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Foreign Language Reading Anxiety: Investigating English-Speaking University Students Learning Chinese as a Foreign Language in the United States

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FOREIGN LANGUAGE READING ANXIETY: INVESTIGATING ENGLISH-SPEAKING UNIVERSITY STUDENTS LEARNING CHINESE AS A FOREIGN LANGUAGE IN THE UNITED STATES

By

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Dedicated to my parents, Huazhong Zhao and Mingzhen Xu, who have always believed in the value of education.
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TABLE OF CONTENTS

LIST OF TABLES........................................................................................................ viii
LIST OF FIGURES...................................................................................................... ix
ABSTRACT.................................................................................................................. x

CHAPTER ONE
INTRODUCTION ........................................................................................................ 1
   Statement of Problem .......................................................................................... 3
   Context of the Study ......................................................................................... 4
   Research Questions ........................................................................................... 5
   Significance of the Study ................................................................................... 6
   Summary ............................................................................................................. 7
   Definition of Terms ............................................................................................ 7

CHAPTER TWO
LITERATURE REVIEW............................................................................................. 9
   The Conceptual Framework of Foreign Language Anxiety............................... 9
      Foreign Language Anxiety and Other Types of Anxiety ................................. 10
      Definition of Foreign Language Anxiety........................................................ 13
   The Effect of Foreign Language Anxiety on Performance................................. 14
      Foreign Language Anxiety Related to Writing and Listening ......................... 21
   The Construct of Foreign Language Reading Anxiety........................................ 25
      Sociocognitive Perspective of Reading.......................................................... 25
      Reading Process for Learners of Chinese........................................................ 27
   Foreign Language Reading Anxiety.................................................................... 29
      Foreign Language Reading Anxiety and Performance ................................. 33
      Foreign Language Anxiety and Background Variables ................................. 35
      Gender........................................................................................................... 35
      Course level.................................................................................................... 38
      Time spent in the target language country.................................................... 40
   Sources of Foreign Language Anxiety and Foreign Language Reading Anxiety  41
      Sources of Foreign Language Anxiety ............................................................ 42
         Communicative task...................................................................................... 42
      Task types...................................................................................................... 45
   Sources of Foreign Language Reading Anxiety................................................. 47
   Summary ............................................................................................................. 50

CHAPTER THREE
METHOD.................................................................................................................. 51
   Setting and Participants ..................................................................................... 52
LIST OF TABLES

1. Summary of Participant Characteristics ......................................................... 54
2. Basic Information about the Instructors .......................................................... 56
3. Chapters, Vocabulary, and Parables that Elementary and Intermediate Students Learned .......................................................... 62
4. Chapter Schedule of the Elementary Chinese I ................................................. 63
5. An Overview of Research Questions, Data Sources and Analysis Tools ............ 73
6. Cronbach’s Alpha of the Two Instruments ...................................................... 81
7. Descriptive Statistics of the FLRAS and the FLCAS ........................................ 82
8. Frequency Percentages on the FLRAS (N=125) ............................................... 82
9. Levene’s Test of Equality of Error Variances .................................................. 88
10. 2*2*2 ANOVA Table ..................................................................................... 88
11. Descriptive Statistics of the FLRAS Score at Different Levels ...................... 90
12. Effect Sizes of the Main Effects and Interactions ........................................... 92
13. Descriptive Statistics of the Reading Performance Score .............................. 95
14. Correlation between FLRAS Score and Reading Performance Score ........... 96
15. Summaries of Research Questions and Findings .......................................... 99
16. Typical Responses from Students about the Most Frustrating Aspects in Reading Chinese ................................................................. 106
17. Chinese Reading Process Described by Students .......................................... 107
18. The Effect of Going to China on Reading Chinese .......................................... 117
LIST OF FIGURES

1. A dialogue from Integrated Chinese Part I .................................................. 59
2. A dialogue from Integrated Chinese Part II .................................................. 60
3. Histogram of the FLRAS score ................................................................. 87
4. The course*China interaction among female students ............................... 93
5. The course*China interaction graph among male students ...................... 93
6. Histogram of reading performance score .................................................. 94
7. Scatterplot of the correlation between the FLRAS and reading performance score ................................................................. 97
ABSTRACT

The aim of this study was to explore the foreign language reading anxiety among learners of Chinese in colleges in the United States. Early studies on foreign language anxiety had an obvious focus on the language skill of speaking (e.g., Aida, 1994; Horwitz, Horwitz & Cope, 1986; Phillips, 1992; Young, 1986) and the foreign language anxiety study related to other language skills such as reading, listening and writing have not drawn researchers’ attention until very recently (Cheng, Horwitz & Schallert, 1999; Saito et al., 1999; Vogely, 1998).

Foreign language reading anxiety is a construct that is related to but distinct from general foreign language anxiety (Saito, Horwitz, & Garza, 1999; Sellers, 2000; Shi & Liu, 2006). Alphabetic and syllabic target languages such as English, Spanish, and Japanese have been studied in the foreign language reading anxiety research but logographic language has rarely been included. By including Chinese, a logographic language, as a target language in research on the foreign language reading anxiety, this study intended to expand the understanding of the nature of foreign language reading anxiety and also the reading process of Chinese as a foreign language.

According to the sociocognitive perspective of reading (Bernhardt, 1991), reading is a meaning-reconstruction process where readers interact with not only the text-based components but also the extra-text components of a reading passage. Text-based components are such as word recognition, phonemic/graphemic decoding, and syntactic features. In reading a Chinese passage, learners of Chinese usually spend excessive time on word recognition due to the non direct relation between the form and the pronunciation of a Chinese character. Humans are limited in cognitive capacity (Eysenck, 1992). Therefore, after most of the cognitive capacity is used in dealing with word recognition, very little cognitive capacity is available for the activation of discourse knowledge, prior knowledge, and metacognition that deal with the extra-text components. The inefficient reading process might lead to reading anxiety among readers. Bernhardt (2005) pointed out that the role of affect such as anxiety had been neglected from the previous reading models, which might explain...
some more of the variance in reading performance.

A review of the previous studies demonstrated that many fundamental questions concerning foreign language reading anxiety such as the sources of foreign language reading anxiety and the relation between foreign language reading anxiety and foreign language reading performance had not been thoroughly investigated. Two basic assumptions raised by Saito et al. (1999) informed the proposed study. First, foreign language reading anxiety was a construct that was related to but distinct from foreign language anxiety. Second, foreign language reading anxiety varied depending on different target languages.

In this study, the researcher explored the following specific research questions.

1. What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States?

2. What background variables are related to foreign language reading anxiety?
   a. Is gender related to foreign language reading anxiety?
   b. Is course level related to foreign language reading anxiety?
   c. Is time spent in China related to foreign language reading anxiety?

3. Is there a relationship between foreign language reading anxiety and foreign language reading performance?

A survey research design was employed in this study. Survey research has been widely used in foreign language anxiety studies (e.g., Horwitz et al., 1986; Saito et al., 1999). A total of 125 learners of Chinese in a large public research university in the U.S. took part in this survey study. The primary data source came from the two anxiety instruments, namely, Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986) and Foreign Language Reading Anxiety Scale (Saito et al., 1999) and also a background information questionnaire. Data from an email interview were the secondary data source triangulating the results obtained from the primary data source. Statistical analysis such as 2*2*2 factorial ANOVA and Pearson Product - Moment correlation analysis were adopted in this study.

The study found: 1. The level of foreign language reading anxiety was similar to the level of general foreign language anxiety among learners of Chinese. Reading Chinese as a foreign language was anxiety-provoking to some students. Unfamiliar scripts, unfamiliar topics and worry about the reading effect were identified as the main sources of foreign
language reading anxiety. 2. There was a significant course level effect on the level of foreign language reading anxiety with intermediate students having a significantly higher level of foreign language reading anxiety than elementary students. 3. There was a significant negative correlation between foreign language reading anxiety and foreign language reading performance.

The findings suggest that reading was as anxiety-provoking to learners of a non-cognate non-western language as speaking did. The unfamiliar scripts were found to be the major source of foreign language reading anxiety, which confirmed one of the hypothesized sources of Saito et al. (1999). The finding about the significant course level effect on the level of foreign language reading anxiety also conformed to the studies done among learners of Japanese (Kitano, 2001; Saito & Samimy, 1996; Samimy & Tabuse, 1992). This finding reminded instructors of Chinese that as students advanced into higher level classes their foreign language reading anxiety increased due to the new characters needed to be learned and the increasing level of difficulty of the reading passages. Measures such as raising students’ radical awareness, choosing reading passages that fit students’ proficiency level, providing background information about the topic of reading passage and giving evaluation feedback after the reading activity were suggested to decrease students’ level of reading anxiety.

The limitations in both the research design and the statistical analysis were acknowledged. The limitations in research design mainly came from the exclusion of advanced class students, the cancellation of the face to face small group discussion, the inclusion of the researcher’s students, and the use of non standardized reading scores. The mean replacement of the missing data, the small cell size in the ANOVA analysis and the ceiling effect of the reading score were the limitations existing in the statistical analysis procedures. Future research was suggested to include advanced level students in examining the role that unfamiliar culture elements played in foreign language reading anxiety as advanced level students had more opportunity to encounter cultural elements in the more authentic reading materials. The relation between foreign language reading anxiety and the use of different word recognition strategies, different topics and styles of reading passages are also worth exploring.
CHAPTER ONE
INTRODUCTION

The aim of this dissertation was to examine the foreign language reading anxiety among American students learning Chinese as a foreign language. Foreign language anxiety has been identified as one of the major affective factors that influence foreign language learning (Aida, 1994; Horwitz, Horwitz & Cope, 1986; MacIntyre & Gardner, 1994b). Early studies in language anxiety had an obvious focus on the language skill of speaking since speaking was considered as the most anxiety-provoking skill among all the four language skills: speaking, reading, writing and listening (e.g., Aida, 1994; Phillips, 1992; Young, 1986). Students were later found to have different anxiety levels related to different language skills and therefore anxiety study related to language skills other than speaking began to appear in 1990s (e.g., Cheng, Horwitz & Schallert, 1999; Saito, Horwitz, & Garza, 1999; Vogely, 1998). Foreign language reading anxiety did not draw researchers’ attention until recently (Saito et al., 1999; Shi & Liu, 2006).

Reading used to be regarded as an individual activity that happens within a person’s brain, and reading did not require the interaction that speaking did (Bernhardt, 1991). Readers were believed to have the advantage of rereading and thinking; consequently, affective factors in second language reading, such as anxiety, were neglected. However, reading was an active meaning constructing process from a sociocognitive perspective (Bernhardt, 1991) in that readers played an important role in reading comprehension. Readers interacted with texts, which led to different interpretations of the text based on the readers’ background knowledge and language knowledge. First language (L1) literacy, second language (L2) language knowledge (e.g., word recognition skills, grammar knowledge, and discourse structure knowledge) and background knowledge were considered to be the major factors that influence L2 reading performance (Coady, 1979; Grabe, 1991). Bernhardt (2005) found that L1 literacy and L2 language knowledge accounted for about 50% of the variance in reading performance and these two factors were insufficient to explain the variances in reading performance. She pointed out that the role of affect such as anxiety had been neglected from
the previous reading models, which might explain some more of the variance in reading performance.

Indeed, studies done in different target languages have showed that foreign language reading anxiety does exist among some foreign language learners, and foreign language reading anxiety is related to foreign language reading performance. For instance, Yamashita (2004) found that students’ anxiety in reading L2 was higher than that in reading L1. The American students learning Japanese, Russian and French as their foreign languages in Saito et al. (1999) reported different levels of foreign language reading anxiety. Students learning Spanish as a foreign language in Sellers’ (2000) study also experienced anxiety in reading and reading anxiety had an influence on reading strategies use and passage content recall. Shi and Liu (2006) found that foreign language reading anxiety had a negative correlation with both reading comprehension scores and general language proficiency scores among English learners in China.

Previous studies have also shown that foreign language reading anxiety levels, unlike foreign language class anxiety levels, vary depending on different target languages (Saito et al., 1999; Sellers, 2000; Shi & Liu, 2006). Foreign languages such as Spanish, French, English, Japanese and Russian have been studied as the target languages in relation to foreign language reading anxiety. Saito et al. (1999) found that students experienced more anxiety in reading Japanese than in French and Russian. Shi and Liu (2006) evidenced that Chinese students studying English had higher levels of foreign language reading anxiety than the American students in Saito et al. The inclusion of unexplored target languages such as Chinese will enrich and expand what we have already known about foreign language reading anxiety.

Chinese is often classified as a less commonly taught language in the U.S. despite the increasing number of students enrolled in Chinese programs. Chinese, like other less commonly taught languages, needs more time and effort on the students’ part in order to reach the same proficiency level of students learning other more commonly taught languages. The Foreign Service Institute estimated that it took approximately 1,320 hours of instruction for students in an intensive program of Arabic, Chinese, Japanese, and Korean to reach the same proficiency level of students learning other commonly taught languages like French or
Spanish in 480 hours of instruction. The effort that students need to put into the study of less commonly taught language and the constant frustration they experienced from learning might make anxiety a salient factor for learners of less commonly taught language. Indeed, “FL anxiety is an important element in the overall learning process, particularly in noncognate, non-western languages, such as Arabic” (Hussein, 2005, p. 207). Similarly, anxiety might also play an important role in the overall learning process of Chinese as a foreign language and for reading in particular. However, the reading anxiety of learners of Chinese as a foreign language has rarely been studied to the best knowledge of the researcher.

**Statement of Problem**

As mentioned in the beginning of this chapter, most early studies on foreign language anxiety have focused on speaking, and foreign language reading anxiety research did not begin until recently (Saito et al., 1999). Many fundamental questions concerning foreign language reading anxiety such as the source of foreign language reading anxiety, the relation between foreign language reading anxiety and foreign language reading performance, and the relation between background variables and foreign language reading anxiety are still waiting for answers.

Although most studies have shown that foreign language anxiety has a negative influence on the learning process and performance (Horwitz et al., 1986; MacIntyre & Gardner, 1989, 1991b; Phillips, 1992; Young, 1991), the relation between foreign language reading anxiety and foreign language reading performance is not so clear cut. Some studies demonstrate that foreign language reading anxiety negatively influences reading performance (Sellers, 2000; Shi & Liu, 2006) while some others show no significance in such a relationship (Brantenier, 2005; Mills, Pajares & Herron, 2006). Background variables such as gender, course level, and experience with the target culture have been discussed in foreign language classroom anxiety studies (Aida, 1994; Campell, 1999; Coulomebe, 2000; Saito & Samimy, 1996). The relation between these variables and foreign language reading anxiety has not been thoroughly explored either.

Saito et al. (1999) pointed out that foreign language reading anxiety varied according to different languages. However, the previous studies have mostly examined target languages which are either alphabetic such as English, French, and Spanish or syllabic such as Japanese.
Only Zhang (2002) has studied Chinese, a logographic language, as the target language in her foreign language reading anxiety study. The participants in Zhang’s study were learning Chinese as a second language in China, which was a second language learning situation. They had the opportunity to learn and use Chinese both inside and outside the classroom. Students in foreign language learning situations, on the other hand, have very few chances to learn and use the target language outside of the classroom. Therefore, due to the different learning situation students in a second language learning situation and foreign language learning situation might experience different levels of foreign language anxiety. This study aims to investigate the foreign language reading anxiety level among English speaking students learning Chinese as a foreign language.

Logographic languages and alphabetic languages have two different writing systems. The alphabetic language has a connection between the sound and the form but there is no such a connection for the logographic language. Native speakers of English can use their phonetic knowledge to help them in reading in another alphabetic language such as French or Spanish but not a logographic language such as Chinese. Therefore, the recognition of words, the reading process and the affective state during the reading process might be different for learners of Chinese and for learners of other alphabetic languages (Saito, et al., 1999). More research into the anxiety level of reading a logographic language as the foreign language needs to be done to deepen the understanding of foreign language reading anxiety.

**Context of the Study**

Due to the closer economic and political ties between China and the U.S., a growing number of American students are beginning to learn Chinese as their foreign language. Chinese was the seventh most commonly learned foreign language in the U.S. according to the 2006 survey by the Modern Language Association (MLA). The MLA’s 2006 survey reported that students learning Chinese in institutions of higher education had increased 312% from 1986 to 2006. Enrollment in Chinese has enjoyed a continuous growing from 1960 to the present. There was a total enrollment of 51,582 of Chinese learners in institutions of higher education in the U.S. according to the MLA’s 2006 survey, which showed a 51.0% increase over the enrollments in the 2002 survey. There was also a rise in number of higher education institutions offering Chinese courses since 2002, from 543 to 661 with a net increase of 118.

In the state of Florida, the Chinese program at Florida State University (FSU) had also enjoyed an increase in student enrollment. For example, in fall 2005, there were two
Elementary Chinese classes with a total number of about 50 students. In fall 2006, three Elementary Chinese classes were offered with a total enrollment of about 80 students. In fall 2007, there were four Elementary Chinese classes with an enrollment of about 90 students according to the registration data at the university’s registration website. Besides elementary Chinese courses, intermediate level Chinese class and above-intermediate level Chinese classes were also offered through the program.

As a Chinese instructor at FSU, the researcher noticed that when students read in Chinese, they always preferred reading the Pinyin (the Chinese pronunciation system) text to reading the character text because the Pinyin used Roman letters that were similar to English. However, characters were what appear in newspapers, books, magazines and almost every other written material in Chinese. In the Elementary Chinese I class, students began learning to read Chinese character text in the third week after they began learning Chinese. At this time, students read the character text with the mediation of Pinyin text because the Pinyin text was given before the character text in the textbook. From the second half of Elementary Chinese II on, students read the character text immediately after they finished learning new vocabulary without the mediation of the Pinyin text since the Pinyin text was moved to the end of each chapter. No Pinyin text was given in the more advanced level Chinese courses such as Chinese Short Stories and Reading, and Reading in Chinese History. Although reading was not the focus of elementary level class, students were required to read the character text in the textbook and short passages in character in the accompanying workbook. Reading comprehension items were also an important part of chapter tests and the final exam.

In light of the increasing number of students learning Chinese, this study was an attempt not only to address the lack of research, but also to add empirical evidence to how learner variables such as anxiety affected the learning of the Chinese language in general and reading in specific.

**Research Questions**

Research on foreign language reading anxiety has been very limited. Based on the few studies on foreign language reading anxiety, two assumptions informed the proposed study. First, foreign language reading anxiety is a construct that is related to but distinct from foreign language anxiety in general. Second, the foreign language reading anxiety level is dependent on different target languages (Saito et al., 1999).

The purpose of this study was to expand the knowledge of foreign language reading
anxiety by examining the foreign language reading anxiety among learners of Chinese. To this end, the study focused on the following research questions:

1. What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States?
2. What background variables are related to foreign language reading anxiety?
   a) Is gender related to foreign language reading anxiety?
   b) Is course level related to foreign language reading anxiety?
   c) Is time spent in China related to foreign language reading anxiety?
3. Is there a relationship between foreign language reading anxiety and foreign language reading performance?

**Significance of the Study**

This study has both theoretical significance and pedagogical implications. Anxiety related to specific language skills had not been studied thoroughly although students had reported to experience different levels of anxiety in relation to different language skills (Kim, 2000; Saito et al., 1999; Sellers, 2000; Vogely, 1998). This study expands the knowledge base related to foreign language reading anxiety by examining Chinese, a logographic language as the target language. This study does not mean to emphasize the difference between learners of Chinese and learners of other languages but hopes to add empirical data to the study of reading anxiety in FL learners, including learners of Chinese.

Anxiety plays an important role in foreign language learning especially in the learning of less commonly taught language (Hussein, 2005; Saito & Samimy, 1996; Samimy & Tabuse, 1992). Chinese is still considered a less commonly taught language despite the increasing enrollment in the Chinese courses. The foreign language anxiety among learners of Chinese has rarely been investigated and no studies have examined the foreign language reading anxiety among learner of Chinese in a foreign language situation. To understand how affective factors, especially anxiety, influence the learning of the less commonly taught language and the reading performance of this language in particular, this study also contributes to the study of foreign language reading anxiety by revealing the relation between foreign language reading anxiety and reading performance and also the relation between different background variables and foreign language reading.
As the number of students enrolled in Chinese program increases in the U.S. and the world, it is important for instructors and researchers to be aware of the affective states of their learners. In terms of pedagogical implications, the data were collected in a large research university in the U.S. and the results can be generalized to similar educational settings. The foreign language reading anxiety level demonstrated the extent to which foreign language reading anxiety was prevalent among learners of Chinese. The sources of foreign language reading anxiety were also revealed with the implication that instructors could better select reading materials, reform their classroom instruction and help students come up with appropriate anxiety-coping strategies.

Summary

The first chapter addresses the need for the investigation of foreign language reading anxiety among learners of Chinese. For one thing, foreign language anxiety in relation to specific language skills such as reading has not been thoroughly investigated. For another, previous studies have rarely included a logographic language as the target language in foreign language reading anxiety. This study of foreign language reading anxiety among learners of Chinese, a logographic language, has the potential to enrich the understanding of foreign language reading anxiety. The definitions of some special terms used in the dissertation are given below.

Definition of Terms

Anxiety: “The subjective feeling of tension, apprehension, nervousness, and worry that are experienced by an individual,” and the “heightened activity of the autonomic nervous system that accompanies these feelings” (Spielberger, 1976, p. 5).

Cognitive perspective of reading: This perspective considers reading process as an intrapersonal problem-solving task that takes place within the reader’s brain (Bernhardt, 1991).

Foreign language anxiety: “A distinct complex of self-perceptions, beliefs, feelings and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (Horwtiz et al., 1986, p. 128).

Foreign language reading anxiety: The anxiety that learners experience in reading a foreign language. It is related to but distinguishable from foreign language anxiety (Saito et al.,
Interactive model of L2 reading: This model acknowledges the importance of affective factors in second language reading besides the other two important variables: L1 literacy and language knowledge (Bernhardt, 2000, 2003, 2005).

Language skills: The four language skills of reading, listening, speaking and writing that usually appear in the foreign language curriculum (Yao et al., 2005).

State anxiety: The apprehension that a person experiences at a particular moment in time as a response to a definite situation (Spielberger, 1983).

Situational anxiety: The specific forms of anxiety that occur consistently over time within a given situation (MacIntyre & Gardner, 1991a).

Social perspective of reading: This perspective holds that reading is a meaning-constructing process and a text consists of many implied value systems and is interpreted differently by different readers or even by the same reader under different contexts (Bernhardt, 1991).

Sociocognitive perspective of reading: This perspective is a combination of social perspective and cognitive perspective of reading. It maintains that text is not only characterized by linguistic elements but also its pragmatic nature, its content, its structure and its topic (Bernhardt, 1991).

Trait anxiety: An individual’s likelihood of becoming anxious in any situation (Spielberger, 1983). Trait anxiety is the more permanent predisposition to be anxious and it is usually viewed as an aspect of personality.

Writing system: A symbolic system that is used to represent the spoken language. Most writing systems are classified into three categories: alphabetic, syllabic, and logographic (Ho & Byrant, 1997b).
CHAPTER TWO
LITERATURE REVIEW

This research explores the research questions related to the foreign language reading anxiety level among learners of Chinese, the relation between foreign language reading anxiety and background variables, and the relation between foreign language reading anxiety and foreign language reading performance. Centered on these research questions, in this chapter, the relevant literature about foreign language anxiety in general and foreign language reading anxiety in particular is reviewed. The first section clarifies and distinguishes the concepts of foreign language anxiety and also the effect of foreign language anxiety on foreign language performance. Foreign language anxiety is a situation-specific anxiety and is distinguished from other types of anxiety. Foreign language anxiety in relation to writing and listening is also reviewed in this section. The second section discusses the construct of foreign language reading anxiety from a sociocognitive perspective of reading. Foreign language reading anxiety is related to but distinct from foreign language anxiety. The third section reviews the relation between foreign language anxiety and three background variables, namely, gender, course level and time spent in the target language country. To better understand the nature of foreign language reading anxiety, the fourth section first reviews the literature about the sources of foreign language anxiety and then addresses the sources of foreign language reading anxiety.

