FOREIGN LANGUAGE ANXIETY

IN TRADITIONAL AND DISTANCE LEARNING FOREIGN LANGUAGE CLASSROOMS

by

Anastasia S. Bollinger

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

This research sought to examine the differences between students' foreign language anxiety levels (high, moderate, low) and student achievement in different learning environments (traditional or distance learning) in a college setting. The Foreign Language Classroom Anxiety Scale (FLCAS) was administered to students of Spanish and French at a community college in central Georgia. Foreign language achievement was measured using students' course final grades. This study was conducted using a causal-comparative design, and data were analyzed and interpreted using *t* tests and a one-way ANOVA. The results for the study showed that there were no significant differences in student achievement between traditional and distance learning foreign language classes, but there were significant differences in student achievement between students with different levels of foreign language anxiety. Also, there were significant differences in foreign language anxiety scores between students in traditional and distance learning foreign language classes. The results of the study add to the limited number of studies on foreign language anxiety across different learning environments of learning and can help teachers with pedagogical decisions to meet the needs of students with various characteristics in their classes.

Keywords: foreign language anxiety, foreign language achievement, traditional classroom, distance foreign language learning

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List of Abbreviations

American Council on the Teaching of Foreign Languages (ACTFL)

Analysis of Variance (ANOVA)

Computer-mediated Communication (CMC)

Foreign Language (FL)

Foreign Language Classroom Anxiety Scale (FLCAS)

Modern Language Association (MLA)

National Center for Education Statistics (NCES)

CHAPTER ONE: INTRODUCTION

Overview

This chapter contains a summary of the most relevant literature and provides the historical, social, and theoretical context for the research problem. In addition, the problem statement, the purpose statement, and significance for this study are discussed. Finally, the research questions and variables are identified, and the main terms are defined.

Background

In the area of globalization, knowing a foreign language has become an essential component of the 21st century skills necessary for global citizenship (American Council on the Teaching of Foreign Languages [ACTFL], 2011; Duncan, 2010). A major report by the Committee of Economic Development (2006) states that to meet the economic, political, and national security needs of the country, American students must strengthen their knowledge of foreign languages and cultural awareness, which are skills critical to successful global communication. With the influence of globalization and the rapid growth of technology, it is important to examine what affects students' performance in foreign language classes which will help to address the nation's language gap. The national language gap was identified by Duncan (2010) as an obstacle to a world-class education which requires students to know foreign languages.

In the past few decades, foreign language enrollment in higher education institutions in the United States has been increasing. More students are taking foreign languages classes than ever before, and the selection of languages being taught is broader than ever (Furman, Goldberg, & Lusin, 2010). The total number of foreign language enrollments for 2002 exceeded that for 1997 by 17.0% (Welles, 2004), and the enrollments for 2009 exceeded that for 2006 by 6.6%

(Furman et al., 2010). In 2013, the foreign language enrollment saw the first slight decline of 6.7% from the 2009 enrollments since 1980, with the exception of a slight decrease in 1995 (Golberg, Looney, & Lusin, 2015). However, in the Modern Language Association of America's report, Golberg et al. (2015) also note a positive trend of the growing number of foreign language students in advanced undergraduate and graduate programs, meaning more students are continuing to take advanced foreign language classes.

At the same time, the number of undergraduate students taking at least one distance learning class has also been steadily increasing. According to the National Center of Education Statistics (2011), from 2003-2004 to 2007-2008, the percentage of such students rose from 16% to 20% of all undergraduates. Moreover, in 2012, 33.5% of all undergraduate students took at least one online class (Allen & Seaman, 2014). Tarone (2015) reported the increasing number of distance learning foreign language classes offered by colleges and universities in the last decade. However, it should be noted that foreign language classes have been added to distance learning programs at a slower rate than other subjects (Hurd, 2006). The factors affecting such cautious approach include the unique requirements of teaching languages; for example, a high level of human contact and rich context (Hurd, 2006; Modern Language Association [MLA], 2014) and increased demands of self-instruction and self-regulation for students (Hurd & Xiao, 2010).

Regardless of the learning environment, whether it is a traditional or distance learning class, the topic of achievement has been of great interest to foreign language educators. Different factors have been considered as predictors of students' achievement in the foreign language classroom. Research has revealed a number of factors accounting for individual differences in foreign language achievement which include teacher expectations, students' attitudes, learners' creativity, the degree of teacher cooperation with students, and students' anxiety level

(Pishghadam, Khodadady, & Zabihi, 2011; Tsiplakides & Keramida, 2010; Wei, den Brok & Zhou, 2009).

As one of the affective variables that influences student achievement in foreign language classes (e.g. Bell & McCallum, 2012; Horwitz, 2001; Krashen, 1981; Marcos-Llinas & Garau, 2009; Xiao & Wong, 2014), foreign language anxiety has been identified as a problem for foreign language students and teachers and has been a focus of research since the 1970s (Horwitz, 2012). However, the research yielded inconsistent results in the 1970s and early 1980s (e.g. Backman, 1975; Chastain, 1975; Kleinmann, 1977; Swain & Burnaby, 1976; Tucker, Hamayan & Genesee, 1976). Finally, in the late 1970s, Scovel (1978) suggested that the reason for mixed results was the different views of researchers on the nature of foreign language anxiety and its measurement. In the mid-1980s, Horwitz, Horwitz and Cope (1986) defined foreign language anxiety as a unique type of anxiety. Horwitz et al. (1986) conceptualized foreign language anxiety as a situation-specific, not trait-specific anxiety, which is different from anxiety related to other subject areas because "no other field of study implicates self-concept and self-expression to the degree that language study does" (Horwitz et al., 1986, p. 128).

Recent research on foreign language anxiety has suggested that it hinders academic achievement in the foreign language classroom (e.g. Bell & McCallum, 2012; Marcos-Llinas & Garau, 2009; Xiao & Wong, 2014). Foreign language anxiety has been found to be negatively associated with foreign language achievement in traditional foreign language classes (e.g. Awan, Azher, Anwar, & Naz, 2010; Hewitt & Stephenson, 2012; Salem & Al Dyiar, 2014); however, students' anxiety levels in distance learning foreign language classes has not received much attention from researchers. With advances in technology that allow educators to develop different methods of delivering knowledge and the changing nature of distance learning foreign

language classes which include more oral interactions (Pichette, 2009), foreign language anxiety should be examined in the distance language learning context to increase understanding of course design and delivery that supports language learners' success.

Affective variables, including anxiety, might be critical for distance language learning because of "the mismatch between an inherently social discipline such as [language] and a learning context which is characterized by remoteness, and because of the specific features of languages which make them more difficult to learn at a distance than other disciplines" (Hurd, 2007b, p. 244). It has been reported that distance learning foreign language students experience anxiety because of limited feedback from teachers and insufficient communication with other distance foreign language learners (Hauck & Hurd, 2005; Zhang & Cui, 2010). In other words, the physical absence of a teacher and peers, as well as isolated context, lack of non-verbal clues, such as facial expressions and gestures, in addition to language difficulties, for example, pronunciation and sound recognition, add to challenges and difficulties experienced by students in distance learning. Because of these unique challenges that students might experience in distance learning foreign language classes, foreign language anxiety levels in students might be different from students in traditional foreign language classes (Hurd, 2007a, Pichette, 2009). In addition, in distance learning foreign language classes, it might be more difficult to identify students with anxiety (Hurd, 2007a; Xiao, 2012).

The critical role of foreign language anxiety is also supported by Krashen's second language acquisition theory (Krashen, 1981) which consists of five main hypotheses: the acquisition-learning hypothesis, the natural order hypothesis, the monitor hypothesis, the comprehension hypothesis, and the affective filter hypothesis. Krashen (1982, 2013) distinguishes between language acquisition (subconscious process) and language learning

(conscious process) and states that units of a language are acquired in a specific order. He also stresses the idea of self-correction while speaking a language and points out that, to acquire a language, students must understand what they hear and what they read. In addition, affective variables play an important role in acquiring comprehensible input, with comprehensible input being defined as input appropriate for the level of students' foreign language competency (Krashen, 1985). The affective filter hypothesis of the theory indicates that there are different affective variables that influence the successful acquisition of a second language. The three affective variables are *motivation*, *self-confidence* and *anxiety*, and the hypothesis claims that the affective filter can be a barrier that prevents optimal input for acquisition (Krashen, 1981, 2013).

Another theory that may have an impact on language acquisition is the media naturalness theory (Kock, 2004), which has been used to study different computer-mediated communication (CMC) media. The theory indicates that media differs in the degree of naturalness with face-to-face communication being the most natural way to communicate. A change in the degree of naturalness leads to an increase in cognitive effort, an increase in communication ambiguity, and a decrease in psychological arousal (or excitement) (Kock, 2004). The theory offers a specific lens of examining distance learning foreign language classes. The media naturalness theory implies the necessity of creating an appropriate education environment for distance learning foreign language classes that enable interactions similar to face-to-face communication. As applied to this study, this theory supports that, because of different degrees of naturalness of the traditional and distance learning foreign language classes, it is expected that foreign language anxiety is influenced by the type of learning environment. Thus, this study seeks to compare differences in foreign language achievement and foreign language anxiety scores between traditional and distance learning foreign language classes.

Problem Statement

With the current initiative to improve and expand foreign language instruction (Duncan, 2010; Panetta, 2010), foreign language instructors should be aware of challenges faced by foreign language students. It has been widely acknowledged by researchers that anxiety is a barrier to foreign language competency, and research continues to find anxiety associated with student achievement in foreign language classes (e.g. Awan et al., 2010; Marcos-Llinas & Garau, 2009; Xiao & Wong, 2014). Foreign language anxiety might be related to academic achievement because students with high levels of foreign language anxiety tend to miss classes and postpone homework (Horwitz et al., 1986). In addition, research has suggested that foreign language anxiety interferes with students' performance of specific cognitive tasks because of limited capacity to process information (Eysenck, Derakshan, Santos, & Calvo, 2007; MacIntyre & Gardner, 1994). For example, anxious students might have difficulties distinguishing sounds and structures in a message in a target language (Horwitz et al., 1986) and avoid using complex structures (MacIntyre & Gardner, 1994); they might attend more to anxiety-provoking stimuli than to the source of information (Eysenck et al., 2007; Omen, 2012). In other words, anxious students have difficulty demonstrating the knowledge they possess (MacIntyre & Gardner, 1994).

Most of the recent studies on foreign language anxiety have concentrated on traditional foreign language classes. With the growing number of distance learning language classes, examination of distance learning of languages has become critical. A foreign language might be more difficult to learn in a distance learning environment than other subjects because of problems for the "acquisition, practice, and assessment of foreign language speaking skills, given the physical absence of a teacher, the isolated context, and reduced opportunities for interacting

in the target language" (Hurd, 2006, p. 304). The distance foreign language learning environment offers additional anxiety-provoking elements that might make affective variables particularly significant. Hurd (2007a) found that distance learning foreign language classes included additional anxiety-provoking factors, such as lack of instant feedback, difficulty assessing personal progress in comparison to other students, isolation, lack of opportunities for speaking practice, and lack of confidence during independent learning.

The problem is that very few studies focused their research on foreign language anxiety experienced in distance learning foreign language classes (e.g. Hurd, 2007a; Pichette, 2009). It has been found that distance learning foreign language students also experience anxiety (e.g. Hurd & Xiao, 2010; Jafarigohar & Behrooznia, 2012; Pichette, 2009; Xiao, 2012; Zhang & Cui, 2010), but most of the studies focusing on anxiety in distance learning foreign language classes were qualitative (e.g. Coryell & Clark, 2009; Hauck & Hurd, 2005; Hurd, 2007b; Hurd & Xiao, 2010; Xiao, 2012). Some studies explored causes of anxiety (Coryell & Clark, 2009), anxiety-producing activities, and anxiety-reducing strategies (Hauck & Hurd, 2005). However, distance learning foreign language classes have been ignored with only a few studies comparing anxiety experienced by students in traditional and distance learning foreign language classes (e.g. Hauck & Hurd, 2005; Pichette, 2009). A major gap in the literature remains in relation to the comparison of students' affective experiences in traditional foreign language classes with their affective experiences in distance learning foreign language classes (Hurd, 2007a; Pichette, 2009; White, 2014). Using the theoretical framework of Krashen's (1981) secondary acquisition theory and Kock's (2004) media naturalness theory, this study aims to fill the gap in the literature on foreign language anxiety and distance learning foreign language classes by investigating

achievement and anxiety profiles of students in traditional and distance learning foreign languages classes.

Purpose Statement

The purpose of this causal comparative study was to examine foreign language anxiety scores and foreign language students' achievement (dependent variables) based on their foreign language anxiety levels (independent variable) across two types of learning environments (independent variable) at a community college in middle Georgia. The first independent variable, foreign language anxiety, was generally defined "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128). It was measured by the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986). Foreign language anxiety has three levels: low, moderate, and high. The second independent variable was the learning environment, and it was generally defined as a type of delivery mode. It compared two groups: traditional foreign language learning and distance foreign language learning. The traditional learning environment is a traditional classroom where students and teachers meet face-to-face for foreign language instruction. Distance foreign language learning occurs using the Internet when the instructor and students are geographically separated from each other and the interaction between the students and the instructor occurs synchronously or asynchronously using a learning management system.

The dependent variables were foreign language achievement and foreign language anxiety scores. Foreign language achievement was measured using students' final numerical course grades. Final numerical grades have been used as a measure of language performance in numerous studies and, thus, are an accepted means of measuring student achievement in the

foreign language classroom and in social science research (e.g. Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009). The second dependent variable, foreign language anxiety, was generally defined "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128). It was measured by the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986).

Significance of the Study

A need for examination of foreign language anxiety in distance learning foreign language education has been documented in the educational research. Hurd and Xiao (2010) described an anxiety profile of distance learning foreign language students and called for more studies in the area to research further the impact of anxiety on distance foreign language learning. White (2014), in her research agenda of distance learning foreign language education, specifically indicated, as one of the research tasks, a need to compare the affective domain of traditional foreign language learners and distance learning foreign language students.

It is also important to recognize that distance learning foreign language education is in need of "an adequate conceptual basis for the field based on a synthesis of perspectives" (White, 2006, p. 248). Theoretically, this study contributes to the area of foreign language teaching and learning which entails a complex interplay of learner characteristics and learning environment. This study serves to reinforce the theoretical bridge between second language acquisition theories and distance learning theories.

To ensure that distance learning foreign language classes provide the same quality of foreign language instruction as traditional foreign language classes, there is a growing need to examine the challenges and difficulties faced by students in distance learning classes, which

present a multifaceted interaction of "human, institutional, and sociocultural" factors (White, 2006, p. 248). This study is significant because current research in foreign language education is deficient in exploration of the differences between traditional and distance learning foreign language classrooms (Pichette, 2009, White, 2014). There appears to be a lack of research that compares anxiety levels of traditional foreign language students and distance learning foreign language students. Due to the unique nature of distance learning foreign language classes (Hurd, 2007a) which have been growing, it is necessary to explore the interaction of anxiety and learning environment with student achievement. Practically, this study seeks to provide an updated understanding of the differences between anxiety levels of foreign language learners in distance learning classes and traditional classrooms and the effect that anxiety levels have on students' foreign language achievement in different learning environments. Such an understanding may offer educators and instructional designers theoretically guided empirical research to make decisions and improvements regarding foreign language teaching and learning.

Research Questions

The research questions for this study were the following:

RQ1: Is there a difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language class)?

RQ2: Is there a difference in foreign language achievement based on students' level of anxiety (low, moderate, high)?

RQ3: Is there a difference in foreign language anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance learning foreign language class)?

