

University of Nevada, Reno

**Foreign Language Student Anxiety and Expected Testing Method: Face-to-Face
Versus Computer Mediated Testing.**

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in
Informational Technology in Teaching

by

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May, 2012

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prepared under our supervision by

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**Foreign Language Student Anxiety And Expected Testing Method: Face-To- Face
Versus Computer-Mediated Testing**

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DOCTOR OF PHILOSOPHY

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Abstract

The evidence is overwhelming; affective factors, in particular anxiety, do affect students who are learning a second or foreign language. Foreign language anxiety can affect students' achievement and desire to continue their studies. Instructors want their students to succeed and want them to continue. Therefore, finding ways to reduce this anxiety is a key factor.

Oral proficiency is the main goal for both students and instructors. The communicative approach is the main teaching focus. Therefore, testing for proficiency should be part of the curriculum. However, many professors do not test in this way, one of the reasons stated is that it can provoke anxiety in students.

Numerous studies indicate that attitudes and beliefs toward language learning and testing can increase anxiety. A method that could reduce students' anxiety levels before they even take a test may help them achieve better results or at least lead to more relaxed attitudes toward these tests.

This study gathered data on the anxiety levels of students who were told that they would be undergoing oral proficiency testing using either traditional face-to-face or computer mediated methods. Comparing these two groups, will the anxiety scores of university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication differ significantly from those who believe they will be tested using face-to-face interviews and classroom discourse? Will the level of the student be a significant factor?

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Et M. jtm

Dedication

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Foreign Language Student Anxiety and Expected Testing Method: Traditional Face-to Face Versus Computer Mediated Testing.

Chapter I

Introduction

A. Statement of the Problem

In these times of budget cuts and reorganization of departments, finding ways to maintain and even increase class enrollment by encouraging students to continue their studies are important goals for modern language departments. Finding ways to keep students' interest and motivation up and anxiety down may be the key to having language students continue beyond the minimum academic requirements.

Research shows that the type of situational anxiety that students feel in foreign language classes is different from other anxieties (Scovel; 1978; Horwitz, Horwitz & Cope, 1986, Horwitz, 2001; MacIntyre & Gardner, 1991b). Anxiety is only one of the affective variables that can influence students who are studying foreign languages. However, research shows that this variable can create serious problems for students in the language classroom (Horwitz et al., 1986; Phillips, 1992; Young, 1991a; MacIntyre & Gardner, 1994b).

Language anxiety can prevent learning from taking place and can cause avoidance behavior in students. This behavior could prevent students from taking any foreign language, putting it off until the last minute, or failing to continue their studies beyond the required classes (Horwitz et al., 1986; Young, 1991). There have been several studies that have shown a link between anxiety and attrition (MacIntyre & Gardner, 1991a; Phillips, 1992; Bailey 1983; Onweugbuzie, & Daley, 2003). Once

enrolled, students may also demonstrate such avoidance behaviors as not doing their homework and not attending class. Once they arrive, they manifest their anxiety by trying not to be called on or not volunteering answers. Instructors and professors often associate these behaviors with students who are not interested in learning or just poor students.

Students express their anxiety verbally in many ways as can be seen from Price's 1991 study. In this qualitative study, she interviewed students about concerns they felt in their foreign language classes. Students in the study verbalized their frustrations with statements such as: "I feel extremely uncomfortable speaking. I feel like I'm stupid..." and "you feel frustrated because you're an interesting adult and you sound like a babbling baby" (Price, 1991, p. 105). Other students complained that even though they studied for hours, they still received a "C" in the course, and this was the only "C" of their college careers. Over studying is another factor that has been linked to high anxiety levels (Eysenck, 1979; MacIntyre, 1995). Clearly, all of these statements and problems show how exasperating foreign language learning and teaching can be. Students who view their foreign language classes in these terms will probably not be continuing beyond the required classes, if they make it through their compulsory semesters. Methods must be found that will help make students feel less anxious and more self-confident in their foreign language classroom experience.

Language learning is different from learning that takes place in other academic subjects. Language is used as a means to express oneself; it is a part of one's identity; it is how one presents oneself to the world. "One's speech is part of one's self. One's ability to interpret or remember history or to do mathematics, gymnastics and so forth is

a skill, but it's not part of one's self" (Young & Kimball, 1995, p. 199). When learning a foreign language, this ability to communicate, to express oneself, becomes limited, and this can be a challenge to self-identity (Young, 1991; Cheng, Horwitz, & Schallert, 1999). This challenge can directly threaten self-concept and worldview, which can produce anxiety, especially in the realm of communication (Horwitz et al., 1986; Young & Kimball, 1995). Brown (1973) stated, "the self-knowledge, self-esteem, and self-confidence of the language learner could have everything to do with success in learning a language" (p. 233). Learning another language is an extremely personal endeavor because "language and self are so closely bound, if not identical, that an attack on one is an attack on the other" (Cohen & Norst, 1989, p. 61). This attack on one's identity can cause anxiety in the foreign language classroom. This can make learning an unpleasant experience that discourages students from continuing their language studies.

Research indicates that affective factors in language learning can interfere with the learning process. Emotions can act as a filter as to whether or not the brain can process the language that is being learned. Krashen's (1985) Affective Filter Hypothesis attributes a pivotal role to emotions, especially anxiety. He maintains that when anxiety is high it can act as a filter and 'short circuit' the brain's processing power. He believes that only when students are not anxious will they seek out new input from the target language and be able to process it. Tobias (1979) adds two more stages to this theory: processing and output. Interfering with cognitive performance at any one of the levels, input, processing, or output, can prevent or delay information processing (MacIntyre, 1999; Onweugbuzie, Bailey & Daley, 2000a). Since avoidance is one way that students

deal with anxiety, this avoidance can hinder the learning process at any of these stages (Swain, 1985).

Anxiety associated with foreign language learning is thought to be different from anxiety associated with other kinds of learning. The first research to take this difference into consideration was published by Scovel (1978) in which he discussed the possibility of an anxiety that was specific to language learning. The first research to identify foreign language anxiety as a specific type was presented by Gardner who studied learners of French in Canada. Gardner, Clément, Smythe, and Smythe (1979) developed the first instrument that was used to measure this particular type of anxiety, the French Class Anxiety Scale. This research found, “Anxiety poses several potential problems for the student of a foreign language because it can interfere with the acquisition, retention, and production of the new language” (MacIntyre & Gardner, 1991a, p. 86). Gardner’s (1985) hypothesis states that foreign language anxiety is “...a construct of anxiety which is not general but instead is specific to the language acquisition context and is related to foreign language achievement” (p. 34). In the 1980s, Horwitz et al. (1986) published their pivotal paper and declared that this language specific anxiety was not just one that is transferred, but “...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). Horwitz proposed that anxiety is one of the most important affective factors influencing the success of language learning (Horwitz, 2001).

B. Computers in Learning and Teaching Foreign Languages

Since computers were introduced as a teaching tool, language teachers have been trying to find ways to effectively incorporate them into the language curriculum. Before

the 80s when technologies first became mainstreamed in the classroom, especially in TESOL, computer assisted language learning (CALL) was the dominant use of technology. Although CALL did use technology in teaching and learning, it was used more as a tool to mimic the old language labs and audio cassette drills promoted by the Audio-lingual method, which is a teaching method based on repetition and memorization. However, with the rapid advances that have been made in this field, these uses have rapidly changed into methods that fit well with a communicative approach to language teaching.

Recent research has been done using technology as a means to reduce anxiety. In particular, Computer Mediated Communication (CMC) is in the forefront as a way of using technology to help students feel more confident (Beauvois, 1992; Darhower, 2002; Chun, 2003; Warschauer, 2005; Wang & Woo, 2007). The use of CMC in foreign language learning and teaching began in the 1990s with a network application called “Daedalus InterChange” by Daedalus, Inc. (Warschauer & Meskill, 2000). Since that time, it has expanded to include both Synchronous Computer Mediated Communication (SCMC) and Asynchronous Computer Mediated Communication (ACMC) uses for foreign language teaching and learning. SCMC involves all parties online together communicating at the same time. Activities such as chat rooms and virtual classrooms are examples of this type of communication. In ACMC activities, the parties involved work at different times and there is no real-time communication between them. These include activities such as e-mails, discussion boards, voice boards and podcasts. A significant body of research has found numerous benefits for learners in both SCMC and ACMC including reduction of anxiety particularly in the area of communication

(Beauvois, 1994, 1999; Beauvois & Elledge, 1996; Kivela, 1996; Warschauer, 1996; Meunier, 1998; Skinner and Austin, 1999; Lee, 2004). The research includes many studies that have shown that this type of communication seems to reduce not only communication anxiety but also produces more productive communication (Beauvois, 1992; Warschauer, 2005; Chun, 2003). Some research has also found a diminished fear of negative evaluation, another anxiety provoking component (Kelm, 1992; Beauvois & Elledge, 1996; Chun, 1994; Kivela, 1996).

C. Research Questions

Many studies have shown that foreign language anxiety can be negatively correlated with performance in the language-learning classroom. MacIntyre and Gardner (1989, 1991b), who conducted the most extensive studies of students' anxiety to date, found that there was a negative correlation between foreign language anxiety and achievement. Other studies (Clément, Gardner & Smythe, 1980; Gardner, Smythe & Lalonde, 1984; Horwitz et al., 1986; Trylong, 1987; Phillips, 1992; Gardner & MacIntyre, 1993) have shown that a high-level of anxiety can be negatively correlated with achievement. However, there has been some conflicting research that showed that anxiety might facilitate learning (Alpert & Haber, 1960; Bailey, 1983). Several of these studies, done before Gardner's and Horwitz's identification of an anxiety specific to language, showed that facilitating anxiety could have a positive effect on language learning. MacIntyre & Gardner (1989) believe that these "inconsistencies" of previous research are "...attributable to an inappropriate level of instrument specificity" (p. 272) and they claim, "...a clear relationship exists between foreign-language anxiety and foreign-language proficiency" (p. 272). Horwitz et al. (1986) support MacIntyre &

Gardner's claim and have also attributed the conflicting results to the lack of a reliable and valid measure of anxiety specific to language learning before the development of the Foreign Language Classroom Anxiety Scale (FLCAS) by Horwitz in 1986.

Given the tendency of the language classroom to promote debilitating anxiety, anxiety that can impede learning, strategies that can create low-stress classroom environments should be a priority. Stevick (1980) believes that language learning "...success depends less on materials, techniques, and linguistic analysis, and more on what goes on inside and between the people in the classroom" (p. 4). If students believe that they are experiencing anxiety and that it has a negative effect on their performance, then it will have such an effect. Stern (1983) asserted, "...the affective component contributes at least as much and often more to language learning than the cognitive skills" (p. 386).

Research supports these claims, which show that affective variables have a significant influence on language achievement (Gardner, 1985; Skehan, 1989; Gardner & MacIntyre, 1993). It has been estimated that over half of all language students experience debilitating levels of anxiety (Horwitz et al., 1986; MacIntyre & Gardner, 1989; Price, 1991; MacIntyre, 1995a). Horwitz concluded that foreign language anxiety is an essential "...obstacle to be overcome in learning to speak another language" (Horwitz, 1986 p. 559).

As Horwitz, Horwitz, and Cope (1986) remarked early in their research, reducing stress by changing the context of foreign language learning is the more important and a considerably more difficult task. As long as foreign language learning takes place in a formal school setting where

evaluation is inextricably tied to performance, anxiety is likely to continue to flourish. (p. 131)

Although this remark was made relatively early in the research on anxiety, not much progress has been made to address this problem. Current advances in computer-mediated communication have opened the door to finding new solutions to reduce foreign language anxiety. Computers are the ideal tools to help second language learners feel sufficiently secure to make and correct their own errors without stress. Students can feel more empowered since they feel less isolated and less afraid to contact others or express themselves in this medium.