The Conceptual Framework of Foreign Language Anxiety

To gain a better understanding of the nature of foreign language reading anxiety, this section begins with the larger concept of anxiety and then moves to the foreign language anxiety. Foreign language anxiety is a situation specific anxiety that is related to foreign language learning. Foreign language anxiety negatively influences foreign language performance.
Foreign Language Anxiety and Other Types of Anxiety

Anxiety is defined as “the subjective feeling of tension, apprehension, nervousness, and worry that are experienced by an individual,” and the “heightened activity of the autonomic nervous system that accompanies these feelings” (Spielberger, 1976, p. 5). Anxiety has been classified into three types: state, trait and situational. State anxiety is the apprehension that a person experiences at a particular moment in time as a response to a definite situation. Trait anxiety is defined as an individual’s likelihood of becoming anxious in any situation (Spielberger, 1983). Trait anxiety is the more permanent predisposition to be anxious and it is usually viewed as an aspect of personality. Situational anxiety is the specific forms of anxiety that occur consistently over time within a given situation (MacIntyre & Gardner, 1991a). The situation-specific anxiety consists of the anxiety that is aroused by a specific type of situation or event such as public speaking, examinations or class participation.

The early studies in foreign language anxiety study had treated the anxiety that students experience in foreign language learning as either trait anxiety or state anxiety. The trait or state approach in studying foreign language anxiety yielded mixed results concerning the relation of foreign language anxiety and performance (Scovel, 1978) and was unable to capture the nature of foreign language anxiety (MacIntyre & Gardner, 1991a). According to MacIntyre and Gardner (1991a), “it seems plausible to suggest that the more meaningful and consistent results have emerged from the latter group (situation anxiety)” (p. 92). In this study, foreign language anxiety is considered as a type of situational anxiety, i.e., the anxiety that is related to the foreign language situation.

MacIntyre and Gardner (1991a) also described in details how foreign language anxiety came into being based on the study done by the same authors in 1989. They described the following:

At the earliest stages of language learning, motivation and language aptitude are the dominant factors in determining success. During the first few experiences in the foreign language, anxiety plays a negligible role in proficiency because even if anxiety is present, it is not the foreign language anxiety that has been discussed to this
Anxiety aroused in this context, as a result of early language experience, would best be called state anxiety. After several experiences with the second language context, the student forms attitudes that are specific to the situation, that is, emotions and attitudes about learning a new language. If these experiences are negative, foreign language anxiety may begin to develop. As negative experiences persist, foreign language anxiety may become a regular occurrence and the student begins to expect to be nervous and to perform poorly. (p. 110)

That is to say, in the beginning of foreign language study, the anxious feelings students experience are not foreign language anxiety but a combination of state anxiety, novelty anxiety and communication apprehension. The anxiety experienced is not specific to foreign language learning. It might also happen in a speech class or in a math class. However, after several negative experiences with foreign language learning, learners begin to associate this anxious feeling with foreign language learning. Anxiety at this point can be treated as foreign language anxiety since it is specific to foreign language learning. Horwitz et al. (1986) also proposed that foreign language anxiety be seen as a separate and distinct process particular to second language acquisition. The initial anxiety experience in language classrooms leads to poor performance and the performance in turn reinforces this anxiety, which is later developed to foreign language anxiety. Therefore, there is a cyclical relationship between foreign language anxiety and foreign language performance.

A series of studies were conducted by MacIntyre and Gardner (1989, 1991a, 1991b, 1994b) to examine the relationship between foreign language anxiety and other types of anxieties, contributing a great deal to the understanding of the construct of foreign language anxiety. It is generally agreed that foreign language anxiety is a form of situation-specific anxiety and is distinct from other types of general anxiety (Aida, 1994; Horwitz et al., 1986; MacIntyre and Gardner, 1991b, 1991c, 1993; Young, 1994).

MacIntyre and Gardner (1989) examined the dimensionality of relevant anxiety scales based on Horwitz et al. (1986) and how foreign language anxiety may operate using Tobias’ (1986) cognitive processing theory. One hundred and four students in an introductory psychology course participated in the study. The students filled in nine anxiety scales and did a paired associates learning task which included 38 French-English noun pairs and a
vocabulary test. Factor analysis on the nine anxiety scales yielded two factors. The Communicative Anxiety factor included French Class Anxiety, French Use Anxiety, English Class Anxiety and the Audience Sensitivity Scale. This factor was called communicative anxiety because the measures involved anxiety reactions in oral communication situations. Mathematics Class Anxiety, Trait Anxiety, Computer Anxiety Test Anxiety, and the State Anxiety Scale belong to the General Anxiety factor. The communicative anxiety was anxiety that was specific to the language classroom. The communicative anxiety bore similarity to the communication apprehension component proposed by Horwitz et al. (1986). However, the test anxiety that was a component in the construct of foreign language by Horwitz et al., contributed to General Anxiety in this study. Therefore, test anxiety might be a general problem and not specific to the language classroom. Only French Class Anxiety and French Use Anxiety were significantly related to written proficiency scores and oral proficiency scores. Other general anxiety scales were not related to proficiency scores.

MacIntyre and Gardner (1991b) expanded their 1989 study by including more anxiety scales and again confirmed their result that foreign language anxiety was a situation-specific anxiety. Twenty three anxiety scales were used to measure different forms of anxiety. Ninety-five students took the Digit Span Test and Vocabulary tests in both their native language English and their foreign language, French. The factor analysis found three factors among the twenty three scales: Social Anxiety, State Anxiety and Language Anxiety. The four Trait Anxiety scales, two communication apprehension, two classroom anxiety scales (Mathematics and English) loaded on Social Anxiety. All the State Anxiety measures, Trait Anxiety, Novelty Anxiety and Physical Danger Anxiety were loaded on State Anxiety. Language Anxiety obtained high loadings from all four French related anxieties, Test Anxiety, and the Daily Routine Anxiety Scale. The researchers attributed the inclusion of test anxiety in this factor to the fact that the French related anxiety measures referred specifically to tests and examinations. Similar results concerning performance and language anxiety were obtained in this study as in the 1989 study. Only language anxiety was negatively correlated with French performance as measured by French Digit Span Test and French Category scores. Other forms of anxiety were not related to the performance scores.
Definition of Foreign Language Anxiety

Foreign language anxiety has been identified as different from other types of anxiety and is specific to the foreign language learning situation (MacIntyre & Gardner, 1989; 1991a; 1991b). Early studies on foreign language anxiety have pointed out the necessity of having a clear definition of foreign language anxiety. Scovel (1978) reviewed four studies concerning anxiety and performance and found that the results of these four studies were inconsistent. Scovel commented, “The research into the relationship of anxiety to foreign language learning has provided mixed and confusing results, immediately suggesting that anxiety itself is neither a simple nor well-understood psychological construct” (p. 132). Horwitz et al. (1986) responded to the fact that researchers had “neither adequately defined foreign language anxiety nor described its specific effects on foreign language learning” (p.125) and 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” (p. 128). Foreign language anxiety is the anxiety that learners experience in the process of learning a foreign language. Foreign language anxiety is related to but distinguishable from other specific forms of anxiety.

In exploring the nature of foreign language anxiety, Horwitz et al. (1986) identified foreign language anxiety as one of performance anxiety within academic and social contexts and drew parallels between it and three other related performance anxiety: communication apprehension, test anxiety, fear of negative evaluation. Horwitz et al. argued that communication apprehension played a large role in foreign language anxiety. People who had trouble speaking in front of groups were likely to experience greater difficulty speaking in a foreign language classroom where they had little control of the communicative situation. Since tests and quizzes in foreign language classes were frequent, test-anxious students in foreign language class experienced more difficulty. Foreign language required continual evaluation by more fluent students or teachers so students in foreign language classroom may be sensitive to the evaluation of their peers. Horwitz et al. explained that although foreign language anxiety was related to these three types of anxiety, it was not the combination of the three. Anxiety came about when learners had to communicate in their second language that
was imperfect and yet to be developed. In this sense, foreign language anxiety was mostly related to the oral aspects of language, listening and speaking.

Although research on theoretical models and frameworks of foreign language anxiety is less extensive than the research on the effect of language anxiety on language learning, several important concepts have emerged. First, foreign language anxiety is distinguishable from other types of anxiety. Second, foreign language anxiety is a situation-specific anxiety. Third, foreign language anxiety comes from negative foreign language learning experience and may have a negative influence on performance.

The Effect of Foreign Language Anxiety on Performance

As Horwitz (2000) put it, “countless language learners and teachers across the world identify with the experience of foreign language anxiety, and the potential of anxiety to interfere with learning and performance is one of the most accepted phenomena in psychology and education” (p. 256). The effect of foreign language anxiety has been vastly examined and general agreement has been reached that foreign anxiety interferes with the learning process and has a negative effect on performance (Aida, 1994; Horwitz et al., 1986; MacIntyre & Gardner, 1991a, 1991b, 1991c; Phillips, 1992).

The effect of anxiety on academic performance has been examined as anxiety is common among foreign language learners (Aida, 1994). Early studies have shown mixed results concerning the effect of anxiety on performance (e.g. Chastain, 1975; Kleinmann, 1977; Young, 1986). Chastain (1975) studied the effect of test anxiety on final grades among students enrolled in beginning French, German and Spanish courses. Test anxiety was positively correlated with Spanish, marginally positively correlated with German, and negatively correlated with French in the audiolingual French class. The correlations with final grades were high across languages but the direction of correlation was not consistent.

Kleinmann (1977) found a significant positive relationship between facilitating anxiety levels and the use of generally avoided structures. For structures which the particular group avoided on the indirect preference assessment task, various affective variables correlated with the use of the structures. For structures which the particular group did not
avoid, the affective variables did not correlate with use. The Spanish and Arabic-speaking
learners of English who reported anxiety were less likely to avoid the complex structures
such as infinitive complements and passive voice. Structures which otherwise would be
avoided were likely to be produced depending on the affective state of the learner with
respect to such variables as confidence, anxiety and motivational orientations. Young (1986)
found there was a negative relationship between the Oral Proficiency Interview (OPI) scores
and anxiety as measured by four individual anxiety scales. When language ability was held
constant, the relation became not significant.

The mixed results have been explained in several ways. Firstly, the relationship
between anxiety and achievement is probably not a simple linear one (Ellis, 1994). Alpert and
Haber (1960) classified anxiety into facilitating anxiety and debilitating anxiety in terms of
the effect of anxiety on performance. The facilitating anxiety motivated the learner to fight
the new learning task while the debilitating anxiety motivated the learner to flee from the new
learning task. Williams (1991) pointed out that the distinction between these two types of
anxiety may be related to the intensity of anxiety. A low anxiety state might have a
facilitating function while a high anxiety state might have a debilitating effect. The two kinds
of anxiety may sometimes cancel each other out and result in no apparent effect on
performance.

Secondly, the impact of anxiety on performance is mediated by students' proficiency
level and task difficulty. Spielberger (1966) integrated intelligence, stage of learning and
difficulty of task into the examination of the impact of anxiety on learning performance. He
claimed that high anxiety facilitated learning when the task was relevantly easy but impeded
learning when the task became difficult. MacIntyre and Gardner's (1991a) study, which
found that language anxiety was not related to the English performance test but related to the
French performance test, supported this theory. Anxiety did not impair comparatively simple
cognitive task such as one's native language tests but negatively influenced more difficult
task such as second language tests.

Thirdly, Scovel (1978) pointed out that the mixed results regarding the effect of
anxiety on foreign language performance might be due to the lack of consistent measurement
and unclear definitions of foreign language anxiety. Later, Horwitz et al. (1986) and
MacIntyre and Gardner (1989, 1991b, 1993b, 1994b) clarified the concept of foreign language anxiety and made a distinction between foreign language anxiety and general anxiety. Horwitz et al. designed the Foreign Language Classroom Anxiety Scale (FLCAS) to measure foreign language anxiety based on his conceptualization of foreign language anxiety. Most of the studies since then have shown that foreign language anxiety (anxiety specific to foreign language learning) negatively influences performance (Aida, 1994; Gardner, Moorcraft & MacIntyre, 1987; Horwitz et al., 1986; Phillips, 1992; MacIntyre & Gardner, 1989, 1991b, 1993, 1994b; Young, 1991). “Studies using the FLCAS and other specific measures of second language anxiety have found a consistent moderate negative correlation between the FLCAS and measures of second language achievement (typically final grades)” (Horwitz, 2001, p. 114). For instance, Horwitz et al. (1986) found that the learners in the anxiety-induced condition were more reluctant to express themselves in the L2. Aida (1994) found there was a moderate negative correlation between anxiety and course grades. The high anxiety group received significantly lower grades than the low anxiety group.

Similarly, MacIntyre and Gardner (1989) found that students with high communicative anxiety learned more slowly and recalled fewer French words than those with low anxiety. French class anxiety and French use anxiety showed significant negative correlations with several measures of learning and performance. MacIntyre and Gardner (1991b) also found a negative relationship between language anxiety and L2 performance on a Digit Span test and on a French Categories test. Phillips (1992) examined the effects of anxiety on performance on an oral test. Students with higher anxiety tended to say less, to produce shorter communication units, and to use fewer dependent clauses and target structures than low anxiety students. Campbell and Ortiz (1991) estimated that up to one half of all language students experienced debilitating levels of language anxiety. Saito and Samimy (1996) found that foreign language anxiety had a negative correlation with final grades among students learning Japanese as a foreign language at all three instructional levels: beginning, intermediate and advanced. In the beginning class, year in college was the best predictor of language performance while in the intermediate and advanced levels, language anxiety became the best predictor.

Anxiety tended not to have a big influence on performance when students’ proficiency
level is controlled according to Young (1991). Young examined the relation between anxiety and foreign language oral test performance. Sixty university-level majors or prospective teachers of French, German and Spanish volunteered to take the OPI. Self-Appraisal of Speaking Proficiency (SASP) and a dictation test were used to assess student’s language ability. A State Anxiety Inventory (SAI) was administered before the OPI to measure students’ level of anxiety prior to the OPI. The cognitive interference questionnaire, the self-report of anxiety (SRA) and the Foreign Language Anxiety Scale of Reactions (FLASR) were administered after the OPI to sample subjects’ thoughts during the OPI, to assess anxiety directly and indirectly. Significant negative correlations were found between the OPI scores and the SRA, SAI and FLASR. The correlation was low to moderate. When the ability level as measured by the SASP was statistically controlled, no significant correlations were found. Young reached the tentative conclusion that when the effect of an individual’s language proficiency was accounted for, oral performance would no longer be influenced by anxiety. However, she also acknowledged that since the OPI was not an official one the students were not terribly anxious.

Foreign language anxiety has also been found to negatively influence performance under the socio-educational model using the Attitude/Motivation Test Battery (AMTB) (e.g., Gardner, 1985; Gardner & MacIntyre, 1993a, 1993b; Gardner, Smythe, Clement, & Gliksman, 1976). The French Class Anxiety Scale was included in the AMTB. Although the concern of these studies have been the larger issues of attitudes and motivation rather than a single construct such as anxiety, these studies have shown that anxiety is one of the best predictors of success in second language. These studies have consistently shown that anxiety negatively affects performance such as speaking, aural comprehension, and final grade.

While most studies have recognized foreign language anxiety as a possible cause of poor performance (e.g., MacIntyre, 1995a), Sparks and Ganschow (1991, 1995, 2000) proposed the Linguistic Coding Deficit Hypothesis (LCDH), which claimed that language aptitude was the primary source of individual differences in language achievement. They reduced affective variables such as anxiety to the role of side effect without explanatory power. MacIntyre (1995b) responded to Sparks and Ganschow’s LCDH hypothesis and pointed out that the LCDH ignored the context in which language learning occurred.
Learning a language was more than “acquiring the technical skill necessary to encode and reproduce sounds” (p. 245). Besides, LCDH had an over emphasis on the learning of the sound system of the language. Sparks and Ganschow (1991, 1995, 2000) asserted that native language deficit caused anxiety. However, the previous studies done by MacIntyre and Gardner (1989, 1994a) found that language anxiety was not related to native language tasks. They stated:

With the wide range of potential influences on language learning, including language anxiety, attitudes, motivation, strategies, learner beliefs, general intelligence, personality, group dynamics, intercultural issues, and so on, it seems unlikely that one variable could account for the majority of the variance in language achievement. (p. 247)

To sum up, early studies in the relationship of foreign language anxiety and foreign language performance have yielded mixed results, which showed that the relationship is a complex one. The relation of anxiety and foreign language performance is mediated by task difficulty and the intensity of anxiety (MacIntyre & Gardner, 1991a; Williams, 1991). The mixed results might also be due to the inconsistent of measurement and the unclear definition of foreign language anxiety (MacIntyre & Gardner, 1989; Scovel, 1978). After foreign language anxiety was established as a specific concept and the distinction was made between foreign language anxiety and general anxiety, a moderate negative relationship between foreign language anxiety and performance has consistently been found (e.g., Aida, 1994; Horwitiz et al., 1986; MacIntyre & Gardner, 1989, 1991b; Phillips, 1992) as measured by the final grades and test scores.

Cognitive psychologists believe that humans are limited in their attention and processing capacity in language learning. Language anxiety may occupy cognitive processing capacity and reduces the amount of attention that students allocate in completing the task at hand (Eysenck, 1992). “As a result, highly anxious subjects are effectively in a dual-task or divided attention situation, in contrast to the non-anxious subjects who primarily process task-relevant information” (Eysenck, 1979, p. 364). There is a cyclical relationship among anxiety, cognition, and behavior (MacIntyre, 1995a). For instance, when a student is asked to answer a question in a second language, he might become anxious. Anxiety consumes part of
the cognitive capacity and therefore performance may suffer. The poor performance leads to students’ negative self-evaluation and self-deprecating cognition. Therefore, researchers have examined the effect of foreign language anxiety from a cognitive perspective (MacIntyre & Gardner, 1989, 1991b, 1994b; Tobias, 1979, 1986). They have come to the conclusion that anxiety affects all three stages of learning: input, processing, and output.

Anxiety interferes with the learning processes because anxious persons tend to focus on “self-directed, derogatory cognition rather than focusing on the task itself” (MacIntyre & Gardner, 1989, p. 255). The task-irrelevant thoughts compete with task-relevant ones for limited cognitive resources. Tobias (1986) described how anxiety might interfere with different stages of learning: input, processing and output. At the input stage, anxiety may cause attention deficits and the learner might not be able to get enough information for the following processing stage. At the processing stage, if the task is relatively simple, anxiety may have little effect on processing. Anxiety and reinforcement do not have effect on performance when the individual has adequate capacity to perform the task (Spielberger, 1966). As the task becomes more difficult, compared to the learner’s ability, anxiety will have a greater influence on processing. At the output stage, anxiety may interfere with the retrieval of previously learned information and thus influences production.

Empirical studies have also led evidence to Tobias’ (1986) theory that anxiety interferes with the three stages of learning. MacIntyre and Gardner (1991b) found that anxiety influenced both the learning (input) and production (output) of French vocabulary. Anxiety was not related to the English performance test but related to the French performance test, which demonstrates that anxiety tended not to impair performance on simple cognitive tasks. Effect of anxiety on the output stage has been emphasized in the previous studies as MacIntyre and Gardner (1991b) said, “research into the effects of anxiety upon language learning has shown an understandable emphasis on the output stage in terms of production, performance, course grades, and other such criteria” (p. 516). Few studies have examined the effect of anxiety on the input stage. MacIntyre and Gardner (1991b) used Digit Span Test score to examine the effect of anxiety on the input stage because “Digit Span Test scores rely upon short-term memory and concentration” (p. 516). Furthermore, “The correlation of Language Anxiety and Digit Span scores in French may indicate that this type of
apprehension can disrupt concentration and the initial processing of linguistic stimuli at the input stage” (p. 529). The distraction of apprehension at this stage hindered students from acquiring enough input and thus less information was available for the processing and output stage. A correlation between Language Anxiety and the French Categories test scores was also found, which again demonstrated the effect of anxiety on the output stage.

MacIntyre and Gardner (1994b) again claimed that foreign language anxiety occurred at three stages of the second language acquisition process: input, processing and output and constructed three stage-specific anxiety scales to measure anxiety at the input, processing and output stages. At the input stage, learner first experienced with a given stimulus. Anxious students may ask for sentences to be repeated more often or may have to reread text several times to compensate for missing input. The processing stage involved the cognitive operations performed on the subject matter: organization, storage and assimilation of the material. The time taken to understand a message or learn new vocabulary items would indicate activity at this stage. Output involved the production of previously learned materials. Ninety-seven students enrolled in first-year French-as-a-second-language class at a large university took part in this study. The three stage-specific anxiety scales each had six items with input anxiety scale measuring the apprehension experienced when taking in information in the second language (Cronbach \( \alpha = .78 \)), the processing anxiety scale measuring the apprehension experienced when organizing and thinking in the second language (\( \alpha = .72 \)), the output scale measuring the apprehension experienced when speaking or writing in the second language (\( \alpha = .78 \)). Significant correlations were found between the stage-specific anxiety scales and the stage-specific tasks (e.g., input anxiety with input tasks). The researchers claimed that foreign language anxiety was correlated with all three stages of learning, not just output.

Onwueguzie, Bailey, and Daley (2000) examined the psychometric properties of the Input Anxiety Scale, the Processing Anxiety Scale and the Output Anxiety Scale designed by MacIntyre and Gardner (1994b). The scales were administered among 258 college students enrolled in Spanish, French, German and Japanese courses. All three scales contributed to the prediction of the global foreign language anxiety. Input anxiety was most closely related to the global foreign language anxiety, explaining more than 40% of the total variance of the
latter. Therefore, theoretically, it is anticipated that foreign language anxiety also affects reading, which mainly involves students in the input stage and the processing stage.

To sum up, foreign language anxiety has an effect on all three stages of learning, i.e. input, processing and output. Although most of the previous studies have focused on the output stage as measured by test scores and course grades, studies have also demonstrated that anxiety also interferes with the input and processing stage. The effect of anxiety on reading from empirical studies will be discussed in the next section. Based on the previous findings it is anticipated that anxiety also interferes with reading although reading is an activity that mainly involves students in the input and processing stage.

Besides the academic and cognitive perspectives, the effect of anxiety has also been studied at the social and personal levels (MacIntyre, 1999). At the social level, anxious students were less likely to communicate when given the opportunity to communicate in natural settings (MacIntyre & Charos, 1996). Anxiety was also studied in relation to self-confidence, which was considered to be a motivating influence, directing the language learner toward contact with the second language community (Clement, Gardner, & Smythe, 1977, 1980). Based on the self-confidence theory by Clement et al. (1977, 1980), a self-confident learner would be highly motivated to communicate with speakers of the target language (MacIntyre, 1999). Qualitative studies have also documented the effect of language anxiety at the individual level (e.g., Price, 1991). In Price’s (1991) study, an interviewee Beth gave an oral report at the end of the third semester of college French and the teacher commented that it was the worst thing that he heard. After eight years, Beth still could not think about the event without getting upset. She said, “I’d rather be in a prison camp than speak a foreign language” (p. 104).

**Foreign Language Anxiety Related to Writing and Listening**

Most of the early studies in foreign language anxiety have a focus on speaking, especially the studies which use FLCAS as a measurement since most items in FLCAS examine learners’ experiences and feelings towards speaking (Horwitz et al., 1986; MacIntyre & Gardner, 1991b; Young, 1990). Some studies have also drawn readers’ attention to the
anxiety that foreign language students might experience in the less examined skills of listening, writing and reading (e.g., Cheng, 2002; Cheng et al., 1999; Vogely, 1998). Foreign language reading anxiety, foreign language listening anxiety and foreign language writing anxiety are related to but distinct from foreign language anxiety. Foreign language anxiety related to writing and listening will be discussed in this section. As foreign language reading anxiety is the focus of this study, the next whole section will be devoted to the discussion of foreign language reading anxiety.

Preliminary support for the existence of foreign language listening anxiety as a phenomenon has been found. Foreign language listening anxiety and foreign language anxiety are distinguishable but related constructs (Hussein, 2005; Kim, 2000; Vogely, 1998). The learners with higher levels of foreign language anxiety tend to have higher levels of foreign language listening anxiety (Hussein, 2005).

