In an extreme case where the response is nonsensical, completely inappropriate and/or completely unrelated to the task, the response may be considered unratable.*

Name _____

Task Completion	½	1	1½	2	2½	3	3½	4
Comprehensibility	½	1	1½	2	2½	3	3½	4
Level of Discourse	½	1	1½	2	2½	3	3½	4
Fluency	½	1	1½	2	2½	3	3½	4
Vocabulary	½	1	1½	2	2½	3	3½	4
Language Control	½	1	1½	2	2½	3	3½	4

Raw Score: _____ **/ 24**

24	100 %	16	82.7 %	8	65.3 %
23.5	98.9 %	15.5	81.6 %	7.5	64.2 %
23	97.8 %	15	80.5 %	7	63.2 %
22.5	96.8 %	14.5	79.4 %	6.5	62.1 %
22	95.7 %	14	78.3 %	6	61.0 %
21.5	94.6 %	13.5	77.2 %	5.5	59.9 %
21	93.5 %	13	76.2 %	5	58.8 %
20.5	92.4 %	12.5	75.1 %	4.5	57.8 %
20	91.3 %	12	74.0 %	4	56.7 %
19.5	90.2 %	11.5	72.9 %	3.5	55.6 %
19	89.2 %	11	71.8 %	3	54.5 %
18.5	88.1 %	10.5	70.8 %	2.5	53.4 %
18	87.0 %	10	69.7 %	2	52.3 %
17.5	85.9 %	9.5	68.6 %	1.5	51.2 %
17	84.8 %	9	67.5 %	1	50.2 %
16.5	83.8 %	8.5	66.4 %	0.5	49.1 %

Converted % Score: _____ **%**

If you use points in your grade book, use Conversion Chart B or the following formula:

$$\text{converted \% score} \times \frac{\text{max score}}{100} = \text{student points}$$

(To divide by 100 move the decimal point two places to the left.)

FINAL GRADE: _____

APPENDIX C

Español 3 - Speaking Pretest

Parte A: - Describe las dos pinturas *Cumpleaños* y *Barbacoa para cumpleaños* por Carmen Lomas Garza (5-10 frases mímimo). Puedes incluir respuestas a las siguientes preguntas.

- Describe todo lo que ves en las pinturas.
- ¿Qué está pasando en las pinturas?
- ¿Qué tipo de celebración es?
- ¿Qué tipo de ropa llevan las personas?
- ¿Qué elementos culturales ves en las pinturas?

Parte B: Una Comparación – Contesta las siguientes preguntas sobre tu cumpleaños.

1. ¿Cuándo es tu cumpleaños?
2. ¿Cómo celebras tu cumpleaños en general?
3. ¿Qué actividades haces con tu familia y tus amigos para tu cumpleaños?
4. ¿Cómo son las pinturas de una fiesta de cumpleaños por Carmen Lomas Garza similar a tus fiestas de cumpleaños?
5. ¿Cómo son las pinturas de una fiesta de cumpleaños por Carmen Lomas Garza diferente a tus fiestas de cumpleaños?

APPENDIX D

Español 3 – Speaking Activity One

¿Cómo eres tú?

Parte A: Escucha la canción y mira el video "Esta es mi vida" por la banda Jesse y Joy.

1.) Pon las secciones de la canción en orden cronológico. Puedes escuchar la canción dos o tres veces si es necesario.
2.) Escoge una sección en que tu puedes identificar características de ti mismo.
3.) Di a un compañero de clase por qué tú puedes identificar con esta sección.
4.) Expresa si te gusta o no te gusta la canción. ¿Por qué te gusta? O ¿Por qué no te gusta?
5.) ¿Por qué es importante ser quien eres y no cambiar?

Parte B: Contesta las preguntas con tres frases (mínima) para cada respuesta.

1. ¿Cómo eres tú?
2. ¿Qué te gusta hacer?
3. ¿Cómo es tu mejor amigo/a?