Since the main goal for learning a language is to be able to use it to communicate, and the predominant teaching approach to date is a communicative one, methods should exist that could be used to test students' communicative competencies while keeping anxiety in check. There appears to be a discrepancy between the push for communicative proficiency and testing for this proficiency. Among the reasons for not incorporating these kinds of tests in the curriculum are the time constraints and the knowledge that they can be extremely anxiety provoking for students. Other reasons are that oral tests are hard to create and highly subjective to grade. Therefore, many language teachers do not test communicative abilities at all or very minimally (Harlow & Caminero, 1990). On the other hand, some research has shown that students believe that they should be taking part in communicative testing. Even though this type of testing can cause anxiety, students believe that it is a necessary *evil* to learn a foreign language (Phillips, 1991). It has also been stated by Chuang (2009) that students seem to be more anxious before the tests than while they are taking them. Therefore, if a method

could be found that would help reduce this anxiety before the testing began, it would be a welcome addition to the classroom.

The present research tested to see if there would be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer-mediated communication than those who believe they will be tested using traditional face-to-face interviews and classroom discourse.

The data was collected during a one-class intervention. Students were informed that they would be undergoing a series of activities to test their level of communicative proficiency for placement purposes. The hypothesis was that students who believed that their testing would be done using SCMC and ACMC methods would have an overall lower level of anxiety as compared to students who were told that they would be tested using traditional face-to-face methods.

Focusing on the source rather than just trying to cope with the symptoms may prove to be the key to reducing or even alleviating foreign language anxiety. Because oral production is a known source of anxiety, and testing is also a known source of anxiety, finding a more efficient and less anxiety-producing method of performing these tasks may improve students' attitudes and reduce their anxiety. Assessment using CMC instead of traditional face-to-face methods may reduce anxiety levels in university students. The experience that students have in the classroom and beliefs about language learning that they bring with them are as powerful as the teaching method, the sequence of presentation, and the instructional material (Horwitz et al., 1986; Bailey, 1988; Price 1991).

D. Summary of Research

The purpose of this study was to provide empirical data regarding the possible effect of using computer-mediated methods for testing the communication proficiency of university students in foreign language courses. The premise was that students who were told they were to be tested using ACMC and SCMC methods will have lower anxiety scores on the Foreign Language Classroom Anxiety Scale than students who were told that they would be tested using traditional face-to-face interviews and classroom methods. A secondary comparison was made between the course levels to see if level had any affect on students' anxiety.

The research questions that were addressed were:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer-mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

Throughout the rest of this work professor and instructor will be used alternately to refer to both professional situations.

Chapter II

Literature Review

Enrollment in foreign language classes has been increasing in the last several years. However, the problems that seem to plague these classes still persist: absenteeism, avoiding homework, not participating in class and attrition are still prevalent. Although these symptoms cannot always be accounted for by the presence of foreign language anxiety in students, it is a problem with consequences that should not be overlooked.

The ultimate goal for students in a language class is to communicate in the target language. The problem is that students often arrive in class with misconceptions about exactly how long this goal should take to achieve, and this can be a source for anxiety. Anyone who has ever had the experience of learning a foreign language knows that it is not an easy task. According to the Foreign Service Institute, it can take a minimum of "240 hours to produce an intermediate level speaker under ideal circumstances (small, intensive classes with highly motivated learners)" (Young, 1999, p. 128). Students who believe that after completing a four-semester university course they will speak the target language proficiently are likely to be disappointed. It takes much time and effort from both students and instructors to achieve this goal.

Learning is a complicated process. Learning a foreign language further complicates this process because it involves more of the self than does learning in other academic subjects. Shams (2006) declared, "the importance of the disparity between the "true" self as known to the language learner and the more limited self as can be presented at any given moment in the foreign language course would seem to distinguish foreign language from other academic anxieties such as those associated with

mathematics or science” (p. 10). An anecdotal example of how much the self can be involved in language is that some individuals who can speak several languages, readily admit that they have different “personalities” when they speak each language.

Charlemagne proclaimed, "to have a second language is to have a second soul."

Language learning and teaching continues to be something of an enigma. The science of second language acquisition is in its infancy, although significant strides have been made in the last 30 years. “To study how we learn a new language is to study how the body, mind and emotions fuse to create self-expression” (Young, 1999, p. 13).

Guiora states, “the task of learning a new language is a profoundly unsettling psychological proposition, not adequately described by limiting it to terms such as ‘motivation,’ ‘attitudes,’ or even ‘affective variables’ ” (Guiora, 1982, p. 8). This is because it can directly threaten an individual’s self-concept and worldview.

Foreign language instructors have been constantly searching for the correct method to teach their students. The traditional approaches such as grammar-translation and the audio-lingual method stressed habit formation and automatic responses. The newer communicative methods of language teaching place emphasis on meaning and communication in the target language. These approaches advocate the development of communicative proficiency as the primary goal (Omaggio, 2001). This goal seems to fit well with students’ primary goal, which is to be able to communicate in the target language.

Research on anxiety specifically linked to foreign language learning has shown that this anxiety can have a marked effect on both the teaching and learning of foreign languages. Research has shown that anxiety can affect achievement and attitudes in the

foreign language classroom (Horwitz et al. 1986; MacIntyre & Gardner, 1991a).

Attrition has also been linked to this type of anxiety. Students drop out because of their perceived inability to perform according to their expectations (MacIntyre & Gardner, 1991). Phillips (1990) believes that anxiety's most detrimental effect on students is on "the attitudes of students toward language learning and on their intentions to continue the study of a foreign language" (p. 228). Bailey, Onwuegbuzie, and Daley's 2003 study on attrition, found that in Spanish, French, Japanese, and German classes at all levels, students with higher anxiety were more likely to drop out.

The effect on teaching also can be seen in the communicative approaches that have focused on reducing anxiety. Because speaking and communication seem to be the most anxiety-provoking activity in learning foreign languages, and the focus in classrooms today is on a communicative approach, many of the communicative methods use techniques that focus on reducing anxiety (Stevick, 1980; Chastain, 1988; Koch & Terrell, 1991). These humanistic methods present the instructor as a facilitator and guide whose role is to try to create a relaxed and friendly atmosphere to encourage learning.

Examples of humanistic methods:

1. Lozanov's Suggestopedia (1979) promotes stimulating a relaxed environment to reduce the learners' anxiety levels so that they can take in and retain as much material as possible. This is done through music and listening activities.
2. Krashen's and Terrell's Natural Approach (1983) emphasizes the importance of a low affective filter in the classroom. Delaying oral production operationalizes this and waiting until students are ready and comfortable to communicate in the target language

reduces stress. This method also emphasizes the development of listening comprehension (Krashen & Terrell, 1983).

3. Asher's Total Physical Response (1977) is used after the "silent period" is over and students are ready to speak. The instructor tries to create a stress free environment by using physical activities and games. Students express themselves through gestures and oral narration. This can relieve tension and lower anxiety to facilitate learning.

4. The Curran Community Language Learning method (1976) focuses on mutual support between instructors and students. The instructor takes on the role of counselor whereas students become clients. By promoting close interpersonal relationships and understanding, anxiety can be reduced, and this will improve language learning.

5. The Silent Way (Gattegno, 1972) "is based on the premise that the teacher should be silent as much as possible in the classroom and the learner should be encouraged to produce as much language as possible" (Richards & Rogers, 1986, p. 99). As in the other methods the teacher's role is to facilitate and encourage students to take risks on their own.

The goal of these approaches is to find a method of teaching that encourages communication but reduces anxiety associated with trying to communicate in a foreign language. These methods are not without problems. They are often hard to implement or just not suited to the personality of the instructor. They also do not address the problem of testing for oral proficiency. There needs to be other alternatives to reduce anxiety that can easily be incorporated in the curriculum in every language class.

Current research and practices have been looking into ways of reducing foreign language anxiety in the classroom. This research has gone in several different directions.

Several studies have introduced methods that concentrate on tactics to make students aware of their anxiety and train them in ways to reduce it through relaxation techniques (Stevick, 1980; Koch and Terrell, 1991; Chastain, 1988). This practice seems to have had favorable results, but it does take time, willingness and cooperation between students and teachers.

This chapter will present a brief description of the history of language learning and theories. Next, anxiety both in a general sense and in foreign language learning will be discussed in more detail. The effects that foreign language anxiety have on teaching and learning will follow, including what affect this anxiety has in the classroom. Finally, a short discussion on how computer-mediated communication (CMC) can affect foreign language anxiety. Finally, two articles that focus on using technology for testing oral proficiency will be examined.

The research questions to be answered are:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer-mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

A. History of Language Learning

The behaviorist movement influenced the linguists of the 50s and early 60s. Second language learning was done through repetition following the ideas of Pavlov, Skinner, and Watson. Skinnerian psychology led to “a heavy reliance in the classroom on the controlled practice of verbal operants (classes of responses) under carefully designed schedules of reinforcement” (Brown, 2000, p. 82). The method that emerged from these beliefs was the audio-lingual method (ALM), which dominated language teaching and learning for more than 30 years and persists today. Shrum and Glisan (1994) defined the ALM in this way:

The Audiolingual Method, which brought a new emphasis to listening and speaking, advocated teaching oral skills by means of stimulus-response learning: repetition, dialogue memorization, and manipulation of grammatical pattern drills. Speaking in the ALM mode usually meant repeating after the teacher, reciting a memorized dialogue, or responding to a mechanical drill. (p. 140)

This method produced students who can only repeat one or two phrases in the language they studied. Sentences such as “Bonjour, je m’appelle Maurice, j’ai un chien et le singe est sur la branche” (“Hello, my name is Maurice, I have a dog, and the monkey is on the branch”), were memorized from random dialogues. Freedom of expression did not exist; it was thought that if one said something incorrectly it may be “fossilized“ in the speaker and would then remain as a *bad* speech habit!

In the early 60s, Noam Chomsky introduced the notion that language was not simply mimics, that the mind was not a “tabula rasa” of what a person hears and repeats, but that in the brain there exists a language organ, a Language Acquisition Device (LAD). This is the part of the mind that gives us the ability to acquire languages. Whereas his linguistic theories never led directly to an approach in language teaching, his ideas changed the focus of the methods that were used at that time, such as the audio-lingual method. These new theories brought about a shift in beliefs and the cognitive movement became the dominant theory in language learning. The cognitive movement did bring about changes in the classroom; it shifted the focus from rote memorization and repetition to negotiation of meaning, to a process approach to learning. The focus shifted to how the mind works in the acquisition of a foreign language (Young, 1999).

The cognitive theory remained the dominant focus of research and methods until the 80s when scientists began to realize that there may be a piece missing in the theory, the affective piece. Joseph LeDoux states in his book The Emotional Brain (1996), “Minds without emotions are not really minds at all. They are souls on ice-cold, lifeless creatures devoid of any desires, fears, sorrows, pain or pleasure” (p. 25). In 1984, Robert Zajonc’s research showed that affect, in other words, emotions, have primacy over cognition. Emotions can exist before cognition and also can be independent of cognition. “Emotions can monopolize the brain’s system, or circuitry, to the extent that they can override conscious brain activity, or cognition” (Young, 1999, p. 18). These beliefs had a profound effect on how the acquisition of a foreign language is viewed. The

recognition of the importance of affective variables in language teaching and learning, is a way of explaining the why and how of the differences in success in this endeavor.

The research pertaining to affect in language learning and teaching has been ongoing since the 60s. Scovel (1978), Robert Gardner (1988), MacIntyre, (1988, 1991a) and others such as Lambert (1967) and Guiora et al. (1972), were at the forefront to postulate that affect can significantly influence the language-learning process. Scovel stated, “it behooves us to examine other ways in which anxiety can be viewed, not as a simple, unitary construct, but as a cluster of affective states, influenced by factors which are intrinsic and extrinsic to the foreign language learner” (p. 134). The real breakthrough came in the early 80s when Stephen Krashen presented his theory of language learning and acquisition. One of the hypotheses in his theory is the Affective Filter Hypothesis (1982) of foreign language learning. This hypothesis claims, “that affective variables do not impact language acquisition directly but prevent input from reaching what Chomsky has called the ‘language acquisition device,’ the part of the brain responsible for language acquisition” (Krashen, 2003, p. 6). This hypothesis and the belief “the affective component contributes at least as much and often more to language learning than the cognitive skills” (Stern, 1983, p. 386), greatly influenced the methods and approaches of teaching foreign languages. Since communication apprehension seems to be the most anxiety-provoking domain in learning foreign languages, and Campbell and Ortiz (1991) consider that it has reached ‘alarming levels’ (p. 159), many of the newer communicative methods use techniques that focus on reducing this anxiety (Stevick, 1980; Chastain, 1988; Koch and Terrell, 1991).