In Kim’s (2000) study, the majority of participants reported experiencing listening anxiety in foreign language classrooms and in real-life communication situations. A new instrument, the Foreign Language Listening Anxiety Scale (FLLAS), was constructed to measure listening anxiety. The factor analysis performed on the FLLAS revealed two factors: Tension and worry over English listening and lack of self-confidence in listening. Lack of confidence in listening was the best predictor of listening proficiency among all the FLLAS and FLCAS factors. Students also reported experiencing listening anxiety in Hussein’s (2005) study. In Hussein (2005), two hundred and thirty-three students enrolled in Arabic language program from six universities completed two anxiety surveys. The foreign language listening anxiety scale used in this study was adapted from the Foreign Language Reading Anxiety Scale (FLRAS) by Saito et al. (1999) with “reading” replaced by “listening.” The Foreign Language Listening Anxiety Scale had an internal consistency coefficient of .96 (n = 233). The total score theoretically ranged from 20 to 100 with a mean of 55.47 (SD = 22.97).

A negative correlation between foreign language listening anxiety and foreign language listening performance has been reported. In Kim (2000), a negative relationship was found between foreign language listening anxiety and listening proficiency among university level English learners in Korea. In Hussein (2005), significant negative correlations were found among foreign language listening anxiety, foreign language learning anxiety, students’
listening comprehension scores, and final grades as a measure of overall achievement. Hussein stated that “Increased anxiety adversely affects student performance. Although this study does not support the conclusion that anxiety causes poor performance, the data suggest that anxiety plays a role in how well students do in class” (p. 214).

The background variables that are related to foreign language listening anxiety are university majors and study with tutors or in private language (Kim, 2000). Hussein (2005) reported no significant differences in listening anxiety attributable to gender although he did find “a significant effect for general FL learning anxiety attributable to gender, with females being more anxious than males” (p. 214).

Foreign language writing anxiety is also identified as being related to but distinct from general foreign language anxiety (Cheng et al., 1999; Cheng, 2002). Cheng et al. (1999) found that second language classroom anxiety measured by the FLCAS (Horwitz et al., 1986) and second language writing anxiety measured by a modified second language version of the Writing Apprehension Test (SLWAT) by Daly and Miller (1975) were two related but independent constructs. Four hundred and thirty-three Taiwanese English majors participated in the study. There was a moderate correlation between the overall FLCAS and the overall SLWAT but items from the FLCAS and the SLWAT were loaded on different components. The findings suggested that second language classroom anxiety was a more general type of anxiety about learning a second language with a strong speaking anxiety element, whereas second language writing anxiety was a language-skill-specific anxiety. In another writing anxiety study by Cheng (2002), one hundred and sixty-five English majors at a university in northern Taiwan completed the SLWAT. Results showed that female students had a significantly higher level of writing anxiety than male learners. No significant correlation was observed between English (L2) writing anxiety and Chinese (L1) writing anxiety. Four dimensions of learner differences were found to explain more than half of the variances in L2 writing anxiety: confidence in English writing, English writing motivation/attitude, extracurricular effort to learn English, and English writing achievement.

In Cheng’s (2002) study, female students had a significantly higher level of writing anxiety than male learners. The differences in the level of English writing anxiety between the groups of freshmen, sophomores and juniors did not reach the level of statistical
significance. English writing anxiety increased as course level increased. This result is in conflict with MacIntyre and Gardner’s (1989) hypothesis that language anxiety level will decrease as learners advance to higher levels. Cheng suggested that a more complex theory of language anxiety development should be formed other than the one proposed by MacIntyre and Gardner. Cheng maintained that proficiency might not be the primary factor that determined the rise or decline of language anxiety. As learners advanced in proficiency, teachers’ requirements increased and learners noticed more mistakes in their performance. Therefore, it was quite possible that learners felt more anxiety as they entered higher course levels.

Foreign language writing apprehension was found to negatively influence writing performance. Lee and Krashen (2002) investigated the predictors of writing English as a foreign language in Taiwan among advanced intermediate level college students. They found that three predictors: reading in English on a regular basis (positive), writing apprehension (negative) and a focus on organization during revision (positive) explained 44% of the variety in the writing performance. Second language writing apprehension was the strongest predictor of writing grades/performance. The greater the apprehension was, the lower the writing grades were. Previous studies had shown that the correlation between first language writing apprehension and writing score was not very strong. Lee and Krashen commented that “perhaps the relationship between apprehension and grades is stronger in a second language” (p. 539). Students who focused more on organization and meaning had lower writing apprehension and those who focused more on grammar and word choice had higher writing apprehension. In their study, the amount of reading and aspects of the composing process were related to writing apprehension but the correlation was low. To sum up, the findings in foreign language listening anxiety and foreign language writing anxiety expand the scopes of the foreign language reading anxiety, which is a focus of this present study.

In this section, the construct of foreign language anxiety has been clarified and discriminated from other types of anxiety (MacIntyre & Gardner, 1989, 1991a, 1991b, 1994b). Foreign language anxiety is a situation-specific anxiety. There is a cyclical relationship between foreign language anxiety and performance (MacIntyre & Gardner, 1991a). Foreign language anxiety has been found to negatively influence foreign language

**The Construct of Foreign Language Reading Anxiety**

This section will begin with a general discussion of several perspectives of reading and what the reading process is for learners of Chinese. The concept of foreign language reading anxiety is then discussed together with the possible effect of foreign language reading anxiety on foreign language reading performance.

**Sociocognitive Perspective of Reading**

Reading used to be viewed as an individual act since it does not need the cooperation from another partner. This perspective is classified as the cognitive perspective by Bernhardt (1991), which considers the reading process as an intrapersonal problem-solving task that takes place within the reader’s brain. Besides the cognitive perspective, the nature of reading has been explored from another perspective, the social perspective. While the cognitive perspective holds that reading is a meaning extracting process, the social perspective holds that reading is a meaning-constructing process. From the social perspective, the text is fluid and open to multiple interpretations. A text consists of many implied value systems and is interpreted differently by different readers or even by the same reader under different contexts. Readers play a major role in the reading process.

A sociocognitive view of second language reading proposed by Bernhardt (1991) is adopted in this study. Bernhardt maintains that text is characterized by not only its linguistic elements but also its pragmatic nature, its content, its structure and its topic. These features interact with learners in the reading process. Texts include both linguistic components and social components. Linguistic components include vocabulary, grammar, and sentence structures. A text is also defined by its topic, content, and styles which are largely social in nature. Both the linguistic components and social components of the text interact with readers.
For instance, topics of a text might be familiar, controversial or foreign to foreign language learners. Readers might engage in different reading processes when they are reading a familiar verse a foreign topic. Similar content when delivered in different styles such as stories and essays might be interpreted differently by the same reader. For instance, readers might find stories to be more engaging than essays and thus feel more relaxed while reading.

Besides the text, readers also have both cognitive and social features. Cognitive characteristics such as the use of reading strategies, word recognition ability, phonemic awareness, syntactic and discourse knowledge vary from reader to reader. Social background characteristics such as ethnicity, gender, views toward reading also influence the second language reading process. For instance, two readers who are similar in their cognitive aspects might have very different views toward reading, which will influence the reading process. Similarly, two readers who share a similar social background might have different word recognition abilities and this cognitive difference might influence their reading process as well. Therefore, research on second language reading should consider both the social and cognitive features of both the text and the reader. As Bernhardt (1991) put it, “if research is conducted from only one view, findings are automatically skewed” (p. 16).

In line with the sociocognitive perspective of second language reading, Bernhardt’s (1990) L2 text reconstruction model states in more details that not only text-based but also extra-text-based components interact with readers as the reader constructs meaning from the text. Text-based components are such as word recognition, phonemic/graphemic decoding, and syntactic features. The extra-text components refer to intra-textual perception or the discourse knowledge, prior knowledge, and metacognition. The text-based components are linguistic in nature and the extra-text-based components are concerned with higher level processing skills such as connecting the prior knowledge with the reading passage in hand and evaluating one’s reading process. This L2 text reconstruction model stresses both the linguistic feature and the social feature in the interaction between the text and the reader, which conforms to the sociocognitive perspective of reading. Therefore, the reading process of learners of Chinese will be discussed within Bernhardt’s (1990) L2 text reconstruction framework.
Reading Process for Learners of Chinese

Chinese is a logographic language, in which the basic orthographic unit is character. Each Chinese character represents a morpheme as well as a syllable. In an alphabetic system, the basic graphic units correspond to phonemes while in Chinese the basic graphic unit corresponds to a spoken syllable which is a morpheme. Unlike the alphabetic language in which there is a grapheme-phoneme correspondence, in Chinese the script-sound relationship is arbitrary. While an alphabetic system uses a small number of letters to represent the phonemic structure of the language, Chinese characters are represented by a large number of different graphic symbols.

Many people mistake Chinese characters as pictographic, where the character is an icon that resembles the thing they mean. In fact, only a very small number of Chinese characters are pictographic and the vast majority (about 90%) are pictophonetic (Ho & Bryant, 1997a), comprising a semantic component (the semantic radical) and a phonological component (the phonetic radical). The semantic radical indicates the meaning of a character and the phonetic radical maps to a syllable not a phoneme. Studies of the reading process among Chinese children have shown that children at an early age (usually from kindergarten to grade one) treat character as an unanalyzed whole and mainly use visual skills and rote memory to recognize characters. At this early stage, children learn words by their salient graphic features. After they have learned more words they reach a point where it becomes hard for them to differentiate graphically similar characters. They begin to use radical awareness to deconstruct characters, inferring the meaning of a character from the semantic radical and the pronunciation of a character from the phonetic radical as they proceed to higher grades (Ho & Bryant, 1997b; Shu & Anderson, 1997).

As it has been mentioned, in English and other alphabetic languages, there is a sound-form correspondence. While learning another alphabetic language such as French or Spanish, English speaking learners can apply their phonetic and phonological knowledge that they have acquired in English to the target languages. However, in Chinese, written scripts do not directly indicate the pronunciation of the character. Learners of Chinese usually engage in two kinds of reading processes. First, they rely on Pinyin, the Chinese pronunciation system.
in recognizing characters. The Pinyin system utilizes 26 Roman letters. The basic speech unit of Chinese is the syllable, which is composed of a consonant initial, a final (vowel or vowel combination) and a tone. To facilitate the learning of vocabulary and dialogues, the Pinyin is usually introduced to learners when they first begin learning Chinese. English speaking students have formed the habit of reading alphabetic languages or reading with sound mediation before they learn Chinese. Therefore, they add Pinyin to characters in the margin while they are asked to read a passage written in Chinese characters. They make meaning of the Chinese sentence by reading Pinyin instead of the characters. The reading process thus becomes slow and laborious.

The second type of reading process is that “learners of Chinese compensate for the lack of sound mediation by relying on the visual aspects of the Chinese character to aid in word recognition” (Everson, 1994, p. 6). Like Chinese children who first begin to learn reading Chinese characters, learners of Chinese rely much on the visual characteristics of character. When comparing native and nonnative readers, Hayes (1988) found that native speakers of Chinese pay attention to both the visual characteristics of characters and their semantic value in reading, while the nonnative speakers of Chinese have a heavy focus on the visual characteristics of characters. As Hayes (1988) stated:

Even highly proficient students of Chinese seem to be overly attentive to distinct features of printed characters at the sentence level. This excess attention to detail may be detrimental to their fluency in reading Chinese because it focuses more on the meaning of individual characters than on the meaning of the entire sentence or text. (p. 193)

Considering the large number of graphic symbols representing characters, learners of Chinese are very likely to be overwhelmed by the distinct graphic features of characters in a sentence. A large part of their cognitive capacity is occupied by word recognition and very little can be allocated to the syntactic features, the activation of prior knowledge, discourse knowledge and metacognition, which also interact with readers in skillful reading according to Bernhardt’s (1986) L2 text reconstruction model.

To sum up, facing the different writing system, learners of Chinese either rely too much on the Pinyin system for sound mediation or on the visual characteristics of characters.
Neither strategy leads to an efficient reading process. In reading Chinese, learners of Chinese spend most of their time in word recognition and very little time and cognitive capacity are left for readers to utilize their syntactic knowledge, discourse knowledge and prior knowledge to aid reading. It is possible that learners of Chinese might feel anxious due to their inefficient reading process.

**Foreign Language Reading Anxiety**

The affective factors including anxiety might explain some variances in second language reading performance as mentioned by Bernhardt (2000, 2003, 2005). She acknowledged the importance of affective factors in second language reading besides the other two important variables: L1 literacy and second language knowledge such as vocabulary knowledge, syntactic and discourse knowledge. She pointed out that studies conducted among cognate and noncognate languages, among children and adults had shown that L1 literacy accounted for 20% and second language knowledge accounted for 30% in a second language reading performance. Bernhardt (2005) commented that the 50% of the variance accounted for by these two variables was insufficient. She stated that “The role of affect and interest in second language text processing is yet to be understood” (p. 137).

According to Brantmeier (2005), “Bernhardt’s model is the first L2 reading model that directly attempts to explain transient variables, such as affect, in the L2 reading process” (p. 67). Anxiety, as an important affect, might exist in foreign language reading process and have an influence on the foreign language reading process and performance. Indeed, Yamashita (2004) reported that anxiety in reading was higher in L2 than in L1 and self-perception as a reader was more positive in L1 than in L2 among Japanese EFL students enrolled in his extensive English reading course. Therefore, it is worthwhile to explore how prevalent foreign language reading anxiety is among foreign language learners and how foreign language reading anxiety might influence foreign language reading performance.

Saito et al. (1999) first raised the concept of foreign language reading anxiety, the anxiety that learners experience in reading a foreign language. They stated two reasons why reading can be anxiety-provoking to foreign language learners: the unfamiliar writing scripts
and unfamiliar cultural background. As it was mentioned earlier, word recognition is a very important part in the reading process. It can be imagined that learners will feel immediately anxious when they attempt to attach meaning to the foreign language words written in a very unfamiliar script in a reading passage. Unfamiliar cultural background might not cause immediate anxiety as unfamiliar writing scripts do; however, learners might find at some point of reading that they can decipher the words and make meaning out of a sentence but still cannot make sense of the whole reading passage due to their unfamiliarity with the target language culture.

Saito et al. (1999) constructed a Foreign Language Reading Anxiety Scale (FLRAS) to measure students’ foreign language reading anxiety and made it clear that foreign language reading anxiety was related to but distinct from general foreign language anxiety. The theoretical range of the total score of the FLRAS was 20 to 100. Three hundred and eighty-three foreign language students enrolled in the first year French, Russian and Japanese participated in the study. A correlation coefficient of .64 was found between the FLRAS and the FLCAS by Horwitz et al. (1986), which measures foreign language anxiety. The correlation means that the two measures shared approximately 41% of the variance and 59% of the variance was not shared between the measures, indicating a differentiation between the two constructs. The mean and standard deviation of the FLRAS (M = 52.9, SD = 9.4) were slightly smaller than those of the FLCAS (M = 95.2, SD = 21.5). The theoretical range of the FLCAS is 33 to 165 and therefore the mean of 52.9 in FLRAS equals 87.3 in FLCAS. Saito et al. concluded that reading was anxiety provoking to some foreign language learners although participants in general reported slightly less reading anxiety than general FL anxiety.

Based on the two possible sources of foreign language reading anxiety, unfamiliar writing scripts and cultural backgrounds, Saito et al. (1999) hypothesized that foreign language reading anxiety level was dependent on specific target languages and it varied by target language. In Saito et al., learners of Japanese were the most anxious when reading, followed by the learners of French, with the Russian learners experiencing the lowest levels of reading anxiety. Saito et al. proposed that levels of foreign language reading anxiety seemed to be related to the specific writing systems.

Huang (2001) in her dissertation studied the foreign language reading anxiety of
Chinese EFL learners in Taiwan using the FLRAS developed by Saito et al. (1999). A total of 236 freshman enrolled in English classes participated in this study. Evidence showed that foreign language reading anxiety existed among the participants. In Huang’s (2001) study, the FLRAS scores of the Chinese university students had a mean of 60.8 and a standard deviation of 10.7. Compared to the mean score of 52.9 with a standard deviation of 9.4 obtained in Saito et al. among American foreign language learners, Huang concluded that Chinese foreign language learners seemed to experience more reading anxiety than American students in Saito et al. Similarly, Shi and Liu (2006) employed the FLRAS to investigate the foreign language reading anxiety among Chinese universities students learning English as a foreign language in Mainland, China. Chinese college students also reported slightly higher levels of foreign language reading anxiety (M = 57.02) than the American students in Saito et al.

The only study on foreign language reading anxiety among learners of Chinese in a second language learning situation was conducted by Zhang (2002) in a second language learning situation. The study included 90 overseas students who had learned Chinese for a year in China. Thirty students were European and American students. Thirty were Koreans and another thirty were Japanese. Zhang found that Koreans and Japanese were very similar in both foreign language anxiety (M = 98) and foreign language reading anxiety (M = 56). European and American students had lower scores in foreign language anxiety (M = 79) and foreign language reading anxiety (M = 54) than Korean and Japanese students. The average score per item of the FLCAS and the FLRAS among Japanese and Korean students was 3.0 and 2.8, respectively. The average score per item of FLCAS and FLRAS among European and American students was 2.4 and 2.75, respectively. Korean and Japanese students had a higher level of foreign language classroom anxiety than foreign language reading anxiety while European and American students had higher levels of foreign language reading anxiety than foreign language classroom anxiety. Fifty-one percent of European and American students believed that reading was the most difficult part in learning Chinese. Forty-three percent of European and American students were not satisfied with their reading skills. European and American students showed lower anxiety in reading methods but high anxiety in relation to general reading comprehension. Seventy percent did not feel upset when they met unknown grammar. Fifty-seven percent agreed that they understood each word but still
did not quite get what the author said. European and American students had less anxiety in the two cultural-related items than Korean and Japanese students. The reason might be that when they decided to learn Chinese, they expected that the Chinese culture was quite different from their own.

Although most studies (Huang, 2001; Saito et al., 1999; Shi & Liu, 2006; Zhang, 2002) have showed that foreign language reading anxiety exists among foreign language learners, some other studies show that foreign language reading anxiety is not much of a concern to advanced language learners and foreign language reading anxiety level is related to the perceived difficulty level of the reading material and following reading tasks (Brantmeier, 2005). Brantmeier (2005) studied students’ anxiety levels related to reading and reading comprehension tasks among 92 students enrolled in an advanced level Spanish grammar and composition course. In this course, students were required to read lengthy and authentic literacy works. As a course requirement, students read a short story before class and completed multiple choice questions. During class, students were randomly chosen to read the story aloud or answer comprehension questions orally. Only Spanish was allowed to be used in class. Four assessment tools were used, namely, multiple choice questions, written recall of reading passage, orally answering questions and reading aloud. A ten-item anxiety scale designed drawing from the FLRAS (Satiao et al., 1999) and the Reading Anxiety Scale (Young, 1999b) was used to measure students’ anxiety about reading and the reading comprehension tasks. Students did not show anxiety about reading in the current course but expressed anxiety about reading in the upcoming literature course. The perceived high difficult level of the literature course might be a cause for the expressed anxiety about reading in the literature course. Brantemier cautioned that his study did not have enough evidence to assert whether anxious feelings with advanced readers affect reading comprehension or not.

Some studies show that reading incurs less anxiety than other tasks or language skills (Abu-Rabia, 2004; Brantmeier, 2005) among foreign language learners because readers can employ reading strategies to aid comprehension. Brantemier’s (2005) results showed that of all language skills, speaking causes the most anxiety, followed by writing, then listening and reading. Abu-Rabia (2004) compared the anxiety related to spelling and reading and found
that students had more anxiety about spelling than reading. Abu-Rabia attributed the result to the fact that spelling was a productive skill that required more creativity than reading, as he stated in the following:

The difference between the reading comprehension test and the spelling test are related to the level of difficulty that each test demands. Reading comprehension is an interactive compensatory process where the reader uses comprehension reading strategies, top-down reading, clues in the text, and redundancy of the text and may apply much guess work based on prior knowledge or sentence context. But learners cannot use these strategies in spelling. There, they have to transfer phonological representations from working memory to orthographic units and such a process needs higher cognitive skills beyond the recognition level. (p. 718)

To sum up, foreign language reading anxiety is identified as a unique type of anxiety (Oh, 1990; Saito et al., 1999; Sellers, 2000). Foreign language reading anxiety is related to but distinct from general foreign language anxiety. Foreign language reading anxiety exists among foreign language learners and the reading anxiety level varies depending on the target languages (Huang, 2001; Saito et al., 1999; Sellers, 2000; Shi & Liu, 2006; Zhang, 2002). Foreign language reading anxiety seems to be related to the perceived difficult level of reading materials (Brantemeier, 2005).

**Foreign Language Reading Anxiety and Performance**

As MacIntyre (1995a) pointed out, “The effects of anxiety are not limited to problems encountered during speaking but pervade the entire language learning process” (p. 94). Studies in specific language skill anxiety have shown that high levels of anxiety could have adverse effects on students’ overall foreign language performance and also on the special language skills (Cheng et al., 1999; Saito & Samimy, 1996; Sellers, 2000). Two studies have shown that foreign language reading anxiety interferes with both the reading process and the reading performance (Sellers, 2000; Shi & Liu, 2006).

Sellers (2000) investigated the relationship between language anxiety and reading in Spanish as a foreign language. The more anxious students recalled less passage content than
the less anxious students. Reading comprehension strategies were also found to be different according to anxiety levels based on the analysis of the Think-aloud interviews. Highly anxious students tended to use more local strategies, such as focusing on vocabulary, attention to syntax and translation. Less anxious individuals approached the text more holistically than did their anxious counterparts. Shi and Liu (2006) found that levels of foreign language reading anxiety were negatively correlated with scores of both a large-scale English test and English reading comprehension among Chinese EFL learners.

Brantmeier (2005) reported a lack of significant correlations among anxiety factors and reading comprehension performance. The author attributed the non relation to the fact that students were familiar with the performance tasks: writing composition based on the reading passage. The students were accustomed to reading individually before coming to class and they were routinely asked to write compositions based on what they read. In Mills, Pajares and Herron (2006), 95 college students enrolled in third and fourth semester French courses participated in the study, among which 66 were females and 29 were males. Students filled in self-efficacy instruments and anxiety instruments and took reading/listening tests. Neither foreign language reading anxiety nor foreign language reading self-efficacy was significantly related to foreign language reading proficiency. Foreign language listening anxiety was negatively correlated to foreign language listening proficiency. Foreign language listening self-efficacy was positively correlated to foreign language listening proficiency among women but negatively correlated to foreign language listening proficiency among men. The non significant relation between foreign language reading anxiety and reading performance might be due to the fact that the reading task was simple and anxiety did not have an influence on simple tasks (MacIntyre & Gardner, 1991a; Spielberger, 1966).

To sum up, while some studies showed that foreign language reading anxiety negatively affects foreign language reading process and also foreign language reading performance (Sellers, 2000; Shi & Liu, 2006), some found no significant relationship (Brantemier, 2005; Milles, Pajares & Herron, 2006). The relation between foreign language reading anxiety and reading performance might be influenced by reading task types and reading text difficulty levels.
Foreign Language Anxiety and Background Variables

The second research question in this study asks about the relationship between foreign language reading anxiety and background variables. As it was mentioned earlier, research on foreign language reading anxiety has been very limited and very few studies have examined the relation between foreign language reading anxiety and background variables. To better inform this study, it is necessary to obtain implications from the previous literature on the more general foreign language anxiety. Researchers have explored the relation between foreign language anxiety and background variables such as course level, gender, course type (selected or required), task types and whether participants have been to the native country with the aim of having these variables help teachers better identify anxious students and find better ways to help anxious students. Mixed results have been found regarding the relations between anxiety level and background variables.

Gender

Gender is one of the background variables that are often discussed in relation to foreign language anxiety. The relationship of the gender to foreign language anxiety is still not clearly established in the literature as different studies have yielded mixed results. Some studies found that female learners experienced more foreign language anxiety than male students (Abu-Rabia, 2004; Bensoussan & Zeidner, 1989). Abu-Rabia (2004) found that female students had higher foreign language anxiety level than male students. In her study, the participants were seventh graders in Israel learning English as a second language. Female students and male students were in separate classes from two religious Jewish schools. Regression analysis showed that gender and teachers’ attitudes together explained 43% of the variance in anxiety. Gender was a stronger predictor than teachers’ attitudes. Bensoussan and Zeidner (1989) have also cautioned that

the expression of anxiety may be permitted or inhibited by culture. In certain societies, the show of emotion is considered a feminine characteristic, and discouraged in males. If so, the higher anxiety levels expressed by females, especially in groups may not only have been influenced by the testing situation, but they may also have been a
reflection of behavior patterns, permitted or encouraged by the culture in situations of stress. (p. 50)

Abu-Rabia (2004) reported that “females were more likely to report openly their feelings of anxiety, especially in a female environment” (p. 719). Therefore, it might be possible that male students did not report faithfully the anxiety they experienced being influenced by their culture of not openly expressing feelings.