Parte C:

1) Escucha a los comentarios de tus compañeros de clase y busca a otra persona con quién tienes algo in común. Responde a la persona y dile que tú también eres _____ o que tú también te gusta hacer _____.
2) También, busca a un compañero con quién no tienes nada en común. Responde a la persona que tú no eres similar y dile a la persona otra descripción o actividad que te gusta hacer.

APPENDIX E

Español 3 – Speaking Activity Two

¿Cómo es tu familia?

Parte A: Describe una foto de tu familia. Haz una introducción de tu familia a la clase.

1.) Describe las características físicas.

2.) Describe las relaciones entre las personas (son esposos, hermanos, tíos, etc.)

3.) Describe la ropa.

4.) Describe la escena (¿Dónde están? / ¿Qué hacen?)

5.) ¿Por qué es la familia importante en la vida, en general?

6.) ¿Qué actividades les gustan hacer?

Parte B: Un miembro famoso de tu familia.

1.) Mira las personas famosas. Selecciona una familia famosa para ti.

2.) Describe a tu familia nueva. Necesitas escoger una madre, un padre, y un hermano/hermana y un esposo /una esposa por lo menos.

3.) Contesta la pregunta: ¿Te gustaría tener una familia famosa? ¿Por qué? ¿Por qué no?

4.) Debes comentar sobre la familia nueva de **cinco** de tus compañeros.

APPENDIX F

Español 3 – Speaking Activity Three

(Image)

Descripciones específicas de tu familia

Parte A: Contesta las preguntas sobre descripciones específicas de tu familia.

1. Escoja tres miembros de tu familia. Di tres adjetivos de esta persona.
2. Explica la descripción de esta persona usando circunlocución en español.

Por ejemplo: Mi hermano = Mi hermano es perezoso.

Mi hermano es perezoso porque mira la televisión mucho, juega los videojuegos, y no ayuda en la casa.

Parte B: Comparte tus descripciones con dos estudiantes de la clase. Después de compartir la explicación de los adjetivos, di a tu compañero cual descripción era su favorita y por qué.

APPENDIX G

Español 3 – Speaking Activity Four

Las Relaciones con los Padres

(Image)

Parte A: Lean las descripciones de 5 tipos diferentes de padres y contestan las siguientes preguntas:

1. ¿En qué grupo están tus padres? ¿Por qué?
2. ¿Tienes buenas relaciones con tus padres o no?
3. ¿Tus padres permiten mucho o son muy estrictos? Da un ejemplo.
4. ¿Son tus padres más estrictos que los padres de tus amigos?

Parte B: Habla con un compañero.

1. Describe con un compañero de clase el tipo de padres que tú tienes.
2. Expresa a tu compañero tu opinión de la importancia de las relaciones con tus padres.

   ¿Por qué es importante a ti? O ¿Por qué no te importa?
3. Cuando tú eres padre o madre, ¿qué tipo de padre o madre quieres ser?

APPENDIX G.1

Descriptions for Speaking Activity Four

Descripciones de los Padres

Tipo #1 – Controla –todo

Este tipo es como un "helicóptero." Ellos siempre quieren tener el control de las vidas de sus hijos. Quieren saber todo. Por ejemplo, preguntas populares son: ¿Adónde vas? ¿A qué hora regresas a la casa? ¿Quienes son tus amigos? Y más. Tienen miedo que sus hijos van a tener problemas con drogas y alcohol y por eso son muy estrictos con sus hijos.

Tipo #2 – Indiferentes

Para este tipo, no les importa si sales, entras, o no llegas a casa. Son menos estrictos que el tipo Controla-todo. Prefieren trabajar, mirar la televisión, o salir con sus amigos y a ellos no les importan las acciones de sus hijos. También no muestran mucha afección a sus hijos.

Tipo #3 – Censura total

Simplemente, nada les gusta: ni tu pelo, ni tu ropa, ni tus amigos. Son estrictos y piensan que ellos saben todo. Según sus padres, ellos tienen la idea de quién eres, y tú no sabes porque eres joven.

Tipo #4 – Perfectos a morir

Este tipo de padres tiene expectativas muy altas de ti. Si hay un examen, tú necesitas sacar una nota de "100." Si tú quieres jugar un deporte, tú necesitas ser el mejor jugador. "Bueno" no es suficiente para ellos. Tienes que ser "excelente" en todas las cosas que haces.