Definitions

1. *Affective filter* consists of affective variables, such as emotional factors, anxiety, and self-confidence and determines learners' receptivity to second language input (Horwitz, 2012; Krashen, 1982).
2. *Affective variables* include individual differences related to feelings about a particular subject (Hurd, 2002).
3. *Cognitive effort* is defined as mental effort or brain activity involved in communication (Kock, 2005).
4. *Communication apprehension* is categorized as a type of anxiety about communicating with another person (Horwitz et al., 1986).
5. *Comprehensible input* is defined as input appropriate for the level of students' foreign language competency (Krashen, 1985).
6. *Computer-mediated communication* is defined as "communication via in-class or out-of-class computer networks" (Horwitz, 2012, p. 241)
7. *Debilitating anxiety* is a type of anxiety that motivates the learner to "flee" the new learning task; it stimulates the individual emotionally to adopt avoidance behavior" (Scovel, 1978, p. 139).
8. *Distance learning* is defined as "the acquisition of knowledge and skills through mediated information and instruction" (United States Distance Learning Association, n.d.).
9. *Facilitating anxiety* is a type of anxiety that "motivates the learner to "fight" the new learning task; it gears the learner emotionally for approach behavior" (Scovel, 1978, p. 139).

10. *Fear of negative evaluation* is defined as "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (Watson & Friend, 1969, p. 449).
11. *FLCAS* – Foreign Language Classroom Anxiety Scale is an instrument developed by Horwitz et al. (1986) to measure individual's anxiety response to the stimulus of learning a foreign language (Horwitz, 1986).
12. *Foreign language anxiety* is defined "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128).
13. *Foreign language* refers to a language in a country where it is not the native language (Horwitz, 2012).
14. *Learning environment* is defined as the delivery medium or mode by which instruction is conveyed and learning is supported (Clark, 2012).
15. *Learning management system* is a software application that is designed to "to deliver, manage, track, and assess learning activities in a formal learning environment" (Stone & Zheng, 2014, p. 756).
16. *Media naturalness* is the degree to which a learning environment resembles face-to-face communication (Kock, 2001).
17. *Monitor* refers to learned knowledge used in self-correction of errors (Krashen, 1982).
18. *Second language acquisition* is defined as an academic field which "seeks to understand how humans learn new languages" (Horwitz, 2012, p. 248).
19. *Second language* refers to learning a language in a country where it is spoken as native (Horwitz, 2012).

20. *Target language* is defined as “the second or foreign language of instruction” (Horwitz, 2012, p. 249).
21. *Test anxiety* is connected to a fear of failure when being assessed (Horwitz et al., 1986).
22. *Traditional learning* is defined as face-to-face instruction provided by an instructor physically present in the classroom with students (Larson & Archambault, 2015).

CHAPTER TWO: LITERATURE REVIEW

Overview

In this chapter, the theoretical frameworks for this study are discussed, including a review of Krashen's (1982) second language acquisition theory and Kock's (2001) media naturalness theory. Foreign language anxiety and its constructs are examined, and the relationship between foreign language anxiety and foreign language learning is also included in the discussion. In addition, this chapter provides an overview of the history of foreign language education and distance learning foreign language education in the USA, including characteristics of students taking distance learning foreign language classes. Through the examination of literature on the topic, the gap in the existing literature is established, and the significance of the study is discussed.

Theoretical Framework

Krashen's Second Language Acquisition Theory

The acquisition hypothesis. One of the theoretical frameworks of the study is Krashen's (1982; 2013) theory of second language acquisition, which consists of five main hypotheses: the acquisition-learning hypothesis, the natural order hypothesis, the monitor hypothesis, the comprehension hypothesis, and the affective filter hypothesis. The acquisition hypothesis sets the foundation for the theory and distinguishes between two ways of developing competence in another language: language acquisition (subconscious process) and language learning (conscious process). Language acquisition is compared to the way children acquire their first language (Krashen, 1982). Acquiring a language is characterized by not necessarily knowing the rules, but feeling what sounds right and wrong. On the other hand, learning a language is usually formal, explicit learning of the rules of a language (Krashen, 1982). Learners are aware that they are

learning and what they are learning which results in what Krashen (1985) calls “knowing about language” (p. 1).

The natural order hypothesis. According to the natural order hypothesis, units of a language are acquired in a specific order (Krashen, 2013). However, the order is unique for each individual even though the variations are not extreme. Krashen (2013) points out that the natural order does not reflect the difficulty of the parts of a language and that the order cannot be altered. The natural order hypothesis has implications for instructional designers who have to keep in mind the order in which students acquire a language to minimize frustration and anxiety (Krashen, 2013).

The monitor hypothesis. The monitor hypothesis stresses the idea of self-correction while speaking a language. Krashen (1982) referrers to a “monitor,” which is learned knowledge used in self-correction of errors. Krashen (2013) notes that three conditions must be met to be able to use the monitor: knowledge of the rule, focus on form, and availability of time. However, if the conditions are not met, monitoring, or editing, occurs before or after the production of language (Latifi, Ketabi, & Mohammadi, 2013). In addition, Krashen (1982) distinguishes between three types of monitor users: over-users, under-users, and optimal users. Over-users of the monitor are always monitoring their language production and are often overconcerned with correctness; as a result, they might not speak with fluency. Under-users do not use their conscious knowledge and are not concerned with error correction. Optimal users use “the monitor” appropriately when the conditions are met, which results in the increase of the accuracy of their output. Optimal users should be the pedagogical goal of foreign language educators.

The comprehension hypothesis. The comprehension hypothesis, or input hypothesis, states that to acquire a language, students must understand what they hear and what they read. In

other words, the input should be comprehensible. In addition, Krashen (1985) claims that with the help of a language teacher, their knowledge of the world, context, acquired linguistic competence, and other extra linguistic information, students move from *i*, their current level, to *i+1*, their next level, when they are provided with comprehensible input which contains *i+1* structures. Teachers can make input comprehensible by using visual aids, gestures, and familiar topics (Krashen, 1982, 2013).

The affective filter hypothesis. However, comprehensible input might be understood, but not acquired if the "affective filter" is raised (Krashen, 1982, 1985). The affective filter is "a mental block" which is raised or lowered when receiving the comprehensible input. According to the affective filter hypothesis, there are affective variables that have an impact on language acquisition (e.g. anxiety, low self-esteem, boredom, stress, anger) (Krashen, 1982, 2013). According to Krashen (1981), both language aptitude (as measured by standard tests) and attitude (affective variables) appear to be related to second language achievement. The affective filter hypothesis describes the effect of such affective variables as motivation, self-confidence, and anxiety on second language acquisition (Krashen, 1982). Affective variables either hinder or facilitate second language acquisition. Low self-esteem, low motivation, and high anxiety levels prevent language acquisition by blocking the input from "the part of the brain responsible for language acquisition" (Krashen, 2013, p. 4). On the other hand, high self-esteem and motivation in conjunction with low levels of anxiety promote language acquisition. Krashen (1982) suggests that one of the educators' "pedagogical goals" should be creating an environment with a low affective filter.

Studies using Krashen's second language acquisition theory. Krashen's theory has been used as a theoretical background in many studies since its introduction in the 1970s. The

first study to use the affective filter hypothesis to conduct research on foreign language anxiety was research by McCann, Hecht, and Ribeau (1986) who found support for the hypothesis. The researchers found that second language learning was significantly negatively related to anxiety (McCann et al., 1986). In more recent studies, Speh and Ahramjian (2010) suggested Krashen's theory could be used as an integrating framework for musical learning with language and support of language acquisition with music. The authors argue that students experience less anxiety when music is used to enhance language acquisition (Speh & Ahramjian, 2010). Elley and Lumelume (2009) studied the impact of three foreign language educational aid projects using Krashen's theory as a theoretical framework, specifically the comprehensive input, and offered support for it. It was found that providing reading materials with comprehensible input in the target language accompanied by the workshops for teachers on the use of these materials showed the most effect on student achievement (Elley & Lumelume, 2009).

Criticism. Nevertheless, Krashen's theory has also been criticized. One of the major criticisms of Krashen's theory is the lack of operational definitions for major terms of the theory (McLaughlin, 1978). Gregg (1984) considered the theory to be too complex and not coherent, and Zafar (2009) pointed out that Krashen had not thought through every detail of the theory; for example, he failed to explain the nature and tools of the affective filter (Zafar, 2009).

Despite all the criticism that has been articulated towards Krashen's theory of second language acquisition, the theory has been very influential, and many foreign language educators base their instruction on the principles of Krashen's (1981) second language acquisition theory (Bahrani, 2011). The theory attempts to explain some factors involved in foreign language learning, including affective variables. The theory also predicts that high levels of anxiety might be related to lower levels of foreign language learning; thus, it is important to investigate which

learning environment, traditional or distance learning, creates an environment with a low affective filter, as suggested by Krashen (1982).

Media Naturalness Theory

The media naturalness theory (Kock, 2001, 2004) considers different types of learning environments and holds that the traditional, face-to-face learning environment is the most natural way to communicate, and humans tend to experience certain problems when using computer-mediated communication (CMC). The media naturalness theory has three main principles: media naturalness, innate schema similarity, and learned schema diversity (Kock, 2001).

The media naturalness principle. According to the media naturalness principle, CMC differs in the degree of naturalness (Kock, 2004). The naturalness of a communication medium is the degree the learning environment is different from face-to-face communication with face-to-face communication having the highest degree of naturalness. The theory places face-to-face communication in the middle of a linear, one-dimensional scale of CMCs. The further away a learning environment is from the center on either side of the spectrum, the greater the difference its naturalness is from face-to-face communication (Kock, 2004).

The degree of naturalness can be evaluated using the following five elements:

"(a) colocation, which would allow individuals engaged in a communication interaction to share the same context, as well as see and hear each other; (b) synchronicity, which would allow the individuals to quickly exchange communicative stimuli; (c) the ability to convey and observe facial expressions; (d) the ability to convey and observe body language; and (e) the ability to convey and listen to speech." (Kock, 2004, p. 333-334)

A learning environment that consists of as many of these five elements to the largest level possesses the highest degree of naturalness (Kock, 2004). It should be noted that, according to

the theory, a change in the degree of naturalness has consequences and leads to changes in cognitive effort, communication ambiguity, and physiological arousal (Kock, 2005). Cognitive effort is defined as mental effort or brain activity involved in communication. The theory holds that a decrease in naturalness leads to increased cognitive effort (Kock, 2005). In addition, when using a less natural learning environment, misinterpretation of information is possible; as a result, communication ambiguity also increases (Kock, 2005). In the absence of communication cues, individuals try to fill in the gaps when interpreting messages, which leads to misinterpretations and increased ambiguity. Finally, the third construct of the theory, physiological arousal, will decrease with the change of naturalness of the learning environment (Kock, 2005). Physiological arousal is generally defined as excitement and pleasure, and each of the five elements of face-to-face communication contributes to physiological arousal (Kock, 2005). Kock (2001) emphasizes the importance of creating electronic communication environments closely resembling face-to-face communication.

The innate schema similarity principle. The second principle of the theory, the innate schema similarity principle, explains that humans have similarities in common communication schemas; as a result, individuals with different cultural backgrounds still have similar communication patterns (Kock, 2001). Moreover, according to the learned schema diversity principle, even though individuals have some comparable communication schemas, learned communication schemas are not as standardized across individuals as are innate schemas because learned schemas are acquired through interaction with the environment (Kock, 2001). This means that individuals can adapt to communicate in low-naturalness media and perceive them as less unnatural.

Studies using the media naturalness theory. Although the media naturalness theory is relatively new, it has been used as a theoretical framework in many studies. DeRosa, Hantula, and Kock (2004) suggested using the media naturalness theory in studying virtual teamwork communication. The media naturalness theory was the basis of Simon's (2006) study of task performance and satisfaction in students communicating through instant messaging, video conferencing, or face-to-face. The results supported the media naturalness theory. The students were more satisfied with the media with a higher degree of naturalness (Simon, 2006). Houser, Cowan, and West (2007) used the media naturalness theory to frame their study of instructor communication behaviors effective in face-to-face situations when mediated in CD-ROM texts. The results also supported the media naturalness theory. Blau and Kaspi (2010) used the theory to explain some of the differences between traditional instruction and audio-written conferencing. Kock and Garza (2011) tested the media naturalness theory by comparing two sections, traditional and distance learning, of a management information systems course in terms of perceived cognitive effort, ambiguity, excitement, and student achievement in the middle of the semester and found general support for it. The learned schema diversity principle (Kock, 2001) was supported by the results received at the end of the semester when no significant differences were found between the two media.

The media naturalness theory holds that electronic communication media often present greater challenges and obstacles to students because they experience an increase in cognitive effort and communication ambiguity and a decrease in excitement (Kock, 2011). As a result, the effects of the learning environment can manifest themselves through frustration which can lead to negative feelings, such as confusion, apprehension, and anxiety. It can be predicted based on

the media naturalness theory that anxiety levels will be higher in distance learning foreign language classes.

The History of Foreign Language Education in the United States

Grammar-Translation Method

Foreign language education has seen many changes over the years with different methods and approaches dominating the field as the most effective way of second language acquisition. The first half of the 20th century was characterized by the dominance of the grammar-translation method (Benderson, 1983). This method featured memorization of grammar rules and vocabulary and application of this knowledge to translation of decontextualized sentences into the target language (Kramsch, 2014; Long, 1999; Scheffler, 2013). The emphasis was mainly put on reading, not on oral communication in the target language (Benderson, 1983). The grammar-translation method can help students understand the grammatical rules of the target language and can help develop students' reading and writing skills in the target language (Chang, 2011; Kong, 2011). However, the method has been criticized for its teacher-centeredness (Chang, 2011), very little oral work (Benderson, 1983; Kong, 2011), little use of the target language, reliance on rote memorization and ignorance of students' interests (Chang, 2011).

Audiolingual Method

In the 1950s, the audiolingual method was proposed by American linguists (Mart, 2013). The audiolingual method was influenced by the behaviorist movement and was based on the principles of the Army Language School (Benderson, 1983). The audiolingual method emphasizes aural and oral work and includes memorization of dialogues, pattern drills, and substitution drills to form habits (Abdel, 2009; Benderson, 1983; Mart, 2013). Also, the method follows a strict sequence of language skills: listening, speaking, reading, and writing (Abdel,

2009), and the presentation-practice-production sequence makes the teacher the center of the classroom (Kumaravadivelu, 2006). Even though the method provides foreign language teachers a framework, the method has a number of disadvantages. One of the disadvantages is that students often complain about dull, uninteresting, and mechanical drills (Abdel, 2009). Another criticism of the earlier approaches to foreign language teaching is lack of consideration for individual differences and not using authentic, real-life situations in teaching a foreign language (Schulz, 2002). In addition, students do not learn to communicate spontaneously (Abdel, 2009) and have problems transferring isolated vocabulary and grammar items into real-life communicative situations (Kumaravadivelu, 2006).

Communicative Approach

By the mid-1960s, as a result of the criticism of the audiolingual method, a new method started to emerge. The term "communicative competence" was introduced in the late 1960s (Rajagopalan, 2004). The shift of the focus on the learner and on learning with a purpose created a new environment (Howatt, 2014) where teachers "must foster meaningful communication" (Kumaravadivelu, 2006, p. 120). In order to do so, teachers are encouraged to use contextualized drills, use authentic language, use activities that integrate all four skills of speaking, reading, listening, and writing, offer choice of response to learners, and be more tolerant to mistakes as part of language learning (Kong, 2011; Kumaravadivelu, 2006; Long, 1999). Foreign language classes have become more conversationally oriented, and the teachers' role has switched to a facilitator (Benderson, 1983). Even though the communicative approach has been enjoying its popularity for several decades now, it has been criticized for its focus on fluency at the expense of accuracy (Lyubova, Bilyalova & Evgrafova, 2014; Xu, 2010), avoidance of the first language, and focus on meaning against form (Wu, 2010) among other things.

One of the major goals of foreign language classes has become communicative competence, which is defined by the ACTFL (2011) as the ability to communicate in a foreign language with native speakers of the language. Reaching communicative competence can present a big challenge to teachers and students because it involves real communication with people in authentic contexts. Teachers are presented with the challenge to create the right kind of interaction for students (Koosha, & Yakhabi, 2013) because speaking, a major component of communicative competence, has been reported as one of the main anxiety-provoking activities in the foreign language classroom (e.g. Azarfarm & Baki, 2012; Horwitz et al., 1986; Young, 1990) and researchers identified anxiety as one of the challenges faced by the students in a foreign language classroom (e.g. Awan et al., 2010; Marcos-Llinas & Garau, 2009; Xiao & Wong, 2014).