In a study among Chinese EFL learners, Shi and Liu (2006) found that there was no significant gender difference in foreign language classroom anxiety. This result conforms to Aida (1994) who found no gender difference in foreign language classroom anxiety among learners of Japanese. Although Shi and Liu (2006) found no significant gender difference in foreign language anxiety, they found that male students had significantly higher foreign language reading anxiety than female students. It is worth noticing that female students also scored significantly higher than male students on a large scale standardized English test. It is possible that female students had lower foreign language reading anxiety due to their comparatively good performance in foreign language tests. Besides, females are usually considered as better foreign language learners than males in China and are more confident in reading in a foreign language than males (Shi & Liu, 2006).

It should be pointed out that the relation between gender and foreign language reading anxiety might be affected not only by the sociocultural context of foreign language learning but also by many other factors such as the use of learning strategies, reading habits, beliefs of foreign language reading, motivation, and foreign language proficiency. In a review of previous literature pertaining to gender and the use of learning strategies, Green and Oxford (1995) found that female foreign language learners tended to use more learning strategies than male foreign language learners. For instance, female students were more inclined to take advantage of learning opportunities, make accurate guesses, and handle emotional issues in language learning. Therefore, it is very likely that females know how to deal with their emotional disturbance such as anxiety in reading a foreign language and therefore their foreign language reading anxiety might be lower than males.

In a study of reading habits and reading patterns among adult Americans, Scales and Rhee (2001) found that more female participants liked to read the Bible and magazines than
male participants while male participants preferred to read reports. It is very likely that female and male readers’ different preferences for different styles of reading materials might influence their affective experiences in reading. For instance, if most of the materials in a foreign language class are familiar to females such as magazine articles, female students might feel less anxious due to their familiarity with the topic and genre.

In Lynch’s (2002) study among children in Canada, he found that girls generally had a higher self-perception of themselves as readers than boys. Girls felt better internally than boys while reading. Girls had more positive perceptions than boys towards feedback from peers and teachers. Girls enjoyed reading more than boys and generally read more than boys. Similar results were obtained in Baker and Wigfield (1999) in their study among fifth and sixth graders in the U.S. They also found that girls perceived reading more favorably than boys and obtained higher reading scores than boys. Attitudes towards reading tended to transfer from first language to second language reading (Yamashita, 2004). It is very likely that when students learn to read in a foreign language, they bring their attitudes towards reading from their first language to the foreign language. If girls enjoy reading in a second language, it is possible that they will experience less foreign language reading anxiety. It is also possible that girls’ serious attitudes toward reading might incur anxiety when they encounter reading comprehension difficulties in foreign language reading.

The anxiety level development in four language skills is also found different between female and male students. In Campell (1999), male students and female students reported equal listening anxiety two weeks before the course and two weeks after the course began and very minimal gender difference was found. However, in reading the percentage of females experiencing reading anxiety dropped by 7% whereas the percentage of males experiencing anxiety rose by 9% two weeks after the course began. To sum up, the relation between gender and foreign language reading anxiety is likely to be affected by many other variables such as learning strategies, reading beliefs, motivations, reading achievement and sociocultural backgrounds.
Course Level

Course level is another background variable that is often studied in relation to foreign language anxiety. Some studies showed that foreign language anxiety levels did not change across course level. In Coulombe’s (2000) study, 13% of the participants reported feeling some anxiety and the anxiety levels did not vary across course years. Belief about negative experience was found to be the best predictor of foreign language anxiety levels. Cheng’s (2002) study also showed no significant writing anxiety differences among freshmen, sophomores, and juniors.

A negative correlation between foreign language anxiety and proficiency level was also reported. Hussein (2005) found there was a small but statistically significant negative correlation between anxiety and the students' year in school. This finding supports those of MacIntyre and Gardner (1991a), who suggested that “as experience and proficiency increase, anxiety declines in a fairly consistent manner” (p. 111).

A series of studies conducted by researchers on language anxiety among learners of Japanese showed that the foreign language anxiety level of students increased as they proceeded to higher levels of classes (Saito & Samimy, 1996; Kitano, 2001; Samimy & Tabuse, 1992). Saito and Samimy (1996) found that advanced students scored the highest in anxiety and the intermediate students the lowest, with beginning students falling between the two. The researchers attributed the results to the change in the curriculum of advanced class, in which greater emphasis was placed on reading and orthographical tasks and less instructional time was allocated. In Hussein’s (2005) study of learners of Arabic, the third year students experienced a significantly lower level of anxiety than the first year students and the reason was “reading and orthographical tasks do not undergo a similar increase in difficulty, because the letters (alphabet) acquired during the initial period of instruction remain the same” (p. 215). Saito and Samimy also pointed out that

The assertion made by MacIntyre and Gardner (1991) that ‘as experience and proficiency increase, anxiety declines in a fairly consistent manner’ (p. 111) was more applicable to the learners of commonly taught or cognate languages than to learners of the other less commonly taught, noncognate languages. (p. 247)
The longitudinal study done by Samimy and Tabuse (1992) also lends support to the finding that learners of Japanese experience a higher level of anxiety as they advance to higher course levels. Samimy and Tabuse examined learners’ attitudes, motivation, risk taking and anxiety in relation to their final grades. Anxious students were found less likely to take risks in communicating in Japanese. Compared with the fall semester, students became more anxious, less motivated, less positive and feeling more awkward in speaking Japanese in the spring.

The relation between course level and foreign language anxiety has also been compared between commonly taught languages and less commonly taught languages. Kitano (2001) compared the findings of language anxiety study between Japanese and other commonly taught foreign languages such as French. Japanese learners’ anxiety level increased as the instruction continued (Samimy & Tabuse, 1992). The French FL learners’ anxiety level decreased as the instruction went on (Gardner, Smythe, & Burnet, 1977). Advanced level students had a higher level of anxiety than lower level students in Japanese courses (Saito & Samimy, 1996). Second year Arabic FL learners experienced the highest level of listening anxiety (Hussein, 2005). The anxiety of advanced level French students was the lowest (Gardner et al., 1977). The increased level of anxiety among Arabic and Japanese FL learners was attributed to the curriculum and course expectations (Hussein, 2005; Kitano, 2001). In second year Arabic, syntax and morphology became increasingly complex and more authentic material was introduced. In advanced level classes, more Japanese was used in explaining ideas and authentic communication skills became the focus while in elementary level classes the focus was on basic skills. Besides, the teachers had higher expectations for the advanced class students. Also, advanced students had acquired more knowledge and were more inclined to notice their own errors.

Studies among learners of Japanese have shown that students’ foreign language anxiety increases as students enter higher level classes (Kitano, 2001; Saito & Samimy, 1996). However, other studies among learners of French (Gardner, Smythe, & Burnet, 1977) found that the foreign language anxiety level decreased as students proceeded to higher level classes. This conflict in previous results justifies the necessity of examining the relation between course levels and foreign language reading anxiety in this study.
Experience with the target language country was also found to be related to foreign language anxiety. Several studies have shown that the experience of going to the target language country greatly reduces students’ anxiety level. For instance, Aida (1994) found that for Japanese FL learners, the experience of going to Japan had a significant impact on anxiety level. Similarly, in Huang’s (2001) study of reading anxiety among learners of English in Taiwan, students who had a plan of visiting an English speaking country in the near future tended to have lower levels of reading anxiety. However, Caruso (1996) reported that the experience of going to French-speaking countries did not produce a significant difference in anxiety levels of French learners.

One explanation for these conflicting results might be the different target languages in question. Chinese culture and Japanese culture are quite different from American culture in that the Chinese culture and Japanese culture represent Eastern culture whereas American culture represents Western culture. Therefore, going to the target language country and experiencing the target culture greatly help learners of Japanese in the U.S. and learners of English in Taiwan to understand the target culture. However, French culture and U.S. culture are similar in the sense that they both belong to Western culture. Learners of French in the U.S. might have already had a good understanding of French culture even before they went to France. Therefore, going to France would not help them much in understanding the target culture. In this study, time spent in China is included as a background variable to examine the relation between this variable and foreign language reading anxiety level among learners of Chinese. The purpose is not only to find out how time spent in China is related to foreign language reading anxiety level but also the reason why time spent in China makes or does not make a difference in terms of foreign language reading anxiety.

Besides gender, course level, time spent in the target language country other background variables such as perceived language ability and text difficulty is also found to have an influence on students’ foreign language anxiety level. Foreign language reading anxiety level was found to increase with students’ perceptions of the difficulty of reading in their foreign language (Saito et al., 1999). Those who perceived reading the target language
as relatively difficult had significantly higher levels of reading anxiety than those who perceived it as somewhat difficult, followed by relatively easy. Comeau (1992, as cited in Aida, 1994) also mentioned that anxiety interacted with learner variables such as students’ expectation of grades and their own perception of language ability. Aida (1994) suggested that future study should investigate the relationship between anxiety and other students’ characteristics such as learners’ beliefs about their own language ability, self-esteem, help-seeking behaviors, and knowledge and use of language learning strategies.

In reviewing studies, it is found that background variables such as gender, proficiency level, whether have been to the target country are related to general language anxiety and foreign language reading anxiety in particular. These studies have yielded mixed results. For instance, gender is not related to foreign language anxiety level in some studies (Aida, 1994) while other studies either find females have more anxiety than males (Abu-Rabia, 2004) or males have more anxiety than females (Shi & Liu, 2006). It is quite possible that the relations between these variables and foreign language anxiety level vary depending on many variables such as the target languages, the specific languages skills under examination, motivation, achievement and the sociocultural background of learners. The purpose for studying the relation between these background variables and foreign language reading anxiety is not only to reveal the relation itself but also to find the reasons why foreign language reading anxiety level is related to or not related to these variables. To deepen the understanding of the nature of foreign language reading anxiety, the following section explores the possible sources of foreign language anxiety in general and foreign language reading anxiety in specific.

**Sources of Foreign Language Anxiety and Foreign Language Reading Anxiety**

To make this study more informative to foreign language teachers, it is necessary to find out not only the relation between the background variables and foreign language reading anxiety but also the possible sources of foreign language reading anxiety so that teachers can better choose reading materials and reform their reading instruction. This section reviews the existing literature about sources of foreign language reading anxiety. Before investigating the sources of foreign language reading anxiety, this section first discusses the sources of general foreign language anxiety and also its implication on the study of sources of foreign language
Sources of Foreign Language Anxiety in General

Horwitz et al. (1986) points out that anxiety comes about when learners have to communicate in their second language that is imperfect and yet to be developed. In this case, foreign language anxiety is mostly related to the oral aspects of language, listening and speaking. Similar to Horwitz et al., most studies exploring the sources of anxiety have showed that speaking in the foreign language or speaking the foreign language in front of others are anxiety-provoking (e.g., Bailey, 1983; Young, 1990). Studies concerning anxiety related to other language skills were not conducted until the 1990s. Therefore, research on foreign language anxiety has major implications for the understanding of sources of foreign language reading anxiety.

Communicative task or speaking performance has been identified as the strongest source of language anxiety (Daly, 1991; Horwitz et al. 1986; Phillips, 1990, 1992; Price, 1991; Young 1990, 1991, 1992). Daly (1991) gave five explanations for the development of communication apprehension in first language: genetic predisposition, experience (reinforced and punished) related to the act of communicating, the unpredictability of other’s responses to a person’s communication, the early communication skill acquisition, and adequate communication model.

The six sources of foreign language anxiety summarized by Young’s (1991) investigation have been widely accepted, especially in explaining anxiety related to speaking a foreign language. The six sources she proposed are personal and interpersonal anxieties, learner beliefs about language learning, instructor beliefs about language teaching, instructor-learner interactions, classroom procedures and language testing.

Personal and interpersonal anxieties mainly refer to low self-esteem and competitiveness. Students having low self-esteem tend to have more anxiety than those who have high self-esteem. Competitiveness was also identified by Bailey (1983) as one source of foreign language anxiety from a diary study. In reading her diaries, Bailey noticed that she often compared herself to the other students in the class although she would not characterize
herself as a competitive learner. The fear of public failure seemed to have been caused by her comparing herself with other students. She felt anxious when she did not compare herself favorably with the others. She also felt anxiety after she made errors on material that she felt she should have known. That is, she felt anxious when there was a discrepancy between an idealized self-image and a realistic assessment of herself as a language learner. To explore if her findings could be applied to a larger population of language learners, Bailey analyzed 10 other papers that used diary studies in foreign language learning. The analysis of these 10 diaries provided more evidence that language classroom anxiety can be caused and/or aggravated by the learner’s competitiveness when he saw himself as less proficient than the object of comparison. Bailey’s finding provides one possible source for reading anxiety: comparing oneself to others or to the “imagined self.” A student might feel anxious in reading when he thinks that others understand better than he does or when he feels that he should understand the reading materials but actually he cannot.

Learner beliefs about language learning are another source of foreign language anxiety (Horwitz, 1988; Price, 1991; Young, 1991). When learners hold unrealistic beliefs about language learning, they are more likely to feel anxious. It is very common for foreign language learners to hold unrealistic expectations about foreign language learning. Horwitz (1988) found that students in her study in general had unrealistic expectation that did not match the classroom reality based on the results from the Beliefs about Language Learning Inventory (BALLI). Many learners believed that learning a foreign language was merely a matter of translating from English to the target language. The most important part was to memorize vocabulary and grammatical rules. In Price’s (1991) study, students believed that their language skills were not as good as others and language learning needs a special aptitude. In terms of reading, if learners believe that they should know each word in the passage in order to understand the passage, they will feel anxious when they encounter new words in reading.

Instructor beliefs about language teaching are another source of language anxiety in that the social context that the instructor sets up in the classroom has a big impact on students’ affective state (Young, 1991). Some teachers feel that they cannot have students do pair work or group work in the fear of losing control of the class. Teachers’ role as a
dominant speaker in the class may arouse anxiety on the part of students. Teachers’ constant correction of students’ mistakes might make students feel anxious as well. When these ideas are applied to reading instruction, one can imagine that if group discussion is allowed and teacher assistance is available during reading practice in class, students might feel less anxious in reading.

Students’ fear of negative evaluation from teachers and peers also contributes to anxiety. Besides, anxiety can also come from language testing (Horwitz et al., 1986; Kitano, 2001; Price, 1991; Young, 1990, 1991). When asked about the aspects of foreign language classroom that bothered the most in Price’s (1991) interview with anxious foreign language students, “they all responded that the greatest source of anxiety was having to speak the target language in front of their peers. They all spoke of their fears of being laughed at by others, of making a fool of themselves in public” (p.105). Pressure from peers, concerns about making errors in pronunciation, the frustration of not being able to communicate effectively were the major sources reported by Price’s interviewees. Similarly, Kitano (2001) identified two sources of anxiety in Japanese as a foreign language classroom, namely, fear of negative evaluation and self-perceived speaking ability. The relationship between fear of negative evaluation and anxiety level was stronger among advanced students than among intermediate and elementary level students. The fear of negative evaluation influenced anxiety level more strongly among those who had been to Japan than those who had not been there. Anxiety of male students was influenced by their self-perception of speaking ability while anxiety of female students was not influenced by their self-perception of speaking ability.

While most studies recognized speaking as the major source of foreign language anxiety, Young (1990) proposed that speaking in the foreign language was not the source of student anxiety but speaking in front of the class was. Young used questionnaires to investigate beginning Spanish students’ perspectives on anxiety and speaking. His investigation centered on the questions of whether speaking activities made students nervous and why speaking made students anxious. One hundred and thirty-five university-level beginning Spanish students and 109 high school students answered a questionnaire designed to identify sources of anxiety over speaking in the foreign language. The questionnaire had three sections. The first section asked students to agree or disagree with twenty-four items
related to language anxiety. The second section asked students to indicate their level of anxiety related to certain in class practices and the third section asked students to identify what characteristics of instruction helped reduce language anxiety. The study found that speaking “on the spot” and “in front of the class” produced the most anxiety from the students’ perspectives. Students reported decreased anxiety in speaking foreign languages during pair work or small-group work. Instructor characteristics such as friendliness, good sense of humor, patience and relaxation can help students reduce their anxiety about speaking in class. Instructor practices such as not making a big deal over mistakes, letting students volunteer answers, and letting students work in small groups were also anxiety reducing. Young’s study showed that teachers’ characteristics and practices play a major role in reducing students’ anxiety. The implication for the present is that teachers’ characteristics and practices might influence the extent to which students feel anxious about reading in Chinese.

Teachers’ comments also played an important role in students’ language learning attitudes (Price, 1991; Young, 1991). From the interview with highly anxious students, Price (1991) found that there seemed to be a critical event in the language class after which the learners became anxious. One interviewee, Joan, talked about her horrible story on the first day of class. “The instructor came in ‘speaking French a mile a minute’” (p. 104). Some teacher characteristics alleviate students’ anxiety while some others have increased student anxiety. Openly discussing the importance of making mistakes helps to alleviate students’ anxiety. Since fear of negative evaluation, either from peers or from teachers, is one major source of anxiety, one can anticipate that students might experience anxiety in reading if they are asked to give answers to the comprehension questions that usually follow the reading activity. The comments and evaluation from peers and teachers following their performance might cause anxiety in the reading process.

**Task types** or test types have also been identified as a source of foreign language anxiety (Kim, 1998; MacIntyre & Gardner, 1994a; Madsen, Brown & Jones, 1991; Young, 1994). Different task types have been found to incur different levels of anxiety. Kim (1998) found that Korean EFL students experienced higher levels of anxiety in communicative contexts than in a traditional context. In the communicative context more speaking activities and more active participation were required than in the traditional context. MacIntyre and
Gardner (1994a) found that students experienced more anxiety in a thing category test than in a free speech task. The explanation might be that the free speech task resembled the real life expectations of language use, in which students were allowed to use the strategic competence that Canale and Swain (1980) identified in their model of communicative competence. However, in the thing category test, there was only one right answer and the task was more related to the artificial constraints of language use in the classroom practices (Young, 1994).

Students hold different views toward different test types and different test types cause different levels of anxiety. In Madsen, Brown and Jones (1991), a high significant effect of language test type was found on the affective ratings. A culture true-false test was considered by level 101 students as easy and pleasant but not seen as a valid and reliable test type. The best students were most negative about and doubted its adequacy to reflect German knowledge. Dictation and grammatical manipulation were considered as being relatively easy and pleasant but translation tests were difficult and frustrating. Dictation and true-false culture tests were generally the least anxiety-producing while translation produced the most anxiety and was the least favored, particularly in beginning classes.

Different after-reading tasks cause different levels of anxiety in reading a foreign language as well. Brantmeier (2005) examined students’ anxiety level about reading and four reading comprehension tasks: multiple choice questions, written recall of reading passage, orally answering questions and reading aloud. Students were more anxious about the post L2 reading oral and written tasks than the reading itself. Brantmeier commented, “Different assessment tasks (oral and written) may require different types of reading, and consequently may invoke different types of anxiety” (p. 77).

To sum up, the sources of general foreign language anxiety such as competitiveness, learner beliefs, instructor beliefs, teachers’ comment, fear of negative evaluation, and classroom procedures might be the sources of foreign language reading anxiety as well. Task types incur different levels of anxiety and therefore, the perceived difficulty of reading tasks might be one source of foreign language reading anxiety.
Sources of Foreign Language Reading Anxiety

Besides investigating the sources of foreign language classroom anxiety in general, some scholars also studied the sources of anxiety related to other language skills than speaking (Cheng, 2002; Saito et al., 1999; Vogely, 1998). This section discusses the possible sources of foreign language reading anxiety by reviewing the studies done on foreign language reading anxiety. Sources of foreign language listening anxiety and foreign language writing anxiety are also discussed with the hope that these studies can bring insights to the study of foreign language reading anxiety sources.

Many aspects of foreign language learning might incur anxiety in students as Hussein (2005) stated:

The unfamiliar writing and phonological systems as well as the foreign cultural contexts of the less commonly taught languages (LCTL) such as Arabic, Japanese or Chinese, appear to produce greater anxiety in learning many LCTLs than the more commonly taught languages. (p. 206)

Cultural context, unfamiliar scripts, grammar, new words, assessment tasks and worry about the reading effect have been identified as the major sources of foreign language reading anxiety (e.g., Huang, 2001; Oh, 1992; Saito et al., 1999; Shi & Liu, 2006; Zhang, 2002).

Saito et al. (1999) hypothesized two causes of foreign language reading anxiety, unfamiliar scripts and culture. They anticipated that the learners of Japanese would rate the culture-related items and writing symbols related items high. The findings seemed not to support the hypothesis. For the item “I am worried about all the new symbols you have to learn in order to read Japanese/French/Russian,” significantly fewer learners of Japanese (40%) than French (62%) and Russian (86%) agreed or strongly agreed. Sixty-eight percent learners of French and 94% learners of Russian agreed or strongly agreed with statement “by the time you get past the funny letters and symbols in French/Russian, it is hard to remember what you are reading about” but only 18% of the learners of Japanese agreed or strongly agreed with the statement. Also, only a low percentage of learners of Japanese agreed or strongly agreed with the culture-related items. The learners of Japanese actually perceived less difficulty in the culture and symbols related items than learners of French and Russian.
did. The researchers suggested that perhaps those students who chose to take Japanese were prepared for the challenges of a highly different culture and writing system and they concluded that the causes of reading anxiety were somewhat perplexing.

Culture seems not to be a cause for anxiety among Chinese EFL students in Huang’s (2001) study but unknown words and overall comprehension are. Students showed confidence of their familiarity with American and English culture. Huang attributed their confidence to their exposure to Western culture in recent decades through mass media like the Internet and television commercials. Only 28% of the students strongly agreed with item 17 in the FLRAS, which indicated that Chinese students generally did not express discomfort with reading aloud in English. Chinese EFL students did not perceive reading as being more difficult than other language skills as indicated in item 16 (15%). Due to the grammar-translation method, 52% Chinese EFL students agreed or strongly agreed with on item 6 which says that one gets upset when meeting with unknown words. Students were worried about the overall meaning of the text, as shown in items 1, 2, 3 5, and 10 in the FLRAS.

The hypothesis about the causes of foreign language reading anxiety raised by Saito et al. (1999) was supported by Shi and Liu’s (2006) study, in which culture-related items were identified as one of the major sources of foreign language reading anxiety. Shi and Liu employed the FLRAS to investigate the foreign language reading anxiety among Chinese EFL students in Mainland, China. Two hundred and eleven sophomores were selected based on stratified random sampling. The results showed that Chinese EFL students experienced slightly higher levels of foreign language reading anxiety than the American students in Saito et al. (1999). Students rated the cultural related items high and believed that before reading they should first be familiar with the foreign culture. Generally, they had no confidence in reading and were dissatisfied with their reading ability.

Grammar and worry about the reading effect were identified as sources of reading anxiety in Zhang (2002). She conducted a foreign language reading anxiety study among 90 overseas students learning Chinese in China. Reading caused more anxiety for European and American students than for Korean and Japanese students. European and American students showed lower anxiety in reading methods but high anxiety in general reading comprehension.
More Korean and Japanese students became upset when they met unknown grammar structures. Fifty-seven percent European and American students agreed that they understood each word but still did not quite get what the author said. European and American students had less anxiety in the two cultural-related items than Korean and Japanese students, which conformed to the finding in Saito et al. (1999). Therefore, grammar and culture seem not to be the sources of reading anxiety while worry about the reading effect might be a source of reading anxiety among American students. Zhang explained that American students were generally confident and carefree, which might be a reason for their not feeling anxious about the unknown cultural elements in a reading passage.

Reading task type is also a source of foreign language reading anxiety (Brantmeier, 2005; Oh, 1992). As Oh (1992) investigated the effect of reading assessment methods on anxiety level, he found that cloze and think-aloud were more anxiety provoking than comprehension and recall tasks. Oh explained that this might be due to three reasons: students’ familiarity with the assessment methods, students’ perception of the validity of an assessment method, and the difficult level of a specific text. Cloze and think-aloud might be less familiar to students and thus perceived as more difficult than other reading tasks.