Tipo #5 – Padres solteros

En esta familia, solo hay un padre o una madre para ser el o la líder de la familia. Ser padre o madre soltero(a) no es una cosa fácil. Muchas veces el padre o la madre tiene un trabajo de muchas horas. Muchas veces el padre o la madre no tiene mucho tiempo para pasar con sus hijos.

APPENDIX H

Español 3 – Speaking Activity Five

Las Relaciones Personales

(Image)

Parte A:
Contesta las siguientes preguntas sobre las amistades y otras relaciones en tu vida:

1. En tu opinión, ¿Cuáles son las relaciones más importantes en la vida de un joven?

   (las relaciones con tus padres o las relaciones con tus amigos)
2. Para ti, ¿Es más importante la opinión de tus padres o de tus amigos cuando tienes que hacer una decisión difícil?

3. ¿Tienes muchos amigos o un(a) amigo(a) mejor? ¿Cuál prefieres?

4. ¿Prefieres tener amigos que son similares o diferentes de ti? ¿Por qué?

5. ¿Es buena idea tener un(a) novio(a) en el colegio? ¿Por qué sí o por qué no?

Parte B:
Comparten tus opiniones (tus respuestas de Parte A) con dos compañeros. Después de compartir tus respuestas hablan de las siguientes preguntas también.

1. ¿Quiénes y cómo son tus amigos? Menciona los nombres y di tres descripciones de cada uno.

2. ¿Tienes un(a) novio(a)? Menciona el nombre y di tres descripciones de él o ella. Si no tienes un(a) novio(a), puedes mencionar tu celebridad favorita y di tres descripciones de él o ella.

APPENDIX I

Español 3 – Speaking Activity Six

La Tecnología

(Image)

Parte A:

Contesta las preguntas:

1) ¿Por qué es la tecnología importante en tu vida?
2) Habla de tres (mínimo) maneras que tu usas tecnología en tu vida (para cuales actividades) y los beneficios que tecnología tiene para ti.
3) Comparte los usos y beneficios de tecnología con dos compañeros de clase.

Parte B: Mira el clip de YouTube que se llama Evolución de la Comunicación en la Tecnología en español.

Describe lo que tú comprendes del video. ¿Qué dice el video de la evolución de tecnología y su impacto para el futuro.

1) ¿Crees que la tecnología es una necesidad en la vida? ¿Por qué? ¿Por qué no?
2) Comparte tu opinión con tres compañeros de clase.

APPENDIX J

Español 3 – Speaking Activity Seven

(Image)

Parte A: Contesta las preguntas sobre las redes sociales.

1.) ¿Usas las redes sociales a menudo (often)?

2.) ¿Cuál es el medio de comunicación que prefieres usar con tus amigos? (mandar textos, mandar mensajes en Facebook o Twitter, o hablar cara a cara?

3.) ¿Crees que el uso de tecnología te ayuda con tus clases o te distrae (distracts you)? ¿Cómo?

4.) ¿Qué puedes hacer sin el uso de tu teléfono celular? ¿Puedes sobrevivir?

Parte B: Mira el video clip de YouTube – Phoebe Prince's Story sobre un tema importante y muy serio en el mundo de las redes sociales - Cyberbullying. Contesta las preguntas y responde a tres compañeros de clase.

1.) ¿Qué piensas de este clip?

2.) ¿Qué puede hacer una víctima de Cyberbullying?

3.) ¿Qué pueden hacer los padres de una víctima?

4.) ¿Qué puedes hacer tú si ves una situación de Cyberbullying o intimidación de otro estudiante en tu escuela? ¿Puedes hablar con tu maestro? ¿Puedes hablar con un consejero? ¿Puedes ayudar?

APPENDIX K

Español 3 – Speaking Activity Eight

Gustar y los Verbos Como Gustar

(Image)

Parte A: Mira el video clip de la canción *Quién te quiere como yo* por Carlos Baute, un cantante español en YouTube.