The history of learning and teaching of foreign languages should not be looked at as a series of theories; one replacing the other, but rather that with each theory another piece was added to the puzzle. This puzzle is far from complete. One of the pieces of this puzzle is the affective variable anxiety. The rest of this chapter will provide details about this variable and how it affects language learning and teaching.

B. Anxiety

Anxiety is, according to Charles Spielberger, a term to describe “an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the automatic nervous system” (Spielberger, 1972 v.2, p. 482).

Research in anxiety and its effects has been far reaching. It was discovered that there are several types of anxiety that can be present in different situations and individuals. They have been identified as trait, state and situation-specific anxieties. Charles Spielberger (1972) was the first to explain the difference between state and trait anxieties.

Trait anxiety, according to Spielberger refers to, “relatively stable individual differences in anxiety proneness” (Spielberger, 1972 v.1, p. 39). Individuals with high trait anxiety are anxious in general in many facets of their lives; it is part of their personality. State anxiety presents itself in a specific situation, in a particular circumstance. Spielberger (1983) defines trait anxiety as a probability of becoming anxious in any situation.

Izard (1972) went one step further and added situation-specific anxiety as another type of anxiety. This anxiety is “associated with threats of self-efficacy and

appraisals of situations as threatening” (Lim, 2003, p. 4). Individuals who suffer from this type of anxiety may only be anxious in certain situations when specific factors are present (Pappamihel, 2002). Gardner and MacIntyre defined more specifically the situation-specific anxiety in relation to foreign language anxiety as “the apprehension experienced when a situation requires the use of a foreign language with which the individual is not fully proficient,” characterized by “derogatory self-related cognition, feelings of apprehension, and physiological responses such as increased heart rate” (MacIntyre & Gardner, 1994b, p. 284).

C. Foreign Language Anxiety

Foreign language does not have an exclusive on research in situation-specific anxiety. Math anxiety, test anxiety, and general communication anxiety are other areas that have been studied very closely. That there exists an anxiety specific to language learning, remained a point of contention for some time. The initial studies considered language anxiety as one that was transferred from another domain, meaning that research in test or math anxiety could be applied to language anxiety. In the beginning, research on the effects of language anxiety on learning produced conflicting results. One of the problems was “the anxiety being studied was not what we would now consider to be language anxiety” (Young, 1999, p. 27). No acceptable measure for language anxiety existed, therefore valid comparisons were hard to make. Studies showed either no relationship or a positive one between language learning anxiety and success in learning (Chastain, 1975; Backman, 1976; and Kleinman, 1977). In 1978, Scovel declared, “momentary anxiety should be distinguished from a more permanent predisposition to be anxious, and that this dichotomy would help to account for some of

the conflicting results of previous anxiety studies” (p. 137). Years of research have shown that foreign language anxiety is separate and different from these other anxieties (Horwitz et al., 1986; MacIntyre & Gardner, 1989, 1991a). MacIntyre and Gardner’s studies found language anxiety to be different from others (1989, 1991b) and that a negative correlation existed between high anxiety levels and achievement in foreign language students. Gardner’s (1985) hypothesis states that foreign language anxiety is: “a construct of anxiety which is not general but instead is specific to the language acquisition context and is related to foreign language achievement” (p. 34). These discoveries indicate that individuals who experience language anxiety do not necessarily suffer from anxiety in their daily lives.

At the same time, Alpert and Haber (1960) proposed that there exists two types of anxieties, facilitating and debilitating.

Facilitating anxiety motivates the learners 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. (Scovel, 1978, p. 139)

Facilitating anxiety is considered to be an asset while debilitating anxiety is detrimental to performance. Gardner, Day and MacIntyre (1992) suggested that the facilitating effect of anxiety is related more to motivation. Horwitz (1990) believes that facilitating anxiety is only helpful for very simple learning tasks but not with more

complicated tasks, such as foreign language learning. The anxiety that is associated with foreign language is considered to be debilitating.

Gardner, Clément, Smythe and Smythe (1979) were the first to develop a scale to measure FL anxiety, the French Classroom Anxiety Scale. This scale contained five questions to measure French class anxiety and was “part of their test battery on attitudes and motivation” (p. 126). Although this was a useful tool, the French Classroom Anxiety Scale, was designed to conduct research in French classes, it was not universal. Horwitz et al. (1986) filled-in the gap with their breakthrough article, “Foreign Language Classroom Anxiety”. They proposed,

Foreign language anxiety is not simply the combination of these fears transferred to foreign language learning. Rather, we need to conceive foreign language anxiety as a distinct complex of self-perceptions, beliefs, feelings and behaviors related to the classroom language learning arising from the uniqueness of the language learning process. (p. 128)

This definition came out of their research with anxious foreign languages students and counselors at the University of Texas’ learning center and led to the development of the Foreign Language Classroom Anxiety Scale (FLACS). This scale measures the three components that Horwitz et al. (1986) believe are present in foreign language learning: communication apprehension, fear of negative evaluation by others, also defined as social anxiety and test anxiety.

Communication apprehension refers to the fear of communicating with other individuals or in front of others, and it can affect the learner’s speaking and listening

abilities. Obviously this type of apprehension is something that would be present most days in the language learning class. Learning a language is interactive and every day in the classroom a student's communicative abilities are being tested. This type of apprehension tends to make individuals who might normally be very talkative to be silent because they cannot express themselves as they want.

The fear of failure or negative evaluations, also referred to as social anxiety, is the worry of how others view the speaker. This is the factor that most involves learners' self-esteem and is closely related to how well students can express themselves in the target language. Research has shown that students expect to be corrected (Horwitz, 1988; Young, 1990; Koch & Terrell, 1991), and feel uncomfortable if they are never corrected. However, depending on how error correction is conducted, it can have a negative effect on students (Horwitz, 1988, Young, 1990, Koch & Terrell, 1991).

Test anxiety was defined by Sarason (1978) as “the tendency to view with alarm the consequences of inadequate performance in an evaluative situation” (p.214). Test anxiety is particularly relevant because in the foreign language classroom tests are frequent. Written grammar tests and quizzes are often given weekly, and these tests normally include listening sections. Students undergo oral communicative testing at least once or twice a semester in such activities as skits, presentations, or interviews. Every day students are asked to present their knowledge in class, by answering questions, reading sentences and listening to the instructor speaking the target language. Students are constantly being evaluated to see how their language abilities are progressing.

Horwitz et al. (1986) believed that all three of these anxieties are essential parts of foreign language anxiety and that they have an adverse effect on students' language learning. Aida's (1994) research tested the construct of the FLCAS questionnaire by validating an adapted version for Japanese students. The researcher did an exploratory study "to examine whether or not the structure reflects the three kinds of anxiety levels" (Aida, 1994, p.157). Aida (1994) stated that the research showed that test anxiety was not a foreign anxiety specific anxiety. This result was supported by MacIntyre and Gardner (1989) who had concluded that test anxiety was a general anxiety and not language specific. These two studies show that more research needs to be done in this area. However, most researchers continue to use the FLCAS with all 33 questions including all three components.

Since Horwitz et al. (1986) presented their findings along with the FLCAS to measure anxiety, research in second language acquisition has been revolutionized and evidence that foreign language anxiety does exist and has a negative effect on students has continued to grow. This instrument to measure foreign language anxiety has made research on language anxiety more comparable and coherent, although Horwitz and Young (1991) admitted, "exactly how anxiety impedes language learning has not been resolved" (p. 177).

D. Language Anxiety: Causes and Effects

a. Achievement. In the early 1900's, studies on foreign language anxiety produced conflicting results. Some research showed a positive relationship, others a negative one, and some no relationship at all. As was previously mentioned, these differing results stemmed partly from the way the research was carried out. Before

Horwitz et al. (1986) developed their FLCAS scale there was no standardized scale and therefore, it was difficult to know what the research was actually measuring. While earlier studies such as Chastain (1975), Kleinmann (1975), Backman (1976), or Swain and Burnaby (1976), produced conflicting results, later studies including the first one to use the FLCAS (Horwitz et al., 1986) found that there was a significant negative correlation between foreign language anxiety and grades, both expected and actual final grades. MacIntyre and Gardner (1989) and again Gardner, Tremblay & Masgoret (1997) found a significant negative correlation between high anxiety level and achievement. Aida (1994) and again Saito and Samimy (1996) also found a significant negative correlation between final grades and high anxiety in American students learning Japanese. Onwuegbuzie, Bailey & Daley (1999) found high anxiety to be the second predictor of achievement in foreign language after general achievement. MacIntyre and Gardner (1991a, 1994a) and Onwuegbuzie, Bailey, Daley (2000), who based their research on Tobias' model of language learning (1986) also found that anxiety at any stage of learning had a negative effect on achievement.

Tobias proposed that language learning is made up of three stages: input, processing, and output that are somewhat interdependent. The input stage, which can be compared to Krashen's input filter, is the first opportunity for the student to take in information. High anxiety at this stage gives students fewer resources, which can affect the other two stages. The processing stage is the stage where material is organized, stored and assimilated, and the output stage is the production of the material. MacIntyre and Gardner (1994b) declared that "The combined effects of language anxiety at all three stages may be that, compared with relaxed students, anxious students have a

smaller base of second language knowledge and have more difficulty demonstrating the knowledge that they do possess” (p. 301).

MacIntyre (1995a) stated,

Anxious students are caught in this double blind: they have learned less and may not be able to demonstrate the information that they have learned. Further, the cyclical relation between anxiety and task performance suggests that as students experience more failure, their anxiety level may increase. (p. 97)

b. Language levels and different languages. Research has shown (Horwitz, 1986; Aida, 1994; Saito, Horwitz & Garza, 1999) that, "for American learners of foreign languages, at least, anxiety levels do not vary with respect to target languages" (Horwitz, 2001, p. 117). Therefore, it can be assumed that when testing for foreign language anxiety different languages can be tested using the same instrument and that the target language should not influence the results.

Most of the research done on the existence of foreign language anxiety has been done using beginning level classes and these studies have shown that anxiety does exist in these students (Scovel, 1978; Horwitz & al., 1986; Horwitz, 2001; MacIntyre & Gardner, 1991b; Young, 1990). Several studies specifically looked at the difference in anxiety levels between beginning and advanced students, Gardner, Smythe, & Brunet (1977), Gardner and al. (1979), Desrochers and Gardner (1981), and Chapelle and Roberts (1986) all found that anxiety was higher at beginning levels. Casado and Dereshiwsky (2001), found that anxiety seemed to increase slightly from the first semester to second semester students, which would support MacIntyre and Gardner

(1991a) who stated, “that this rise in anxiety could be explained by “the attitudes and beliefs students form specific to learning a new language. If these experiences are negative in the beginning, foreign language anxiety may become a regular occurrence and as students continue their studies they expect to be nervous and perform poorly, therefore they do” (p.110). However, Gardner, Smythe, & Brunet (1977) showed that once students moved on to the intermediate and advanced levels anxiety decreased. Ay (2010) in a study with young adolescent students in Turkey found that the anxiety in beginning students differed from the anxiety in upper levels. The beginners seemed to have more anxiety in receptive skills whereas the advanced levels’ anxiety seemed to be more in productive skills.

Although most of the research has been on beginning level students, there are two studies that looked specifically at advanced level students and found that the level was higher in these students. Ewald (2007) did a qualitative investigation with twenty-one upper level students and found that anxiety was present at this level. However, this study did not do any kind of quantitative analysis using the FLCAS questionnaire.

Marcos-Llinás & Garau (2009) researched the difference in anxiety between three levels, advanced, intermediate, and beginning learners using the FLCAS questionnaire. The results of their testing showed that there was a significant difference in the means and that advanced learners were more anxious than either beginners or intermediates. Although these are conflicting results, most studies do show that there exists more anxiety at the lower levels. Therefore, concentrating on reducing anxiety at this level should be a priority.

c. **Learning.** The largest impact of anxiety on language learning appears to be related to communication apprehension and social apprehension. Therefore, most of the research that has been done revolves around these areas. Communication apprehension is by far the “single most important source of language anxiety” (MacIntyre, 1999, p. 33). Several studies have found this to be true, starting with the Horwitz 1986 study where it was found that 86% of students are anxious when asked to use the language for communication. Four years later, Young (1990) conducted a study in which she found that students enrolled in first semester and intensive Spanish courses, in both high school and at the university level, generally felt anxious when speaking in front of others. The fact that they were anxious about speaking in front of others ties social anxiety with communicative anxiety, since the feeling of being judged by others becomes apparent.