Sources of listening anxiety have also been identified by several researchers (Kim, 2000; Vogely, 1998). Based on answers from the retrospective interview protocol and open-ended responses, Kim (2000) divided the causes of listening anxiety into three categories: characteristics of text, personal characteristics, and characteristics related to listening process. In Vogely’s (1998) study, students enrolled in the first three semester of university-level Spanish class reported the sources of listening comprehension anxiety and strategies that they used to cope with the anxiety. The author classified the reported sources of listening comprehension anxiety into four categories: input, processing-related aspects, instructional factors and attributes of the teacher or learner. The characteristic of input was claimed to be the major source of listening comprehension anxiety which included the nature of speech, level of difficulty, lack of clarity, lack of visual support and lack of repetition. Some of the sources identified for foreign language listening anxiety might also be the sources for foreign language reading anxiety because both listening and reading are mainly involved in input activities. For instance, the level of difficulty of the reading passage might
be a source for foreign language reading anxiety.

Sources of foreign language writing anxiety have been studied at different levels. Cheng et al. (1999) found that four dimensions of learner differences explained more than half of the variance 57% in L2 writing anxiety: confidence in English writing, English writing motivation/attitude, extracurricular effort to learn English, and English writing achievement. Lee and Krashen (1997) noted that writing apprehension might be caused by a poor composing process. Therefore, the lack of confidence and the poor composing process were the possible major factors that led to writing apprehension. Similarly, in reading, if students are not confident in reading they might feel more anxious. Inappropriate reading strategies are also possible causes for reading anxiety. To sum up, the previous literature has proposed unfamiliar writing systems, cultural contexts, grammar, new words, assessment tasks, and the difficulty level of reading passages as the possible sources of foreign language reading anxiety.

Summary

This chapter was designed to clarify the concept of foreign language anxiety and review the effect of foreign language anxiety on foreign language performance. The conceptual framework of foreign language reading anxiety with focus on its two major characteristics was discussed. Foreign language reading anxiety is related to but distinct from foreign language anxiety, and foreign language reading anxiety varies according to specific target languages. The review also shows that previous literature has a heavy focus on speaking while anxiety related to specific language skills has not been thoroughly explored. The fact that foreign language reading anxiety also exists among some foreign language learners (Huang, 2001; Saito et al., 1999) urges researchers to enrich the understanding of foreign language reading anxiety by expanding the scope from the study of alphabetic language as target languages to logographic languages in foreign language reading anxiety research. The relation between foreign language anxiety and background variables such as gender, course level and time spent in the target country was also discussed. Finally, to deepen the understanding of foreign language reading anxiety, the sources of both foreign language anxiety and foreign language reading anxiety were explored.
CHAPTER THREE

METHOD

This chapter first presents background information about the settings, participants, instructors and instruction. The data sources, data collection procedures, scoring method and data analysis are provided in line with the research questions. This chapter also discusses the issues of validity of survey research including measures that this study takes to ensure the validity.

To investigate issues related to foreign language reading anxiety, three research questions were explored:

1. What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States?

2. What background variables are related to foreign language reading anxiety?
   a. Is gender related to foreign language reading anxiety?
   b. Is course level related to foreign language reading anxiety?
   c. Is time spent in China related to foreign language reading anxiety?

3. Is there a relationship between foreign language reading anxiety and foreign language reading performance?

In light of the research questions, a survey research design was adopted. The research method employed in this study also drew on the traditions of research in foreign language anxiety. Survey research has been widely used in foreign language anxiety studies (e.g., Horwitz et al., 1986; Saito et al., 1999). Survey research is good at “pinning down the contemporary facts” (Ebel, 1980, p. 130). Considering that the main purpose of this study was to reveal the anxiety level among learners of Chinese in reading Chinese and the correlation between foreign language reading anxiety and background variables and reading performance, the survey research design was appropriate. The survey research was conducted during the fall 2007 at the Florida State University.
The participants of this study were recruited from students enrolled in Chinese courses at Florida State University (FSU), a large public research university in the southern United States. According to the description of students at the university’s website, the university had diverse students from all 50 states in the U.S. and 137 countries. Twenty-five percent of students were minority students and fifty-seven percent were women. The university policy required all students obtaining a Bachelor of Arts (BA) degree to complete a classical or modern foreign language through the 2000 level (2220 or equivalent) as was stated in the Florida State University 2007-2008 General Bulletin Undergraduate Edition (p. 66). For students who had no previous experience with the selected language, the course work would include 1120 (first semester language course), 1121 (second semester language course) and 2220 (third semester language course).

The East Asian Language Program (including Chinese and Japanese) at FSU was housed in the Department of Modern Languages. The department offered language courses in Arabic, Hebrew, Chinese, German, Italian, Japanese, French, Slavic, Spanish and Portuguese to undergraduate and graduate students. When the study was conducted, the East Asian Language program (including Chinese and Japanese) has recently been approved to have the capacity to accept majors in either Chinese or Japanese. A survey conducted in the spring semester 2007 by the Department of Modern Languages at FSU showed that more than 50 students who were enrolled in the spring semester Chinese classes had an intention to choose Chinese as their major in the fall semester 2007 (F. Lan, personal communication, April, 2007). Chinese ranked second among the foreign languages that students wanted to choose as their major.

Three types of courses were offered through the Chinese program at the time. The large bulk of classes were related to languages skills and included: Elementary Chinese I (Chi 1120) and II (Chi 1121), Intermediate Chinese (Chi 2220), Chinese Writing and Grammar (Chi 2300), Chinese Short Stories and Reading (Chi 3501), Business Chinese I and II (Fol 3901), Reading in Chinese History (Chi 4503), and Reading in Chinese Literature (Chi 4930) according to the ascending difficulty levels. Culture-related and translation-related courses,
Altogether 174 students were enrolled in all the Chinese language skill classes in fall 2007 including Elementary Chinese I and II, Intermediate Chinese, Chinese Short Stories and Reading, and Reading in Chinese History based on the university’s registration data. Of the 174 enrolled, 138 students participated in this study. These students were the ones that were present in the Chinese classes on the day when the researcher went into their classes to collect data. Among the 138 participants, thirteen students were from the two above-intermediate classes, Chinese Short Stories and Reading and Reading in Chinese History. These thirteen students were excluded from this study due to the following reasons. First, the small number and unbalanced distribution of this group could not be included as one separate group in the subsequent 2*2*2 Factorial ANOVA analysis. All the male students in this group had been to China and therefore there was an empty cell in the 2*2*2 factorial ANOVA analysis. Second, this group of students could not be combined with the intermediate class students as one group because they used different textbooks, different class schedules, and different emphasis in instruction. The participants of this study were the 125 students from Elementary Chinese I, Elementary Chinese II, and Intermediate Chinese.

Table 1 shows some basic information about the participants including: age, gender, ethnicity, Chinese course level, year in college, native language, and experience with China. As shown in Table 1, 43.2% of the participants were female and 56.8% were male. In terms of age, a majority of participants were between eighteen and twenty-two (88%) and 12% of the participants were in the age range of twenty-three and thirty. In terms of ethnicity, 57.6% of the participants were white, 8% were black, 23% were Asian, 10% were Latino, 4.8% were multiracial and 4.8% marked other. Of the 125 participants, 69 were enrolled in Elementary Chinese I, 23 in Elementary Chinese II and 33 in Intermediate Chinese. 9.6% of the participants were freshmen, 31.2% sophomore, 31.2% junior, 26.4% senior and 1.6% master. English was the native language for 91.2% of the participants. Spanish, Italian, Cantonese, French, and Portuguese were the native languages that the other 8.8% participants spoke. Those whose native language was not English all reported that English was their first foreign language and they ranked their proficiency in English as near native proficiency. 92% participants reported that Chinese was their second foreign language. Spanish and French
were the first foreign languages reported by most of the participants. 61.6% participants indicated that Spanish was their first foreign language and 8% participants indicated that French was their first foreign language.

Table 1
Summary of Participant Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td>54</td>
<td>43.2</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>71</td>
<td>56.8</td>
</tr>
<tr>
<td>Age</td>
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<td>10</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>41</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>31</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>18</td>
<td>14.4</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>10</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>23-30</td>
<td>11</td>
<td>12.0</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White</td>
<td>72</td>
<td>57.6</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>8</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>23</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>Latino</td>
<td>10</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Multiracial</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>Current Chinese class</td>
<td>Chi1120</td>
<td>69</td>
<td>55.2</td>
</tr>
<tr>
<td></td>
<td>Chi1121</td>
<td>23</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>Chi2220</td>
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<td>26.4</td>
</tr>
<tr>
<td>Year in college</td>
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<tr>
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<td>Sophomore</td>
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<td>31.2</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>39</td>
<td>31.2</td>
</tr>
<tr>
<td>Variable</td>
<td>Category</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Senior</td>
<td>33</td>
<td>26.4</td>
<td></td>
</tr>
<tr>
<td>Master</td>
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<td>1.6</td>
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<tr>
<td>Native language</td>
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</tr>
<tr>
<td></td>
<td>Spanish</td>
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<tr>
<td></td>
<td>Italian</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Cantonese</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>French</td>
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<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Portuguese</td>
<td>1</td>
<td>0.8</td>
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<tr>
<td>Chinese as the second foreign language</td>
<td>Yes</td>
<td>115</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Have been to China</td>
<td>Yes</td>
<td>36</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>89</td>
<td>71.2</td>
</tr>
<tr>
<td>Purpose of going to China</td>
<td>For studying</td>
<td>24</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>12</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>For visiting,</td>
<td>21</td>
<td>58.3</td>
</tr>
<tr>
<td></td>
<td>teaching, family</td>
<td>3</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>and business</td>
<td>5</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>purpose</td>
<td>89</td>
<td>71.2</td>
</tr>
<tr>
<td>Length of staying</td>
<td>&lt;1 month</td>
<td>7</td>
<td>19.4</td>
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<tr>
<td></td>
<td>=2 months</td>
<td>21</td>
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<td>8.3</td>
</tr>
<tr>
<td></td>
<td>&gt;3 months</td>
<td>5</td>
<td>14.0</td>
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<tr>
<td>Plan to go to China</td>
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<td>121</td>
<td>96.8</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>3.2</td>
</tr>
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</table>
When asked about their experience with China, 36 participants reported that they had been to China and 89 participants reported no visits to China prior to this study. Of the 36 participants who had been to China, 24 indicated that their purpose of being to China was to study Chinese and 12 reported purposes such as sightseeing, teaching, family, and business. Seven students stayed in China for less than a month and the purpose for their going to China was not language learning. Twenty one students were in China for about two months and three students were there for about three months. These students were mostly in China learning Chinese through the Study Abroad Program that FSU offered every summer. Five students stayed in China for three months and most of them had families or business ties in China. When asked about whether they were planning to go to China, 121 participants responded that they were. Seventeen out of 18 students who had been to China in the intermediate class went to China to study the Chinese language. Only five out of the 18 students who had been to China in the elementary class went to China to study Chinese.

There were five instructors teaching the five Chinese courses offered at FSU in fall 2007. Table 2 gives the basic information about the instructors.

Table 2

<table>
<thead>
<tr>
<th>Instructor</th>
<th>1</th>
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<tbody>
<tr>
<td>Course(s)</td>
<td>Chi4503</td>
<td>Chi1120</td>
<td>Chi1121</td>
<td>Chi1120</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td>Chi2220</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Chi3501</td>
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<tr>
<td>Age</td>
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<td>30-34</td>
<td>30-34</td>
<td>30-34</td>
<td>25-29</td>
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<td>Gender</td>
<td>Male</td>
<td>Male</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Native language</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
</tr>
<tr>
<td>First foreign language</td>
<td>English</td>
<td>English</td>
<td>English</td>
<td>English</td>
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</table>
Among the five Chinese instructors there was an associate professor, an instructor and three teaching assistants. All of them were native speakers of Chinese and spoke English as their first foreign language. They all had taught English at the university level in China for several years. The associate professor obtained his doctoral degree in Comparative Literature in a university in the U.S. and had taught Chinese for thirteen years in the U.S. The instructor obtained his master’s degree in Teaching English to Speakers of Other Languages (TESOL) in a university in the U.S. and had taught Chinese in the U.S. for six years. The three teaching assistants were all doctoral students at FSU. Two of them were first-year and second-year doctoral students in the Humanities department. The first-year doctoral student obtained her master’s degree in American Literature in a university in China. The second-year doctoral student obtained his master’s degree in Translation in a university in China. The third

<table>
<thead>
<tr>
<th>Instructor</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Highest degree</td>
<td>Doctor in</td>
<td>Master in</td>
<td>Master in</td>
<td>Master in</td>
<td>Master in</td>
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<tr>
<td></td>
<td>Comparative Literature</td>
<td>TESOL</td>
<td>Translation</td>
<td>American Literature</td>
<td>Translation</td>
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<td>N/A</td>
<td>Humanities</td>
<td>Humanities</td>
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<td>Instructor</td>
<td>Teaching assistant</td>
<td>Teaching assistant</td>
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<td>Experience with teaching English</td>
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<td>9 years</td>
<td>8 years</td>
<td>3 years</td>
</tr>
<tr>
<td>Experience with teaching Chinese</td>
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<td>6 years</td>
<td>1.5 years</td>
<td>0.5 year</td>
<td>2.5 years</td>
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</tbody>
</table>
teaching assistant was the researcher of this study and she was a fourth year doctoral student in Multilingual/Multicultural Education. She also obtained her master’s degree in Translation in a university in China. Prior to studying in the U.S., all of the three teaching assistants had taught English in universities in China for several years. Instructors who were teaching different sections of the same course used the same syllabus, textbooks, materials, schedules and tests.

**Instruction**

This section first introduces the textbooks used in the elementary and intermediate Chinese class and then goes to the schedules and instruction of each course. The textbook for both the Elementary and Intermediate Chinese classes was *Integrated Chinese* (Part I and Part II) compiled by Yao et al. (2005). The textbook was arranged by topics, which were introduced through two dialogues related to the topic. Each chapter included new vocabulary, the character text of the two dialogues, the Pinyin text of the dialogues, an English translation of the dialogues, grammar, and pattern drills. The textbook consisted of two parts, Part I and Part II. In Part I, the Pinyin text of the dialogue went right before the character text of the dialogue. Figure 1 shows a typical dialogue in *Integrated Chinese* Part I.

In *Integrated Chinese* Part II, the Pinyin text of the dialogue appeared at the end of each chapter. Figure 2 shows a typical dialogue in Part II. Altogether twenty-three chapters were included in Part I and Part II. According to the schedule, the Elementary Chinese I class would complete eight chapters, Elementary Chinese II eight chapters and Intermediate Chinese seven chapters. Elementary Chinese II students learned four chapters from Part I and four chapters from Part II. Therefore, Elementary Chinese II students need to adjust themselves from reading character text with the mediation of Pinyin text to reading character text without the mediation of Pinyin text.
Figure 1. A dialogue from Integrate Chinese Part I
Both Elementary Chinese I and Elementary Chinese II students met four times a week for a 50 minutes class from Monday to Thursday. On Friday, the class was offered online, in which the instructor posted reading or writing assignments on the Blackboard site for students to do on a computer at their convenience. Except for the “Introduction” part on pronunciation and character-writing, approximately seven class periods were spent on each
chapter. Students finished learning the Pinyin and radicals in the first two weeks and then proceeded to the learning of dialogues in the following chapters. Since dialogues were written in both Pinyin and characters in *Integrated Chinese* Part I, students began learning to read the character text of the dialogues as early as the third week from the start of the Chinese course. Instructors usually encouraged students to read the character dialogues without referring to the Pinyin text since students would have to read the character text only as they moved on to higher-level classes.

Both Elementary Chinese I and II covered eight chapters. By the time the participants filled in the instruments for this study, the Elementary Chinese I students had learned the Introduction chapter and the first four chapters. They had learned the Chinese pronunciation system Pinyin, the fifty basic radicals and about two hundred Chinese characters. Elementary Chinese II students had learned twelve chapters including what they had learned in Elementary Chinese I. They had learned about six hundred Chinese characters. For both Elementary Chinese I and II, the final grade was based on attendance and participation (15%), assignments (20%), quizzes and chapter tests (40%), and the semester exam (25%). Reading comprehension was an important component in the chapter tests and in the semester exam, which usually accounted for 20% to 30% of the total score.

The Intermediate Chinese course was organized in a very similar way to the Elementary Chinese course but the instruction time was shortened. Students still met for a 50-minute class period from Monday to Thursday but there was no online class on Fridays. Every other Thursday, there was an online class. Seven class periods were devoted to each chapter and the chapter was learned in the same schedule as in the Elementary Chinese.

More supplementary reading materials were included in the Intermediate Chinese course. Besides the dialogues and reading passages in the workbook, three Chinese short stories were introduced to the students. These short stories were usually parables adapted from authentic Chinese reading materials. These supplementary reading materials included more new words and were more challenging to students than the reading materials in their textbook and workbook. One parable took one class period. Students read the parables in groups and then answered questions based on the parable and then discussed how the parable could be applied to their life.
By the time the questionnaire and instruments for this study were administered, Intermediate Chinese students had learned twenty chapters (including the previous two semesters) and two parables. Overall, the students had learned about 800 Chinese characters. Again, reading comprehension accounted for 15% to 30% of the chapter tests and final exam in the form of open-ended questions or reading comprehension multiple choice questions. The final grade was also based on attendance and participation (15%), assignments (20%), quizzes (20%) and chapter tests (30%), and the semester exam (15%). Table 3 gives specific information about what the Elementary I, II and Intermediate students had learned from the Chinese course(s) before they were asked to fill in the instruments for this study.

Table 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Chapters</th>
<th>Vocabulary (characters)</th>
<th>Chinese Parables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Chinese I</td>
<td>Introduction + 4 (From Integrated Chinese)</td>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td>Elementary Chinese II</td>
<td>Introduction +12 (From Integrated Chinese)</td>
<td>600</td>
<td>0</td>
</tr>
<tr>
<td>Intermediate Chinese</td>
<td>Introduction +20 (From Integrated Chinese)</td>
<td>800</td>
<td>2</td>
</tr>
</tbody>
</table>

For both Elementary and Intermediate Chinese classes, a chapter was usually taught according to the following schedule. In the first two class periods, the teacher introduced the new words and grammar points to students based on the two dialogues in the chapter. In the third class period, students did the pattern drill exercises in group work. In the fourth class period, students did oral performance in pairs as one of their chapter quizzes. In the fifth class period, students did the listening and reading exercises in the workbook. In the sixth class
period, students did the grammar and translation exercise in the workbook. In the last class period students took the chapter exam. A chapter schedule of the Elementary Chinese I class is given in Table 4.

Table 4  
*Chapter Schedule of the Elementary Chinese I*

<table>
<thead>
<tr>
<th>Class period</th>
<th>Class content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New words and grammar in dialogue one</td>
</tr>
<tr>
<td>2</td>
<td>New words and grammar in dialogue two</td>
</tr>
<tr>
<td>3</td>
<td>Pattern drills</td>
</tr>
<tr>
<td>4</td>
<td>Oral performance</td>
</tr>
<tr>
<td>5</td>
<td>Listening and reading exercise in the workbook</td>
</tr>
<tr>
<td>6</td>
<td>Grammar and writing exercise in the workbook</td>
</tr>
<tr>
<td>7</td>
<td>Chapter test</td>
</tr>
</tbody>
</table>

As evidenced in Table 4, the curriculum incorporated four language skills: speaking, listening, reading and writing. However, in the beginning level, the emphasis was on speaking, listening, and grammar. Reading materials were the two dialogues in the textbook and the reading comprehension passages in the workbook. For the intermediate level class, besides the above-mentioned reading passages and dialogues, they had also read two parables before they filled in the two instruments for this study. They also read one more parable before the semester ended.

**Data Collection**

**Data Sources**

The primary data sources came from two anxiety scales, the Foreign Language
Classroom Anxiety Scale (see Appendix C) and the Foreign Language Reading Anxiety Scale (see Appendix D), a background information questionnaire (see Appendix E), scores of reading comprehension passages (see Appendix F) in chapter tests and final exam. The secondary data source came from email interviews (see Appendix G). The data sources are provided in line with the research questions. The first research question asks about the foreign language reading anxiety level among learners of Chinese. To answer this question, two anxiety scales were employed.

**The Foreign Language Classroom Anxiety Scale (FLCAS)** is a self-report measure of students’ anxiety feeling in the foreign language classroom designed by Horwitz et al. (1986). The instrument had 33 items on a five-point Likert-type scale ranging from “strongly agree” to “strongly disagree.” Items were developed from student self-reports, clinical experiences and a review of related instruments. The items measured foreign language anxiety relating to three general sources of anxiety: communication apprehension; tests; and fear of negative evaluation.

In calculating the total scores of the FLCAS, a numerical value was first given to each of the items in the FLCAS. For the negative statements, such as item 1 in the FLCAS, “I never feel quite sure of myself when I am speaking in my Chinese class,” the scoring went after the following rule, “strongly agree” (5 points), “agree” (4 points), “neither agree nor disagree” (3 points), “disagree” (2 points) and “strongly disagree” (1 point). For the positive statements, such as item 2 in the FLCAS “I don’t worry about making mistakes in Chinese class,” the scoring rule was reversed, i.e., “strongly agree (1 point), “agree” (2 points), “neither agree nor disagree” (3 points), “disagree” (4 points) and “strongly disagree (5 points). There were 33 items in the FLCAS and the possible range of score was 33 to 165. The higher score indicated more anxiety on the students’ part.

Horwitz (1991) examined the construct validity of the FLCAS by looking into the correlation between the FLCAS and several other anxiety scales such as State-Trait Inventory (Spielberer, 1983), r = 0.29, p = 0.002, n = 108, Personal Report of Communication Apprehension (McCroskey, 1970), r = .28, p = 0.063, n = 44. The low correlation showed that “foreign language anxiety can be discriminated from these related constructs, although it appears that foreign language classroom anxiety is moderately associated with test anxiety”
The reliability of instruments is usually examined through internal consistency and stability. The reliability of the FLCAS has been reported among many different students’ samples. In Horwitz et al. (1986), the FLCAS was administered to 300 students in introductory foreign language classes. The internal consistency of 0.93 based on Cronbach’s alpha was reported. The test-retest reliability over a period of eight weeks was $r = .83$ (p<0.001). In a study among learners of Japanese, Aida’s (1994) reported an internal consistency of .94 of the FLCAS using Cronbach’s alpha. The reliability, mean, standard deviation, and range obtained in Aida’s study were very similar to those of Horwitz et al. The mean of Aida’s study was slightly higher than that of Horwitz et al., in which the participants were students in an introductory Spanish class. The study showed that students might feel more anxious in learning a non-Western, foreign language like Japanese than in learning commonly taught western languages such as Spanish.

Aida (1994) also tested the construct of foreign language anxiety by validating an adapted FLCAS for students of Japanese. Aida found that 18 items were loaded on the first factor: speech anxiety and fear of negative evaluation; other items were loaded on the following three factors: fear of failing in class, comfortableness in speaking with Japanese, negative attitudes towards Japanese class. The study did not support the Horwitz et al. (1986) claim that test anxiety was the third component of foreign language anxiety. Items that were considered as test anxiety by Horwitz et al. failed to load on any of the factors. Similarly, MacIntyre and Gardener (1989) concluded that test anxiety was a general anxiety problem and it was not specific to foreign language learning.

Rodriguez and Abreu (2003) examined the stability of the general foreign language classroom anxiety construct across English and French. Their study confirmed the stability of the foreign language classroom anxiety construct across English and French. The finding conformed to Saito et al. (1999) in which learners’ foreign language anxiety levels were not significantly different across languages. Although researchers like Aida (1994) have pointed out that instruments such as FLCAS were primarily measures of anxiety related to speaking situations, the FLCAS was also found to have significant predictive ability in second language writing achievement (Cheng et al., 1999). Cheng et al. (1999) maintained that the
FLCAS was more than a measure of second language speaking anxiety. They suggested that it was a measure of learner’s broader concerns about second language classes.

For the purpose of this study, the researcher used the FLCAS to measure the general foreign language anxiety that American students experience in the Chinese classroom. The words “foreign language” in the original scale was changed to “Chinese.”