The History of Foreign Language Anxiety Research and its Constructs

Early Studies

Foreign language anxiety has been an interest of researchers and language teachers for decades (e.g. Chastain, 1975; Kleinmann, 1977, MacIntyre & Gardner, 1989). However, research has yielded inconsistent results about the effects of anxiety on foreign language learning. In his literature review on the effect of anxiety on foreign language learning, which is considered a turning point in understanding anxiety experienced in learning a foreign language (Horwitz, 2010) and, thus, foundational, Scovel (1978) discussed several studies which presented inconsistent results. For instance, anxiety was one of the nine personality characteristics studied by Swain and Burnaby (1976) in French immersion students. The researchers found that anxiety was negatively correlated at a statistically significant level to only one measure of French proficiency (a French reading test), but no positive or negative significant correlations of anxiety

to other measures (different parts of French achievement tests) were observed. In another study, Tucker et al. (1976) studied different attitude factors (e.g. ethnocentrism, attitude towards language, encouragement, anxiety, interest) as predictors of student achievement and discovered anxiety to be negatively correlated with only one standardized test of French proficiency, but no significant correlation with the other three measures: oral interviews, a listening comprehension test, or a reading comprehension test. Also, Backman (1975) studying Venezuelan students of English noted that one of the two worst performing students had the highest anxiety level, and the second worst performing student had the lowest anxiety level. Another interesting study in terms of mixed and confusing results in the relationship between anxiety and second foreign language achievement is Chastain's research (1975). Chastain (1975) observed positive, negative, and non-significant correlations between different types of anxiety and academic achievement in French, German, and Spanish classes. In the audio-lingual French class, test anxiety showed a strong negative correlation with the final course grades. In Spanish classes, there was a positive correlation between test anxiety and the final grades, and in a regular French class and German class, test anxiety showed no relationship to the final course grades. At the same time anxiety as a personality trait was not correlated to student achievement in any classes. Finally, when Kleinmann (1977) examined anxiety within the facilitating-debilitating anxiety framework, he found that students with high levels of facilitating anxiety were more likely to use difficult language structures while students who scored low on facilitating anxiety tried to avoid structures different from their native language. Scovel (1978) elaborated further on facilitating anxiety and debilitating anxiety: "Facilitating anxiety motivates the learner to "fight" the new learning task; it gears the learner emotionally for approach behavior. Debilitating anxiety, in

contrast, motivates the learner to "flee" the new learning task; it stimulates the individual emotionally to adopt avoidance behavior" (p. 139).

Scovel (1978) suggested that the reason for mixed results was the different views of researchers on the nature of foreign language anxiety and its measurement. Scovel (1978) recommended that researchers specify the type of anxiety under consideration when conducting studies. In addition to the facilitating-debilitating anxiety framework, anxiety can be described from the trait-state point of view. Most often, anxiety is defined as "an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry" (Spielberger, 1972, p. 482). Anxiety as a state varies in individuals and can change in intensity over time. On the other hand, anxiety is also referred to as a personal trait which is relatively stable (Spielberger, 1972). Trait anxiety manifests itself in many different circumstances, which means that a person with high level of trait anxiety might experience it in a variety of situations (MacIntyre & Gardner, 1991). In addition, as an alternative to state anxiety, a situation-specific type of anxiety has been identified (MacIntyre & Gardner, 1991; Spielberger, Anton, & Bedel, 1976). Situation-specific anxiety refers to anxiety experienced in well-defined situations like public speaking, a math class, tests (Spielberger et al., 1976); in other words, it is "limited to a given context" (MacIntyre & Gardner, 1991, p. 90).

Foreign Language Anxiety as a Unique Type of Anxiety

Foreign language anxiety, however, as a unique type of anxiety was not defined until the mid-1980s. Horwitz et al. (1986) conceptualized foreign language anxiety and considered it a situation-specific, not trait-specific anxiety. Foreign language anxiety is different from the other academic subjects' types of anxiety because "no other field of study implicates self-concept and self-expression to the degree that language study does" (Horwitz et al., 1986, p. 128). Thus, the

researchers defined foreign language anxiety as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (Horwitz et al., 1986, p. 128).

Three components related to foreign language anxiety were identified by Horwitz et al. (1986): communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension is categorized as a type of anxiety about communicating with another person (Horwitz et al., 1986). Test anxiety is connected to a fear of failure when being assessed (Horwitz et al., 1986). Finally, fear of negative evaluation is defined as "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively” (Watson & Friend, 1969, p. 449).

Another reason for inconsistent results mentioned by Scovel (1978) was a lack of proper tools to measure foreign language anxiety which resulted in researchers using a wide variety of measures available to study anxiety, but not specific to foreign language learning. Some of the examples included the Sarason Test Anxiety Scale (Sarason, 1978), the Taylor Manifest Anxiety Scale (Taylor, 1953), and the Achievement Anxiety Scale (Alpert & Haber, 1960). The main problem with these measures was that they were not designed to measure foreign language anxiety, but general anxiety. Overall, the instruments used to study foreign language anxiety included three tools: behavioral tests, self-reports, and physiological tests (Scovel, 1978). Behavioral tests consist of observation of people’s actions (e.g. pacing the floor, fidgeting, nail or lip biting). Self-reports usually examine internal feelings of participants, and physiological tests include measuring heart rate, blood pressure, palm sweating, and other physiological responses. Self-reports are the most often used tool in educational research (Zheng, 2008). Even though self-reports have been criticized for a tendency to overlook complexities of issues under

study and for a possibility of deceitful answers (Elliott, 2004), self-reports are widely used because of the opportunities they offer for statistical analysis and use of large samples, and ease of administration and scoring (Elliott, 2004; Karabenick et al., 2007).

The Foreign Language Classroom Anxiety Scale

To address the problem of the absence of an appropriate measure of foreign language anxiety, Horwitz et al. (1986) developed the Foreign Language Classroom Anxiety Scale (FLCAS), which is an instrument to measure the level of foreign language anxiety. The survey consists of 33 questions scored with a five-point Likert scale (answers range from strongly agree to strongly disagree) (Horwitz et al., 1986). The scale includes three areas of anxieties: communication apprehension (for example, "I never feel quite sure of myself when I am speaking in my foreign language class"), test anxiety (for example, "I tremble when I know that I'm going to be called on in language class"), and fear of negative evaluation (for example, "I get upset when I don't understand what the teacher is correcting").

The idea that foreign language anxiety is a unique, situation-specific type of anxiety has been widely accepted, and the FLCAS has become a commonly used instrument when measuring foreign language anxiety (Hewitt & Stevenson, 2012; Park & French, 2013; Sener, 2015; Tran, 2012; Zhang, 2014). Many studies reported high internal reliability when using the FLCAS, Cronbach's alpha ranging from 0.92 to 0.95 (e.g. Aida, 1994; Kim, 2009; Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009; Noormohamadi, 2009).

Criticism

Horwitz et al.'s theory and the FLCAS instrument (1986) have been challenged and criticized. First, the direction of the causal relationship between foreign language anxiety and language learning difficulties has been questioned by some researchers. For example, Sparks and

Ganschow (1995) consider high levels of foreign language anxiety to be a consequence rather than a cause of low academic achievement. In their opinion, native language learning ability and second language aptitude play a role in learning a foreign language, and difficulties in language processing cause low motivation and anxiety (Sparks & Ganschow, 1995; Sparks & Patton, 2013).

However, in support of Horwitz et al. (1986), MacIntyre (1995a) noted that Sparks and Ganschow's (1995) point of view was based only on cognitive ability factors without taking into consideration the context in which language learning occurs (e.g. social factors). In addition, MacIntyre (1995b) addressed the claim that foreign language anxiety might be related to anxiety about native language learning by pointing out to studies that have reported that foreign language anxiety correlates significantly to foreign language tasks but not with the same tasks performed in the native language. MacIntyre's (1995a) other argument was a classic example of a student who knows the material but often "freezes up" when asked to demonstrate the knowledge. This example, in MacIntyre's view (1995a), supports the argument that anxiety is a cause, not a consequence of poor performance. Horwitz (2000) further developed the argument by indicating that advanced and successful foreign language learners (including language teachers) were also reported having anxiety. For example, Marcos-Llinás and Garau (2009) found different levels of anxiety across proficiency levels. Advanced students showed higher anxiety levels than beginning and intermediate learners of foreign languages. Moreover, Horwitz (2000) drew attention to the fact that the number of people with foreign language anxiety is more than the number of people with native language decoding disabilities. Horwitz (2000, 2001) concluded that Sparks and Ganschow (1995) oversimplified language learning by saying that "the challenge

is to determine the extent to which anxiety is a cause rather than a result of poor language learning" (Horwitz, 2001, p. 118).

At the same time, it should be mentioned that Horwitz (2000) and MacIntyre (1995a) have not completely rejected the other perspective. For example, MacIntyre (1995a) draws attention to a vicious cycle: when students fail, they feel anxious; feeling anxious, students fail again. He adds that differences in native language coding and affective variables are supplemental to one another in the explanation of individual differences in foreign language learning (MacIntyre, 1995a).

In addition, the validity of the FLCAS has been challenged. For example, Sparks and Ganschow (1991) claimed that the FLCAS focuses more on language components than anxiety: 60% of the questions focus on receptive or expressive language, 15% of the items involve auditory memory for language, 12% of the questions include speed of language processing, and 12% of the questions emphasize difficulties with reading and writing. Despite the criticism, the FLCAS is an accepted instrument because it is specifically related to the foreign language learning experience. It has been used in a large body of research with students in traditional foreign language classrooms (e.g. Aida, 1994; Kim, 2009; Mahmood & Iqbal, 2010; Gregersen, MacIntyre, & Meza, 2014) and in one study with distance learning foreign language students (Pichette, 2009).

The Current State of Foreign Language Anxiety and Student Achievement

The Relationship between Foreign Language Anxiety and Student Achievement

Many studies have been conducted to investigate the relationship between foreign language anxiety and student achievement. The very first study using the FLCAS conducted by Horwitz (1986) revealed a significant moderate negative correlation between anxiety and student

achievement indicating that higher levels of anxiety are associated with lower course grades of undergraduate students. The development of the scale has allowed researchers to demonstrate correlation between foreign language anxiety and student achievement in numerous subsequent studies. For example, Awan et al. (2010) found a negative correlation between foreign language anxiety as measured by the FLCAS and academic achievement (r = -.273, p < .01), suggesting that students with higher levels of anxiety performed more poorly than undergraduate students with lower levels of anxiety. In another study, Hewitt and Stevenson (2012) found a moderate negative correlation (r = -.49, p < .001) between foreign language anxiety as measured by the FLCAS and students' oral exam performance, demonstrating that the students with lower levels of anxiety performed better on their oral exam than their more anxious peers. In addition, differences between the oral exam scores of students with high, moderate, and low anxiety were significantly different. The results were also supported by recent studies of Sener (2015) and Ghorbandordinejad and Ahmadabad (2016), who found a significant negative relationship between foreign language anxiety as measured by the FLCAS and student achievement. Students with lower levels of foreign language anxiety showed better academic achievement. These research studies provide support for Horwitz's at al. (1986) point of view that anxiety can have only an adverse effect on student performance.

It should be noted that there have been some propositions that foreign language anxiety can be also facilitative (e.g. Kleinmann, 1977); however, the research to support this suggestion is hard to find (Dewaele & MacIntyre, 2014). For example, in one of the recent studies, Park and French (2013), while investigating gender differences in foreign language anxiety, noticed more anxious students, as measured by the FLCAS, received higher grades compared to less anxious students. The researchers concluded that anxiety could play a facilitating role in a foreign

language classroom (Park & French, 2013). In another recent study, Bell and McCallum (2012) focused on learning, cognitive, and affective variables of foreign language students. It was reported that anxiety was positively, but not significantly correlated with exam grades and positively correlated with effort attributions. The researchers suggested that their finding supported the facilitative anxiety point of view (Bell & McCallum, 2012). However, the limitation of their study is that Bell and McCallum (2012) used a different instrument, not the FLCAS, to measure foreign language anxiety. Because of deficient research data, Horwitz (2010) rejects the idea that anxiety in foreign language classes can be facilitative and considers this point of view mistaken.

Foreign Language Anxiety and Other Variables

As more studies have been conducted on foreign language anxiety, more researchers have come to realize that foreign language anxiety often interacts with numerous other variables during the complex process of foreign language learning. The result was a great number of other studies on the interaction of foreign language anxiety and other variables in foreign language learning, such as age, gender, year of study, motivation, strategy use, and others, as is briefly reviewed in this section.

Demographic factors. Researchers have been interested in examining anxiety in different age groups of students. It should be noted that most studies on foreign language anxiety included college or university level language learners (e.g. Dewaele & MacIntyre, 2014; Liu & Ni, 2015; Park & French, 2013; Week & Ferraro, 2011). Very few studies have been conducted with high school students (e.g. Dewaele & MacIntyre, 2014; Ghorbandordinejad & Ahmadabad, 2016; MacIntyre, Baker, Clement, & Donovan, 2003), and studies with middle school (e. g. Salem & & Dyiar, 2014) and elementary school students are very scarce (e.g. Gursoy & Akin,

2013). Dewaele and MacIntyre (2014) reported a strong and significant effect of age on foreign language anxiety with teenagers having the highest mean anxiety level followed by those in their twenties and pre-teens showing the lowest mean anxiety level. In Gursoy and Akin's (2013) study, ten-year old students, the youngest group, were also less anxious than the older participants.

More recent studies also aimed at other groups of students, for example, students with different exceptionality status (Bell & McCallum, 2012; Salem & Dyiar, 2014) and heritage and non-heritage speakers (Coryell & Clark, 2009; Tallon, 2009; Xiao & Wong, 2014). For example, Salem and Dyiar (2014) investigated foreign language speaking anxiety among students with learning disabilities and found a negative relationship between foreign language speaking anxiety and oral fluency of special education students. When Bell and McCallum (2012) compared gifted students and students with learning disabilities on their levels of anxiety and attitude about learning a foreign language, they found that students with learning disabilities had significantly higher levels of anxiety and lower levels of attitude than gifted students.

Another group of students of particular interest to researchers is heritage speakers. In general, the mean anxiety scores of heritage students are lower than the mean anxiety scores of nonheritage students (Jee, 2016, Tallon, 2009). Heritage and nonheritage students also differ in terms of the most anxiety provoking activities in a foreign language class. When Xiao and Wong (2014) compared the four language skills of heritage Chinese language learners, they found that writing activities produced significantly more anxiety than reading, speaking, or listening activities. The study showed significant differences between the writing anxiety and reading, speaking, and listening anxieties. On top of a heritage identity, a target language could have been at play because writing in Chinese could present additional challenges (Xiao & Wong, 2014). Jee

(2016) found similar results with Korean heritage students, who showed more anxiety to writing and reading assignments than speaking.

In their study, Onwuegbuzie, Bailey, and Daley (1999) reported that university language students with the highest levels of foreign language anxiety tended to have at least one of these characteristics: older, high academic achievers, never travelled abroad, did not take high school language courses, had low expectations of their final grade for their current language course, had a negative perception of their academic abilities, or had a negative perception of their self-worth. In a more recent study, Dewaele and MacIntyre (2014) reached similar results and noted that low-anxious students knew more languages, achieved a more advanced level of language learning, had above average standing in their peer group, were older and more advanced in their education.

Target languages. Many studies of foreign language anxiety were conducted with students of foreign languages, like Spanish (e.g. Bell & McCallum, 2012; Horwitz, 1986; Tallon, 2009; Week & Ferraro, 2011), Chinese (e.g. Kao & Craigie, 2013; Liu & Ni, 2015; Xiao & Wong, 2014; Zhao et al., 2013), Korean (Jee, 2016; Kim, 2009), and English as a foreign language in European countries (Hewitt & Stephenson, 2012; Toth, 2010), English as a foreign language in Asian countries (Cao, 2011; Park & French, 2013; Trang, Baldauf, & Moni, 2013; Tsai & Li, 2012; Zhang, 2014;), English as a foreign language in the Middle East countries (e.g. Atasheneh & Izadi, 2012; Ezzi, 2012; Gursoy & Akin, 2013; Jafarigohar & Behrooznia, 2012; Jebreil, Azizifar, Gowhary, & Jamalinesari, 2015; Koksal, Arsal, & Bakla, 2014; Mesri, 2012; Salem & Dyiar, 2014; Sener, 2015; Serraj & Nordin, 2013). Foreign language anxiety appears to be a universal problem across different languages and different countries. For example, in the North American context, Week and Ferraro (2011) discovered that in American students of

French, German, and Spanish, gender and anxiety, measured by the FLCAS, were significantly related to foreign language performance determined by a final grade. In the, Middle East situation, Mahmood and Iqbal (2010) examined anxiety in male and female groups of Pakistani students of English and documented that in both the male and female Pakistani students, anxiety had an effect on academic achievement. In the Asian context, Wang (2010) found that over 50% of the students learning English in China had moderate to high anxiety levels.