Analiza el video clip y piensa en tu opinión de lo que pasa en el clip. Di 5 frases a un compañero usando el verbo gustar u otro verbo como gustar (de tu lista). Puedes escribir las frases mientras que miras el video y luego compartir tus opiniones.

Puedes analizar la ropa, el pelo, la motocicleta del cantante, o puedes hablar del paisaje mexicano o los otros personajes en el video.

1)

2)

3)

4)

5)

Parte B: Usa gustar y otros verbos como gustar para contestar las preguntas. Después de practicar individualmente, comparte tus respuestas con dos compañeros.

1) ¿Qué piensas de los videos musicales de Lady Gaga?
2) ¿Qué piensas de las personas que usan Twitter para comunicar todos los detalles de su vida?

3)¿Qué piensas de los programas de "realidad" en la televisión?

APPENDIX K.1

Verbs for Speaking Activity Eight

Gustar y los verbos como gustar:

Español	Inglés
hacer gracia	to amuse
interesar	to be interested
molestar	to be bothered by
parecer	to seem
preocupar	to worry
quedar	to remain/to be left
repugnar	to disgust
caer mal	to make a bad impression
cansar	to tire
convenir	to suit/to be good for
doler	to hurt
encantar	to love/be delighted by
fascinar	to be fascinated by
faltar	to lack

APPENDIX L

Español 3 – Speaking Posttest

(Image)

Parte A: Mira las dos imágenes de familias usando la tecnología. Describe las dos imágenes (usen 5-10 frases mínimo). Puedes incluir respuestas a las siguientes preguntas:

- Describe todo lo que ves en las imágenes.
- ¿Qué está pasando en las imágenes.
- ¿Dónde está la familia?
- ¿Qué hace cada persona y qué tipo de dispositivo usa cada miembro de la familia?

Parte B: Una comparación – Contesta las siguientes preguntas sobre tu familia y el uso de tecnología que tiene tu familia.

1) ¿Es tu familia similar o diferente que las familias de las imágenes? ¿Por qué?
2) ¿Tu familia tiene muchos dispositivos? ¿Cuáles tiene?
3) ¿Pasas mucho tiempo con tu familia? ¿Qué actividades hacen ustedes?
4) ¿Piensas que el uso de tecnología puede afectar las relaciones personales? ¿Es el efecto negativo o positivo para la familia? Explica.
5) ¿Mandas muchos textos a las personas en tu familia?

APPENDIX M

PARENTAL CONSENT / STUDENT ASSENT FORM

The Effect of *Voice Thread*® Integration on High School Students' Anxiety and Oral Proficiency in the Foreign Language Classroom
Doctoral Dissertation Research Study
Melanie Dunn
Liberty University
School of Education

You are invited to be in a research study about the effect of voice-conferencing technology integration on foreign language learning. You were selected as a possible participant because you are taking an advanced Spanish course and have a solid knowledge of vocabulary and grammatical structures in the Spanish language. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Melanie Dunn, Liberty University School of Education

Background Information

The purpose of this study is to determine if the integration of a voice-conferencing tool called *Voice Thread*® has an effect on the anxiety foreign language learners experience related to speaking in Spanish compared to students who practice speaking using the language laboratory. A second purpose of the study is to determine if the integration of *Voice Thread*® has an effect on the students' ability to verbally communicate in the target language. *Voice Thread*® is a tool that allows students to record their voices and post original comments or add comments to other students' posts. Students have the capability to record comments directly to the program by either calling in using their cell phone or by using a microphone on their computer or a classroom computer. This study will help provide evidence as to whether or not speaking practice in the online environment helps students feel more comfortable speaking and also whether or not it affects their proficiency or ability to communicate in the target language.