The Foreign Language Reading Anxiety Scale (FLRAS) by Saito et al. (1999) was designed to measure the anxiety that students experience in reading in a foreign language. The FLRAS was composed of 20 items, each of which was answered on a 5-point Likert scale, ranging from “strongly agree” to “strongly disagree.” The highest degree of anxiety received a 5 and the lowest received a 1. In this study, the words “Russian, French and Japanese” in the original scale was changed to “Chinese.”

In calculating the total scores of the FLRAS, a numerical value was first given to each of the items in the FLRAS. For the negative statements, such as item 1 in the FLRAS “I get upset when I’m not sure whether I understand what I am reading in Chinese,” the scoring went after the following rule, “strongly agree” (5 points), “agree” (4 points), “neither agree nor disagree” (3 points), “disagree” (2 points) and “strongly disagree” (1 point). For the positive statements, such as item 12 in the FLRAS “I enjoy reading Chinese,” the scoring rule was reversed, i.e., “strongly agree (1 point), “agree” (2 points), “neither agree nor disagree” (3 points), “disagree” (4 points) and “strongly disagree (5 points). There were 20 items in the FLRAS and the possible range of score was 20 to 100. The higher score indicated more anxiety on the students’ part.

Saito et al. (1999) tested the construct validity of the FLRAS by calculating the correlation between the FLRAS and the FLCAS. A correlation coefficient of 0.64 (n = 383, p<0.01) was found, which means that although there was a significant overlap between the two constructs, fifty-nine percent of variance was not shared by the two constructs. The FLRAS represented a construct that was related to but distinct from the construct represented by the FLCAS. Hsiao (2002) also used confirmatory factor analysis to analyze the construct validity of the Chinese version of the FLRAS and the result supported the unidimensionality of the scale and claimed that the scale was reliable and valid for eliciting reading anxiety of Chinese college foreign language learners. The FLRAS (Saito et al., 1999) had also been
reported to have a good internal consistency of the .86 (Cronbach’s alpha, n = 383) among learners of French, Russian and Japanese in American universities.

A background information questionnaire was designed specifically for this study to create a profile of the sample and collect information needed to answer the second research question which aimed to reveal the relationship between foreign language reading anxiety and background variables such as gender, course level and time spent in China. The background information questionnaire elicited the following participant information: identification number (last six digits of their social security number), gender, age, ethnicity, course number, year in college, major, whether the participants have been to China, the purpose of going to China, the length of stay, native language, Chinese courses taken so far, heritage speaker or not, other foreign languages learned, whether the other foreign language experience is successful, time spent in reading, the purpose of reading, perceived Chinese ability and reading ability, whether they have been classified as having reading deficiency in English, perceptions of difficulty level of reading passages, perceptions of reading task difficulties, and expectation of the difficulty level of Chinese before enrollment.

Reading comprehension scores were needed to answer Research Question 3 about the relation between foreign language reading anxiety and reading comprehension performance. In Shi and Liu (2006), the reading score was based on a reading test which was composed of eight reading passages, 40 test items. The reading comprehension test was administered one week after the students filled in the FLRAS. Since there was no separate reading tests for the Chinese courses at FSU and the reading score in one chapter test was not reliable enough as the measure of students reading performance score, the researcher calculated the reading scores based on students’ reading comprehension scores on both the chapter test(s) and the final exam, which were collected on a continuous basis after the instruments were filled in.

For both the Elementary Chinese I and II class, students took three chapter tests and one final exam after they filled in the instruments and before the semester ended. For the Intermediate Chinese class, there were two chapter tests and one final exam after the participants filled in the instruments. The reading comprehension passages in the chapter tests and exam were designed based on the topics in the chapters and had been used with students
for several years. From the feedback from students, the reading comprehension items had good face validity. The passages were considered as appropriate by the Chinese professor and instructors at FSU in terms of difficulty level. The chapter test scores and reading scores were recorded by the instructors and were reported to the researcher at the end of the semester. The researcher added these reading scores up and converted it on a 100 percent scale for consistence.

**Questions for email interviews** were also designed to find out what caused difficulty for American students in reading Chinese as a foreign language and also what were the possible sources of foreign language reading anxiety. The questions were originally designed for a focus group discussion. Due to students’ time conflicts and busy schedules at the end of the semester, only two students were able to attend the focus group discussion. Therefore, the researcher revised the focus group discussion questions to email interview questions in order to get more data. The interview questions began with general motivations for the Chinese course and then moved toward reading with an emphasis on sources of reading anxiety. The interview questions emphasized the following items: motivation to learn Chinese, challenges met in learning Chinese, frustration about Chinese course, reading process, strategies used in reading Chinese, views on group reading, how Pinyin and character text influence the reading process, how experiences with China influence reading, and strategies used to deal with cultural elements, new words, and grammar in a reading passage.

**Timeline**

The two instruments FLCAS and FLRAS were administered by the researcher in the regular class time in the tenth week of the fall semester, 2007. Both foreign language anxiety and foreign language reading anxiety were situation-specific anxiety. According to MacIntyre and Gardner (1991a), the initial anxiety that learners experienced in foreign language classrooms were not foreign language anxiety but a combination of novelty anxiety and communication anxiety and it might happen in other classes such as a speech class or a math class. After several negative experiences in the foreign language classroom, students began to associate the anxious feelings with foreign language learning and at this time students were
experiencing foreign language anxiety. Other studies on foreign language anxiety had also chosen to collect data after students had learned the language for about half of a semester. For instance, Saito et al. (1999) collected their data in the eleventh week of a semester.

The background information questionnaire was distributed together with the two instruments. After signing the consent form (see Appendix A), students filled in the two instruments and the background questionnaire. Reading scores from one/two chapter tests and the final exam were reported by instructors at the 16th week of the semester. In the background questionnaire, students who were willing to participate in the focus group discussion are asked to leave their email address. Forty-eight students left their email address. However, when the researcher sent out the invitation email for focus group discussion, only three students replied. Due to time conflict, these three students could not attend the focus group discussion together. Therefore, the researcher changed the focus group discussion questions to interview questions and emailed the questions to the two Chinese classes that she taught. Altogether, twenty-four students replied. The researcher printed out the students’ responses and searched for the emerging themes that were helpful in explaining the survey results and also in explaining students’ Chinese reading process and reading anxiety as well.

Data Analysis

The research questions were answered through the quantitative analysis of the survey data. Scores from the FLRAS and FLCAS were used to answer the first research question about the foreign language reading anxiety level among learners of Chinese. Descriptive statistics including mean, standard deviation, maximum, minimum and frequency were used. Data from the FLRAS and the background questionnaire were used to answer the second research question about the relation between background variables and foreign language reading anxiety. A 2*2*2 factorial Analysis of Variance (ANOVA) was used to detect how different background variables were related to the foreign language reading anxiety level. For instance, the ANOVA analysis revealed whether or not there was a difference in foreign language reading anxiety level between female students and male students, among students from different course levels and between those who have been to China and who have not.
Data from the FLRAS and students’ reading scores were used to answer the third research question about the relationship between foreign language reading anxiety and foreign language reading performance. Pearson Product-Moment correlation analysis was conducted to obtain the correlation between reading anxiety and reading performance score.

**Assumptions and Issues of Validity**

**External Validity**

The response rate of a survey is one indicator of the external validity of survey research (Alreck & Settle, 1985). If the response rate is too low, the external validity of the survey will be affected because those who do not respond might follow a certain pattern and the data collected is biased. For instance, if many female students do not respond to a survey about preference of soda, the survey result will be biased and not representative. To increase the response rate of the present survey research, the survey data were collected during class time. Students were allocated enough time to finish the survey instruments and the instruments were collected before the class ends. The indirect benefit that the participants could obtain from the present survey research was also explained before they were asked to fill in the survey questionnaires. Most students enrolled in the Chinese course were very motivated in learning Chinese. Knowing that the survey result would help the instructors to understand their affective feelings towards the Chinese course and to improve the curriculum and instruction, all of the students present in the class on the survey day participated in the study.

Another concern of external validity of survey research is the representativeness of the sample. Due to the time limit and the researcher’s limited access to the target population, the researcher used a convenience sample instead of a random sample. The sample was not representative of all learners of Chinese in the U.S. However, the sample students came from a large public research university in the south of the U.S., and they were representative of the learners of Chinese in public universities in the south of U.S. in terms of age range, majors, race and gender.
Internal Validity

Threats to the internal validity of survey research mainly came from the following sources: the survey administrator, respondents, questionnaires and the mode of data collection (Groves, 1987). The characteristics of survey administrators such as their race and gender and the instructions that they gave to the participants of the survey might all influence the participants’ response to the questionnaire items. The survey administrator of this study was the researcher. To minimize the treats to internal validity from the survey administrator, the researcher gave same instructions to all participants. One limitation was that the two classes the researcher taught also took part in the survey and answered interview questions. Therefore the researcher’s role as both an instructor and researcher might influence students’ honest responses on the questionnaire. Due to the comparatively small sample size of this study, the exclusion of the two classes the researcher taught became impractical. The researcher assured students of the confidentiality and anonymity of their responses to minimize the effect of the researcher’s role on students’ responses and to obtain honest responses.

Threats to internal validity might also come from respondents. The validity of survey research was largely based on the frank and honest responses from the respondents. Impression management and self deception on the part of respondents might influence their honest responses (Paulhus, 1991). For instance, the respondents might think about the results that the researcher wanted to obtain and they would orient their responses to the results. Self-deception occurred when the respondent’s imagined-self was different from his real self when he filled in the instruments. For instance, a student might care about each word in reading and a new word would cause anxiety to him when he actually read in a foreign language. However, when asked about how he felt seeing new words in a foreign language reading passage, he might regard himself as a mature reader who would not be bothered by one or two new words. Again, a solution to these problems was that the researcher should assure students that their responses were anonymous and confidential (Cunliffe & Goldstein, 1979). The researcher reminded students that they should mark their first reaction to the statements in the questionnaire so as to ensure the honesty of their responses (Saito et al.,
A third source of threats to internal validity comes from the instruments. The instruments should be able to measure what the researcher intends to measure and should yield consistent results among the same sample over time. As previously noted, the two instruments employed in this study have good validity and reliability among English speaking university students learning a foreign language. The sample of this study was similar to the samples in the previous studies. The results of this study also showed that the instruments had very good internal consistency.

The fourth threat to internal validity of survey research comes from the mode of data collection. Telephone, email, and face-to-face modes are the common ways that survey data is collected. Different modes of data collection might bring in different results. If part of the data is collected through email while part of the data through face to face, the internal validity of the survey is affected. In this study, the data were collected in a face-to-face manner and all the participants were given the same instructions. Therefore, the threat posed by different modes of data collection was minimized.

Summary

Set in the Chinese classes at FSU, this study focused on the foreign language reading anxiety level among learners of Chinese and the relation between foreign language reading anxiety and background variables and performance. Participants were 125 students enrolled in Elementary Chinese and Intermediate Chinese classes at FSU. An overview of the research questions, data sources and analysis tools are provided in Table 5.
<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources</th>
<th>Analysis tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States?</td>
<td>1. Scores from the two instruments FLCAS and FLRAS; 2. FLRAS scores of Japanese students in Saito et al. (1999)</td>
<td>Descriptive statistics such as mean, standard deviation, maximum, minimum and frequency.</td>
</tr>
<tr>
<td>What background variables are related to foreign language reading anxiety?</td>
<td>1. Scores from FLRAS 2. Information from the background information questionnaire</td>
<td>2<em>2</em>2 Factorial ANOVA</td>
</tr>
<tr>
<td>Is there a relationship between foreign language reading anxiety and reading scores?</td>
<td>1. Scores from FLRAS 2. Reading comprehension scores from two chapter tests and one final exam</td>
<td>Pearson Product-Moment correlation analysis</td>
</tr>
</tbody>
</table>
Very few studies have explored the foreign language reading anxiety among learners of a logographic language. The inclusion of learners of Chinese in the research of foreign language reading anxiety contributes to not only the understanding of the construct of foreign language reading anxiety but also the understanding of the reading process of a logographic language as a foreign language. Studies of learners of Chinese suggest that the ineffective reading process might lead to reading anxiety from a sociocognitive perspective of second language reading (Bernhardt, 1991). The review of relevant literatures reveals that although foreign language anxiety has shown to have a negative correlation with foreign language performance, the relation between foreign language reading anxiety and foreign language reading performance has not been clearly established. The relation between background variables and foreign language anxiety has been found to vary depending on the target languages and also the specific language skills in question.

This chapter presents the results of the study, answering the research questions by analyzing the data obtained from the data collection step. This chapter first explains what statistical procedures were adopted to analyze the data and then presents the answer to each research question based on either the descriptive or inferential statistic results.

Research Questions Revisited

The three research questions raised for this study are as follows:
1. What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States?
2. What background variables are related to foreign language reading anxiety?
   a. Is gender related to foreign language reading anxiety?
   b. Is course level related to foreign language reading anxiety?
   c. Is time spent in China related to foreign language reading anxiety?
3. Is there a relationship between foreign language reading anxiety and foreign language reading performance?

**Missing Data**

As mentioned in Chapter Three, 137 students participated in this survey study. Thirteen students from the two advanced classes were not included in the statistical analysis of the study due to the small number of this group of students. The responses from the remaining 125 students were entered into the Statistical Package for the Social Sciences (SPSS) version 15 for statistical analysis. In this study, there was no missing data on the three background variables: gender, course level, whether or not they have been to China. That is, all participants identified themselves in terms of these three background variables. Altogether four students, one from Chi1120, two from Chi1121 and one from Chi2220 missed one item on the primary instrument FLRAS. Six participants, four from Chi1120 and two from Chi2220 missed one item on the FLCAS. Two students, one from Chi1120 and one from Chi1121 filled in the FLRAS but did not fill in the FLCAS. In this study, the missing item value was replaced by using the item mean based on the responses of other participants on the same item.

In real-life data, missing data is inevitable due to various reasons such as participant’s carelessness, illness, or poorly-designed questionnaire items. Therefore, appropriate handling of missing data should be done before the statistical analysis. There are various ways to deal with missing data such as listwise deletion, pairwise deletion, replacement with mean or median, and replacement with imputed values. Deletion leads to excessive loss of statistical power while all replacement procedures are biased if there is a nonrandom distribution of missing values to a greater or lesser extent (Pigott, 1994). Therefore, the first step to deal with missing data is to look at the remaining variables and check if the data are missed at a random pattern. Considering the item number in the FLRAS (20 items) and the total number of participants (125), the item missing rate was very low and no pattern was detected. In survey research which uses Likert-type scales, the missing scale scores usually comes from the miss of one or more of the items that make up the scale. Therefore, “it is more natural and
more accurate to address the absence of these item scores by substituting item means for missing item scores rather than to estimate the missing scores using other variables” (Raaijmakers, 1999, p. 727).

Statistical Tests

The data of this study were entered into the SPSS version 15 for analysis. In addition to descriptive statistics such as descriptive and frequencies, three major statistic tests were conducted. First, the Cranbach’s Alpha was calculated on both the instruments, the FLRAS and the FLCAS to test the internal consistency of the two questionnaires. Second, a 2*2*2 factorial ANOVA was run using the total FLRAS scores as the dependent variable and the three background variables as the three independent variables. All of the three background variables, gender, course level and time spent in China had two levels. The effect sizes, expressed in terms of Cohen’s d were calculated to examine the extent of differences between groups. Third, the correlation between foreign language reading anxiety and foreign language reading performance was explored by calculating the Pearson Product-Moment Correlation. Each of the statistical tests was explained in more details below and how the statistic results should be interpreted in the context of this present study was also provided.

Cronbach’s Alpha

In this study, Cronbach’s Alpha was calculated on both the FLRAS and the FLCAS to test the internal consistency of these two questionnaires. In survey research, the validity and reliability of a questionnaire are very important in that the questionnaires are usually the major data sources. In many cases it is not feasible to provide every aspect of validity and reliability of a questionnaire. Dornyei (2003) suggested that the researchers at least provide evidence that the questionnaire had an “appropriate reliability in at least one aspect: internal consistency” (p. 110) and “internal consistency is generally seen as the psychometric prerequisite for any scientific survey measurement” (p. 111). Internal consistency refers to the homogeneity of the items that make up the multi-item scale. Internal consistency reliability is usually measured by the Cronbach’s Alpha coefficient, which ranges from zero to one. As a
rule of thumb, a cut-off point of .60 is common in exploratory research (Garson, 2006). For well developed attitude scales, the Cronbach’s Alpha coefficient should approach 0.80. Due to the complexity of second language acquisition process, researchers should also be prepared for lower Cronbach’s Alpha coefficient and 0.70 is a cut-off (Dornyei, 2003). In this present study, the cut-off of 0.70 was used and a lower than 0.70 Cronbach’s Alpha was a warning sign that the instruments used were not very reliable.

**2*2*2 Factorial ANOVA**

A 2*2*2 factorial ANOVA was run to answer Research Question Two that examined whether or not foreign language reading anxiety level was related to gender, course level and time spent in the target country. ANOVA is the statistical technique for measuring the relationship between a categorical independent variable and a continuous dependent variable (Alreck & Settle, 1985). In many fields, researchers often work with experiments or surveys that involve more than two factors as “this type of design is usually more economical and can provide more information than separate one way or two way layouts” (Sahai & Ojeda, 2004, p. 235). Factorial ANOVA is often used to analyze data involving more than two factors. The second search question of this study explored the relationship between foreign language reading anxiety and background variables. The foreign language reading anxiety was a continuous variable and the background variables included three factors which were all categorical. Therefore, a 2*2*2 factorial ANOVA analysis was suitable for the second research question. Besides the effect of each independent variable, the factorial ANOVA also provides the interaction effects of combinations of different independent variables. As Hatch and Lazaraton (1991) put it, “[T]he advantage of using a Factorial ANOVA is that we can look not only at the effect of each independent variable but also the interaction effects in the combination of different independent variables” (p. 370).

In this study, before the 2*2*2 factorial ANOVA was run the assumptions of ANOVA were first checked. A three-way ANOVA also needs to meet the assumptions of general ANOVA designs: (a) The dependent variable is normally distributed. (b) The population variances of the dependent variable are the same for all cells. (c) The cases
represent random samples from the populations, and the scores on the dependent variable are independent of each other (Green, Salkind, & Akey, 2000).

When interpreting the 2*2*2 factorial ANOVA, the researcher followed the guidelines given by Maxwell and Delaney (2004) that the three-way interaction and two-way interaction were examined before the main effects. The alpha level of the statistical tests in this study was set at 0.05 as it was the tradition in second language research (Mackey & Gass, 2005). There are seven effects in a three way A*B*C design: an A main effect, a B main effect, a C main effect, an A*B interaction, an A*C interaction, a B*C interaction, and an A*B*C interaction. The A main effect compares levels of A after averaging over levels of B and C. The A* B interaction examine whether the A effect is the same at different levels of B, averaging across levels of C. The A*B*C interaction examines whether the two-way A*B effect is the same at different levels of C (Maxwell & Delaney, 2004). When interpreting the results of a three way A*B*C ANOVA, it is suggested that the researchers should first look at the three-way interaction. If the three-way interaction is not significant, the researcher should look at the two-way interaction. “A main effect test is interpreted only when the factor in question is involved in non significant two-way interaction and the three way interaction is non significant” (Maxwell & Delaney, 2004, p.339).

Effect Size

Effect size was employed in answering Research Question Two to show the degree of differences of foreign language reading anxiety level between different groups such as the male group and the female group, the intermediate level class group and the elementary level class group. Cohen’s d was used as the index for the effect size and was calculated for both the main effects and interactions in the 2*2*2 factorial ANOVA. Significance tests are used when researchers attempt to generalize the sample results to the population. For instance, if the result is significant at p = 0.05, it means the researchers have 95% confidence to conclude that the result is not achieved by chance. Therefore, statistical significance indicates if a result is powerful enough to be generalized into the population. “If a result is non-significant, this means that we cannot be certain that it did not occur in the particular sample only because of
chance (e.g., because of the unique composition of the learners examined)” (Dornyei, 2003, p. 115). Tests for statistic significance are highly influenced by sample size (Cohen, 1988). Large sample sizes are more likely to yield statistically significant test results, holding all other things equal. As Olejnick and Algina (2000) stated:

> While statistical significance helps to protect the researcher from interpreting an apparently large observed difference as meaning a true difference between populations when sample sizes are small, it does not protect the researcher from interpreting a trivially small observed difference as meaningful when sample sizes are large. Small differences can be statistically “significant” simply because of a large sample size. (p. 241)

Therefore, large sample size tends to lead to a statistically significant result although there might be only a small difference in population while a small sample size tends to lead to a statistically non-significant result although there might be a big difference in population. Hence, it has been recommended that effect sizes being calculated and reported in addition to the significance tests (Cohen, 1988; Ellis, 2000; Thompson, 1996). Effect sizes are also useful in making comparisons of results and findings across studies (Ellis, 2000).

Effect size can be reported in terms of a mean difference in standard deviation units or the proportion of variance shared. It is to some degree arbitrary as which one to report at the time (Olejnik & Algina, 2000). “A standardized mean difference can be transformed into the scale of any measure that is meaningful to a researcher, an advantage not enjoyed by a proportion of variance effect size” (Olejnik & Algina, 2000, p. 263). The effect size in standardized mean difference, therefore, tells the extent to which the groups are different or not. In this study, Cohen’s d was used. Cohen (1988) recommended standardized mean differences of 0.2, 0.5, and 0.8 for small, medium, and large effects, which was also adopted in this study when the effect sizes of Cohen’s d were interpreted.

**Pearson Product-Moment Correlation**

The Pearson Product-Moment correlation was calculated to answer Research Question Three which explored the relationship between foreign language reading anxiety
and foreign language reading performance. “The Pearson Product-Moment correlation coefficient indicates the degree that quantitative variables are linearly related in a sample” (Green, Salkind, & Akey, 2000, p. 234). There are two assumptions underlying the significance test for the Pearson correlation. First, the variables are bivariately normally distributed. Second, the cases represent a random sample from the population and the scores on variables for one case are independent of scores on these variables from other cases (Green, Salkind, & Akey, 2000). “If the variables are bivariately normally distributed, each variable is normally distributed ignoring the other variable and each variable is normally distributed at all levels of the other variable” (p. 235). Therefore, in this study the normality of the two variables, namely, foreign language reading anxiety and foreign language reading performance, was first examined through histograms before the correlation was run and interpreted.

In this study, the scatterplot of the data points was also given to show the relationship between the two variables in addition to the Pearson Product-Moment correlation coefficient. Sometimes, there might be a non-linear relationship between two variables. Green, Salkind and Akey (2000) suggested that “it is important to determine if a nonlinear relationship exists between two variables before describing the results using the Pearson correlation coefficient” (p. 235) and they also suggested the use of a scatterplot of the data points to examine if there is a non linear relationship. The correlation coefficient captures two aspects of the relationship, the strength and direction. “For the behavioral sciences, correlation coefficients of 0.1, 0.3, 0.5, irrespective of sign, are typically interpreted as small, medium, and large coefficients, respectively” (p. 236). A positive sign indicates a positive relationship while a negative sign indicates a negative relationship. In this study, the cut-off points of 0.1, 0.3 and 0.5 were used respectively to indicate a weak, medium and large relationship.

**Research Question One**

The first research question was: What is the foreign language reading anxiety level among English speaking university students learning Chinese as a foreign language in the United States? This research question was answered through descriptive statistics such as
mean, median, mode, standard deviation, minimum and maximum. Before the descriptive statistics was reported, the internal consistency of the two instruments, the FLRAS and the FLCAS, were examined and reported. Table 6 gave the Cronbach’s Alpha and number of items in each of the instruments. Both the FLRAS and the FLCAS had good internal consistency as was indicated by the Cronbach’s Alpha. The FLRAS had a Cronbach’s Alpha of 0.834 and the FLCAS had a Cronbach’s Alpha of 0.947. According to Dornyei (2003), an instrument with a Cronbach’s Alpha of 0.8 and above was considered as a very reliable instrument.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language Reading Anxiety Scale (FLRAS)</td>
<td>0.834</td>
<td>20</td>
</tr>
<tr>
<td>Foreign Language Classroom Anxiety Scale (FLCAS)</td>
<td>0.947</td>
<td>33</td>
</tr>
</tbody>
</table>

Participants in this sample had a mean score of 53.25 (SD = 10.36) in the FLRAS and a mean score of 88.82 (SD = 21.28) in the FLCAS (see Table 7). The minimum of the FLRAS score was 26 and the maximum was 77. The minimum of the FLCAS score was 41 and the maximum was 143. There are 20 items in the FLRAS and 33 items in the FLCAS. Therefore, the mean score per item in the FLRAS was 2.66 and the mean score per item in the FLCAS was 2.69. It means that students experienced a very similar level of foreign language reading anxiety and foreign language classroom anxiety as indicated by the similar mean score per item in the FLRAS and the FLCAS. Because the FLRAS mainly measures students’ level of anxiety in reading a foreign language and the FLCAS mainly measures students’ level of anxiety in speaking a foreign language, the similar mean score per item in
the FLRAS and the FLCAS in this study indicated that reading caused a similar level of anxiety to students as speaking did among learners of Chinese.