Communicating and speaking in the target language is not only closely connected with communication apprehension and its emphasis on interpersonal interactions, but as was mentioned, it is also linked with the fear of negative evaluation. Price (1991) interviewed several students and found that factors that caused anxiety in communication were fears of being laughed at and the fact that it occurs in front of an instructor and classmates. Phillips (1992) found anxious students produced less and shorter communication units and used fewer dependent clauses and other target structures than low anxiety students.

From the learners' perspective, speaking is the most anxiety-producing skill (Horwitz et al., 1986; Young, 1990; Ellis, 1994; Chen, Horwitz, & Schallert, 1999). Young compiled a list of classroom activities that caused anxiety, they included such activities as: spontaneous role play, speaking, oral presentation or skits in front of the

class, presenting a prepared dialogue and writing on the board. These are the types of activities that can exist in the language classroom on any day. Phillips did find that there were communicative activities that can reduce anxiety, such as group or pair work, activities that take students out of the spotlight.

Young (1991b) categorized the sources of anxiety in three general groups: the learners themselves, the instructor, and the institutional practices. Anxiety within these three groups can occur at both personal and interpersonal levels. She believed that there are six potential sources that stem from these groups:

- a) personal and interpersonal anxiety
- b) learner beliefs about language learning
- c) instructor belief about language teaching
- d) instructor-learner interactions
- e) classroom procedures
- f) language testing

Personal and interpersonal anxiety and learner beliefs about language learning can be seen in the learners themselves. One of the primary factors that affects individuals personally and interpersonally is self-esteem. When interviewed by Young (1992), Krashen declared,

the more I think about self-esteem, the more impressed I am with its impact. This is what causes anxiety in a lot of people. People with low self-esteem worry about what their peers think; they are concerned with pleasing others. And that, I think, has a great deal to do with anxiety. (p. 427).

Brown (2000) description of self-esteem parallels foreign language anxiety. He depicted self-esteem as possessing three levels, global, situational and task self-esteem. Global self-esteem is the general self-appraisal that a person feels, much like state anxiety is a general state of anxiousness. Situational self-esteem is an individual's self-appraisal in particular situations, similar to trait anxiety. Finally, task self-esteem "refers to one's own assessment in particular tasks of particular situations. For example, within the second language acquisition domain, task self-esteem might relate to particular language skills such as listening, speaking, reading, and writing" (Park & Lee, 2005, p. 198). This again closely ties with situational-specific anxiety in foreign language learning. Heyde (1979) found that there was a positive correlation between the level of oral production and level of self-esteem at all three levels, the highest being with task self-esteem. This seems to parallel research in foreign language anxiety, the higher the anxiety the lower achievement level.

The learner beliefs about language learning can have a negative effect and create anxiety in students because many of their beliefs do not match reality. As already mentioned, one of these beliefs involves, the time that students believe it will take to speak the language being different from the actual hours necessary to reach that level. This can make students feel that they are not progressing as they should, and may make them believe they are failures.

A factor that is related to speaking apprehension is that many students believe that they should not speak until they have perfect pronunciation. Gregersen and Horwitz (2002) compared the reactions of anxious students with students identified as perfectionists. They concluded, "findings suggests that procedures that have been used

to help individuals overcome perfectionism may also be useful in helping anxious foreign or second language learners” (p. 568). Since students are asked to speak well before they have achieved perfect pronunciation, this could create anxiety.

The third aspect is the belief that certain individuals have an aptitude for languages. “Anxiety can readily develop in students who feel they do not possess this special aptitude and in those who experience difficulties with the language learning since they believe they should be able to learn” (Phillips, 1991, p. 4). Students who believe that they do not possess this aptitude may just give up as they think that they will never be able to succeed.

The attitudes that the professor has about what should happen in the classroom can have serious consequences for students. Allemand and Aida (1994) discovered that students who had “an instructor who was judged more ‘authoritarian’ had a high level of anxiety. Students who had an instructor judged more ‘facilitative’ were more relaxed” (p. 15). Young (1991a) stated:

Instructors who believe their role is to correct students constantly when they make an error, who feel that they cannot have students working in pairs because the class may get out of control, who believe that the teacher should be doing most of the talking and teaching, and who think their role is more like a drill sergeant’s than a facilitator’s may be contributing to learner language anxiety.
(p. 428)

Research by Brandl (1987) found that some instructors believe “a little bit of intimidation is a necessary and supportive motivator for promoting students’

performance” (p.50) and, differing from their students, they considered their role should be “less of a counselor and friend and objected to a too friendly and in-authoritative student-teacher relationship” (p. 49). The researchers also reported that students realized that some error correction is necessary, but they consistently reported anxiety over responding incorrectly and looking or sounding ‘dumb’ or ‘inept’ (Horwitz, 1986, 1988; Young, 1990; Koch and Terrell, 1991). Young (1991a) recognizing this phenomenon specified that the problem for students is “not necessarily error correction but the *manner* of error correction – when, how often, and most importantly, how errors are corrected” (p. 429).

The last aspect, testing, is an aspect that causes anxiety in the foreign language classroom and is, for some students, an anxiety that is present in other classes. Young (1991b) stated, “in language testing, the greater the degree of student evaluation and the more unfamiliar and ambiguous the test tasks and formats, the more learner anxiety is produced” (p. 429). Madsen et al. (1991) concurred that students can feel more anxious, depending on the test format and questions. They found, for example, that dictation and true-false test questions created less anxiety than questions such as translations and listening activities. When developing tests, professors should pay attention to time limit, format, length, testing environment, perceptions of test validity and clarity of test instructions (Young, 1999).

E. Anxiety and Oral Communication Testing

Heaton (1988) remarked, “ the goal of language testing is as a device to not only motivate and reinforce students learning, but also to evaluate their performance and progress” (p. 57). When testing for oral proficiency all three of the anxiety components

described by Horwitz come into play (Phillips, 1999). The experience of oral testing in particular can be so traumatic that it lowers self-esteem and makes the academic evaluation system seem inhuman (Alcala, 2002). This was confirmed by Mejias et al. (1991); Daly (1991), and Ur (1996) who stated, “so serious are these difficulties, in fact, that most language exams either do not include oral testing techniques or give them very low weighting in the final grade” (p. 133).

Even though testing for oral proficiency has the potential to create anxiety in students it is a necessary part of learning a foreign language. The problem is, “if an instructor has a communicative approach to language teaching but gives primarily grammar tests, this likely leads students not only to complain, but also to experience frustration and anxiety” (Young, 1991a, p. 429). It is apparent that since the communicative approach is the predominant teaching method there is not enough oral testing going on in the classroom to back up this approach (Harlow & Caminero, 1990; Teng, 2005; Liu, 2006; Chuang, 2009). According to Chuang (2009) most well-established language tests do not include an oral component. This practice is not being “pedagogically fair” and is not sending the right message, “If we pay lip service to the importance of oral performance, then we must evaluate that oral proficiency in some visible way” (Harlow & Caminero, 1990, p. 497). Omaggio (1986), Mueller (1987), Underhill (1987) Gonzalez (1989), and Harlow and Caminero (1990), have supported the claim that assessment of oral skills should be an integral part of any teaching syllabus. In order to convince students that communication is an important goal, more oral proficiency testing should be taking place.

Harlow and Caminero's 1990 study, gave evidence that many foreign language instructors still do not formally test the speaking proficiency of their students on a regular basis. After surveying 67 randomly chosen universities, they found that 57% currently test the speaking proficiency of beginning students. The reasons most often given for not testing, 30% of the respondents, was lack of time. The second most frequent reason was logistical aspects.

When asked how often they administered a test, 48% said once a term and 29% twice a term. For almost half of the respondents the oral test counted between 10 – 19% of the final grade. The types of testing practices that were used included questions mainly in interview form, 87%, followed by role-play either alone or in groups, 55%. A description component was included by 28%, and 25% included a reading section which tested pronunciation. These numbers are encouraging, but need to be improved.

The most anxiety provoking activity in the classroom is speaking the target language in front of others and oral activities such as skits, presentation and responding to questions in class (Koch & Terrell, 1991; Price, 1991). According to Harlow and Caminero this is the method that 87% of the instructors use to test for oral proficiency. This anxiety is closely related to fear of negative evaluation because "students fear being negatively evaluated, not only by their peers, but by the instructor" (Young, 1990, p. 550). Young (1991a) "found that more than 68% of her subjects reported feeling more comfortable when they did not have to get in front of the class to speak" (p. 429).

The first two studies that were done specifically looking at the relationship between oral performance and anxiety were Kleiman (1977) and Steinberg (1982). Both of these studies suggested, "anxiety could materially affect an individual's avoidance

behavior and the quality of language output” (Young, 1991, p. 59). The American Council on Teaching Foreign Languages (ACTFL) has developed the Oral Proficiency Interview (OPI) that can be used to test for individual’s oral proficiency using face-to-face interviews (Young, 1991b). In Young’s study (1991b) she found that there existed a significant negative correlation between performance on the OPI and anxiety level; however, when she controlled for proficiency scored variances, this correlation no longer existed. This would tend to indicate that ability and not anxiety is what counted. Young explained that the reason for this discrepancy could be that this particular OPI was not official, in other words the grades did not count. This may have influenced the results.

Several studies have found that oral language tests are not always more anxiety provoking than written tests. Madsen et al. (1991) noted that several studies included Jones (1976, 1985), Shohamy (1980, 1982) and Scott (1986), found that oral tests are less anxiety-producing than written tests. These results could be explained because many students “feel that oral tests are a necessary part of a language course and represent an accurate evaluation of their ability” (Bowen, 2009, p. 47). However, Phillips (1992) found that highly anxious students’ performance received lower marks than less anxious ones when tested using the FLCAS scale. Therefore, if anxiety is present it can have a negative effect on students’ outcome.

Chuang (2009) found that Taiwanese college students in EFL, when testing for oral performance felt more nervous before the test than during the actual testing. Horwitz et al. (1986) believe that even imagined evaluation could provoke anxiety. The desire of students to have oral proficiency and the emphasis on a communicative

approach should lead for more testing oral proficiency using methods that can keep anxiety in check.

F. Computer Mediated Communication

Computer mediated communication (CMC) in teaching foreign language skills has been in use since the 90s. Much research has been done on the many benefits of this technology on communication and foreign language learning and reducing anxiety. (Beauvois, 1994, 1999; Beauvois & Elledge, 1996; Kivela, 1996 Lee, 2004; Meunier, 1998; Skinner & Austin, 1999; Warschauer, 1996). Some of the positive aspects of using CMC are that students feel a sense of empowerment, and they feel more comfortable taking risks when communicating using CMC both synchronously and asynchronously (Beauvois, 1994; Blake 2000; Chun, 1994; Kern, 1995; Schultz, 2000). This is encouraging since Steinberg & Horwitz (1986) proposed that anxiety may inhibit a student's ability to elaborate on thoughts and this can inhibit the practice of the target language. Another benefit seems to be a diminished fear of negative evaluation (Kelm, 1992; Kivela, 1996; Chun, 1994; Beauvois & Elledge, 1996).

The research in CMC (Beauvois, 1997; Payne & Whitney, 2002) has also shown that although this is a written medium, and especially with students using SCMC, that these skills do transfer into improved oral performance. Emerging evidence from synchronous computer mediated communication (SCMC) research (Abrams, 2003; Beauvois, 1997, Payne & Whitney, 2002) "suggests that real-time, conversational exchange via text may indirectly develop L2 speaking ability" (Payne & Ross, 2005, p. 35). A study carried out by Tudini (2003) showed that negotiation of meaning, which is considered to be evidence of language improvement by theorists, did occur in students

using SCMC. Several studies have also shown that students may actually produce more language in a SCMC chat than a face-to-face discussion (Abrams, 2003; Kern, 1995, Warschauer, 1996). Other advantages of SCMC include greater percent of participation, more complex language and improved attitudes (Beauvois, 1992; Chun, 1994; Kern, 1995; Roed, 2003; Warschauer, 1996).