Few studies compared foreign language anxiety of students studying different foreign languages to examine if foreign language anxiety varied according to the target language. When Dewaele and MacIntyre (2014) examined foreign language enjoyment and anxiety of students around the world, they noticed significant cultural group differences. American participants had the lowest anxiety while Asian students reported the highest anxiety, and South Americans, Arabs, and Europeans scored somewhere in the middle. Horwitz (2001) also reported levels of foreign language anxiety may vary in different cultural groups. For American learners of foreign languages, at least, anxiety levels do not seem to vary with respect to target language (Horwitz, 1986; Aida, 1994); however, Asian students of English seem to have higher levels of anxiety with Middle Eastern students scoring lower (Horwitz, 2001). These results indicate that future researchers, when studying foreign language anxiety, should pay attention not only to general constructs of foreign language anxiety, but also to additional variables that might have an effect on students.

Personality factors. Different personality factors have been studied in relationship with foreign language anxiety. Noormohamadi (2009) investigated the relationship between foreign language anxiety and language learning strategies. Foreign language anxiety negatively correlated with the extent of strategy use, and there was a significant difference between high-

anxiety and low-anxiety groups on their strategy inventory. This means that students who expressed more anxiety tended to use strategies less frequently than their less anxious classmates did.

Dewaele and McIntyre (2014) came to an interesting conclusion about anxiety and enjoyment in the foreign language classroom. Even though the researchers found a significant negative correlation between foreign language enjoyment and foreign language anxiety, the two variables shared only 12.9% of their variance. In addition, the two distractions were quite different. Based on these results, the researchers concluded that the two variables are related, but they might "be independent emotions, and not the opposite ends of the same dimension" (Dewaele & McIntyre, 2014, p. 261).

Another study by Bashosh, Nejad, Rastegar, and Marzban (2013) included shyness and willingness to communicate and found no significant relationship between foreign language anxiety and shyness and foreign language anxiety and willingness to communicate. On the other hand, negative foreign language attitude was positively correlated with foreign language anxiety, which means that students with lower foreign language aptitude had higher foreign language anxiety (Bell & McCallum, 2012).

Sabasi (2010) and Zhang (2014) examined students' beliefs about foreign language learning. Sabasi (2010) found that students who believed that they had a poorer ability of speaking than their peers showed more anxiety. Zhang (2014) reported similar results that the stronger the students' beliefs in self-efficacy and confidence were, the less anxious they were. Interesting results were reported about students' beliefs about instructional settings. Students who believed that they should not be forced to speak in a foreign language class and who preferred their foreign language teachers to explain important things in their first language

seemed to be more anxious. Also, students who believed in learning a foreign language through formal and structured learning tend to be more anxious than students who did not have such beliefs (Zhang, 2014).

Instructional contexts.

Listening comprehension. Language researchers have also been interested in foreign language anxiety experienced with the four traditional language skills, such as conversation, writing, reading, and listening. Listening comprehension with regard to foreign language anxiety was examined by Atashehe and Izadi (2012) who observed a moderate negative correlation between foreign language anxiety as measured by the FLCAS and listening comprehension (r = -.469, p < .000). The results were supported by Serraj and Noordin's study (2013) which showed a smaller but significant negative correlation between foreign language anxiety as measured by the FLCAS and listening comprehension performance (r = -.214, p < .05). This means that as learners' foreign language anxiety increases, their listening success in listening comprehension tasks decreases.

Writing. Writing anxiety has not received as much attention because it is not practiced in foreign language classes as much as other skills (Horwitz, 2013; Lui & Ni, 2015). Lui and Ni (2015) examined writing anxiety as measured by a different instrument than the FLCAS and foreign language achievement of Chinese learners of English. The researchers found a significant negative correlation between foreign language writing anxiety and student performance demonstrating that increase in writing anxiety is associated with decrease in student achievement (Lui & Ni, 2015). The difficulty of English writing, the desire to write better, worry about exam scores, the lack of vocabulary, the lack of foreign language writing practice, and unfamiliarity with the writing genre were cited as causes of foreign language writing anxiety (Lui & Ni, 2015).

Writing anxiety of Iranian students of English was the focus of the study by Jebreil et al. (2015). The researchers reported a high level of writing anxiety, as measured by a different instrument than the FLCAS, among the students and found significant differences in writing anxiety levels of students in different proficiency levels, which means the participants at the elementary level were significantly more anxious than the students at the intermediate or advanced levels (Jebreil et al., 2015).

Reading. Foreign language anxiety has also been connected to reading activities. Recent studies reported a significant negative correlation between foreign language reading anxiety and foreign language reading achievement which shows an adverse impact of anxiety on student performance during reading activities (Tsai & Li, 2012; Zhao et al., 2013). Unfamiliar script, unfamiliar topics, and worry about comprehension were cited as major sources of foreign language anxiety during reading activities (Zhao et al, 2013).

Speaking. A multitude of research exists on foreign language speaking anxiety (Liu & Ni, 2015), which has been found to be negatively correlated with student oral performance demonstrating that higher levels of speaking anxiety are associated with lower student achievement in oral activities (e. g., Hewitt & Stephenson, 2012; Horwitz et al., 1986; Salem & Al Dyiar, 2014; Wang, 2010). In addition, Woodrow (2006) found foreign language speaking anxiety a significant predictor of foreign language oral performance, and Salem and & Dyiar (2014) reported the same for students with learning disabilities learning a foreign language.

Speaking is usually cited as the most anxiety-provoking activity among anxious language learners (Azarfarm & Baki, 2012; Horwitz et al., 1986). Kim (2009) presented interesting results when comparing foreign language anxiety in two classroom contexts: reading and speaking. The researcher found higher levels of anxiety in the conversational classes than in reading classes. At

the same time, regardless of classroom context, less anxious students showed more successful performance (Kim, 2009).

Proficiency levels of language. Some studies have examined levels of anxiety at different proficiency levels of language. However, these studies produced conflicting results. Pichette's (2009) study found that first-semester language learners in traditional classrooms showed the same level of anxiety as advanced learners in traditional classes. As for distance language learners, the more experienced learners demonstrated less anxiety than beginners, except for writing anxiety. On the other hand, Marcos-Llinas and Garau (2009) discovered that advanced learners had the highest level of foreign language anxiety. Low-anxiety students showed lower academic achievement. Even though anxiety was related to academic performance, there was no statistically significant relationship between different levels of anxiety and academic achievement.

Learning environment. With the new forms of delivering knowledge making their way in pedagogy, it is important to get a closer review of another instructional context variable: learning environment (traditional and distance). To date, very few empirical studies have been conducted to examine anxiety profiles of traditional students and distance learning students of foreign language classes (Hauck & Hurd, 2005; Pichette, 2009). For example, Pichette (2009) found anxiety profiles of distance foreign language learners to resemble those of traditional students of foreign language. A more careful look at anxiety experienced in distance learning foreign language classes is necessary (White, 2014).

The results of the reviewed studies suggest that foreign language anxiety might be related in a complex way to a number of demographic, cognitive, affective, and instructional factors, including learners' cultural background, learners' personal characteristics and learning

experiences, classroom activities, to name a few. Given the focus of recent research on different variables in foreign language learning, foreign language anxiety should also be assessed in different settings, including the distance learning environment (Week & Ferraro, 2011).

Distance Learning Foreign Language Education

The mid-1800s is usually cited as the beginning of distance education (Caruth & Caruth, 2013; Casey, 2008; Lease & Brown, 2009). As such, distance education has been defined in numerous ways. One of the most accepted definitions of distance education is the definition provided by Keegan (1980). In his seminal article, Keegan (1980) identified six characteristics of distance education distinguishing it from traditional education: a) teacher-learner separation; b) influence of an educational organization; c) use of media; d) two-way communication; e) participation in an industrialized form of education; f) learner as individual or privatization of learning (p. 33). The definition offers a helpful lens to examine distance education even though it has experienced many changes because of advances in technology. Thus, from the technological perspective, several generations of distance education have been distinguished (Taylor, 2001; Wang & Sun, 2001; White, 2003).

The first generation, or the correspondence model (Taylor, 2001), was based on print medium and relied on postal services. This print-based model was characterized by long wait periods (Fleming & Hiple, 2004; White, 2003). The number of distance learning language courses offered during that time was limited because the learning environment did not provide opportunities to develop language skills (White, 2003). The correspondence generation lasted until about the middle of the 20th century, when new delivery media were found with the invention of radio and television.

The second generation of distance education included print, audio, and video components. Printed materials were supplemented by audio and video materials in the form of audio cassettes and video cassettes (Lease & Brown, 2009). As a result, these new modes of delivery were able to offer more possibilities for developing four language skills in distance learning language courses. Another important characteristic of the period is synchronous communication made possible through the application of teleconferencing (Taylor, 2001). The student-instructor communication improved, and the number of distance learning foreign language courses and a variety of languages offered increased (Wang & Sun, 2001). It should be mentioned though that Taylor (2001) considered teleconferencing a separate generation.

The third generation includes the use of computers, both offline and online. It is often called the multi-media model (Wang & Sun, 2001). On the one hand, computers served as an aid, not the primary learning environment (Wang & Sun, 2001). An example of this use is computer-assisted learning including multimedia packages with CDs, DVDs, and access to online resources (White, 2003). Computer-assisted language learning (CALL) did not start until the early 1980s (Wang & Sun, 2001). Fleming and Hiple (2004) do not consider CALL a form of distance education but a form of self-instruction or independent learning. On the other hand, the third-generation model of language learning is characterized by enhanced communication tools, which provide opportunities for two-way communication (Bates, 2005). Examples include computer-mediated communication (CMC), like e-mails and computer conferences (White, 2003). In addition, authentic language learning material is accessibly available on the Internet, which makes up an enriched content for interaction (Wang & Sun, 2001).

Wang and Sun (2001) argued that the fourth generation of distance education has been emerging since the mid-1990s because of the more extensive use of the Internet-based activities

in real time. Synchronous communication is especially critical for distance learning of languages. Internet telephoning, Internet video conferencing, virtual communities, and virtual classrooms using real time technologies are examples of the fourth-generation technologies (Wang & Sun, 2001). At this early stage of the fourth generation, distance language learning has scarce data on real life language learning over the Internet. Real time technology provides students with opportunities for spontaneous interactions in the target language with teachers, tutors, and other native speakers of the target language.

Advances in technology have allowed educators to develop different learning environments of delivering knowledge, providing educators with more opportunities for flexibility and interaction. Elements of all four generations of distance learning are present in today's distance learning foreign language courses (White, 2003). However, when comparing the effectiveness of distance learning language classes with traditional language classes, research yielded inconsistent results. Even though Murday, Ushida and Chenowth (2008) observed increased students' satisfaction in distance learning foreign language classes compared to the traditional foreign language classes, Blake, Wilson, Cetto, and Pardo-Ballester (2008) and Salcedo (2010) reported no statistically significant differences in student performance between traditional and distance learning foreign language classes. On the other hand, Soleimani, Sarkhosh, and Gahhari (2012) found that students in traditional foreign language classes showed better performance results than students in distance learning foreign language classes in speaking and structural knowledge, but not in reading and writing. "No significant difference" does not mean "as good as" (Twigg, 2001), thus warranting further study.

Even if no statistically significant changes are observed between student performance in traditional and distance learning foreign language classes, it should not be concluded that both

learning environments are equally effective. Blake (2011), Blake et al. (2008), and Young (2008) pointed out that other factors should be taken into consideration when comparing the learning environments of instruction. Just like traditional foreign language classes, distance foreign language classes differ in terms of learner variables (e.g. motivation, self-efficacy, learning styles) and teacher variables (e.g. experience, use of teaching methods and technological tools) which should be taken into account when comparing the two learning environments. For example, even though Summers, Waigandt, and Whittaker (2005) found no significant differences in grades between traditional and distance learning statistics classes, the students in the distance learning classes were less satisfied with their course than the traditional students. These results were inconsistent with the "no significant difference" phenomenon.

Characteristics of Distance Learning Foreign Language Learners

Compared to traditional face-to-face classrooms, distance learning foreign language classes present both teachers and learners with new challenges (White, 2003). In their mixed-methods study of students' and teachers' perceptions of different distance learning subjects at a virtual school, Oliver, Kellogg, and Patel (2012) found that students had significantly lower perceptions of their distance learning foreign language classes and viewed themselves less successful compared to other five subjects. Knowledge of distance foreign language learners, their characteristics, including challenges and opportunities, is critical in providing high quality distance learning foreign language instruction. Different variables affecting students' success in distance learning foreign language classes has been studied: motivation (Hurd, 2006; Xiao & Hurd, 2010), autonomy (Andrade & Bunker, 2009; Kostina, 2013), personality (Hurd, 2006), learning styles (Küçük, Genç-Kumtepe, & Taşcı, 2010), learning strategies (Hurd, 2000).

For example, Kostina (2013) examined learner autonomy and student satisfaction among students taking web-based Russian language courses. The examination was done in four phases: at the beginning of the course, at midpoint, at the end, and after the end of the courses. The researcher found significant positive correlations between satisfaction and autonomy in at the beginning of the course, but correlations were not statistically significant at midpoint (Kostina, 2013). Kostina (2013) pointed out that technical difficulties, fast pace of distance learning classes, and high workload negatively affected students. On the other hand, the convenience and flexibility of the distance learning foreign language classes contributed to the students' overall enjoyment and excitement over their web-based experience (Kostina, 2013). Sun's (2014) study complements Kostina's (2013) study in terms of difficulties experienced by students when taking distance learning foreign language classes. Keeping up with the schedule, participation in collaborative work, constant engagement with the class and socialization, as well as issues with self-motivation and self-directed learning were among major difficulties of distance learning foreign language students identified by Sun (2014). In addition, limited instant feedback from teachers and insufficient communication with other distance foreign language learners were also named as challenges of distance foreign language learners (Zhang & Cui, 2010). Overall, difficulties experienced in distance learning foreign language classes were related to the nature of distance education.

Self-motivation and self-directed learning were among characteristics of successful distance language learners examined by Xiao (2012) in his qualitative study. The researcher focused on the affective perspective (motivation, beliefs, and anxiety) and concluded that successful distance learning foreign language students are overall motivated, have specific reasons which help sustain motivation, and are aware of benefits of their progress. They also

have high self-efficacy, an internal locus of learning, and are self-regulatory learners. As for anxiety, both successful and unsuccessful distance learning foreign language students experienced anxiety; however, the two groups differed in their attitudes towards anxiety and anxiety reducing strategies. Successful students were better at dealing with anxiety and better at choosing a particular strategy for a targeted problem (Xiao, 2012).

Anxiety among Distance Foreign Language Learners

It has been found that distance learning foreign language students also experienced anxiety. For example, Hurd (2007a) in the French context and Hurd and Xiao (2010) in the English as a foreign language context found that the majority of students experienced anxiety in distance learning foreign language classes. However, compared to the amount of research that has been done on anxiety in traditional foreign language classes, anxiety among distance foreign language learners has not received as much attention. Most of the studies focusing on anxiety in distance learning foreign language classes were qualitative (e.g. Coryell & Clark, 2009; Hauck & Hurd, 2005; Hurd, 2007; Hurd & Xiao, 2010; Xiao, 2012). Some studies explored causes of anxiety (Coryell & Clark, 2009), anxiety-producing activities, and anxiety-reducing strategies (Hauck & Hurd, 2005), and very few compared anxiety in traditional foreign language classrooms with distance learning foreign language classes (Hauck & Hurd, 2005; Pichette, 2009).