Table 7

<table>
<thead>
<tr>
<th></th>
<th>FLRAS</th>
<th>FLCAS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>53.25</td>
<td>88.82</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>53.00</td>
<td>88.82</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>45.00</td>
<td>91.00</td>
</tr>
<tr>
<td><strong>Std. Deviation</strong></td>
<td>10.36</td>
<td>21.28</td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>51.00</td>
<td>102.00</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>26.00</td>
<td>41.00</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>77.00</td>
<td>143.00</td>
</tr>
</tbody>
</table>

The FLRAS contained 20 Likert-type items pertaining to respondents’ feelings and attitudes towards reading a foreign language. Table 8 shows the frequency of responses to the 20 items in the FLRAS.

Table 8

<table>
<thead>
<tr>
<th>Item</th>
<th>FLRAS</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>1. I get upset when I’m not sure whether I understand what I am reading in Chinese.</td>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td>Item FLRAS</td>
<td>Percent (%)</td>
<td>SD</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------</td>
<td>----</td>
</tr>
<tr>
<td>2  When reading Chinese, I often understand the words but still can’t quite understand what the author is saying.</td>
<td>12.0</td>
<td>37.6</td>
</tr>
<tr>
<td>3  When I’m reading Chinese, I get so confused I can’t remember what I’m reading.</td>
<td>16.8</td>
<td>48.8</td>
</tr>
<tr>
<td>4  I feel intimidated whenever I see a whole page of Chinese in front of me.</td>
<td>12.8</td>
<td>28.0</td>
</tr>
<tr>
<td>5  I am nervous when I am reading a passage in Chinese when I am not familiar with the topic.</td>
<td>8.8</td>
<td>18.4</td>
</tr>
<tr>
<td>6  I get upset whenever I encounter unknown grammar when reading Chinese.</td>
<td>4.8</td>
<td>32.8</td>
</tr>
<tr>
<td>7  When reading Chinese, I get nervous and confused when I don’t understand every word.</td>
<td>11.2</td>
<td>35.2</td>
</tr>
<tr>
<td>8  It bothers me to encounter words I can’t pronounce while reading Chinese.</td>
<td>12.8</td>
<td>32.8</td>
</tr>
<tr>
<td>9  I usually end up translating word by word when I’m reading Chinese.</td>
<td>8.0</td>
<td>26.4</td>
</tr>
<tr>
<td>10 By the time you get past the funny letters and symbols in Chinese, it’s hard to remember what you’re reading about.</td>
<td>20.8</td>
<td>53.6</td>
</tr>
<tr>
<td>11 I am worried about all the new symbols you have to learn in order to read Chinese.</td>
<td>8.0</td>
<td>19.2</td>
</tr>
<tr>
<td>12 *I enjoy reading Chinese.</td>
<td>0</td>
<td>1.6</td>
</tr>
<tr>
<td>13 *I feel confident when I am reading in Chinese.</td>
<td>1.6</td>
<td>17.6</td>
</tr>
<tr>
<td>Item</td>
<td>FLRAS</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>14</td>
<td>*Once you get used to it, reading Chinese is not so difficult.</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>The hardest part of learning Chinese is learning to read.</td>
<td>16.8</td>
</tr>
<tr>
<td>16</td>
<td>I would be happy to learn to speak Chinese rather than having to learn to read as well.</td>
<td>28.8</td>
</tr>
<tr>
<td>17</td>
<td>I don’t mind reading to myself, but I feel very uncomfortable when I have to read Chinese aloud.</td>
<td>9.6</td>
</tr>
<tr>
<td>18</td>
<td>*I am satisfied with the level of reading ability in Chinese that I have achieved so far.</td>
<td>7.2</td>
</tr>
<tr>
<td>19</td>
<td>Chinese culture and ideas seem very foreign to me.</td>
<td>20.8</td>
</tr>
<tr>
<td>20</td>
<td>You have to know so much about Chinese history and culture in order to read Chinese.</td>
<td>31.2</td>
</tr>
</tbody>
</table>

Scale: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree
Note: *negative items were reversed before scoring

A large proportion of students expressed their interest in reading Chinese and actually believed that Chinese reading was enjoyable. 81.6% of the students agreed or strongly agreed with item 12 that stated “I enjoy reading Chinese” and 80% of the students agreed or strongly agreed with item 14 that read “Once you get used to it, Chinese reading is not so difficult.” 74.4% of the students disagreed with or strongly disagreed with item 10 that stated “By the time you get past the funny letters and symbols in Chinese, it’s hard to remember what you’re reading about.” Despite the fact that students enjoyed reading Chinese, there were still things about reading in Chinese that caused worries and anxiety among students, such as unfamiliar scripts, unfamiliar topics and general worry about reading effect.

Concerns with unfamiliar scripts and word recognition in reading seemed to be a
primary source of reading anxiety. 54.4% of the students agreed or strongly agreed with item 11 that stated “I am worried about all the new symbols you have to learn in order to read Chinese.” 48.8% of students agreed or strongly agreed with item 9 that stated “I usually end up translating word by word when I’m reading Chinese.” 33.6% of the students agreed or strongly agreed with the item 8 that stated “It bothers me to encounter words I can’t pronounce while reading Chinese.” 38.4% of students agreed or strongly agreed with item 4 that stated “I feel intimidated whenever I see a whole page of Chinese in front of me.”

Students also showed worries about the reading effect. 42.8% of the students agreed or strongly agreed with item 1 that stated “I get upset when I’m not sure whether I understand what I am reading in Chinese.” 32.8% of the students agreed or strongly agreed with item 2 that read “when reading Chinese, I often understand the words but still can’t quite understand what the author is saying.

Unfamiliar topic was another source of reading anxiety. Forty-four percent of the students agreed or strongly agreed with item 5 that stated “I am nervous when I am reading a passage in Chinese when I am not familiar with the topic.” Students did not view Chinese culture as very foreign to them and did not think that they need to know much about Chinese culture in order to read Chinese. Only 17.6% of the students agreed or strongly agreed with item 19 that stated “Chinese culture and ideas seem very foreign to me. Only 5.6% of the students agreed or strongly agreed with item 20 that read “you have to know so much about Chinese history and culture in order to read Chinese.”

**Research Question Two**

The second research question explored what background variables are related to foreign language reading anxiety. More specifically, it asked: (a) Is gender related to foreign language reading anxiety? (b) Is course level related to foreign language reading anxiety? (c) Is time spent in China related to foreign language reading anxiety?

The first independent variable gender had two levels, i.e., female and male. The second independent variable course level also had two levels. In this study, participants from Elementary Chinese I and Elementary Chinese II were combined together and termed as the
Elementary Chinese students. Elementary Chinese I and Elementary Chinese II were both elementary level Chinese classes targeted at students who had no experience or very little experience of Chinese learning. Elementary Chinese II class was a second semester Chinese class, i.e., a continuation of the first semester Elementary Chinese I. These students were combined to be considered as one group because they used the same textbook, similar class schedules and they were both considered as being at the elementary level of Chinese learning. An independent sample t-test was run to see if students in Elementary Chinese I and Elementary Chinese II had significant levels of difference in the FLRAS scores and no statistical difference was found between the two groups (p = 0.44) although Elementary Chinese II students (M = 53.79) experienced higher foreign language reading anxiety than Elementary Chinese I students (M = 51.82).

The third independent variable “time spent in China” was also considered as having two levels, having been to China or having not been to China. In this sample, most of the students who had been to China stayed in China for one and a half month to three months (66.6%) mainly for the purpose of studying Chinese. Approximately 19.4% stayed in China for less than or equal to a month mainly for visiting or traveling purpose and 14% stayed in China for more than three months either because they went to China multiple times or they stayed in China for the purpose of learning Chinese or teaching English. The results would be more informative if this study had included four levels in the “time spent in China” variable: not having been to China, staying in China for less than or equal to a month, staying in China for one and a half to three months, and staying in China for more than three months. However, the relative small sample size (n = 125) did not allow the more detailed classification. If four levels were adopted, the cell size in the 2*2*2 ANOVA would become very small.

A 2*2*2 ANOVA was run using the three background variables as the independent variables and the FLRAS score as the dependent variable. As mentioned, each background variable, i.e., gender, course level and time spend in China had two levels. Before the 2*2*2 ANOVA was run, the assumptions of ANOVA were first checked. The first assumption that the scores on the dependent variable were independent of each other was guaranteed by the present research design as participants were independent from each other and each of them filled in the FLRAS only once. The second assumption that the data were normally
distributed was checked through the histogram of the FLRAS score (see Figure 3). The
histogram showed a good norm distribution.

![Histogram of the FLRAS score](image)

*Figure 3. Histogram of the FLRAS score*

The third assumption that the population variances of the dependent variable were the
same for all cells was checked through the Levene’s test of equality of error variances (see
Table 9). The Levene’s test was not significant (p = 0.742), which means that the error
variances of the dependent variable were equal across groups.
Table 9
Levene's Test of Equality of Error Variances

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.616</td>
<td>7</td>
<td>117</td>
<td>.742</td>
</tr>
</tbody>
</table>

In the three-way ANOVA table, there was a three-way interaction: gender*course*China; three two-way interaction: gender*course, gender*China, and course*China; and three main effects: gender, course and China (see Table 10). The variable ‘gender’ had two levels: female and male. The variable ‘course’ also had two levels: Elementary and Intermediate. The variable ‘China’ also had two levels: having been to China and having not been to China. As Maxwell and Delaney (2004) suggested, researchers should first look at the three-way interaction when interpreting results from a three-way ANOVA. The three-way interaction in this study was not significant, $F(1, 117) = 266.82$, $p = 0.111$. The non-significant three way interaction means that the two-way gender*course effect on the FLRAS score was the same between students who had been to China and those who had not been to China.

Table 10
2*2*2 ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>1237.983(a)</td>
<td>7</td>
<td>176.855</td>
<td>1.714</td>
<td>.112</td>
</tr>
<tr>
<td>Intercept</td>
<td>217222.564</td>
<td>1</td>
<td>217222.564</td>
<td>2104.999</td>
<td>.000</td>
</tr>
<tr>
<td>gender</td>
<td>13.516</td>
<td>1</td>
<td>13.516</td>
<td>.131</td>
<td>.718</td>
</tr>
<tr>
<td>course</td>
<td>498.406</td>
<td>1</td>
<td>498.406</td>
<td>4.830</td>
<td>.030</td>
</tr>
</tbody>
</table>
When the three-way interaction is not significant, it is recommended that researchers should look at the two-way interaction. None of the three two-way interactions was significant in this study. The gender\*course interaction was not significant, $F(1, 117) = 0.357$, $p = 0.551$, which means that the gender effect on the FLRAS score was the same between Elementary Chinese students and Intermediate Chinese class students, averaging across those who had been to China and who had not been to. The gender\*China interaction was not significant, $F(1, 117) = 0.076$, $p = 0.783$, which means that the gender effect on the FLRAS score was the same between those who had been to China and who had not been to China, averaging across course levels. The course\*China interaction was not significant either, $F(1, 117) = 0.009$, $p = 0.926$, which means that the course level effect on the FLRAS score was the same among those who had been to China and those who had not been to China, averaging over gender. As Maxwell and Delaney (2004) suggested, the main effect was interpreted when the factor in question was involved in non significant two-way interaction and there was no significant three way interaction.

Among the three main effects, the course level effect was significant, $F(1, 117) = 4.830$, $p = 0.030$, which means that there was a course effect on the FLRAS score averaging over gender and experience with China. A closer look at the descriptive statistics (Table 11)
showed that the intermediate class students (M = 55.87) experienced a significantly higher level of foreign language reading anxiety than the elementary class students (M = 52.31). The gender effect was not significant, F (1, 117) = 0.131, p = 0.718, which means that there was no gender effect on the FLRAS averaging over course level and experience with China. Table 11 showed that female students experienced a higher level of foreign language reading anxiety (M = 54.29) than male students (M = 52.46) but the difference was not statistically significant. The experience with China effect was not significant either, F (1, 117) = 3.436, p = 0.066. The students who had been to China experienced lower level of foreign language reading anxiety (M = 51.38) than those who had not been to China (M = 54.00) but the difference did not reach the statistical significance level.

<table>
<thead>
<tr>
<th>gender</th>
<th>Course experience with China</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>female</td>
<td>yes</td>
<td>46.25</td>
<td>10.95119</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>55.19</td>
<td>10.49938</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>53.49</td>
<td>11.03833</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>3.00</td>
<td>yes</td>
<td>56.75</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>57.75</td>
<td>4.27200</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>57.08</td>
<td>6.21521</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>yes</td>
<td>51.50</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>55.46</td>
<td>10.02148</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>54.29</td>
<td>10.22476</td>
<td>54</td>
</tr>
<tr>
<td>male</td>
<td>1.00</td>
<td>yes</td>
<td>51.20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>51.34</td>
<td>10.46774</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>51.32</td>
<td>10.23314</td>
<td>50</td>
</tr>
</tbody>
</table>
As mentioned, the significant tests were greatly influenced by the sample size. Considering the comparatively small sample size of this study, the effect sizes of the three main effects and the interactions were also calculated (see Table 12). ‘Course’ had an effect size of 0.346 (Cohen’s d), which was a small to medium effect size according to Cohen’s cutoff of 0.2 for small effect size and 0.5 for medium effect size. ‘Having been to China’ had a small effect size (Cohen’s d = 0.252) and ‘gender’ also had a small effect size (Cohen’s d = 0.177). The three two-way interactions had very small to small effect sizes. The three way interaction had a large effect size (Cohen’s d = -1.123). The three-way interaction was not statistically significant. The statistical non-significance test and the large effect size mean that
there might be a large difference between female and male students in terms of the course*China interaction but the sample size of the present sample was not large enough to detect this difference.

Table 12

Effect Sizes of the Main Effects and Interactions

<table>
<thead>
<tr>
<th>Main effects and interactions</th>
<th>Effect Sizes (Cohen’s d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>0.346</td>
</tr>
<tr>
<td>China</td>
<td>0.252</td>
</tr>
<tr>
<td>Gender</td>
<td>0.177</td>
</tr>
<tr>
<td>Gender*course</td>
<td>0.026</td>
</tr>
<tr>
<td>Gender*China</td>
<td>-0.228</td>
</tr>
<tr>
<td>Course*China</td>
<td>-0.048</td>
</tr>
<tr>
<td>Gender<em>course</em>China</td>
<td>-1.123</td>
</tr>
</tbody>
</table>

The following two graphs (Figure 4 and Figure 5) demonstrated the different course*China interaction between female students and male students. Among the female students, the having been to China effect was larger among elementary students than among intermediate students. Among the male students, the ‘having been to China’ effect was larger among intermediate students than elementary students. The female elementary students who had been to China had the lowest foreign language reading anxiety ($M = 46.25$, $SD = 10.95$) while the male intermediate students who had not been to China have the highest foreign language reading anxiety ($M = 58.62$, $SD = 9.92$).
Figure 4. The course*China interaction among female students

Figure 5. The course*China interaction graph among male students
Research Question Three

The Pearson Product-Moment correlation was calculated to answer the third research question about the relationship between foreign language reading anxiety and foreign language reading performance. Before the Pearson Product-Moment correlation was calculated, the two assumptions of normal distribution were first examined through histograms. As was mentioned in the previous section, the FLRAS scores were normally distributed. Figure 6 was the histogram of the reading performance score.

Figure 6. Histogram of reading performance score
The reading performance score was almost normally distributed but a little bit skewed to the right. There are several reasons for the skewness of a continuous survey data distribution, such as ‘ceiling’ effect, ‘floor’ effect or few extreme outliers (Alreck & Settle, 1985). The histogram showed a ceiling effect where students could not score more than 100 in the reading performance tests. From the histogram (Figure 6), it is also seen that there was an outlier to the left of the histogram. “Outliers are observations with excessively large residuals” (Tate, 1998, p. 49). Tate (1998) suggested that when there was an outlier, the researcher need to go back to the case and see if an error has occurred. The researcher went back to the data and identified the case which had a reading performance score of 57.90. The case was 4.9 standard deviation away from the sample mean (M = 90.54, SD = 7.36). The researcher checked the record of reading performance scores of the participant and found no error in calculation and data input. The reason for this extreme case might be that this participant was not very good in reading performance. Tate also recommended that the researcher should retain legitimate outliers for further consideration, outliers that were not due to input error. Therefore, this outlier was reserved in the data set for correlation analysis.

Table 13 provided the descriptive statistics of the reading performance score. The reading performance score had a mean of 90.54 (SD = 7.36). The highest reading performance score was 100 and the lowest was 57.90. 25% of the participants had a reading performance score lower than 87 and 25% of the participants had a reading performance score higher than 95.79.

<table>
<thead>
<tr>
<th>Reading performance score</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>90.54</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>92.11</td>
</tr>
<tr>
<td><strong>Std. Deviation</strong></td>
<td>7.36</td>
</tr>
</tbody>
</table>
The Pearson Product-Moment correlation between the foreign language reading anxiety and foreign language reading performance was significant (see Table 14), \( r(123) = -0.352, p<0.001 \). According to the cutoff of 0.1, 0.3, 0.5 as small, medium and large correlation (Green, Salkind & Akey, 2000), there was a significant medium negative correlation between the foreign language reading anxiety and foreign language reading performance. Students with lower foreign language reading anxiety tended to have higher foreign language reading performance score.

<table>
<thead>
<tr>
<th>FLRAS</th>
<th>Reading performance score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>125</td>
<td>125</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
It is also suggested that the scatterplot always be examined after calculating the correlation to detect if the two variables are related to each other in a linear way (Chambers, Cleveland, Kleiner, & Tukey, 1983; Green, Salkind, & Akey, 2000). The scatterplot of foreign language reading anxiety and foreign language reading performance score showed a pretty linear relationship (see Figure 7). Due to the ceiling effect, students could not obtain a reading performance score that was higher than 100. If there was not such a ceiling effect, the relationship might look more linear.

Figure 7. Scatterplot of the correlation between the FLRAS and reading performance score
In addition, there were several cases at the right upper corner of the scatterplot that did not seem to fit in the negative linear relationship. Those cases had both high foreign language reading anxiety score and foreign language reading score. The identification numbers of these cases were identified through the “data id mode” function in the SPSS. The personal characteristics such as gender, age, ethnicity, course level, motivation, major, whether or not having been to China were examined to detect any possible trend among these cases. Altogether six cases were examined as was shown in Figure 7. All these six cases scored above 96 in the reading performance but had a reading anxiety that was equal to or higher than 63. Among these six cases, there were three female students with Asian background who had never been to China. Considering that female students with Asian background accounted for only 12% of the all the participants but occurred frequently in the right corner area of the scatterplot, the researcher suggested that there might be a trend of higher reading performance and also higher reading anxiety among female students who had Asian background but had never been to China. The female students with Asian background in general had a higher reading performance score (M = 93.63) than the whole sample (M = 90.54). The reading anxiety score among these group (M = 54.33) was also higher than the whole sample (M = 53.25). The correlation between foreign language reading anxiety and foreign language reading performance among female students with Asian background was still negative but not significant, r (13) = - 0.196, p = 0.484. The negative correlation between foreign language reading anxiety and reading performance in the female students with Asian background was not as strong as in the rest of the sample. However, due to the small number of this group of students (N=15), it was too early to make any conclusion.

Summary

The study resulted in three major findings (Table 15). First, a review of the FLRAS scores and FLCAS scores showed that students experienced a similar level of foreign language reading anxiety (per item mean = 2.66) and foreign language classroom anxiety (per item mean = 2.69). Reading Chinese was anxiety-provoking to some students. The major sources of foreign language reading anxiety stemmed from unfamiliar scripts, unfamiliar
topics of reading passages and general worry about reading effect. Second, an examination of the 2*2*2 ANOVA results indicated that there was a significant course level effect on the FLRAS score with a small to medium effect size (Cohen’s d = 0.346). Intermediate class students experienced a significantly higher level of reading anxiety than the Elementary class students. The ‘having been to China’ effect was not significant (p = 0.066) with a small effect size (Cohen’s d = 0.252). Those who had been to China experienced a lower level of reading anxiety than those who had not been to China. The gender effect was not significant. Third, the correlation between foreign language reading anxiety and foreign language reading performance revealed a significant medium negative correlation between these two variables. Students with lower foreign language reading anxiety had higher foreign language reading performance.

Table 15

*Summaries of Research Questions and Findings*

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the foreign language reading anxiety level among English speaking</td>
<td>The FLRAS score had a mean of 53.25.</td>
</tr>
<tr>
<td>university students learning Chinese as a foreign language in the United States?</td>
<td>The participants experienced a similar level of foreign language reading</td>
</tr>
<tr>
<td></td>
<td>anxiety and general foreign language anxiety.</td>
</tr>
<tr>
<td></td>
<td>Unfamiliar scripts, unfamiliar topics and general worry about reading</td>
</tr>
<tr>
<td></td>
<td>effect were identified as the major sources of foreign language reading</td>
</tr>
<tr>
<td></td>
<td>anxiety.</td>
</tr>
<tr>
<td>2. What background variables are related to foreign language reading anxiety?</td>
<td>The background variable of ‘course level’ was related to foreign language</td>
</tr>
<tr>
<td></td>
<td>reading anxiety.</td>
</tr>
</tbody>
</table>
Table 15 - continued

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Is gender related to foreign language reading anxiety?</td>
<td>There was not a statistically significant effect of gender on the foreign language reading anxiety and effect size for ‘gender’ was small.</td>
</tr>
<tr>
<td>b. Is course level related to foreign language reading anxiety?</td>
<td>There was a statistically significant effect of course level on the foreign language reading anxiety and the effect size for ‘course level’ was small to medium.</td>
</tr>
<tr>
<td>c. Is time spent in China related to foreign language reading anxiety?</td>
<td>There was not a statistically significant effect of having been to China on the foreign language reading anxiety and the effect size for ‘having been to China’ was small.</td>
</tr>
<tr>
<td>3. Is there a relationship between foreign language reading anxiety and foreign language reading performance?</td>
<td>There was a significant medium negative relationship between foreign language reading anxiety and foreign language reading performance.</td>
</tr>
</tbody>
</table>
CHAPTER FIVE
DISCUSSION AND CONCLUSION

Overview

Foreign language reading anxiety has been explored among learners of syllabic or alphabetic languages as foreign languages but has not been explored among learners of Chinese as a foreign language, which uses a logographic writing system. As Saito et al. (1999) point out the different writing systems of the native language and the target language might be a source of foreign language reading anxiety. This study expands the previous research by examining foreign language reading anxiety among learners of Chinese as a foreign language.

Set in the theoretical framework of Bernhardt's (2000, 2003, 2005) L2 reading model, which acknowledges not only the importance of L1 literacy and second language knowledge but also affective factors in second language reading, this study investigated the foreign language reading anxiety level among learners of Chinese as a foreign language and also what background variables were related to the foreign language reading anxiety level. In addition, this study examined the relationship between foreign language reading anxiety and foreign language reading performance.

A survey research design was implemented. The participants included 125 English speaking college students enrolled in eight intact Chinese classes at a large public university in the U.S. The participants had an age range from 18 to 30. Among the participants, 92 were enrolled in the Elementary Chinese class and 33 were enrolled in the Intermediate Chinese class. About 43% participants were female and about 57% participants were male. Approximately 28.8% participants had been to China and 72.2% participants had not been to China prior to the study.