G. Oral Proficiency Assessments and Computers

Two articles stand out that specifically match technology and testing oral proficiency. In his 2000 article, Larson presents a program at Brigham Young University (BYU). This program was set up to test oral language skills using the computer. BYU has developed testing software called Oral Testing Software (OTS) that facilitates computerized oral testing (Larson, 2000). The reason for developing this software was to “facilitate the assessment of oral competence in the language being studied” (Larson, 2000, p. 55). Larson listed two benefits to this testing, the superior quality of the digital recordings and the fairness of the test; everyone is taking exactly the same test. “The OTS package has now been piloted by several hundred language students, and evaluative comments from students and teacher have been very favorable” (Larson, 2000, p. 56). Although no research has been done on the effect of this testing on students’ anxiety levels, it does encourage professors to make oral proficiency tests part of their curriculum. For 30% of the professors, not having enough time to test in the classroom was the reason they gave for not testing.

Kenyon and Malabonga’s (2001) study compared three different ways of testing oral proficiency. They looked at the Oral Proficiency Interview (OPI), the tape-mediated Simulated Oral Proficiency Interview (SOPI) and the newly developed

Computerized Oral Proficiency Instrument (COPI). In particular, they compared the SOPI and COPI for, among other factors, which test made students feel more nervous. This was not done using the FLCAS anxiety scale but through a questionnaire that they had developed. Question four asked students directly which test made them feel more nervous. Students indicated agreement on a scale from one to four. The results showed, “Although the mean rating for the COPI was lower than for the SOPI (i.e., examinees were less nervous on the COPI) it was not statistically significant at the .05 level. However, it reveals that almost half of the students (47%) indicated that they were more nervous taking the SOPI than the COPI” (Kenyon & Malahonga, 2001, p. 73). Even though 32.7% of the students were more nervous taking the COPI, after reviewing the comments it appears that this nervousness was due to “the technological simplicity of the SOPI” (Kenyon & Malabonga, 2001, p. 73).

H. Conclusion

“A female student speaks of the evenings in her dorm room spent rehearsing what she should have said in class the day before, one male student claims to hear only a loud buzz whenever his teacher speaks the foreign language” (Horwitz et al., 1986, p. 126).

A review of the literature indicates that foreign language anxiety can develop from individual attitudes and can also be influenced by the methods and techniques that are used in the classroom. Phillips (1992) declared,

Although language anxiety apparently explains a small part of a very complex picture with regard to performance, its most significant contribution to the framework may well lie in its

influence on the *attitudes* of students toward language learning and on their *intentions* to continue the study of a foreign language. (p. 22)

Young (1991a) went further by proposing that perhaps the methodology may be the crucial aspect, “Student language anxiety might be an indication that we are doing something fundamentally unnatural in our methodology” (p. 429). Palacios, in his 1998 study, found that a non-threatening classroom atmosphere might indeed decrease anxiety levels.

The research on the use of CMC and the effect that it can have on anxiety level in students is growing. The data indicates that it can have a positive affect on lowering anxiety (Beauvois, 1992; Chun, 1994; Kern, 1995; Roed, 2003; Warschauer, 1996). However, there appears to be relatively little data on how CMC could affect anxiety in testing for oral proficiency. The research on testing oral proficiency is in its infancy particularly when looking at the use of CMC in testing. What is more pertinent is if students believe that anxiety affects their performance on tests, it probably will (Scott, 1986; Phillips, 1992). Lowering anxiety may affect performance because students may have better attitudes about their language learning experience in general, and therefore they may be more successful. The analogy by Horwitz (2000) puts in perspective how students may feel on any given day in the foreign language classroom:

When we wear clothing that is unbecoming or have ‘a bad hair day,’ we feel uncomfortable because not only do we not feel like ourselves, we feel that we are presenting a less positive version of ourselves to the world than we normally do. In an analogous way,

few people can appear equally intelligent, sensitive, witty, and so on when speaking a second language as when speaking their first; this disparity between how we see ourselves and how we think others see us has been my consistent explanation for language learners' anxiety. (p. 258)

To quote Yogi Berra "Ninety percent of the game is half mental" (Horwitz, 2000, p. 20). It is not clear how anxiety affects performance, but what is clear is that what a student believes is possibly more influential than "any external reality" (Bailey, 1983). Finding ways to reduce anxiety is necessary because what students believe can affect their attitudes toward language class, language study in general, even the target culture. Furthermore, these attitudes are likely to affect decisions about further language study, for it is unlikely that students will continue language learning beyond the level of lower division or diploma requirements if they are discouraged by lack of progress and anxious about being in class (Phillips, 1991, p. 2). Phillips (1992) affirmed, "encouraging a relaxed atmosphere in the classroom may be a first step in alleviating anxiety related to oral testing" (p. 20).

The focus of this study was to see if students who believe that they will be tested using CMC to test for proficiency might be more relaxed before even beginning the testing. Changing students attitudes towards language learning, especially in the beginning, could led to less anxiety in students in the upper level classes. This may also be a decisive step in keeping our students in language classes. The two research questions to be answered were:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

Chapter III

Methodology

The purpose of this study was to see if university students in foreign language courses who believe they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication present lower anxiety scores than those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse. The hypothesis is that students who believe that they will be tested using CMC as an alternative to traditional face-to-face methods, will tend to have significantly different anxiety scores before even beginning the testing procedures, which could affect their performance. This chapter will discuss the methods used in testing this hypothesis. The Foreign language Classroom Anxiety Scale (FLCAS) was the principle-measuring instrument followed by a background questionnaire that was used for comparison purposes between beginning and advanced level students.

The research questions that were addressed were:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

A. Participants

To see if the prospect of using CMC will result in lower FLCAS scores overall, an experiment was performed using students in the Department of Modern Languages (MODL) of Northern Arizona University. It was decided to test beginning levels (101-202) and advanced levels (300 and above) and in all the languages taught at NAU because testing for oral proficiency is an activity that should be integrated into all classrooms at all levels, and the research shows that in testing language is not a factor. The student population at NAU is a mainly a Caucasian population between the ages of 18 to 25.

Because all the language classes were included, there was a diverse student population. Students of mixed ages, mixed motivation and mixed abilities were part of this population. There were majors, minors, and students simply fulfilling their language requirements or just taking the language for their own pleasure.

B. Instruments

Two instruments were used to collect data for this study: A background questionnaire that was developed by the researcher and the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al, 1986).

The background questionnaire included two questions: motivation for taking the course (major, minor, requirement or pleasure) and class level. This questionnaire was used to compare the anxiety level between language course levels because most of the literature points to higher anxiety in lower levels (Gardner, Smythe, & Brunet (1977);

Gardner and al. (1979); Desrochers and Gardner (1981); Chapelle and Roberts (1986). Copies of this questionnaire can be found in Appendix A.

Horwitz et al., (1986) created the Foreign Language Classroom Anxiety Scale (FLCAS) to provide researchers with a valid and reliable instrument to measure anxiety specific to language learning. This self-rating language anxiety questionnaire contains 33 questions scored using a five-point Likert scale. The participants chose the degree to which each statement applied to them (e.g. strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree). The questions on the anxiety scale reflected three areas: communication apprehension, test anxiety, and fear of negative evaluation or social anxiety in the foreign language classroom because the designers believe these are three components of foreign language anxiety. After extensive pilot testing of approximately 300 students at the University of Texas at Austin, Horwitz (1986) concluded that this test demonstrated satisfactory reliability. “In one sample of 108 students, scores ranged from 45 to 147 ($m = 94.5$, $Mdn = 95.0$, $SD = 21.4$). Internal consistency, as measured by Cronbach’s alpha coefficient was .93, and test-retest reliability over 8 weeks was $r = .83$, $p = .001$, $n = 78$ ”. (p. 560). This measure has become the standard scale for determining the level of language anxiety present in students studying a foreign language.

Horwitz also conducted criterion-related studies on the construct validity of this scale. She found “correlation of the FLCAS with the Trait Scale of the State-Trait Anxiety Inventory (Spielberger, 1983) obtained $r = .29$, $p = .002$, $n = 108$; with the Personal Report of Communication Apprehension (McCroskey, 1970), $r = .28$, $p = .063$, $n = 44$; with the Fear of Negative Evaluation Scale (Watson & Friend, 1969), $r = .36$, p

=.007, $n = 56$ and with the Test Anxiety Scale (Sarson, 1978), $r = .53$, $p = .001$, $n = 60$. She noted that language anxiety can be discriminated from these related constructs” (Horwitz, 1986, p. 561). She also noted that foreign language test anxiety is only moderately associated with test anxiety as did Aida (1994) and MacIntyre & Gardner (1989). Horwitz pointed out as well that scores on the FLCAS can be associated with “expected grade in the foreign language course, $r = .52$, $p = .001$, $n = 1-8$, and with the question, ‘Rate your anxiety level concerning foreign language class,’ $r = .77$, $p = .001$, $n = 108$ ” (Horwitz, 1991, p. 561).

Questions 1, 4, 9, 14 15, 18, 24, 27, 29 30 and 32 specifically measure communication apprehension. Questions 3, 5, 6, 8, 10, 11, 12, 16, 17, 20, 21, 22, 25, 26, and 28, specifically measure test anxiety. Questions 2, 7, 13, 19, 23, 31 and 33 specifically measure fear of negative evaluation. Questions 2, 5, 8, 11, 14, 18, 22, 28 and 32 are key-reversed (negatively worded). The total scale scores range from 33 to 165, with high scores indicating high levels of foreign language anxiety. After adding up the participants’ answers 5 for the highest level of anxiety and 1 for the lowest that number is divided by 33, and the resulting number (1-5) is the participants’ anxiety level. Any student with less than 3 is considered not terribly anxious and averages near 4 and above are considered highly anxious (Horwitz, 2008). Students who are identified as highly anxious by the FLCAS score high in questions related to speaking the foreign language (Horwitz et al., 1986).

The researcher decided to include all 33 questions from the FLCAS questionnaire. The fact that students believed that they would be taking a proficiency test meant that all three components that can cause anxiety might be present. All

questions except the key-reversed ones, were scored from 1 point (strongly agree) to five points (strongly disagree). This questionnaire has been used in most studies to assess the level of language learning anxiety (Phillips, 1992; Aida, 1994; Ganschow et al., 1994; Ganschow & Sparks, 1996; Onwuegbuzie et al., 1999, 2000). Some advantages of this questionnaire are that it can be administered to a large group; the results are easily quantifiable, and it permits statistical analyses. Copies of the FLCAS are located in Appendix B.

C. Procedure

Quantitative methods were used to investigate the research questions:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

This study was a single-treatment design and, theoretically, the only difference in the subjects' experience during the experiment was exposure to one of the two experimental treatments (Mertens, 1998, p. 73). The quantitative data was collected using an experimental research design in the form of a questionnaire. Background data was gathered to provide further insight into the students' profiles and understandings into the students' motivation for taking the language and to compare beginning and advanced levels. Because the research has shown that beginning level languages students can

show signs of higher language anxiety than advanced level students (Gardner, Smythe, & Brunet 1977; Gardner and al.,1979; Desrochers and Gardner, 1981; Chapelle and Roberts, 1986), class level was a factor that was taken into consideration.

The study took place at Northern Arizona University in Flagstaff during the 2011 fall semester. The one-time intervention was done over a one-day period to keep the knowledge of the experiment as unknown as possible as to not skew the results. However, the researcher was willing to extend this to two days if the first day did not yield enough participants. The researcher or the research team member read the instructions to the students from the statement that was prepared by the researcher. (See Appendix C) This ensured that every student received exactly the same instructions and explanations. Students were told that the testing was to take place within the next week of classes, and three different oral examinations would be administered as part of a new departmental policy to test oral proficiency. Students were randomly assigned to either the technology or traditional group by the questionnaire that they were given. Each questionnaire had either traditional or technology in the upper left hand corner. One group would be tested using traditional face-to-face methods and the other group would be tested using computer mediated communication, both synchronously and asynchronously.

Students were told that those receiving the treatment (technology) would be undergoing the same type of tests as those in the traditional group; however, they would be using WimbaVoice Board and Chat asynchronously and synchronously for the interview and discussions and VoiceThread asynchronous for the presentation. It was

further explained that both groups would be given all the materials before the testing began and would have the same restrictions as far as notes and time constraints.