Hauck and Hurd (2005) conducted two phenomenographic studies on language anxiety and the role of successful learner self-management in a distance learning foreign language context. The researchers used two intervention points, at the beginning and at the mid-point of the course, to distribute the questionnaires about language anxiety and anxiety–reducing

strategies. Over a fifth of students at each intervention point reported feeling more anxious about learning a language at a distance than learning in a traditional setting.

An interesting finding of Hauck and Hurd's (2005) study was the number of students who found that the distance factor made no difference in their feeling of anxiety. The number of "more anxious" students stayed the same at the beginning and at the mid-point of the course; however, the number of students in the "less anxious" category was not stable, and at mid-point some of the students changed the distance factor to "no difference" (Hauck & Hurd, 2005). At the same time, only a third of all students in distance learning foreign language classes found appropriate strategies to deal with anxiety. The result was confirmed by Hurd (2006) who found managing of anxiety at the bottom of the list of approaches to distance language learning identified by students.

Similar to traditional foreign language students, most of the distance learning foreign language students cited speaking as the major cause of their anxiety (Hurd, 2007a). Oral production assignments that generated more anxiety included recording oral presentations and speaking in front of others, either during tutorials or during the examined group speaking test. Interestingly, reading activities have not been found to produce foreign language anxiety in distance learning foreign language classes. During reading activities, no significant relationship (positive or negative) between foreign language anxiety and reading comprehension in distance learning foreign language classes was reported with Iranian students of English as a foreign language (Jafarigohar & Behrooznia, 2012). However, Bosmans and Hurd (2016) found a negative relationship between foreign language anxiety and phonological attainment, meaning that good pronunciation skills were associated with low levels of foreign language anxiety.

Several variables have been studied having an effect on foreign language anxiety in distance learning classes. Zhang and Cui (2010) investigated previous experience in distance learning classes. Using a survey, the researchers found a noticeable degree of anxiety and frustration among the beginner distance learners who were subjected to more anxiety and frustration in distance learning foreign language classes than more experienced distance learners (Zhang & Cui, 2010). On the other hand, Pichette (2009) focused on first-semester and more experienced distance learning foreign language students. Higher anxiety was reported among first-semester distance learners. As for age and gender, there was no significant relationship between foreign language anxiety and gender and foreign language reading anxiety and age during reading activities in distance foreign language classes (Jafarigohar & Behrooznia, 2012). However, female students were significantly more anxious about reading in a foreign language than male students, but there were no significant differences between age groups (Jafarigohar & Behrooznia, 2012).

Comparing traditional and distance learning foreign language classes in his quantitative study, Pichette (2009) also found that the distance factor did not play a role in the anxiety profile of students. There were no statistical differences between classroom and distance learners in their anxiety profiles. Pichette (2009) attributed the results to the changing nature of distance learning foreign language classes which include more oral interaction than before. Pichette (2009) also noted more anxious students in Spanish classes than in English as a foreign language classes and writing anxiety producing less anxiety in distance learning foreign language classes than traditional foreign language learning classes. Pichette (2009) noted the need for future research to examine further the differences between anxiety profiles of students in traditional and distance

learning foreign language classes to determine if the observed tendencies would emerge with a different group of students.

Foreign language anxiety in distance learning foreign language classes needs to be examined more fully. Since there is much research showing a negative correlation between foreign language anxiety and student achievement in traditional foreign language classes, further research should include investigation of the relationship between anxiety and achievement in distance learning foreign language classes (Hurd, 2007a). More recently, White (2014) called for more longitudinal comparative studies of affective experiences of foreign language learners in traditional and distance foreign language classes. Therefore, this study attempted to fill the gap in literature on foreign language anxiety in distance vs. traditional classes and to contribute to a more comprehensive profile of distance learning foreign language students.

Summary

In the literature review chapter, the study was situated within the theoretical framework of Krashen's second language acquisition theory and Kock's media naturalness theory. A review of foreign language anxiety and its constructs was presented, including its correlation with student achievement. Empirical studies show that foreign language anxiety affects student achievement. Most of the recent studies on foreign language anxiety have concentrated on traditional foreign language classes. However, distance learning foreign language education have been ignored with only few studies comparing anxiety experienced by students in traditional and distance learning foreign language classes. Because foreign language anxiety is one of the key affective variables in traditional foreign language classes, it is necessary to fill the gap in the literature on foreign language anxiety in distance learning foreign language classes. In particular,

it is important to examine anxiety profiles of students and their influence on achievement in different learning environments.

CHAPTER THREE: METHODS

Overview

This study examines if there are statistically significant differences in foreign language students' achievement (dependent variable) and foreign language anxiety scores (dependent variable) based on their foreign language anxiety levels (independent variable) and their learning environment (independent variable) at a community college in Middle Georgia. Students enrolled in traditional and distance learning foreign language classes at a Middle Georgia community college were recruited to complete the Foreign Language Classroom Anxiety Scale to measure their anxiety levels in foreign language classes. Two *t*-tests and a one-way ANOVA were completed to compare foreign language students' achievement and foreign language anxiety scores based on their levels of anxiety and learning environment. This chapter discusses the research design and analysis for this study, as well as examines the research questions and hypotheses, the participants and the setting, the instruments and procedures.

Design

A quantitative approach was appropriate for this study because it sought to compare groups of students on quantitative measures to examine objectively the differences between the groups and to generalize findings from the sample to a defined population (Gall, Gall, & Borg, 2010). The purpose of this non-experimental, causal comparative study was to examine if there were statistically significant differences in foreign language students' achievement and foreign language anxiety scores (dependent variables) based on their foreign language anxiety levels and learning environment (independent variables) at a community college in central Georgia.

A causal-comparative design was used in this study. Consistent with causal-comparative design, the independent variables (type of learning environment and anxiety) were not

manipulated in the study (Rovai et al., 2013). The choice of the causal-comparative research design was also consistent with the research on the topic. Causal-comparative design was adopted in many studies on anxiety in foreign language classes (e.g. Bell & McCallum, 2012; Kim, 2009; Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009; Tallon, 2009).

The first independent variable, foreign language anxiety, is generally defined "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128). It was measured using the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986). The independent variable of foreign language anxiety has three groups: low, moderate, and high.

The second independent variable in the study was learning environment which is generally defined as a type of delivery mode by which instruction is conveyed and learning is supported (Clark, 2012). The independent variable of learning environment has two groups: traditional and distance learning. The traditional learning environment is a traditional classroom where students and teachers meet face-to-face for foreign language instruction. Distance foreign language learning occurs using Internet technology when the instructor and students are geographically separated from each other and the interaction between the students and the instructor occurs synchronously or asynchronously using a learning management system.

The first dependent variable was foreign language achievement. Foreign language achievement was measured using students' final numerical course grades. Final numerical grades have been used as a measure of language performance in numerous studies (e.g. Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009) and, thus, are considered an adequate measure of student achievement.

The second dependent variable, foreign language anxiety scores, is generally defined "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al., 1986, p. 128). It was measured by the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986).

Research Questions

The research questions for this study were the following:

RQ1: Is there a difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language classes)?

RQ2: Is there a difference in foreign language achievement based on students' level of anxiety (low, moderate, high)?

RQ3: Is there a difference in foreign language anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance learning foreign language classes)?

Null Hypotheses

The following are the null hypotheses for this study:

$H_0$1: There will be no statistically significant difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language classes).

$H_0$2: There will be no statistically significant difference in foreign language achievement based on students' level of anxiety (low, moderate, high).

H_03: There will be no statistically significant difference in anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance learning foreign language classes).

Participants and Setting

Population

The population for this study was students enrolled in traditional and distance learning foreign language classes in a middle Georgia community college. Convenience sampling was used because students were recruited from pre-existing groups available at the college (Gall et al., 2007).

The setting was a public independent college accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) to award associate degrees. It is a community college with multiple campuses around middle Georgia with a main campus, five distance learning centers, three extension centers, and an online campus. The college has an open enrollment policy, which means that it does not have any enrollment requirements for students other than a high school diploma or GED. In addition, the college does not charge out-of-state tuition. According to the National Center for Education Statistics, in 2015-2016, about 7800 students attended the college full time or part time. The two main ethnicities enrolled were Black (43%) and White (42 %). More females (60%) than males (40%) attended the college. Approximately 68% of students were under the age of 24 while 32% were age 25 and over. As far as learning environment, 18% of students were enrolled only in distance education, 14% were enrolled in some distance education, and 68% students were not enrolled in any distance education classes.

Sample

The students were recruited to participate in the study by an e-mail from the researcher. The following demographic data was collected about students: gender, ethnicity, age, student and employment status, prior foreign language and distance education experience, and academic major (Appendix F). All participants were taking an elementary or intermediate level of Spanish or French class either through online campus or traditional classes through one of the campuses of the community college. The courses were delivered in spring, summer, and fall 2016 and were eight weeks in length. Students earned five quarter hours of college credit for the course.

This study included 147 participants which exceeded the recommended sample size. Olejnik (1984) recommends a minimum number of 100 participants for an independent-samples *t* test and 126 participants for a one-way ANOVA with three groups at the .05 level of significance and with statistical power at .7 for a medium effect size. The sample consisted of 27 % males and 77% females, 50% White and 32% Black students. Seventy percent were under the age of 24, and 30% were over the age of 25. The sample was very similar to the profile of the community college population (see Table 1).

Table 1

Participants' Demographics

	Sample (N = 147)		College Population
	n	%	%
Male	35	27	40
Female	104	77	60
White	70	50	42
Black	44	32	43
Hispanic	12	7	6
Asian	3	2	2
American Indian	2	1	2
Other	8	6	5
24 and under	103	70	68
25 and over	44	30	32

Learning environments of foreign language classes. Distance learning foreign language classes were delivered fully online as synchronous and asynchronous combination courses using Moodle™ as a learning management system. Students were able to access and retrieve course content, participate in discussion forums, submit assignments, take quizzes and exams, and view feedback and grades. They were not required to participate in weekly synchronous chat sessions with the instructor; however, that option was available to students. The distance language learning group (n = 58) consisted of 16% males and 85% females, 62% were under the age of 24, and 38% were over the age of 25. Half of the students (50%) were

White while 33% were Black (see Table 2). The distance language learning group was very similar to the profile of the community college population.

Traditional and distance learning foreign language courses had the same student objectives and the same content including a required textbook. The same master syllabus was used in both types of classes. The traditional foreign language group (n = 89) consisted of 34% males and 66% females, 51% White and 30% Black students. Seventy five percent were under the age of 24, and 25% were over the age of 25 (see Table 2). The traditional language learning group had a similar profile to the distance language learning group and the community college population.

Students of 18 different foreign language instructors participated in the study with only one instructor teaching a traditional class and a distance language learning class. All foreign language instructors were adjunct instructors not in the first year of teaching. All of the instruction was aligned with the student learning objectives outlined in the master syllabi. Thus, the traditional and distance language learning classes were the same in content, but differed in the learning environment (traditional vs. distance). No participants were involved in both types of learning during the research study.

Table 2

Participants' Demographics Based on Type of Learning Environment

	Traditional Classes (*n*=89)		Distance Learning Classes (*n*=58)	
	N	%	*N*	%
Male	30	34	9	15
Female	59	66	49	85
White	45	51	29	50
Black	27	30	19	33
Hispanic	6	7	7	12
Asian	2	2	1	2
American Indian	1	1	1	2
Other	8	9	1	2
24 and under	67	75	36	62
25 and over	22	25	22	38

Instrumentation

Foreign language anxiety refers to a situation specific, not trait-specific anxiety which is related to three elements: communication apprehension, test anxiety, and fear of evaluation (Horwitz et al., 1986). It was measured by the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986). The survey consists of 33 questions scored with a five-point Likert-type scale with answers ranging from strongly agree to strongly disagree. The FLCAS is shown in Appendix A. The instrument has nine reverse-scored items: item numbers 2, 5, 8, 11, 14, 18, 22, 28, and 32. The scale includes three areas of anxieties: communication apprehension

(for example, “I never feel quite sure of myself when I am speaking in my foreign language class”), test anxiety (for example, “I tremble when I know that I'm going to be called on in language class”), and fear of negative evaluation (for example, “I get upset when I don’t understand what the teacher is correcting”). The total composite score can range from 33 to 165. The higher the total score, the higher the level of anxiety (Horwitz et al., 1986). Three levels of foreign language anxiety, high, moderate, and low, were determined by the composite score on the scale; thus, individuals who completed the scale were grouped according to their level of anxiety. To determine a student’s anxiety level, the total score is divided by 33, which is the total number of questions. Horwitz (2013) gives a general recommendation that students with averages below three are considered having a low level of anxiety while students with averages around three are placed in a moderate level of anxiety group. Finally, students who average near four and above have a high level of foreign language anxiety. Some researchers have used the number of standard deviations above or below the mean for each individual score to help determine the level of anxiety (e.g. Hui-Ju, 2011; Marcos-Llinas & Garau, 2009). After the consultation with Dr. Horwitz, one of the developers of the FLCAS, it has been decided to use the standard deviation method. Students whose foreign language anxiety scores were one or more standard deviations above the mean were considered to have a high level of anxiety (scores between 127 and 163). Participants with one or more standard deviations below the mean were classified as having a low level of anxiety (scores between 41 and 71). The rest of the students were placed into the moderate level of anxiety group (scores between 72 and 126).

The FLCAS has been widely used in studies to measure the level of foreign language anxiety in students. The scale has been used with college students (e.g. Awan et al., 2010; Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009); however, most of the studies that used

the FLCAS have been conducted with students taking traditional foreign language classes (Jee, 2016, Kim, 2009; Tallon, 2009). There was only one study that used the instrument in the online environment (Pichette, 2009), and a modified version was used by Bosmans and Hurd (2016) to study a relationship between foreign language anxiety and phonological attainment in a distance learning environment.

Studies to establish validity of the scale have been conducted (Horwitz, 1986). Construct validity has been reported, and the results support that the instrument measures the constructs of foreign language anxiety (Horwitz, 1986). The instrument has demonstrated internal reliability with a Cronbach's alpha of .93 (Horwitz et al., 1986). Test-retest reliability over eight weeks yielded an $r = .83$ ($p < .001$) (Horwitz et al., 1986).

In this study, the Cronbach's alpha coefficient was calculated as .96, indicating very high reliability for the FLCAS (Rovai et al., 2013). Possible reasons for such a high Cronbach's alpha might be the redundancy of items and a narrow focus of the construct (Boyle, 1991). However, it has been pointed out that Cronbach's alpha is very sensitive to the number of items (Cortina, 1993). As the number of items in a scale becomes larger, it is more difficult to avoid reaching a very high reliability coefficient (Clark & Watson, 1995).

Many studies reported higher internal reliability values when using the FLCAS, Cronbach's alpha ranging from 0.92 to 0.95 (e.g. Aida, 1994; Jee, 2016; Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009; Noormohamadi, 2009). The Cronbach's alpha coefficient below .90 was reported by Matsuda and Gobel (2004), who calculated it at .78. A modified version of the FLCAS used by Bosmans and Hurd (2016) had the Cronbach's alpha coefficient of .966. Despite its higher reliability values, the FLCAS has been used extensively in foreign

language anxiety research. As previous studies on foreign language anxiety used the FLCAS, it was decided to use the scores of the FLCAS for comparison reasons.

Special permission to use the FLCAS in this study was granted by one of the authors of the FLCAS, Elaine Horwitz of the University of Texas in Austin, TX. A letter of permission is included in Appendix B. The average completion time was around seven minutes. The instrument was scored and participants' levels of anxiety were calculated by the researcher.

Foreign language achievement was measured using students' final numerical course grades. Final grades have been used as a measure of language performance in numerous studies (e.g. Mahmood & Iqbal, 2010; Marcos-Llinas & Garau, 2009). The final numerical grade earned in the courses was also used to operationalize achievement as grades. According to college policy and as recorded in the syllabi, the grading scale is 90-100% of points, A; 80-89% of points, B; 70-79% of points, C; 65-69% of points, D; and less than 65% of points, F.