Procedures:

If you agree to be in this study, I would ask you to do the following things:
You will be among approximately 150-200 students invited to participate in this research study. You will be assigned to one group for the duration of the eight week study. Your assigned group will either use the language laboratory for weekly speaking practice or will integrate *Voice Thread*® for weekly speaking practice. If you will be integrating *Voice Thread*® for speaking practice, please know that some weekly practice will take place outside of the classroom in the online environment. All groups will begin by taking two pretests. One pretest consists of the Foreign Language Classroom Anxiety Scale Survey. This will be a paper and pencil 33 item survey. You will take another pretest in the language laboratory where you will provide a speaking sample in the target language as you describe a picture and answer questions in Spanish. Your voice will be recorded and your pretest will be rated by two Advanced Placement Spanish

teachers using the Performance Assessment for Language Students speaking rubric. Each week, you will spend approximately 45 minutes doing a variety of speaking activities ranging from describing pictures, responding to questions, responding to songs, and responding to video clips. Each group will be practicing speaking using the same activities; only the method for practice will be different. At the end of the eight-week period, you will take two posttests. You will take the Foreign Language Classroom Anxiety Scale survey again. You will also go to the language laboratory to take a speaking posttest which will be similar in format to the pretest. The posttest will be recorded and will be rated by two AP Spanish teachers using the Performance Assessment for Language Students Speaking Rubric.

Risks and Benefits of being in the Study

The risks in this study are no more than the participant would encounter in everyday life. Some students may feel uncomfortable or nervous during the speaking practice and during the pretest and posttest when their voices are recorded for an oral proficiency rating.

The benefits to participation are: Students will benefit from participation in this study due to the extra speaking practice they will be getting throughout the course of the study. This will hopefully help increase their verbal communication skills in Spanish.

Confidentiality:

Participant data collected for this study will be kept private. It will not be possible to identify any of the subjects in the study in any published work. Students will be assigned a number and data collected will be separated from the student name/number codes. The Foreign Language Classroom Anxiety Scale research data will be secured in a locked cabinet. The participant voice recordings will be saved to a CD or jump drive and will be locked in a cabinet. Access to the voice recordings will only be given to the two AP Spanish teachers for rating purposes only. The AP Spanish teachers will be given no participant information. Audio files will be kept secure until three years after completion of the study and will then be deleted. Data from the anxiety scale surveys will be shredded, along with speaking rubrics used to rate the speaking pretests and posttests.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships. Participation in this study will also not affect your Spanish course grade. Please inform your classroom teacher if you wish to withdraw from the study at any time.

Contacts and Questions:

The researcher conducting this study is: Melanie Dunn. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact me at XXX High School, XXX-XXX-XXX, xxx@liberty.edu or my advisor Dr. Amanda Rockinson-Szapkiw, XXX-XXX-XXXX, xxx@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Assent:

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature of
Participant:_____Date:_____

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child to participate in this study.

Signature of parent or guardian:_____ Date: _____
(If minors are involved)

Signature of Investigator:_____ Date: _____

APPENDIX N

School District Approval Letter

April 20, 2012

Dear Ms. Dunn:

RE: Research Study Approval - The Effect of *Voice Thread*® Integration on High School Students' Anxiety and Oral Proficiency in the Foreign Language Classroom

This letter provides written approval for your quasi-experimental research study which seeks to determine the ability of the asynchronous voice-conferencing tool, *Voice Thread*®, to support instructional strategies and affect student anxiety and oral proficiency within xxxxxxx County Schools. As stated in your letter to me, participation should be considered voluntary and data will be collected through experimental grouping. Your study sounds very interesting, and I applaud your efforts of continued education. If I can provide additional information to support this approval, please be encouraged to contact me at xxx-xxx-xxxx or by email.

Respectfully
Submitted,

xxxxxxxxxxxx
Superintendent

APPENDIX O

Liberty University IRB Approval Letter

April 24, 2012

Melanie Dunn
IRB Approval 1298.042412: The Effect of Voice Thread Integration on High School Students' Anxiety and Oral Proficiency in the Foreign Language Classroom

Dear Melanie,

We are pleased to inform you that your above study has been approved by the Liberty IRB. This approval is extended to you for one year. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB and we wish you well with your research project.

Sincerely,

Fernando Garzon, Psy.D.
IRB Chair, Associate Professor
Center for Counseling & Family Studies
(434) 592-5054