The nature of the testing was then explained. The first test would be an interview. The traditional method students would participate in a face-to-face interview with their professor. The CMC method students would go to the media lab, and using Wimba Voice Board in Blackboard asynchronously, would answer the same questions as the traditional group. These questions would be previously recorded, and students would record their answers asynchronously. The time allowed to answer the questions would be the same for both groups to keep the testing fair.

The second evaluation would be a small group discussion. Students would receive the topic the day before so that they could prepare. The discussions for traditional method students would be held in the classroom and be monitored by their instructor. The CMC students would meet again in the media lab where they would be doing their written discussion synchronously using Wimba instant chat session. This chat session would be done synchronously since the research has shown that this closely parallels face-to-face discussions (Beauvois, 1992; Chun, 1994; Kern, 1995; Warschauer, 1996; Roed, 2003; Arnold, 2007)

The final evaluation would be to make up a story based on a picture. Every student in all classes would be given the picture the previous day, and would have time to prepare what they were going to say. The assignment would be to make up a story describing the image, using a specific tense and vocabulary. The traditional method students would be presenting their story in the classroom whereas the CMC students

would be recording their description asynchronously using the VoiceThread program in the media lab.

The two tools to be used by the CMC group would be Wimba and VoiceThread. Wimba is a tool that is available in the Blackboard learning management system that is available to all students at the university. The tools in Wimba allow for both synchronous (Chat) and asynchronous (Voiceboard) activities. VoiceThread is a program available on the Internet and no software needs to be installed. It allows individuals to look at videos and images and leave comments in five ways, voice, text, audio files, or video and then share them with whomever they choose. They can even use the doodle tool to point out things that they are describing.

After all the testing procedures were explained to the satisfaction of all students, and all of their questions had been answered the FLCAS, and the background questionnaire were administered. In order to make sure that students were randomly assigned to either the CMC or traditional group, each questionnaire had either Technology or Traditional written in the top left-hand corner. The researcher controlled for random assignment of these questionnaires by mixing all of them together and then randomly putting the number needed for each class in the envelopes that were then taken to the classes to be tested. Students were told that this was part of an administrative departmental procedure and was totally anonymous. Once every student had finished filling out all the questionnaires they were informed that they had just participated in an experiment to see if university students who perceived they will be tested using CMC methods for testing will have significantly different language anxiety scores than those who perceived they will be tested using traditional face-to-face methods. The students

were then given a debriefing form. This form included a consent to participate that was presented as either a yes or no box. The students were asked to check one of these boxes and hand in this debriefing form stapled to their questionnaires. They were told if they chose not to participate there would be no consequence and that it was completely anonymous. (See Appendix D) The students were not dismissed until it was clear that everyone understood that this was a hypothetical situation and that the proficiency testing would not be taking place. The students were directed to contact the researcher if they had any further questions about this research project.

D. Data Analysis

A power analysis was performed by the researcher before the data was collected in order to determine how many cases would be needed to have a medium effect size with the power at .80. It was calculated using 'G*Power3' (Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G., 2009) that was downloaded from the Internet and the results showed that at least 32 cases per cell would be needed.

After all the data had been collected it was analyzed using two 2 X 2 factorial ANOVAs. The first one compared method of testing (traditional vs. technology) by level of course (beginning vs. advanced) on the dependent variable's total scores, which was the total anxiety score. The second one compared method of testing (traditional vs. technology) by level of course (beginning vs. advanced) on the dependent variable, which was just the questions that related to the communication apprehension scores. The other two subtest scores, test and social anxieties, will be presented in a descriptive table breaking out all of the scores by level and treatment. The results will be presented

in chapter four. The last chapter, chapter five will present a detailed discussion on the implications the results could have for language teaching and testing in the future.

Chapter IV

Results

In this chapter, the data that was obtained from 172 participants was analyzed and the results presented. The data that was collected was used to address the following research questions:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

The FLCAS questionnaire was administered in 12 foreign language classes for a total N = 214, 109 beginning and 105 advanced. Eleven participants chose not to be included in the study, two beginning and nine advanced, by checking the “no” box. Two of them stated that they had filled out the questionnaire in a previous class. The remaining 203 participants were separated into four different groups, technology (beginning and advanced) and traditional (beginning and advanced) according to the questionnaire that they had filled out. In the advanced groups, there were 43 technology participants and 53 traditional participants. In the beginning groups, there were 57 technology participants and 50 traditional participants. Because the statistical test that was to be used was a 2 x 2 ANOVA, having an equal number of participants in each cell was desirable. The researcher decided to randomly remove 10 advanced technology participants, 14 beginning technology participants, and 7 traditional participants to make

the groups even. Therefore, 31 participants were randomly selected to be excluded in the final analysis. This meant that there were 43 participants in each cell for the 2 x 2 ANOVA analyses. This satisfied the criteria for the power analysis that had been run (chapter three, p. 50), which required at least 32 cases in each cell.

The testing was done over a two-day period to obtain enough participants for each level, beginning and advanced. The first day of testing the questionnaires were administered to six advanced level Spanish classes, two beginning Spanish classes and one beginning French class. The following day the testing was done in two beginning Japanese classes and one advanced French class. Because there are always more students in beginning level classes than advanced level classes the testing included seven advanced level classes and five beginning level classes. This ensured that there would be enough students to fulfill the power analysis criteria. Spanish, French and Japanese were the three languages that were included in the testing because they were the instructors who agreed to participate and whose classes fit into the testing schedule.

The testing procedure took place as described in Chapter Three. In each class, either the researcher or the team member first read the statement (See Appendix C) and answered students' questions to the best of their ability. Then FLCAS and demographic questionnaires were administered. Once the students had filled out the questionnaires the researcher or the team member continued reading the statement and then handed out the permission forms. The students were allowed to choose whether or not to participate by checking the appropriate box, "yes" or "no". The questionnaires were stapled to the permissions slips, collected, and put in an envelope that was taken to the researcher's office.

The data for the 172 participants to be included in the study was entered into SPSS and analyzed. The results of these analyses will be presented in three sections: Section A will present the statistical results for the FLCAS questions in general, Section B will present the results pertaining to the research questions, Section C will present the descriptive results collected from the demographic questionnaire.

A. Analysis of the Results of FLCAS Anxiety Scale

After running the analyses, the present study revealed that the mean anxiety score of the entire group of 172 participants was 87.74 and that the standard deviation was 22.41. The scores ranged from 38 to 152. Compared with several previous studies, the subjects' scores in this study were lower than most other studies such as: Horwitz et al., (1986) ($M = 94.5$, $SD = 21.41$), Aida (1994) ($M = 96.7$, $SD = 22.10$) and Zhang (2010) ($M = 98.23$, $SD = 20.31$). Only Cheng's (2009) ($M=83.22$, $SD=13.23$) study had a lower mean than the current study (see Table 1).

Table 1

Descriptive Statistics of the FLCAS Scores

	<u><i>N</i></u>	<u><i>Min</i></u>	<u><i>Max</i></u>	<u><i>M</i></u>	<u><i>SD</i></u>
The present study	172	38	152	87.74	22.41
Horwitz et al. (1986)	108	45	147	94.50	21.40
Aida (1994)	96	146	146	96.70	22.10
Rodriguez & Abreu (2003)	110	Not addressed	165	89.69	20.11
Zhang (2010)	147	50	161	98.23	20.31
Cheng (2009)	380	Not addressed	Not addressed	83.22	13.23

These scores indicate that according to the FLCAS scale the participants in this study fall in the low anxiety range. This is based on Horwitz who stated, “students with averages around 3 should be considered slightly anxious, while students with averages below 3 are probably not very anxious” (Horwitz, 2008, p. 235). Two different number sets can be used to present the results of the FLCAS scale. Either the total mean score divided by 33, which would give a mean anxiety level of 3, or just using the total mean, which would give a mean anxiety level of 99. For the purpose of this study the average of the total mean score will be used to present the results. This scale puts mean values from 1.00 to 2.49 as having very little anxiety, values ranging from 2.50 to 2.99 have low anxiety, values from 3.00 to 3.49 have medium anxiety, and values from 3.50 to 5.00 are considered to be highly anxious. Based on this scale the mean for this group, 2.66 (87.74), would be a low anxiety score. The scores for the present study were broken down into four ranges to look at the percentages in each range (see Table 2).

Table 2

Anxiety Level of Participants

	n	Percentage	Scores (total)
High anxiety level	17	10%	3.55-4.61
Medium anxiety	38	22%	3.00-3.48
Low anxiety level	37	21%	2.52-2.97
Very low to no anxiety level	80	47%	1.15-2.48

This breakdown reveals that 10% of the students fall into the highly anxious category with scores ranging from 3.55-4.61; 22% had anxious feelings at a medium level with scores ranging from 3.00-3.48, 21% had low anxiety with scores ranging from 2.52-2.97 and, 47% felt either very low or no anxiety with scores from 1.15 to 2.48.

a. The three foreign language anxiety components of the FLCAS.

According to Cao (2011) there exists two models that have been used to analyze the FLCAS scale. Cao did a comparison test between two of the models that have been used by researchers. The first model (Horwitz et al., 1985; Bailey, 1983; Huang, 2008) is based on three components, which included communication apprehension, test anxiety, and fear of negative evaluation or social anxiety. The other model (Zhao, 2007) considered four factors, which included communication apprehension, test anxiety, fear of negative evaluation (social anxiety) and anxiety of the foreign language classroom experience. Cao (2011) states,

The present study showed that the three factor model has the better fit by comparing the fit indices of the models produced using change in chi-square (χ^2), Root Mean Square Error Approximation (RMSEA), Akaike Information Criterion (AIC), Schwartz Bayesian Criterion (SBC), Browne-Cudeck Cross Validation Index (BCCVI). As can be seen, the three factor model could be considered as the better model in investigating foreign language classroom anxiety. (p. 84)

The researcher chose to use the three-factor model. The breakdown of this model includes communication apprehension questions 1, 4, 9, 14, 15, 18, 24, 27, 29, 30 and 32, social anxiety questions 2, 7, 13, 19, 23, 31 and, 33, and test anxiety questions 3, 5, 6, 8,

10, 11, 12, 16, 17, 20, 21, 22, 25, 26 and 28. Questions 2, 5, 8, 11, 14, 18, 22, 28 and, 32 were key-reversed (negatively worded). The descriptive results of each of these components can be found in Table 3.

Table 3

<i>Descriptive Statistics for Foreign Language Components</i>				
Rank	Types	<i>M</i>	<i>SD</i>	<i>N</i>
1	Social Anxiety	2.63	.72	172
2	Communication apprehension	2.60	.70	172
3	Test Anxiety	2.58	.72	172

Table 3 shows that the means for the 172 student participants presented low anxiety for all three components. The mean score for social anxiety 2.63 ($SD = .72$) was the highest compared to the mean score for communication apprehension that was 2.60 ($SD = .70$). The test anxiety mean score was 2.58 ($SD = .72$).

b. Analysis of specific FLCAS questions. After analyzing the frequency of the students' responses for each question, it was determined that more than 40% of students reported agreeing and strongly agreeing on six FLCAS questions (5, 8, 10, 18, 28 and, 32) and disagreeing and strongly disagreeing on three of the reverse FLCAS questions (2, 14 and, 22). There were five questions that had mean anxiety scores above 3, questions 2, 7, 12, 14 and, 22. Table 4 presents these five questions, beginning with the one that showed the highest level of anxiety.

Table 4

Highest Anxiety Level and Percentage Questions

Questions	Mean	Percentage
22. I don't feel pressure to prepare very well for language class. (Reversed)	3.41	54.7%
14. I would not be nervous speaking the foreign language with native speakers. (Reversed)	3.38	57.6%
2. I don't worry about making mistakes in language class. (Reversed)	3.26	52.9%
7. I keep thinking that the other students are better at languages than I am.	3.03	33.8%
12. In language class, I can get so nervous I forget things I know.	3.02	43.0%

Question 22 is a test anxiety component and had the highest mean with 54.7% who disagreed or strongly disagreed; however, it was closely followed by question 14 that is a communication apprehension component, which had a slightly lower mean, but a higher percentage of 57% who disagreed or strongly disagreed. Questions 2 and 7 targeted the social anxiety component, question 2 also had a percentage of 52.9% of the participants who disagreed or strongly disagreed. The last question 12 was a test anxiety component and although it had a slightly lower mean than question 7 it had a higher percentage at 43% who agreed and disagreed, compared to 33.8% who agreed or strongly agreed with question 2.