Procedures

After securing the Liberty University Institutional Review Board's approval to conduct the study (Appendix E), the dean, the department chair, and the instructors were informed about the study. The contact information (only emails) of all students enrolled in foreign language classes was obtained through the Office of Institutional Research, Planning, and Effectiveness of the community college. The students were recruited to participate in the study by an e-mail from the researcher. The invitation was sent by email, and reminders were also sent through the quarter (Appendix D). If the students agreed to participate, they electronically consented to providing the researcher with their survey responses and access to their end of course grades (Appendix C). The online survey was created using SurveyHero, which is considered a secure site because a username and a password log-in is required to access data. The students completed

the voluntary web-based survey starting week three of the course. Having the participants complete the instrument starting week three helped to ensure that the participants had gone through the initial adjustment to their instructors and course requirements. Every week (starting week four and finishing week eight) a follow-up email was sent as a reminder (Appendix D). To maintain confidentiality, the survey asked participants for their student identification numbers (ID) instead of their names in order to match survey responses with end of course points, demographic questions, and items from the FLCAS. End of course points for each ID number were obtained from the Office of Institutional Research, Planning, and Effectiveness, who did not have access to the survey results. The researcher did not have the ability to match the ID numbers with the names.

Data Analysis

All data were entered into an Excel spreadsheet, and the Statistical Package for the Social Sciences Software (SPSS), version 24, was used to perform the statistical analysis. Prior to analysis, the data were screened for missing data and out-of-range values. In addition, extreme outliers were detected using boxplots. The analysis was run with extreme outliers present and with extreme outliers removed from the data set. Results from both analyses are presented and discussed in the subsequent sections.

Null Hypothesis One

To examine the first null hypothesis that there will be no statistically significant difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language classes), a *t* test was used because the means of two independent groups were compared (Rovai et al., 2013). The independent *t* test is a

parametric procedure, and it allows the researcher to assess whether there is a statistically significant difference in mean scores between the groups (Rovai et al., 2013).

Prior to the analysis, assumption testing was completed. The key assumptions for a *t* test are homogeneity of variance (two groups have similar variances) and normality (dependent variable is normally distributed) (Warner, 2013, p. 189). Homogeneity of variance was evaluated using Levene's test. The normality assumption was assessed by creating histograms and by conducting the Kolmogorov-Smirnov normality tests because both groups had a sample size larger than 50 (Warner, 2013). The .05 significance level, which is generally accepted in social science research, was used to determine whether the first null hypothesis could be rejected (Rovai et al., 2013). The effect size was calculated using Cohen's *d*. Observed power is also reported.

Null Hypothesis Two

To examine the second null hypothesis that there will be no statistically significant difference in foreign language achievement based on students' level of anxiety (low, moderate, high), a one-way ANOVA test was used because the means of three independent groups were examined to assess if they were statistically different (Rovai et al., 2013). Prior to the analysis, assumption testing was completed. The key assumptions for a one-way ANOVA are homogeneity of variance (the groups have similar variances) and normality (dependent variable is normally distributed) (Rovai et al., 2013). Homogeneity of variance was evaluated using Levene's test. The normality assumption was assessed by creating histograms and by conducting the Shapiro-Wilk normality tests for low-anxiety and high-anxiety groups because both groups had a sample size smaller than 50 and by conducting the Kolmogorov-Smirnov normality test for the moderate-level anxiety group because the group had a sample size larger than 50 (Warner,

2013). Because of the violation of the homogeneity of variance assumption, Welch's one-way ANOVA with the .025 significance level, a Bonferroni correction, was used to determine whether the second null hypothesis could be rejected. The effect size was calculated as partial eta squared (η_p^2). Observed power is also reported.

Null Hypothesis Three

To examine the third null hypothesis that there will be no statistically significant difference in anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance learning foreign language classes), a *t* test was used because the means of two independent groups were compared (Rovai et al., 2013). The independent *t* test is a parametric procedure, and it allows the researcher to assess whether there is a statistically significant difference in mean scores between the groups (Rovai et al., 2013).

Prior to the analysis, assumption testing was completed. The key assumptions for a *t* test are homogeneity of variance (two groups have similar variances) and normality (dependent variable is normally distributed) (Warner, 2013, p. 189). Homogeneity of variance was evaluated using Levene's test. The normality assumption was assessed by creating histograms and by conducting the Kolmogorov-Smirnov normality tests because both groups had a sample size larger than 50 (Warner, 2013). The .05 significance level, which is generally accepted in social science research, was used to determine whether the third null hypothesis could be rejected (Rovai et al., 2013). The effect size was calculated using Cohen's *d*. Observed power is also reported.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this non-experimental, causal comparative study was to examine if there is a statistically significant difference in foreign language students' achievement (dependent variable) and foreign language anxiety scores (dependent variable) based on students' foreign language anxiety levels (independent variable) and their learning environment (independent variable) at a community college in Middle Georgia. Two *t*-tests and a one-way ANOVA were completed to investigate the research questions. This chapter presents results for each analysis of every research question and hypothesis.

Research Questions

The research questions for this study were the following:

RQ1: Is there a difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language classes)?

RQ2: Is there a difference in foreign language achievement based on students' level of anxiety (low, moderate, high)?

RQ3: Is there a difference in anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance foreign language learning class)?

Null Hypotheses

The following are the null hypotheses for this study:

$H_0$1: There will be no statistically significant difference in foreign language achievement based on the type of learning environment (traditional and distance learning foreign language classes).

$H_0$2: There will be no statistically significant difference in foreign language achievement based on students' level of anxiety (low, moderate, high).

$H_0$3: There will be no statistically significant difference in anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional and distance learning foreign language classes).

Descriptive Statistics

A total of 147 students participated in this study, all of whom took foreign language classes either in a traditional, face-to-face, learning environment or as a distance learning language class. Specific demographics data (gender, race, and age) of the participants in the two learning environments were presented in Chapter Three. Mean and standard deviation for the dependent variable of student achievement can be found in Table 3.

Table 3

Descriptive Statistics for Academic Achievement

	N	*M*	*SD*
Overall	147	88.48	10.59
Traditional classes	89	88.96	0.91
Distance learning classes	56	87.76	1.72
Low-anxiety group	24	92.79	4.44
Moderate-anxiety group	96	88.44	9.25
High-anxiety group	27	84.81	16.37

Mean and standard deviation for the dependent variable of foreign language anxiety are presented in Table 4. Traditional foreign language students had a higher mean of student

achievement and a lower mean of foreign language anxiety than distance learning students. The low-anxiety group of students showed the highest mean of academic achievement and the lowest mean of foreign language anxiety with the high-anxiety group of students having the lowest mean score of student achievement and the highest mean score of foreign language anxiety.

Table 4

Descriptive Statistics for Foreign Language Anxiety Score

	N	*M*	*SD*
Overall	147	99.24	27.01
Traditional classes	89	95.4	26.69
Distance learning classes	56	105.14	26.64
Low-anxiety group	24	60.83	8.11
Moderate-anxiety group	96	97.11	14.14
High-anxiety group	27	140.96	10.99

Tables 5 and 6 present descriptive statistics for the dependent variables based on the type of learning environment groups and foreign language anxiety level groups.

Table 5

Descriptive Statistics for Academic Achievement Based on Type of Learning Environment and Anxiety Level

	Traditional classes (n = 89)				Distance learning classes (n = 58)			
	N	%	*M*	*SD*	*N*	%	*M*	*SD*
Low-anxiety group	18	20	92.94	4.98	6	10	92.33	2.5
Moderate-anxiety group	59	66	88.15	9.08	37	64	88.89	9.61
High-anxiety group	12	14	86.92	9.33	15	26	83.13	20.56

Table 6

Descriptive Statistics for Foreign Language Anxiety Score Based on Type of Learning Environment and Anxiety Level

	Traditional classes (n = 89)				Distance learning classes (n = 58)			
	N	%	*M*	*SD*	*N*	%	*M*	*SD*
Low-anxiety group	18	20	60.78	8.59	6	10	61	7.24
Moderate-anxiety group	59	66	95.61	14.56	37	64	98.08	13.59
High-anxiety group	12	14	141.92	11.79	15	26	140.2	10.66

Results

Null Hypothesis One

Assumption tests. In order to examine differences in academic achievement in traditional and distance learning language classes, a *t* test was used because the means of two independent groups (traditional and distance learning language classes) were compared (Rovai et al., 2013). The independent-samples *t* test is a parametric procedure, and it allows the researcher to assess whether there is a statistically significant difference in mean scores between the groups (Rovai et al., 2013).

Prior to the analysis, assumption testing was completed. The key assumptions for a *t* test are homogeneity of variance (two groups have similar variances) and normality (dependent variable is normally distributed) (Warner, 2013, p. 189). The assumption of homogeneity of variance was evaluated using Levene's test and found tenable, $F(145) = 1.95$, $p = .16$.

The normality assumption was assessed by creating histograms and by conducting the Kolmogorov-Smirnov normality test because both groups had a sample size larger than 50 (Warner, 2013). The histograms (Figures 1 and 2) showed negative skewness, and the Kolmogorov-Smirnov tests had a significance level of below .05, $p = .00$. The normality assumption was violated; however, an independent-samples *t* test is considered robust to the violation of the normality assumption when a sample is large (Warner, 2013).

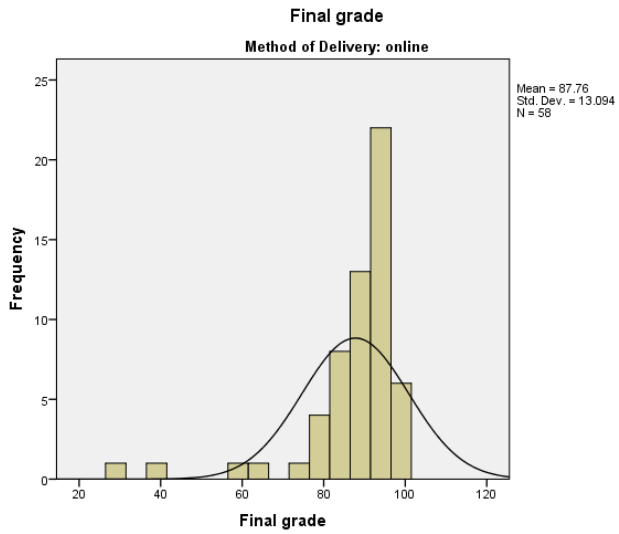

Figure 1. Histogram of normality testing for academic achievement in distance learning foreign language classes.

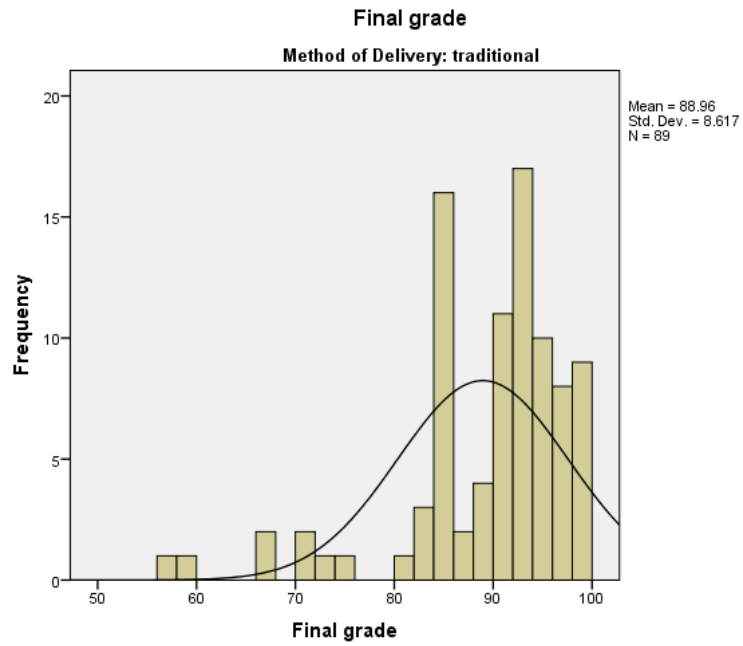

Figure 2. Histogram of normality testing for academic achievement in traditional foreign language classes.

Statistical analysis. The results of the independent-samples *t* test were not statistically significant, $t(145) = -.67$, $p = .50$. There was no significant difference between the mean student achievement scores of traditional ($n = 89$, $M = 88.96$, $SD = 8.62$) and distance learning foreign

language classes (n = 58, M = 87.76, SD = 13.09). The 95% confidence interval for the difference in the means was -4.73 to 2.34. The researcher failed to reject the null hypothesis. The effect size, Cohen's d, was small (d = 0.1), indicating that the magnitude of differences between the two means is small (Cohen, 1992). The observed power at $\alpha = .05$ was .10.

It should also be mentioned that three extreme outliers were discovered during data screening by examining the boxplot (Figure 3). Even though the extreme outliers did not have any impact on the statistical model, it was decided to report the results of the statistical analysis without the outliers as well (Warner, 2013).

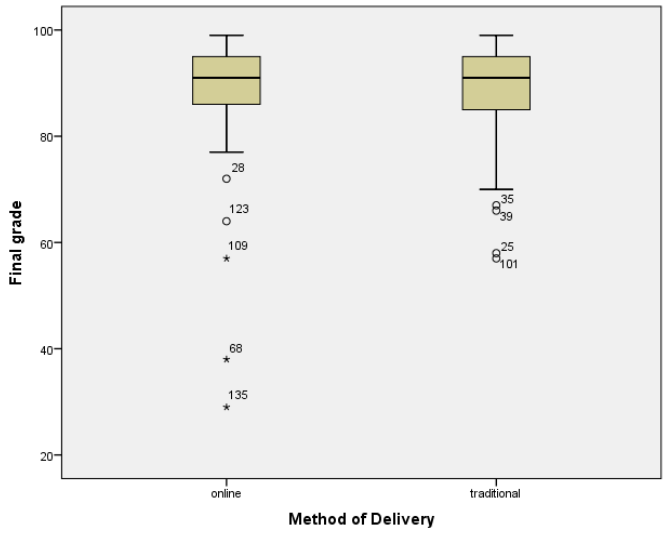

Figure 3. Boxplot of academic achievement scores in traditional and distance learning foreign language classes.

The outliers did not have any effect on the assumptions of homogeneity of variance and normality, and the t test showed statistically non-significant results, $t(142) = .97$, $p = .33$. With extreme outliers removed, there was no significant difference between the mean student achievement scores of traditional (n = 89, M = 88.96, SD = 8.62) and distance language learning classes (n = 55, M = 90.29, SD = 6.87). The 95% confidence interval for the difference in the means was -1.37 to 4.04. The effect size and observed power were similar to the statistical model

run with outliers. The students in the traditional foreign language classes and distance learning foreign language classes did not differ in achievement.

Null Hypothesis Two

Assumption testing. In order to explore differences in students' achievement between three groups of different levels of anxiety, a one-way ANOVA test was used because the means of three independent groups were examined to assess if they were statistically different (Rovai et al., 2013). Prior to the analysis, assumption testing was completed. The key assumptions for a one-way ANOVA are homogeneity of variance (the groups have similar variances) and normality (dependent variable is normally distributed) (Rovai et al., 2013).

The normality assumption was assessed by creating histograms and by conducting the Kolmogorov-Smirnov normality test for the moderate-anxiety group because it had a sample size larger than 50 and by conducting the Shapiro-Wilk normality test for the low-anxiety and high-level anxiety group because both groups had a sample size lower than 50 (Warner, 2013). After the examination of the histogram (Figure 4) and conducting the Shapiro-Wilk normality test (p = .096) for the low-anxiety group, the normality assumption was found tenable. For the moderate-anxiety group and high-anxiety group, the assumption of normality was found non-tenable because the histograms showed negative skewness (Figures 5 and 6), and the normality tests were significant (p = .00). Homogeneity of variance was evaluated using Levene's test and found non-tenable, $F(144) = 4.89$, $p = .009$.