B. Research Questions

a. Research question one: Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?

Table 5

Descriptive Statistics of Means

Dependent Variable: Total Anxiety				
Level	Method	<i>M</i>	<i>SD</i>	<i>N</i>
Beginning	Technology	2.86	.788	43
	Traditional	2.75	.664	43
	Total	2.81	.726	86
Advanced	Technology	2.51	.572	43
	Traditional	2.48	.624	43
	Total	2.51	.596	86
Total	Technology	2.70	.704	86
	Traditional	2.62	.655	86
	Total	2.66	.679	172

To test the main effect of method of testing and language levels and the interaction between these variables, a 2 x 2 analysis of variance was performed on the dependent variable of total anxiety scores. The alpha level was set at 0.05.

The statistical assumptions of ANOVA were met. Inspection of the results of the 2 x 2 ANOVA source table (see Table 6) indicate that the interaction effect was not significant, $F(1, 168) = .073, p = .79, \eta^2 = <.001$, which is a small effect size. Table 6 also indicates a non-significant main effect for method of testing, $F(1, 168) = .657, p = .42, \eta^2 = .004$, which is a small effect size. Therefore, the null hypothesis may not be rejected for research question one. There was not a significant interaction between level and method of testing nor for the main effect method of testing.

Table 6

ANOVA Source Table Independent Variable Total Anxiety

Dependent Variable: Total Anxiety						
<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>Partial η^2</i>
METHOD	.292	1	.292	.657	.419	.004
LEVEL	3.839	1	3.839	8.63	.004*	.049
METHOD * LEVEL	.032	1	.032	.073	.787	<.001
Error	74.716	168	.445			
Total	78.879	171				

a. R Squared = .053 (Adjusted R Squared = .036)
* $p < .0.05$

b. Research question two: Will there be any difference in anxiety between beginning and advanced level students?

The main effect for level, was significant, $F(1, 168) = 8.632, p = .004, \eta^2 = .049$. The effect size was medium (see Table 6). Examining the means (see Table 7) for level it shows that beginning students tended to have higher levels of anxiety than advanced

students. Therefore, the null hypothesis can be rejected for research question two. The means show that beginning students have a higher anxiety level than advanced students.

Table 7

Descriptive Statistics for Beginning and Advanced Levels

Level	M	95% Confidence Interval		n
		Lower Bound	Upper Bound	
Beginning	2.81	2.67	2.95	43
Advanced	2.51	2.37	2.65	43

c. Analysis for communication apprehension. A two-way analysis of variance was performed using just the questions that pertained to communication apprehension anxiety, 1, 4, 9, 14, 15, 18, 24, 27, 29, 30 and, 32 (see Table 8). The results were very close to those presented in source Table 6 on the total anxiety score. The interaction effect, $F(1, 168) = 3.41, p = .56, \eta^2 = .002$, which is a small effect size. Therefore the interaction was not significant, nor was the method of testing, $F(1, 168) = .674, p = .41, \eta^2 = .004$, which is a small effect size. However, again the main effect for level was significant, $F(1, 168) = 8.024, p = .005, \eta^2 = .046$. This was a medium effect size.

Table 8

ANOVA Source Table Independent Variable Communication Apprehension

Dependent Variable: Total Communication Apprehension

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>Partial η²</i>
METHOD	.318	1	.318	.674	.413	.004
LEVEL	3.79	1	3.790	8.024	.005*	.046
METHOD * LEVEL	.161	1	.161	.341	.560	.002
Error	79.359	168	.472			
Total	83.628	171				

a. R Squared = .051 (Adjusted R Squared = .034
**p* < 0.05

d. Descriptive data for social and test anxiety factors

The other two components of foreign language anxiety are social anxiety and test anxiety. A two-way analysis of variance was not done on these two components. However, it appears that the means and standard deviations were remarkably similar (see Table 9). These results follow the results that were presented in Table 3 that showed very little difference between the three foreign language components, communication apprehension, social anxiety and test anxiety. The total mean for social anxiety in the technology group was 2.70 (*SD* = .756) and traditional was 2.57 (*SD* = .682). Looking at test anxiety the total mean was 2.62 (*SD* = .766) and for traditional it was 2.52 (*SD* = .669). Again the differences appear to be low. The difference between the means of beginning and advanced levels appears to be higher. The total beginning mean was 2.72

($SD = .768$) and the total advanced mean was 2.55 ($SD = .665$).

Table 9

<i>Descriptive Statistics for social and test anxiety</i>						
Method	Level	Social		Test		Social and Test
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Technology	Beginning	2.81	.835	2.80	.840	43
	Advanced	2.58	.658	2.44	.645	43
	Total	2.70	.756	2.62	.766	86
Traditional	Beginning	2.62	.691	2.64	.710	43
	Advanced	2.52	.678	2.40	.611	43
	Total	2.57	.682	2.52	.669	86
Level	Method					
Beginning	Technology	2.81	.835	2.80	.840	43
	Traditional	2.62	.691	2.64	.710	43
	Total	2.72	.768	2.72	.778	86
Advanced	Technology	2.58	.658	2.44	.645	43
	Traditional	2.52	.678	2.40	.611	43
	Total	2.55	.665	2.42	.625	86

C. Results from the Demographic Questionnaire

The demographic questionnaire contained only two questions. The first one asked students to state which language they were taking and at what level, either beginning or advanced in order to answer research question two. The second question asked students

to circle the reason that they were taking the course. There were four possibilities available for the students to circle: major, minor, requirement or pleasure. Although students were instructed to circle only one answer 13 students circled more than one and were put into a multiple category. Descriptive statistics were run for these categories (see Table 10).

Table 10

Descriptive Statistics for Academic Motivation

Academic Motivation	<i>M</i>	<i>SD</i>	<i>n</i>
Major	2.40	.556	27
Minor	2.55	.622	68
Requirement	2.97	.679	35
Pleasure	2.80	.728	29
Multiple Reasons	2.63	.813	13
Total <i>N</i>			172

The results of the descriptive statistics produced means that indicate some difference that may necessitate further research. The mean for major was 2.40 ($SD = .556$) and minor was 2.55 ($SD = .622$) compared with the requirement mean at 2.97 ($SD = .679$) and the pleasure mean at 2.80 ($SD = .728$).

This chapter presented the results of the two 2 x 2 ANOVAs that were run to answer the two research questions:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and

asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?

The null hypothesis may not be rejected. There was no significant difference in the means.

2. Will there be any difference in anxiety between beginning and advanced level students?

The null hypothesis can be rejected. Beginning students have higher anxiety levels than advanced.

Several descriptive statistics were also presented including the means for test anxiety and social anxiety. The descriptive statistics displaying the results from the background questionnaire were also presented. Chapter five will look more closely at these findings and discuss the implications that they may have on foreign language instruction and testing in the future.

Chapter Five

Discussion of Findings and Implications

This study investigated the effect that method of testing, (traditional or technology) and language level (beginning or advanced) could have on the foreign language anxiety scores of students who believed that they were going to be tested for oral proficiency. The study was conducted at Northern Arizona University at the end of the 2011 fall semester in beginning and advanced level Spanish, French and, Japanese classes.

In chapter four the results of the 2 x 2 factorial ANOVA, which was done on 172 participants, were presented. The two main effects, method of testing and level of students, were tested with dependent variables, total anxiety scores and communication apprehension subtest scores. Descriptive statistics on the other two components of foreign language anxiety, social and test anxieties were also presented. Finally, the results of descriptive statistics based on the demographic questionnaire were introduced. The questionnaire asked the participants to state their academic reason for taking the language course, the language that they were taking and the level of their language class. This last chapter considered the findings and what pedagogical implications they may have in the foreign language classroom.

The first section will present the results for the research questions. Next, will be a discussion of the findings related to the foreign language classroom anxiety scale (FLCAS) questions. This will be followed by a discussion of the information obtained from the demographic questionnaire. In conclusion, some limitations of the current study are acknowledged, and several suggestions for further research will be proposed.

The research questions considered were:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

A. Research Questions

Research question one:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?

The result for the main effect, method of testing, was non-significant. This means that if students perceive that they will be tested using traditional methods or if they perceive that they will be using technology, neither one will have significant effect on their anxiety levels. The result of several previous studies that used technology in the classroom indicated that using CMC methods in the classroom can produce lower anxiety levels. (Beauvois, 1994, 1999; Beauvois & Elledge, 1996; Kivela, 1996; Meunier, 1998; Skinner & Austin, 1999; Warschauer, 1996; Lee, 2004). However, these studies were not considering oral proficiency testing.

One student wrote a noteworthy comment on his or her questionnaire, “When I heard I would have a choice b/w computer or professor. I’d prefer professor since they would be more understanding.” Interestingly, this participant had an anxiety mean of 3.09, which is a medium level score and this was an advanced student. Maybe for this student the idea of using technology did raise his or her anxiety score.

Research question two:

2. Will there be any difference in anxiety between beginning and advanced level students?

The 2 x 2 ANOVA that was run on the independent variable method of testing, traditional or technology and level of student, beginning or advanced indicated no significance for method of testing nor for the interaction. However, the main effect for level, beginning or advanced, did show a significant result. The significance level was .004 with a medium effect size. The descriptive statistics tell us that beginning level students had significantly higher levels of anxiety than advanced level students, $M = 2.51$ versus $M = 2.81$. These findings follow the conclusions of Chapelle and Roberts (1986), Gardner, Smythe, & Brunet (1977), Gardner and al. (1979) and, Desrochers and Gardner (1981), which indicate that beginning students have higher anxiety levels. These results indicate that if the goal is to retain students in advanced levels, measures need to be taken to reduce the anxiety in beginning level students.

B. The FLCAS Questionnaire.

Looking at the results of the FLCAS questionnaire one notices that the overall mean for the 172 participants was 2.66, which is in the low anxiety range. However, there were over 50% of the students who experienced some anxiety and 10% of them at a

high level. To get a better picture of the anxiety that was present in these 172 participants, each anxiety component, communication apprehension, social and test anxieties, will be presented separately. Because several studies show that anxiety can have an effect on achievement (MacIntyre and Gardner, 1989; Aida, 1994; Saito and Samimy, 1996; Onwuegbuzie, Bailey & Daley, 1999), finding methods to reduce this anxiety need to be addressed.

a. Communication apprehension anxiety

Communication apprehension is thought to be the largest source of language anxiety, Horwitz cited that 86% of students are anxious when asked to communicate in the target language (Horwitz, 1986; MacIntyre, 1999). In this study 46% of the students fell into the low to high anxiety range for communication apprehension. Because an oral proficiency test would be testing this particular skill, it is useful to consider the questions that had the highest anxiety scores for this component. This will give some insight into where the students' concerns lie. Comparing all of the anxiety scores reveals that 9 of the 11 questions that pertained to this type of anxiety had means that were above 2.50, which is in the low to high anxiety range. Question 14 stated "I would not be nervous speaking the foreign language with native speakers." This reversed-keyed question revealed that 57% of the students disagreed or strongly disagreed. It also had the second highest anxiety score of all the questions with a mean score of 3.38, which is a medium anxiety level. Question 32 (also key-reversed), "I would probably feel comfortable around native speakers of the foreign language," had an anxiety level mean of 2.91 and a percentage of 33% who disagreed or strongly disagreed. These results reflect that one of the students' concerns is using the language with native speakers. Because many classes do have

native speakers as instructors, these professors should pay particular attention to keeping their students' anxiety low. Sometimes native speakers may be taking the course, this can happen particularly in Spanish classes. Instructors should be aware that this could cause anxiety in the other students in the classes where this situation exists.

Question 9, "I start to panic when I have to speak without preparation in language class," elicited a written comment, "I don't do well w/impro!" This question had an anxiety level at 2.92 with 37% of the participants agreeing or strongly agreeing. This indicates that asking students to speak without giving them adequate time to prepare is something that could create anxiety in the classroom.