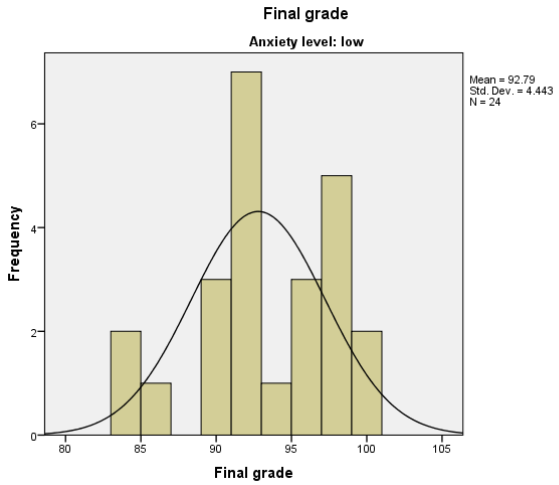

Figure 4. Histogram of normality testing for academic achievement in low-anxiety group.

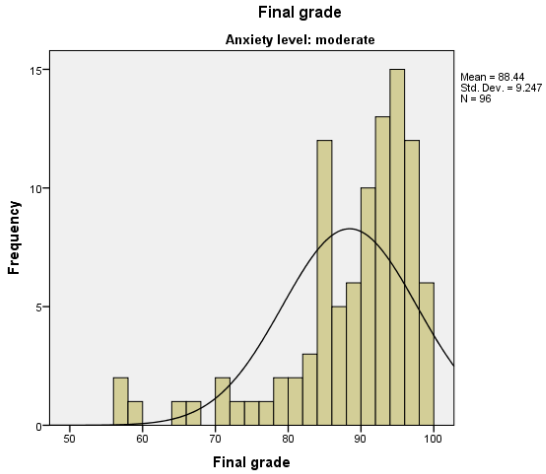

Figure 5. Histogram of normality testing for academic achievement in moderate-anxiety group.

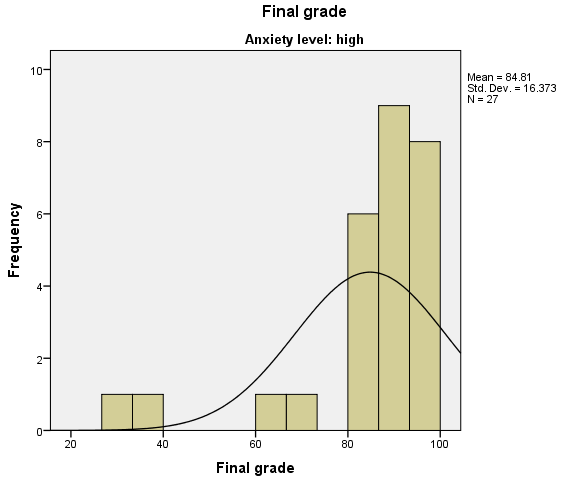

Figure 6. Histogram of normality testing for academic achievement in high-anxiety group.

Statistical analysis. Because of the violation of the homogeneity of variance assumption, Welch's one-way ANOVA with the .025 significance level, a Bonferroni correction, was used to determine whether the second null hypothesis could be rejected. Results of Welch's one-way ANOVA, Welch's $F(2, 54.03) = 7.12$, $p = .002$, $\eta^2 = .05$, observed power = 0.57, revealed that there were statistically significant differences present in the means of the low-level anxiety group (n =24, M = 92.79, SD = 4.44), moderate-level anxiety group (n =96, M = 88.44, SD = 9.25), and high-level anxiety group (n = 27, M = 84.81, SD = 16.37). Thus, there was significant evidence to reject the second null hypothesis. The effect size, partial eta squired, η_p^2, was between small and medium ($\eta_p^2 = .05$), indicating that 5% of the differences in student achievement can be attributed to group membership (Rovai et al., 2013). The observed power at $\alpha = .025$ was .57, which means that there is a 57% likelihood that the null hypothesis was correctly rejected.

Post hoc tests were necessary to evaluate pairwise differences among the means because the results were statistically significant (Warner, 2013). Because the variances were not homogeneous, the Dunnett's C test, a test that does not assume equal variances among the three groups, was performed using $\alpha = .025$ (Green & Salkind, 2011). There was a significant difference in the means between the moderate- and low-anxiety groups ($p < .025$), but no significant differences between the moderate- and high-anxiety groups and low- and high-anxiety groups ($p > .025$).

During the initial data screening, two extreme outliers were discovered in the high-anxiety group (Figure 7). It was decided to report the results of the statistical analysis without the outliers as well (Warner, 2013).

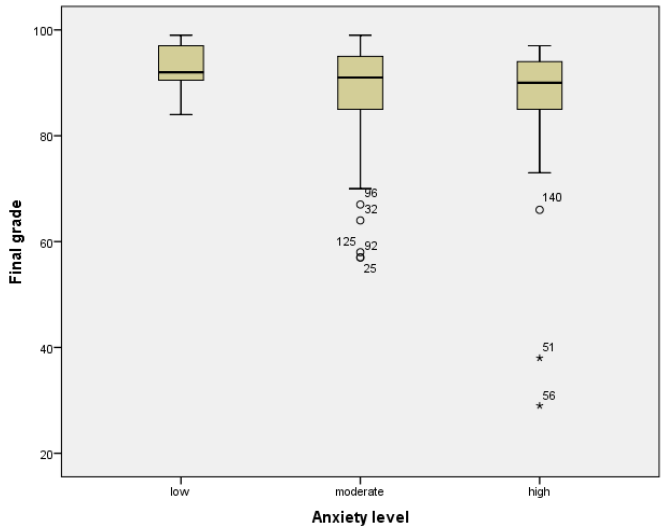

Figure 7. Boxplot of academic achievement scores in low-, moderate-, and high-anxiety groups.

It was found that outliers did not have any effect on the assumptions of homogeneity of variance or normality. With extreme outliers removed (N = 145), the statistical model did not change. The results of Welch's one-way ANOVA, Welch's $F(2, 57.33) = 6.1$, $p = .004$, $\eta^2 = .04$, observed power = 0.4, revealed that there were still statistically significant differences present in the means of the low-level anxiety group (n =24, M = 92.79, SD = 4.44), moderate-level anxiety group (n = 96, M = 88.44, SD = 9.24), and high-level anxiety group (n = 25, M = 88.92, SD = 7.19). Thus, there is significant evidence to reject the second null hypothesis when outliers are removed. The observed power and effect size were slightly lower than in the model with extreme outliers.

Follow-up tests were conducted to evaluate pairwise differences among the means. Because the variances were not homogeneous, the Dunnett's C test, a test that does not assume equal variances among the three groups, was performed using $\alpha = .025$. There was a significant difference in the means between the moderate- and low-anxiety groups ($p < .025$), but no significant differences between the moderate- and high-anxiety groups and low- and high-anxiety groups ($p > .025$). The low-anxiety group performed better on achievement than the

moderate-anxiety group. The moderate-anxiety group and high-anxiety group did not differ in achievement. Neither did the low- and high-anxiety groups.

Null Hypothesis Three

Assumption tests. In order to examine differences in foreign language anxiety scores in traditional and distance learning language classes, a *t* test was used because the means of two independent groups (traditional and distance learning language classes) were compared (Rovai et al., 2013). The independent-samples *t* test is a parametric procedure, and it allows the researcher to assess whether there is a statistically significant difference in mean scores between the groups (Rovai et al., 2013).

Prior to the analysis, assumption testing was completed. The key assumptions for a *t* test are homogeneity of variance (two groups have similar variances) and normality (dependent variable is normally distributed) (Warner, 2013). The assumption of homogeneity of variance was evaluated using Levene's test and found tenable, $F(145) = .00$, $p = .98$.

The normality assumption was assessed by creating histograms and by conducting the Kolmogorov-Smirnov normality test because both groups had a sample size larger than 50 (Warner, 2013). The histograms (Figures 8 and 9) showed near normal distribution, and it was verified by the Kolmogorov-Smirnov tests ($p = 0.2$). Additionally, the inspection of the boxplots indicated no extreme outliers present (Figure 10).

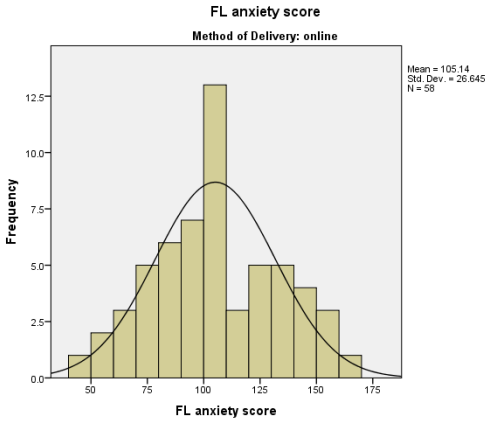

Figure 8. Histogram of normality testing for foreign language anxiety scores in distance learning foreign language environment.

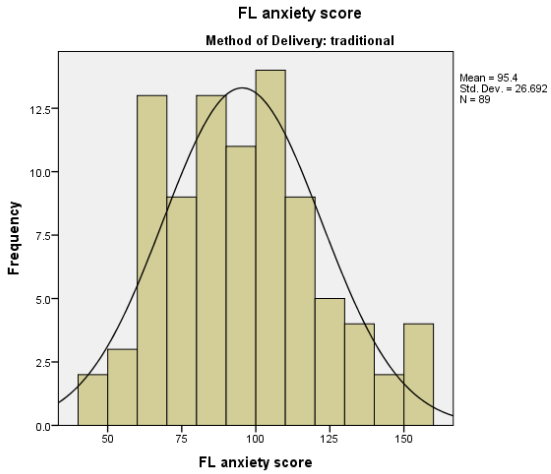

Figure 9. Histogram of normality testing for foreign language anxiety scores in traditional environment.

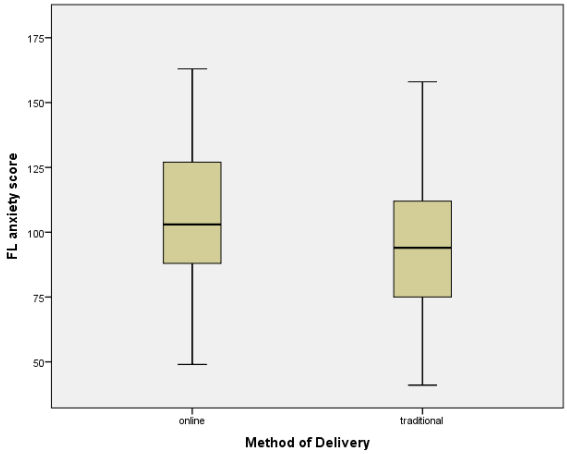

Figure 10. Boxplot of foreign language anxiety scores in two learning environments.

Statistical analysis. The results of the independent-samples *t* test were significant, $t(145) = 2.17$, $p = .032$. There was a statistically significant difference between the mean foreign language anxiety scores of traditional ($n = 89$, $M = 95.4$, $SD = 26.69$) and distance language learning classes ($n = 58$, $M = 105.14$, $SD = 26.64$). The 95% confidence interval for the difference in the means was .84 to 18.63. The researcher rejected the null hypothesis. The effect size, Cohen's *d*, was small to medium ($d = 0.4$), indicating that the magnitude of the differences between the two means was small to medium (Cohen, 1992). The observed power at $\alpha = .05$ was .6, which means that there is a 60% likelihood that the null hypothesis was correctly rejected. The distance learning foreign language group had more anxiety than the traditional group.

CHAPTER FIVE: CONCLUSIONS

Overview

Charter Five provides a discussion of the findings of the study. The Discussion section is organized according to the research questions and examines them in light of the results, literature, other studies, and theory. The Implications section discusses theoretical, practical, and empirical significance of the study. Limitations of the study are also explained, and, finally, recommendations for future studies are proposed.

Discussion

The purpose of this non-experimental, causal comparative study was to examine if there was a statistically significant difference in foreign language students' achievement and foreign language anxiety (dependent variables) based on their foreign language anxiety levels (independent variable) and their learning environment (independent variable) at a community college in Middle Georgia. The first independent variable, foreign language anxiety, was measured using the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986). The independent variable of foreign language anxiety had three levels: low, moderate, and high. The other independent variable in the study was learning environment which had two variations: traditional and distance learning. The first dependent variable was foreign language achievement, and it was measured using students' final numerical course grades. The other dependent variable was foreign language anxiety as measured using the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986). The sample consisted of 147 (*N*) participants. Two *t*-tests and a one-way ANOVA test were completed to investigate the three null hypotheses. The results of the two tests showed that the researcher failed to reject the null hypothesis one, and the researcher rejected the null hypotheses two and three.

Research Question One

The results of a *t* test indicate that there was no statistically significance difference in foreign language achievement between students based on the type of learning environment (traditional foreign language class or distance learning foreign language class). Students in traditional classes do not perform better than students in distance learning foreign language classes. However, the results should be interpreted with caution because the observed power was .1. Even though the average final grade in a traditional foreign language classroom (M = 88.96, SD = 0.91) was slightly higher than the average final grade in a distance learning foreign language class (M = 87.76, SD = 1.72), the magnitude of differences between the two means was too small to detect a statistically significant difference. Also, even though no statistically significant differences were observed between student performance in traditional and distance learning foreign language classes, it should not be concluded that both learning environments are equally effective in learning a foreign language. "No significant difference" does not mean "as good as" (Twigg, 2001). There is no credible evidence to conclude than one learning environment is as good as the other.

The results of this study are consistent with Blake et al. (2008) and Salcedo (2010), who reported no statistically significant differences in student performance between traditional and distance learning foreign language classes. On the other hand, Soleimani et al. (2012) found that students in traditional foreign language classes showed better performance results than students in distance learning foreign language classes in speaking and structural knowledge, but not in reading and writing.

Blake (2011), Blake et al. (2008), and Young (2008) pointed out that other factors should be taken into consideration when comparing the learning environments of instruction. Just like

traditional foreign language classes, distance learning foreign language classes differ in terms of learner variables (e.g. motivation, self-efficacy, learning styles) and teacher variables (e.g. experience, use of teaching methods and technological tools) which should be taken into account when comparing the two learning environments. For example, even though Summers et al. (2005) found no significant differences in grades between traditional and distance learning statistics classes, the distance students were less satisfied with their course than the traditional students.

Research Question Two

The results of a one-way ANOVA showed that there was a statistically significant difference in foreign language achievement based on students' level of foreign language anxiety (low, moderate, high). Students with lower levels of anxiety perform better than students with higher levels of anxiety. The results should be interpreted with caution because of small to medium effect size and observed power. The effect size indicated that 5% of the differences in student achievement can be attributed to group membership. The observed power was also below medium and indicated that there is a 57% likelihood that the null hypothesis was correctly rejected.

Additionally, grades (student achievement variable) were not normally distributed but negatively skewed in the statistical models for research questions one and two. It is possible that grade inflation might have had an impact on grade distribution. According to Rojstaczer and Healy (2012), in 2008 about 43% of all assigned grades were As. Compared to 1960, it showed an increase of 28 percentage points. In comparison, in 1988, there was an increase of 12 percentage points. Rojstaczer and Healy (2012) found that the increase was due to a decreasing number of Cs, Ds, and Fs, but the distribution of Bs remained fairly constant. In 2008, Ds and Fs

accounted for less than 10% of all awarded grades (Rojstaczer & Healy, 2012). A more recent study by Kostal, Kuncel, and Sackett (2016) also provided evidence for grade inflation from 1995 to 2007 and suggested possible reasons. Grade inflation could be caused by the increased number of adjunct instructors, who tend to assign higher grades, and an overall grading leniency of all instructors. All foreign language instructors who taught the sampled classes in the community college were adjunct. In addition, A is the most commonly awarded grade in community colleges (Rojstaczer, & Healy, 2010). All traditional and distance learning foreign language classes under study were taught at a community college. It should also be noted that grade inflation itself is a controversial subject. Some researchers believe that the problem is non-existent (e.g. Pattison, Grodsky, & Muller, 2013).

Even though the learning environment in Kim's (2009) study was different from the present study, the results are consistent with Kim (2009), who found that less anxious students showed more successful performance in both traditional conversational and reading courses. The results of this study are not in line with Marcos-Llinas and Garau (2009), who discovered that, even though anxiety was related to academic performance, there were no statistically significant differences in academic achievement between different levels of foreign language anxiety in traditional Spanish classes.