Question 1 "I never feel quite sure of myself when I am speaking in my foreign language class," had a mean of 2.85, 32% agreed or strongly agreed. The results for this question reinforce the notion that one of the main concerns of these students was speaking the language in class. This indicates that the communication component has the potential to generate anxiety in students. Therefore, professors should be cognizant that putting students on the spot to perform without proper preparation may not be the best way to get the students to use the target language.

b. Social Anxiety

The scores in the social component revealed that two of the questions were above the 3.0 anxiety level, which is a medium level anxiety score. Question 2 ($M=3.26$) and question 7 ($M=3.03$). Question 2 (key-reversed), "I don't worry about making mistakes in language class," had a high percentage, 53% of the students disagreed or strongly disagreed. Question 7 "I keep thinking that the other students are better at languages than I am," showed that 34% agreed or strongly agreed with this question. Both of these

questions show that students are concerned with their own progress in the classroom and that many of them believe that the other students are stronger. Price (1991) reported, “the majority of her subjects believed their language skills to be weaker than those of the others in the class” (p. 427). However, one other question presented some intriguing contrasting results. Questions 31 had the second lowest anxiety score with a mean of 1.98. This question “I am afraid that the other students will laugh at me when I speak the foreign language,” had 83% of the students who disagreed or strongly disagreed. These questions reveal that although students are concerned with their language abilities and many of them perceive other students’ abilities as better than theirs, they see their classmates as “sympathetic companions in the language learning process, not as a source of ridicule” (Ewald, 2007, p. 135).

Question 19 “I am afraid that my language teacher is ready to correct every mistake I make,” had a mean score of 2.11, which is considered very low anxiety. There was a student who hand wrote a comment to this question, he or she said, “I feel that this is their job.” This comments fits with the literature (Horwitz, 1986; Young & Terrell, 1991), which states that students do want to be corrected. It also may prove that in these classes professors have found an effective way to correct their students without raising their anxiety levels.

c. Test anxiety

Because this study was specifically looking at testing oral proficiency, this component was a notable one to consider in more detail. Several studies, Horwitz, 1986, MacIntyre, 1989, and Aida, 1994 have come to the conclusion that this component is not necessarily part of the specific anxiety that is related to language, but more of a general

anxiety component. However, at the present time it is still included in the questionnaire and considered a component of language anxiety. The present study's findings disclosed that the mean for test anxiety was the lowest of the three components; however, there was not much difference between the three means, social, $M = 2.63$, communication apprehension $M = 2.60$ and test $M = 2.58$. What is noteworthy is that this component contained both the highest and lowest anxiety level scores. Question 22, "I don't feel pressure to prepare very well for language class," was the highest with a mean of 3.41, which is a medium anxiety score. This key-reversed questions had 55% of the students who disagreed and strongly disagreed. The lowest scored question was question 21 "The more I study for a language test, the more I get confused." This question had a mean of 1.82 and 86% who disagreed or strongly disagreed. These questions seem to indicate that students do feel compelled to study for their examinations, but this does not affect their abilities to take the test, this is a result that instructors want to hear! Question 11 "I don't understand why some people get so upset over foreign language classes, received two written comments, "weird question. What do they get upset about?" and someone else, "People get upset over them?" This question did present a mean score of 2.95, which is very close to a medium anxiety score. However, 34% of the students neither agreed nor disagreed with this question, perhaps they too found it to be an awkward question.

C. The Demographic Questionnaire

The purpose of this questionnaire was to establish the level of the students who were tested in order to answer research question two. A secondary question was asked as a point of interest to get more information on the participants. They were asked their academic reason for taking the course. There were four possibilities, "major", "minor",

“requirement” and, “pleasure”. Although students were asked to choose one, some participants chose two of the possibilities. Therefore, a fifth possibility was added to the data when it was entered in SPSS, which was “multiple”. It was decided to examine this data to see if there was anything noteworthy to consider. The results reflected that there was quite a large difference between the means for these choices. The means for major and minor compared to requirement and pleasure were quite different. Although no analysis was run on these means, if they are examined visually some interesting possible inferences can be made. If students were taking the language to fulfill a requirement ($M = 2.97$) or for pleasure ($M = 2.80$) they had an overall higher anxiety level than students who were majors ($M = 2.40$) or minors ($M = 2.54$). This follows the previous findings that beginning levels have higher anxiety than advanced because more beginners are studying the language either for a requirement or for pleasure. Looking at the 17 participants who had the highest anxiety levels with means from 3.55 to 4.61, the previous findings are again confirmed. Of those 17 participants, 13 of them were taking the course for either a requirement or for pleasure and all but two were at the beginning level. This parallels the findings that beginning levels have higher anxiety levels and that there are more students in beginning levels taking the class as a requirement or for pleasure.

D. Implications

The findings confirm that foreign language anxiety does exist in the language classroom. Even though the overall mean for anxiety in this study was in the lower level, compared with some of the previous studies, Horwitz et al. (1986) 2.86, Aida (1994), 2.93, Rodriguez & Abreu (2003) 2.72, and Zang (2010) 2.98, there were still 53% of the

students who had some foreign language anxiety. Instructors should be aware of the activities and situations that can create anxiety in their students. Situations that involve native speakers, and putting students on the spot to perform oral task are all activities that can raise anxiety. In particular, instructors who teach beginning level students should be concerned with creating a low anxiety classroom so that more students can be retained to continue their studies in the upper levels as majors and minors.

E. Limitations

This study had certain limitations in examining the effect of technology on anxiety. Because this experiment was a deception the oral proficiency test was not actually performed. The results show only how the students felt about the different methods, not how they would actually perform on the test using either traditional methods or technology. Therefore, a true comparison of a difference in scores between the methods of testing was not obtained.

Another factor that may have affected the results was the timing of the study. This study took place at the end of the fall semester, and students were told that the oral proficiency testing was to be done the last week of classes. In all the classes tested this announcement was met with many sighs and general dissatisfaction. One student even wrote a comment on the questionnaire, "This added test is very inconvenient; we already have two exams to prepare for! The time spent doing this test should be spent studying." If many of the participants thought this way, this may have skewed their responses on the questionnaire. The participants may have been more focused on the fact that they were taking a test and not on the different method that they were going to be tested with, technology or traditional. This may also explain the mean for test anxiety being very

similar to communication apprehension and social anxiety.

F. Suggestions for Further Research

Based on the findings and limitations of this study, several suggestions for future research can be made.

1. Another experimental study could be done, using the same methods but at a different time during the semester, perhaps at the beginning. Students might be more focused on the different methods of testing rather than just that they will be tested. It would be extremely interesting to see if the results would be significantly different from those in the current study.

2. A follow-up experimental study should be done that includes actual testing. One class could do all their proficiency tests using technology and the other using traditional methods. The researcher could do a pretest and posttest using the FLCAS questionnaire to see if there was a significant difference between the classes that used technology for oral proficiency testing and those who used traditional methods. It would also be interesting to look at the achievement levels of these classes to see if there was a measurable difference.

3. The academic reason for taking the course is a subject that should be explored further. Even though the means were not analyzed for statistical differences, there appears to be a substantial difference between the means for majors and minors and those for requirement and pleasure. If anxiety is higher for students taking the course as a requirement or for pleasure, would more of those students go on to be majors or minors if their anxiety was lowered in the beginning classes?

4. Another questions that could be interesting to investigate, is the effect of self-esteem on language anxiety. Taking into consideration Brown's (2000) description of self-esteem, is low self-esteem a cause of language anxiety or does the presence of low self-esteem result in high anxiety?

5. Gregersen and Horwitz's 2002 study they looked at perfectionism as a cause of anxiety. Although their research was limited to a small group of students (8), this could be another area of interest for further research.

In conclusion, communication is the goal of both students and professors. The communicative approach is being used in many of today's classrooms. Testing for these skills remains a problem that needs to be solved. Larson (2000) tried a new system that uses technology for testing at Brigham Young University, and other schools such as the Department of Modern Languages at Staten Island, are following in this path (Mares, 2011). If these methods of testing prove to be not only easier to implement, but also to reduce anxiety, this could be an asset to foreign all language programs.

Anxiety can negatively affect the language learning experience in numerous ways and reducing anxiety seems to increase language acquisition, retention and, learner motivation (Von Wörde, 2003). Therefore, reducing foreign language anxiety should be the primary goal in all language classes, so that students will continue with their language studies beyond the required courses.

You live a new life for every new language you speak. If you know only one language, you live once (Czech proverb).

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Appendix A

Demographic Questionnaire

1. Language and level: _____
2. I am taking this class for a Major Minor Requirement Pleasure (Circle one)

Appendix B

Foreign Language Classroom Anxiety Scale

Each of the following statements refers to how you feel about your foreign language class. Please indicate by circling either Strongly Agree, Agree, Neither agree nor disagree, Disagree or Strongly disagree. Please give your first reaction to each statement. Please circle an answer for 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 C

Instructions to the Students

The Department of Modern Languages just created a new policy in order to more effectively place language students in the level that corresponds best to their communicative proficiency. This testing will be done in the next week of classes in order to evaluate the students' progress and proficiency levels.

The testing will take place over a one week period and will consist of three different kinds of evaluations; an interview, a classroom discussion and an individual presentation. Because this is a new procedure the testing will be done in two different ways. You will be randomly assigned to one of the two groups, technology or traditional. The technology group will be doing all of the evaluations on the computer, either in real time or in recordings. The traditional group will be doing all their evaluations in face-to-face situations in their classrooms. The technology group will be doing all their evaluations in the computer media lab.

There will be three different tests. The first one will be a face-to-face interview, or a recorded one if you are the technology group. The second activities will be a classroom discussion on a preselected topic. The traditional group will be doing this in the classroom and the technology group will be doing this using a real time chat room. The final activities will be a presentation about a preselected image with limitations as far as the tense and vocabulary that can be used. Again the traditional group will be doing this in the classroom and the technology group will be using a program call VoiceThread where they will record their presentation.

Are there any questions at this point? (Be sure and emphasize that the time limits and use of notes will be the same for both groups).

Now you will be filling out two preliminary questionnaires concerning this new policy. Please fill these out according to how you feel at the moment and do not put your names on these questionnaires. Once you have finished filling them out please place them on your desk and wait for everyone to get finished. **(Hand out questionnaires and have students fill them out. When everyone has finished have the students put the questionnaires aside and continue reading.)**

Now that you have finished I would like to inform you that you have just participated in a research study that is looking into anxiety levels in foreign language students. Please do not talk about this study with other students because if they know about the experiment this could affect the way they answer their questionnaires.

The research questions are:

1. Will there be a significant difference in the anxiety scores between university students who believe that they will be tested for oral proficiency using synchronous (SCMC) and asynchronous (ACMC) computer-mediated communication and those who believe they will be tested using traditional face-to-face interviews and classroom oral discourse?
2. Will there be any difference in anxiety between beginning and advanced level students?

I will now hand out a debriefing form that you should complete. You should read this form and decide if yes or no you want to participate in this research project. If you decide to check the no box this will not affect you in any way and is completely

anonymous. Simply hand in all of the forms, stapled together. They will be looked at by the researcher and counted only if you have checked the yes box. Again, please do not talk about this study with other students because if they know about the experiment this could affect the way they answer their questionnaires.

Remember this testing will not be taking place!

Any more questions?

Appendix D

Debriefing form

You are invited to participate in a study concerning foreign language learning anxiety. This research is being conducted in partial fulfillment of the requirements for my dissertation. The purpose of this study is to investigate if using computer-mediated communication in testing will result in lower anxiety scores in university students. This study is not related to the Modern Language Department nor to the class that you are taking. Your participation is entirely voluntary and you may refrain from participating in this research study. Your grades will not be affected by refusal to participate.

If you have any questions or would like to discuss the study, please feel free to call me at 523-6910. You may have a copy of this form if you so desire.

Thank you for your cooperation. Your participation is greatly appreciated.

Sincerely yours

Cynthia Dohl

The researcher

I agree to participate in this study

I do not wish to participate in this study

Appendix E

Permission to use the FLCAS

I appreciate your interest in my work.

Subject to the usual requirements for acknowledgment, I am pleased to grant you permission to use the Foreign Language Classroom Anxiety Scale in your research. Specifically, you must acknowledge my authorship of the FLCAS in any oral or written reports of your research. I also request that you inform me of your findings. Some scoring information about the FLCAS instruments can be found in my book *Becoming a Language Teacher: A Practical Guide to Second Language Learning and Teaching*, Allyn & Bacon, 2008.

Best wishes on your project.

Sincerely,
Elaine K. Horwitz