This study provides support for Horwitz's et al. (1986) point of view that anxiety has an adverse effect on student performance. A closer look at academic achievement in three anxiety groups reveals that low-anxiety students earned higher grades (M = 92.79, SD = 4.44) than moderate-anxiety group (M = 88.44, SD = 9.25) and high-anxiety group (M = 84.81, SD = 16.37). The results of research question two follow expected patterns demonstrated by previous studies. Most of the studies conducted in traditional foreign language classes found students with

lower levels of foreign language anxiety show better academic achievement. The results were also supported by recent studies of Sener (2015) and Ghorbandordinejad and Ahmadabad (2016), who found a significant negative relationship between foreign language anxiety as measured by the FLCAS and student achievement. In a distance context, this study showed results consistent with Basmans and Hurd's (2016) recent study where a significant negative correlation between a lower level of foreign language anxiety and good pronunciation skills was reported. Foreign language anxiety is one of the variables that should be investigated more in relation to student performance in distance learning foreign language classes.

Research Question Three

The results of a *t* test indicate that there was a statistically significant difference in foreign language anxiety scores as measured by the Foreign Language Classroom Anxiety Scale between two types of learning environment (traditional foreign language class or distance foreign language learning class). Students in traditional foreign language classes are less anxious than in distance learning foreign language classes However, the results should be interpreted cautiously because the effect size indicated that the magnitude of the differences between the two means is small to medium (Cohen, 1992). The observed power also showed that there is only a 60% likelihood that the null hypothesis was correctly rejected.

The results of this study are not consistent with Pichette (2009) who found that the distance factor did not play a role in the anxiety profile of students because no statistical differences in students' anxiety profiles between traditional and distance learners of a foreign language were noted. However, it has been noted that, in distance learning foreign language classes, it might be more difficult to identify students with anxiety (Hurd, 2007a; Xiao, 2012). Because of the unique challenges that students might experience in distance learning foreign

language classes, foreign language anxiety profiles of distance learning students might be different from students in traditional foreign language classes (Hurd, 2007a).

The results of this study are consistent with a qualitative study by Hauck and Hurd (2005), who found that about 20% students reported feeling more anxious about learning a language at a distance than learning in a traditional setting. Similar to the study of Hauck and Hurd (2005), this study found that a high level of anxiety was experienced by 26% of distance language learning students while only 14% of traditional language learning students reported high levels of anxiety (Table 5). Additionally, the mean of foreign language anxiety score in distance learning foreign language classes (M = 105.14, SD = 26.64) was higher than the mean score in traditional foreign language classes (M = 95.4, SD = 26.69).

The most popular reasons for taking distance learning classes are location and flexible schedule (e.g. Horspool & Yang, 2010). However, since oral communication is usually cited as the most anxiety provoking activity among anxious language learners (Azarfarm & Baki, 2012; Horwitz et al., 1986), it is possible that some students with higher anxiety levels might have chosen distance learning to avoid intimidating participation in the traditional setting because distance learning foreign language classes in this community college did not have required oral sessions.

Implications

Theoretical Implications

The results of the study support media naturalness theory (Kock, 2011). The media naturalness theory holds that electronic communication media often present greater challenges and obstacles to students because they experience an increase in cognitive effort and communication ambiguity and a decrease in excitement (Kock, 2011). Given that there was a

statistically significant difference in foreign language anxiety scores between the two types of learning environment (traditional foreign language class or distance foreign language learning class), foreign language anxiety might be influenced by the type of learning environment because of different degrees of naturalness between the traditional and distance learning foreign language classes. As a result, the effects of the distance learning environment can manifest themselves through frustration which can lead to negative feelings, such as confusion, apprehension, and anxiety.

The results of research question two about differences in student achievement among students in three different groups of foreign language anxiety support Krashen's second acquisition theory (Krahsen, 1982), specifically the affective filter hypothesis. The affective filter hypothesis holds that high anxiety levels might prevent language acquisition. Given that there was a statistically significant difference in academic achievement between low-anxiety and moderate-anxiety groups, higher levels of anxiety might be related to lower levels of foreign language learning. The results of research question three about differences in foreign language anxiety scores among students in the two learning environments suggest that traditional foreign language classes might be creating an environment with a lower affective filter than distance learning foreign language classes. Since Krashen (1982) suggests that one of the educators' "pedagogical goals" should be creating an environment with a low affective filter, further investigation of distance learning foreign language classes is necessary.

Practical Implications

The results of the study emphasize the need for greater awareness of foreign language anxiety in distance learning foreign language classes. Given the limited amount of research on distance learning foreign language classes, the results of the study provide an updated

understanding of the differences between anxiety levels of foreign language learners in distance learning classes and traditional classrooms and the effect that anxiety levels have on students' foreign language achievement in different learning environments. This provides evidence that foreign language anxiety is one of the variables that might have an effect on student achievement in distance learning foreign language classes. Distance learning foreign language students were found to experience higher levels of foreign language anxiety, and both distance and traditional students in low-anxiety group earned higher grades. A better understanding of foreign language anxiety may help educators and instructional designers to make decisions and improvements regarding foreign language teaching and learning, including ways to address students' anxiety in distance learning foreign language classes.

Limitations

There were several limitations in this study. Non-randomization is one of the limitations because of the nature of the design. This was a non-experimental causal-comparative study where it was impossible to use random assignment because it used pre-existing groups, and participants were assigned to groups based on their class registration. Non-randomization presents a threat to internal validity, and it is possible that the groups were not equivalent (Rovai et al., 2013). Additionally, unequal group sizes (traditional vs. distance groups and low-anxiety vs. moderate-anxiety vs. high-anxiety groups) could have had an effect on the results of the study (Warner, 2013).

Additionally, student history could be considered a limitation (Rovai et al., 2013). Student history in regards to their previous experience in traditional and distance learning classes and prior foreign language experience may be a threat to internal validity in the study because the survey results may have been influenced by students' recent experience in different types of

classes. The limitation was addressed by including questions about students' previous experience with foreign language and different modes of delivery in the background questionnaire to ensure that most of the participants had the same background. About 67% of students enrolled in distance learning foreign language classes had no prior distance learning experience. About 73% of all participants had prior foreign language experience (69% in distance foreign language learning classes and 75% in traditional foreign language classes).

Even though this study had a relatively large sample size (N = 147), generalizability is another possible limitation of the study (Rovai et al., 2013). The results of the study may not be generalized to other populations or to students of grade schools and other types of higher education institutions. The results might not be generalizable to other foreign languages.

Another limitation of the study includes possible self-report bias and untruthful reporting. The results of the study are based on self-reported measures of students' experiences in foreign language classes and rely on students' accuracy and honesty. Even though participants in online surveys have been reported to experience less peer pressure and to provide more truthful responses (Ward, Clark, Zabriskie, & Morris, 2014), the nature of self-reporting is still considered a limitation. In addition, the FLCAS has been designed to be used in a traditional classroom setting, and the wording of some of the questions may have not accounted for distance learning foreign language classes.

Finally, implementation may have been another limitation in this study. It is possible that students in traditional and distance learning foreign language classes were treated differently. The study used students taught by 18 different instructors. Even though the same master syllabi, curriculum, and instructional materials were used in both groups, students might have had different experiences in their classes.

Recommendations for Future Studies

Distance foreign language learning continues to be an under-researched area. Further research is needed to improve our understanding of distance learning foreign language classes. The growth of distance learning foreign language classes will continue, so it is critical that teachers understand how to meet the needs of students in this environment.

Future studies should focus on replication of this study in different settings including different types of higher education institutions and grade schools. Distance learning foreign language classes might not be the best fit for all students, so future studies should also focus on different learners' characteristics including gender, ethnicity, age, as well as prior distance learning experience and prior foreign language experience. In addition, beginning and advanced foreign language students should be included in further studies.

Since there is much research showing a negative correlation between foreign language anxiety and student achievement in traditional foreign language classes, further research should include investigation of the relationship between anxiety and achievement in distance learning foreign language classes. Even though student achievement did not differ between the students in two learning environments in this study, anxiety profiles were different, so the interplay of two variables, foreign language anxiety and learning environment, should be researched in more detail.

Also, more qualitative studies, especially case studies and phenomenological studies, could help determine reasons why students choose distance learning foreign language classes and identify activities provoking more anxiety in distance learning foreign language classes. In addition, it would be interesting to compare this study to the results of a qualitative study of anxiety profiles of the two learning environments. The stories behind students' anxiety related to

foreign language learning can help provide an in-depth understanding of the interaction of anxiety and the learning environment.

In regards to research design, a study with random assignment to groups, as well as a pre-test to establish students' initial level of foreign language proficiency would strengthen the validity of the results. Finally, more longitudinal comparative studies of affective experiences of foreign language learners in traditional and distance learning foreign language classes are warranted to investigate the stability of foreign language anxiety in distance learning foreign language classes.

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APPENDIX A

FOREIGN LANGUAGE CLASSROOM ANXIETY SCALE (FLCAS)

(Horwitz et al., 1986)

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 con- fused I get.
Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

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

23. I always feel that the other students speak the foreign language better than I do.
Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

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

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

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

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

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

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

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

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

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

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

APPENDIX B

APPROVAL TO USE FOREIGN LANGUAGE CLASSROOM ANXIETY SCALE

On Thu, Jan 8, 2015 at 10:28 AM, Horwitz, Elaine K <horwitz@austin.utexas.edu> wrote:

It's nice to meet you, and I appreciate your interest in my work. I am including my permission statement below. It is really up to your judgment if the (any) instrument is appropriate for your student population. Strictly speaking, new validation studies should be undertaken whenever an instrument is used with a new population. I have some information on this in the book I mention below.

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 can be found in my book Becoming a Language Teacher: A Practical Guide to Second Language Learning and Teaching, 2nd edition, Pearson, 2013.
Best wishes,

Elaine Horwitz

APPENDIX C

CONSENT FORM

The Liberty University Institutional
Review Board has approved
this document for use from
2/19/16 to --
Protocol # 2420.021916

CONSENT FORM
Foreign Language Anxiety
in Traditional and Distance Learning Foreign Language Classrooms
Anastasia Bollinger
Liberty University
School of Education

You are invited to be in a research study of foreign language anxiety. You were selected as a possible participant because you are enrolled in a foreign language class. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

Anastasia Bollinger, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information:

The purpose of this study is to compare levels of foreign language anxiety in face-to-face and distance learning foreign language classes.

Procedures:

If you agree to participate in this study, I would ask you to complete the online survey, which consists of 41questions. The survey will take about 15 to 30 minutes to complete. End of course grades for each ID number will be provided by the Office of Institutional Research, which will not have access to the survey results. The ID numbers will be deleted from the data sheet once grades and survey results have been matched.

Risks and Benefits of being in the Study:

The risks involved in this study are minimal and are no more than you would encounter in everyday life.

Participants are not expected to receive a direct benefit from participating.

Compensation:

You will not receive any financial compensation for taking part in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify you as a subject of this research. Research records will be collected using Google Forms, which is a secured format that requires a username and a password login to access data. The data will also be stored securely on the researcher's personal computer, and only the researcher and her faculty advisor will have access to the records. All data will be deleted from the website and the researcher's personal computer three years after completing the study.

Also, confidentiality will be maintained by asking you to submit your school ID number instead of your name. The researcher will not have the ability to match the ID numbers with the names.

End of course grades for each ID number will be provided by the Office of Institutional Research, which will not have access to the survey results. The ID numbers will be deleted from the data sheet once grades and survey results have been matched.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University, the School of Education, or the researcher. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study:

If you choose to withdraw from the study, please contact the researcher at the email address included in the next paragraph. Withdrawal requests can be processed only before the end of the quarter because the ID numbers will be deleted from the data sheet once grades and survey results have been matched. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions:

The researcher conducting this study is Anastasia Bollinger. If you have questions, **you are encouraged** to contact her at asbollinger@liberty.edu. You may also contact the research's faculty advisor, Dr. Jillian Wendt, at jarnett@liberty.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Carter 134, Lynchburg, VA 24515 or email at irb@liberty.edu

Please notify the researcher if you would like a copy of this information to keep for your records.

Statement of Consent:

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

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

Signature: _____ Date: _____

Signature of Investigator: _____ Date: _____

Your participation in this survey is greatly appreciated!

Survey link:

APPENDIX D

E-MAIL INVITATION TO PARTICIPATE IN THE STUDY

Initial e-mail sent to students

Dear student,

Many colleges and universities offer foreign language classes. Feedback about your experience in foreign language classes is critical to improve your learning experience in foreign language classes. You are invited to take a survey concerning experiencing anxiety in foreign language classes. Your feedback will increase awareness and provide more information about one of the individual factors affecting foreign language achievement.

To participate, please go to _____ . Read the informed consent and digitally acknowledge your consent to participate in this study. Then, take 15-30 minutes to complete the survey about foreign language anxiety. Please take time to complete it as soon as possible.

Your answers to the questions will be confidential. Neither the researcher nor the instructor will be able to link directly the participants to their survey responses. For more information about confidentiality, please read the informed consent.

This study is conducted by Anastasia Bollinger as part of a doctoral dissertation study in fulfillment of the requirements for her degree from Liberty University's School of Education. The study is being conducted under the supervision of Dr. Jillian Wendt. If you have any questions about the study, please feel free to contact Anastasia Bollinger at asbollinger@liberty.edu

Thank you for your time and consideration. Thank you for your participation in this research study.

First, second, and third follow-up e-mails

Dear student,

This is a reminder that you still have the opportunity to complete the online survey and provide feedback about your experience in your foreign language class in which you are currently enrolled. Feedback about your experience in foreign language classes is critical to improve your learning experience in foreign language classes.

To participate, please go to _____ . Read the informed consent and digitally acknowledge your consent to participate in this study. Then, take 15-30 minutes to complete the survey about foreign language anxiety. Please take time to complete it as soon as possible.

Your answers to the questions will be confidential. Neither the researcher nor the instructor will be able to link directly the participants to their survey responses. Responses will in no way affect your grades in this class. For more information about confidentiality, please read the informed consent.

This study is conducted by Anastasia Bollinger as part of a doctoral dissertation study in fulfillment of the requirements for her degree from Liberty University's School of Education. The study is being conducted under the supervision of Dr. Jillian Wendt. If you have any questions about the study, please feel free to contact Anastasia Bollinger at asbollinger@liberty.edu

Thank you for your time and consideration. Thank you for your participation in this research study.

Fourth follow-up e-mail

Dear student,

This is a reminder to complete the online survey about your experience in your foreign language class in which you are currently enrolled. Feedback about your experience in foreign language classes is critical to improve your learning experience in foreign language classes.

To participate, please go to _____ . Read the informed consent and digitally acknowledge your consent to participate in this study. Then, take 15-30 minutes to complete the survey about foreign language anxiety. This survey will only be available until _____ (last day of Week 8). Please take time to complete it as soon as possible.

Your answers to the questions will be confidential. Neither the researcher nor the instructor will be able to link directly the participants to their survey responses. Responses will in no way affect your grades in this class. For more information about confidentiality, please read the informed consent.

This study is conducted by Anastasia Bollinger. If you have any questions about the study, please feel free to contact Anastasia Bollinger at asbollinger@liberty.edu

Thank you for your time and consideration. Thank you for your participation in this research study.

APPENDIX E

IINTITUTIONAL REVIEW BOARD APPROVAL

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 19, 2016

Anastasia Bollinger
IRB Exemption 2420.021916: Foreign Language Anxiety in Traditional and Distance Learning Foreign Language Classrooms

Dear Anastasia,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2, 4), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
> (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.
>
> (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

APPENDIX F

DEMOGRAPHIC QUESTIONS

Demographics:

Please provide some basic demographic information.

1) What is your sex?

Male

Female

2) What is your race/ethnicity?

White

Black

Asian

Hispanic

American Indian

Other

3) What is your age range?

Under 25

Over 25

4) Please indicate your employment status

Unemployed

Part-time

Full-time

5) Please indicate your student status

Part-time

Full-time

Other

6) Please indicate your major

Biology

Business Administration

Computer information systems

Computer science

Criminal justice

Cyber security

Education (early childhood, middle, or secondary)

English

General Studies

Health and Physical Education

History

Homeland security and emergency management

Human communication

Information technology

Logistics management

Mass communication

Mathematics

Paralegal studies

Political science

Pre-nursing

Psychology

Social work

Sociology

7) Do you have any prior foreign language experience?

Yes

No

8) Do you have any distance learning experience?

Yes

No