Three major findings emerged. First, learners of Chinese had a similar level of foreign language reading anxiety and general foreign language anxiety. Unfamiliar scripts, unfamiliar topics and worry about reading effect were identified as the major sources of foreign language reading anxiety. Second, there was a significant course effect on foreign language
reading anxiety with intermediate level students having a higher level of anxiety than the elementary level students. Third, there was a significant negative correlation between foreign language reading anxiety and foreign language reading performance.

In this chapter, interpretations and discussions of the major findings are organized according to each research question. Limitations of the study both in the research design and data analysis are offered, following the discussion of findings. Recommendations for future foreign language reading anxiety research and pedagogical applications of findings are provided at the end of this chapter.

**Foreign Language Reading Anxiety Level among Learner of Chinese**

This section discussed the results of the first research question by comparing the level of foreign language reading anxiety and level of the general foreign language anxiety and also by looking into the sources of foreign language reading anxiety.

**Level of Foreign Language Reading Anxiety vs. Level of Foreign Language Anxiety**

The first research question examined the foreign language reading anxiety level among English speaking college students in the U.S learning Chinese as a foreign language. The finding indicated that students experienced a similar level of foreign language reading anxiety and general foreign language anxiety as measured by the FLRAS and the FLCAS respectively. The FLRAS had 20 items and the total possible score of the FLRAS ranged from 20 to 100. The mean of the FLRAS among the present sample was 53.25 (SD = 10.36). The FLCAS had 33 items and the total possible score of the FLCAS ranged from 33 to 165. The mean score of the FLCAS was 88.82 (SD = 21.28). The average per item score for the FLRAS and the FLCAS was 2.66 and 2.69 respectively. The FLCAS measured the general foreign language anxiety with a focus on speaking while the FLRAS measured the foreign language reading anxiety. The similar average per item score of the FLRAS and FLCAS indicated that reading provoked a similar level of anxiety as speaking did among learners of Chinese.

The European and American students in Zhang (2002), who were learning Chinese as
a second language in China had a slightly higher level of foreign language reading anxiety 
(M = 54) than the American students in the present sample (M = 53.25). However, in Zhang 
the European and American learners had a higher level of foreign language reading anxiety 
than general foreign language anxiety as measured by the FLCAS (M = 79). The average per 
item score for the FLRAS and the FLCAS among the European and American students in 
Zhang was 2.7 and 2.39. Reading incurred more anxiety than speaking among the European 
and American students in Zhang.

The inconsistence between the result of this study and Zhang (2002) might be 
attributed to the different language learning contexts. In this study, the students were learning 
Chinese as a foreign language while in Zhang the students were learning Chinese as a second 
language. In a second language environment, students were immersed in the target language 
and had more opportunity to use the target language, especially the opportunity to converse 
with the native speakers in the target language. The frequent contact and use of Chinese in 
conversation might have made speaking Chinese a familiar activity. This might be a reason 
why the European and American students had a lower general foreign language anxiety than 
foreign language reading anxiety. However, being in the target language country might not be 
as beneficial to reading as it was to speaking. Students had more practice opportunity in 
speaking Chinese than reading Chinese while living in China. Therefore, the improvement of 
reading might not be as noticeable to students as speaking was. After spending some time in 
reading without seeing a big and quick improvement, students might think that reading in 
Chinese was hard and thus had more anxiety in reading than in speaking.

The present sample had a mean FLRAS score of 53.25, which was lower than the 
learners of Japanese (M = 56.01), similar to learners of French (M = 53.14) and higher than 
the learners of Russian (M = 46.64) in Saito et al. (1999). Saito et al. (1999) proposed that 
different writing system was a possible source of foreign language reading anxiety. The 
bigger the difference was between the target language and native language in terms of writing 
system, the more anxiety the students were expected to experience while reading the foreign 
language. In Saito et al. (1999), that learners of Japanese experienced higher level of reading 
anxiety than learners of French and Russian led support to this hypothesis. Based on this 
hypothesis, among the foreign language learners whose primary language was English,
learners of Chinese were expected to experience a similar or higher level of foreign language reading anxiety than the learners of Japanese since Chinese and Japanese were both different from English in terms of the writing system. However, this study showed that learners of Chinese actually experienced a lower level of foreign language reading anxiety than learners of Japanese in Saito et al. (1999).

Due to complex factors such as curriculum, participants characteristics, reading task difficulties, it is difficult to base conclusion on the comparison results of the foreign language reading anxiety level among different samples. It is more informative to compare the level of foreign language anxiety and the level of foreign language reading anxiety among the same sample as this comparison tells if reading and other language skills especially speaking provoke the same level of anxiety holding all other variables equal. In Saito et al. (1999), the average per item score of the FLCAS and the FLRAS for learners of French is 2.95 and 2.66 respectively, for learners of Russian 2.81 and 2.38 respectively, and for learners of Japanese 2.83 and 2.80 respectively. As the FLCAS score indicates the level of speaking anxiety and the FLRAS score indicates the level of reading anxiety, the above-mentioned average per item scores show that reading provoked a lower level of anxiety than speaking did among learners of French and learners of Russian but a similar level of anxiety as speaking did among learners of Japanese. In this sense, the result of this study was consistent with the result of Saito et al. because reading provoked a similar level of anxiety as speaking did among learners of Chinese. French and Russian use a similar writing system as English while Chinese and Japanese use a different writing system than English. Therefore, a tentative conclusion can be made that reading provoked more anxiety to learners of foreign languages which use a different writing system than that of their native language.

The scores of the FLRAS and FLCAS showed that reading provoked a similar level of anxiety as speaking did among learners of Chinese. The responses from the interview also demonstrated that reading in Chinese as a foreign language was anxiety-provoking to some of the learners of Chinese. In the interview responses, a student stated that he decided to focus on speaking and listening only and gave up reading and writing Chinese because reading and writing were so painful to him. He stated that:

Reading Chinese is a slow and painful process that takes hard dedication and hours of
commitment. Writing it is even worse. Learning Chinese has helped me come to the decision that if I ever do open a business in China, I'm going to need a secretary to send me my faxes and memos in English. As long as I can hold my own in a conversation, I will regard my time in the Chinese program as successful.

The response from this student represented an extreme case. To other students, reading was frustrating mainly because of the very different writing systems. For instance, a student mentioned that “reading Chinese is frustrating because it’s so different that what we are used to in the American language and I constantly am having to look up words to understand things.” To have a better understanding of the nature of foreign language reading anxiety, especially that among the learners of Chinese, the researcher also explored the possible sources of foreign language reading anxiety.

Possible Sources of Foreign Language Reading Anxiety

The possible sources of foreign language reading anxiety among learners of Chinese identified by the FLRAS questionnaire and interview questions were unfamiliar scripts, unfamiliar topics and general worry about the reading effect. The finding confirms one of the two possible sources of foreign language reading anxiety proposed by Saito et al. (1999), unfamiliar scripts, as the unfamiliar scripts of Chinese caused trouble in word recognition. However, a majority of students did not think that Chinese culture was foreign to them and believed that they did not have to know a lot about Chinese culture in order to read. The following paragraphs provide explanations and discussions for the possible sources of reading anxiety among learners of Chinese based on the FLRAS results and students’ interview responses.

Unfamiliar scripts. The frequency percentage on each item of the FLRAS showed that the unfamiliar script was a primary source of foreign language reading anxiety. 54.4% of the students agreed or strongly agreed with item 11 that read “I am worried about all the new symbols you have to learn in order to read Chinese.” As mentioned in the previous paragraph, Saito et al. (1999) hypothesized two sources of foreign language reading anxiety, namely, unfamiliar writing scripts and unfamiliar cultural elements. However, the results obtained
from their study did not support their hypotheses about the sources of foreign language reading anxiety. In their study, the percentage of learners of Japanese who agreed or strongly agreed with item 11 (40%) was lower than learners of French (62%) and learners of Russian (86%). According to their hypotheses, there should be more learners of Japanese who agreed with this item. Saito et al. explained that students were prepared for the differences in writing between Japanese and English. This study conformed partially to Saito et al.’s hypotheses in that the unfamiliar script was a major source of foreign language reading anxiety while unfamiliar cultural elements was not. The percentage of students endorsed anxiety with Item 11 was highest among all the items.

In line with the results from the FLRAS questionnaire, characters were identified as the most frustrating aspect of reading Chinese through the interview. When asked about what frustrated them most in reading Chinese in the interview questions, most of the respondents answered “characters”. Table 16 presented some typical answers from students concerning aspects that were most frustrating to them in reading Chinese.

<table>
<thead>
<tr>
<th>Response number</th>
<th>What frustrated you most in reading Chinese?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I get frustrated when I can’t remember what a character means when I know that I once knew.</td>
</tr>
<tr>
<td>2</td>
<td>Characters are very discouraging due to their complexity.</td>
</tr>
<tr>
<td>3</td>
<td>Coming across a character that I do not know is frustrating. It is hard to find what that character means.</td>
</tr>
</tbody>
</table>

The differences in the writing systems of Chinese and English made students spend more time in recognizing each word and feared that if they missed one word they would miss
the meaning of the whole sentence and even the whole paragraph. Many students read word for word in order to understand the passage. Approximately 49% agreed or strongly agreed with item 9 that read “I usually end up translating word by word when I’m reading Chinese.” In Saito et al. (1999), it was also found that more learners of Japanese (54%) translated word by word in reading than learners of French (33%) and learners of Russian (29%). American students spent more time and effort in recognizing each word in reading Chinese and Japanese due to the unfamiliar scripts of the target languages. Table 17 presented student responses describing the reading process they use for Chinese.

<table>
<thead>
<tr>
<th>Number</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Most of the time I translate the Chinese word for word.</td>
</tr>
<tr>
<td>2.</td>
<td>When I am trying to read a Chinese passage, I read word for word while making sure I am understanding what I am reading. If I don’t understand what I am reading, I stop and read it over again.</td>
</tr>
<tr>
<td>3.</td>
<td>I read the passage word by word. But when I read the characters, I don’t think of the Chinese word for them, I just think of the English equivalent.</td>
</tr>
<tr>
<td>4.</td>
<td>I go through once trying to read character by character depending on the difficulty I will go back and right the pinyin above characters I am not familiar with, once I can read the passage I go back to get a understanding of the meaning and then work on grammar structure.</td>
</tr>
</tbody>
</table>

Two word recognition strategies can be inferred from students’ responses. Due to the influence from their native languages, many students relied on phonological mediation, i.e. pronouncing the word while reading, in recognizing Chinese characters. About 34% students
agreed or strongly agreed with the item 8 in the FLRAS that read “It bothers me to encounter words I can’t pronounce while reading Chinese.” Here is how a student described his reading process in Chinese, “When I read Chinese, I will take the character and then say the sound in my head and then try to find the interpretation. Very inefficient, but this is the only process that seems to work for me.” Phonological mediation was efficient in recognizing English words by native English speakers because the relative regular correspondence between the pronunciation and the letters. Since there was no direct relationship between a Chinese character and its pronunciation, the sound mediation in recognizing Chinese characters became very inefficient.

English-speaking learners in this study transferred their L1 (English) word recognition skill, phonological mediation, to L2 Chinese word recognition. This finding also conformed to the previous studies that showed L1 word recognition skill was likely to transfer to the second language learning. Research about the L1 effects on English word recognition have shown that Chinese ESL learners did not do as well as other ESL learners whose L1 was alphabetic such as Koreans and Indonesians in identifying English words measured through lexicon decision tasks, category judgment task or other naming tasks (e.g., Muljani, Koda, & Moates, 1998; Wang & Koda, 2005; Wang, Koda & Perfetti, 2000). Chinese ESL learners were found to rely less on phonological information and more on orthographic information in identifying English words than did their Korean counterparts. (Wang & Koda, 2005). The English speaking students have formed the reading habit of using phonological mediation in recognizing English words. Therefore, it is natural for them to use phonological mediation when they decipher meaning from Chinese characters. However, due to the special characteristics of the Chinese writing system, such as no direct relation between form and sound, phonological mediation is not an effective word recognition skill.

The homophones in Chinese, the words which share the same pronunciation but have different forms and meanings, also made sound mediation inefficient. Chinese characters are all monosyllabic, which means that each character is represented by only one syllable. One syllable in Chinese is usually combined of one initial (or onset) and one final (or rime). Sometimes one final can also be a syllable. There are 21 initials (usually consonants) and 39 simple finals and compound finals (usually vowels and combination of vowels). Not all
initials can be put freely with all finals to form syllables and there are about 400 syllables in Chinese. The use of four tones increased the number of syllables in Chinese to about 1,200. The number of commonly used Chinese characters is around 5,000 (Zhou, Shu & Shi, 1999). Therefore, one pronunciation (syllable plus tone) corresponds to an average of four commonly used characters in Chinese.

Considering that learners of Chinese were usually not very sensitive to tones when they begin learning Chinese, homophones to them were usually not only the characters which share the exact same pronunciation but also those which share the same syllable but different tones. When students used sound mediation to help them recognize characters, they often felt frustrated because there were so many homophones in Chinese. One sound might correspond to different characters and thus different meanings. Students also mentioned the frustration with regard to the homophones. For instance, a student said, “That so many of the characters look or sound alike makes it difficult to know what the dialogue is trying to say.” Therefore, besides the non direct relationship between sound and form, the many homophones were another reason why phonological mediation was not efficient in reading Chinese characters. Students need to be trained not to rely too much on Pinyin and form a direct form-meaning connection without the mediation of sound.

Relying on the salient graphic features of characters was another way mentioned by students in recognizing Chinese characters. For instance, a student said, “What will catch my eye first will be the characters with the more unique stroke patterns. Enclose (enclosed structure) being the most easy to recognize.” On the other hand, using the graphic characteristics to recognize a character was not efficient either because there were many characters in Chinese which look similar. One student said that “the whole character process seems a bit ridiculous to me, as two almost identical characters can have completely different sounds (and meanings).” The student continued to give one example in Chinese, the two words 太 (tai, too) and 大 (da, big). The two words are similar in writing in except one dot but they have totally different meaning and pronunciation. The many visually similar words made the reliance on the graphic characteristics a tedious process for word recognition.

Worry about the reading effect was identified as another source of foreign language reading anxiety among the present sample. Approximately 42.8% students agreed or strongly
agreed with item 1 that stated “I get upset when I’m not sure whether I understand what I am reading in Chinese.” About 33% students agreed or strongly agreed with item 2 that read “when reading Chinese, I often understand the words but still can’t quite understand what the author is saying.” Worry about reading effect has been identified by two studies. In Zhang (2001), the European and American students also showed anxiety about the effect of reading Chinese. In her study, 57% of students agreed or strongly agreed with Item 2 and 40% with item 1. In Saito et al. (1999), 58% learners of Japanese agreed or strongly agreed with item 1 and 40% agreed or strongly agreed with item 2.

There were several possible reasons why students felt upset when they were not sure if they understood what they were reading. First, most students reported that their purposes of reading Chinese were for tests (100%) and for assignments (96.7%). Students were usually asked to do reading performance tasks after reading on both the tests and assignments and their performance on these reading tasks affected their final grades. Therefore, it was likely that students might become anxious when students were not sure if they fully understood the Chinese passages, fearing that they could not do well on the reading performance tasks.

The after-reading task types might also be a reason why worry about the reading effect was a source of foreign language reading anxiety. Different task types have been identified to be associated with different degrees of foreign language anxiety (Brantmeier 2005; MacIntyre and Gardner, 1994a). In the context of this study, most of the after-reading tasks that students were asked to do were multiple choice questions and true/false questions, which only allowed for one correct answer. This practice might have fostered a cognitive perspective towards L2 reading among second language learners, which believes that there was only one correct interpretation of the L2 text. Therefore, many times students became upset when they were not confident with their understanding of the text. They were worried that their understanding might be different from other students or from the teacher or from the correct answer. Young (1994) also found that students were more anxious in doing tasks that allow for one right answer than the ones that allow for different answers.

Besides the reading tasks on tests and assignments, students were often asked to answer oral questions after reading dialogues and texts in the textbook in class. If students were not sure they understood the reading, they might become anxious fearing that they
would give the wrong answer in front of the class and thus incur possible negative evaluation from their peers and teacher. Fear of negative evaluation from either peers or teacher had been identified as a possible source of foreign language anxiety (Horwitz et al., 1986; Kitano, 2001; Young, 1991).

Sometimes, students became anxious and frustrated because they could understand the meaning of single words but still could not understand what the author was saying. The reason, as discussed in the previous paragraphs, might be that their word recognition process was not efficient and occupied too much time and processing capacity and thus very limited processing capacity was left for the activation of syntactic knowledge and discourse knowledge, which were also important components of skillful reading (Bernhardt, 1990). In the interview responses, one student expressed his worry about reading effect by saying that “I forget what I just read or am unable to put the entire paragraph together (to get its meaning) without re-reading the passage again and again.”

**Unfamiliar topic** was another source of reading anxiety. 44% of the students agreed or strongly agreed with item 5 that stated “I am nervous when I am reading a passage in Chinese when I am not familiar with the topic.” This finding conformed to Shi and Liu (2006) in which unfamiliar topics also caused reading anxiety among the Chinese ESL learners. According to the sociocognitive perspective of L2 reading (Bernhardt, 1991), a text is not only characterized by the linguistic elements but also its content, topic and structure. Therefore, to fully understand a text, students need to understand not only the linguistic elements of the text, but also the topic and the structure. According to Ausubel’s (1963) meaningful learning theory, students learn the best when they can relate the new knowledge with the existing knowledge. When the topic of the L2 text was not familiar to students and students cannot relate the topic to their existing knowledge base, it was natural that students might feel anxious. For instance, an advanced level student mentioned that he felt upset while reading a Chinese article about college entrance exam in China because he was not familiar with the topic. His anxious feeling did not disappear until the teacher explained the background knowledge related to the college entrance exam.

Although unfamiliar culture has been identified in other studies as a possible source of foreign language reading anxiety (e.g., Shi & Liu, 2006), unfamiliar culture was not
identified as a source of reading anxiety among the present sample. Actually most students felt that they were familiar with the Chinese culture and agreed that one did not have to know too much about Chinese culture in order to read Chinese passages. In this study only 17.6% students agreed or strongly agreed with item 19 that read “Chinese culture and ideas seem very foreign to me” and only 5.6% students agreed or strongly agreed with item 20 that stated “you have to know so much about Chinese history and culture in order to read Chinese.” This result conforms to the findings in Saito et al. (1999), in which only 11% of the learners of Japanese agreed or strongly agreed with item 19 and 15% agreed or strongly agreed with item 20. The similarity between the two studies might be due to the similar sample of students. In both studies, the participants were college students in the U.S. and they might share similar attitudes towards foreign cultures.

Results of this study are not consistent with Shi and Liu (2006), in which they identified the unfamiliar culture as the major source of reading anxiety among EFL students in mainland China. There were three possible reasons why unfamiliar culture incurred anxiety among the EFL students in Shi and Liu but not in this study. Firstly, in Shi and Liu, the participants had learned English for around eight years while in this study students had learned Chinese for half to one and a half years. The English proficiency level of the EFL students in Shi and Liu was much higher than the Chinese proficiency level of the American students in this study. Due to the low level of students’ Chinese proficiency, very few or no cultural elements were embedded in the reading passages. The EFL students in Shi and Liu were more likely to encounter cultural elements in the reading passages than the American students in this study. Secondly, the use of internet was more prevalent among the American students than the Chinese EFL students. Internet provided a platform and resources for students to search for questions concerning foreign cultures. A student mentioned what she did when she encountered unknown cultural elements in reading. “I struggle through it. Sometimes I’ll try and look it up online.” Thirdly, the American students usually did not worry about their knowledge about foreign cultures. In Zhang (2001), the European and American students and the Korean and Japanese students had all learned Chinese together in China for a year. While 50% of European and American students did not agree that Chinese culture was foreign to them, only about 20% of Korean and Japanese did not think that
Chinese culture was foreign to them. Fourthly, the United States is an immigrant country with a mix of different cultures. The American students had more opportunities to encounter different cultures and thus foreign culture might not be very foreign to them.

Overall, American students learning Chinese were open-minded to Chinese culture and realized the differences between the Chinese and American cultures before they were enrolled in the course. As a student said, “There is a great difference between Chinese culture and American culture but I know this and I am very open-minded and try to learn the new culture. I try to research whenever I feel some tradition is different than what I know.” The increasing number of Chinese students who were studying in the U.S. also gave American students an opportunity to learn Chinese culture. A student mentioned that “I do not know much about Chinese culture, but do have a small amount of experience with it, mostly from a couple of friends in the past from mainland China and Taiwan.” Despite the fact that Chinese and English were very different in the writing system, students had shown high interest in reading Chinese. Chinese character was one of the fascinating aspects about Chinese that attracted students to learn Chinese. Therefore, although students experienced a certain level of reading anxiety in learning Chinese due to the different writing scripts, unfamiliar topics and worry about reading effect, they were still very motivated in reading Chinese, which gave them a feeling of uniqueness.

**Background Variables and Foreign Language Reading Anxiety**

The second research question explored the relationship between three background variables and foreign language reading anxiety. The results presented in Chapter 4 revealed that foreign language reading anxiety was related to course level but not gender or having been to the target country. In this section, explanations and discussions are included with regard to the relations between each of the three background variables and the foreign language reading anxiety.

**Course Level and Foreign Language Reading Anxiety**

Results show that foreign language reading anxiety was related to course level, F (1,
Students in the Intermediate Chinese class had a significantly higher level of foreign language reading anxiety (M = 55.87) than students in the Elementary Chinese class (M = 52.31). As course level increased, the foreign language reading anxiety level increased. This result is partially consistent with the results obtained in Brantmerier (2005), in which the learners of Spanish did not express Spanish reading anxiety in a Spanish Grammar and Composition Course but showed anxiety in the upcoming Spanish literature course. The result of this study is different from Brantmerier in that in this study, although as a whole the Elementary Chinese class had a lower level of reading anxiety than students in the Intermediate Chinese class, reading was anxiety provoking to some of the students in Elementary Chinese class. However, in Brantmerier, students did not express reading anxiety in the Spanish Grammar and Composition course.

This result also conforms to the result obtained from studies about general foreign language anxiety among learners of Japanese. A series of studies (e.g., Kitano, 2001; Saito & Samimy, 1996; Samimy & Tabuse, 1992) conducted among learners of Japanese came to the conclusion that students’ foreign language anxiety increased as they entered higher level classes. The similarity in results between this study and the above mentioned studies might be due to the fact that both languages used a different writing system from English. As students proceed to higher levels Chinese classes, they need to learn more characters and as students enter high level Japanese classes, they need to learn more Kanji (Chinese characters in Japanese). This result is in conflict with the result obtained in Hussein (2005), in which he found that learners of Arabic in the third year had a significantly lower level of foreign language anxiety than learners in the first year because the reading and orthographic tasks in the Arabic class did not undergo a similar increase in difficulty. Learners of Arabic did not have to learn new letters as the Chinese or Japanese learners did as they enter higher level of classes.

Both Chinese and Japanese are related to Asian cultures and both are considered not commonly taught languages in the U.S. despite the increasing number of students learning these two languages. The fact that American students did not consider Chinese culture or Japanese culture as foreign to them did not mean that American students were really familiar with and understood Chinese culture or Japanese culture. In higher level Chinese classes, the
requirements for the familiarity with Chinese culture in order to fully understand a Chinese passage increased. The more cultural elements embedded in the reading passage in the intermediate class might also be a reason why the level of foreign language reading anxiety increased.

As mentioned, in the Intermediate Chinese classes, students needed to learn and master more characters in order to read at the according proficiency level. However, students still had not found an effective way to recognize characters and most of the students still relied on Pinyin to decipher the meaning of characters. As an intermediate level students said, “if all of Chinese could be in pinyin, I would be thrilled.” In the Intermediate Chinese textbook, the Pinyin text was not provided together with the character text and teachers usually asked students only focus on the character text. The forced transition from reading Pinyin to reading only characters in the textbook might also be the reason why intermediate students had higher level of reading anxiety. In addition, students had learned more words and therefore there was a higher frequency for them to encounter homophones, which made sound mediation very inefficient. As a student mentioned, “I get really upset when I encounter two words that are similar (in sound or meaning) and I confuse them with each other because they’re so similar.”

Another possible reason why Intermediate Chinese class students felt more reading anxiety than the Elementary Chinese class students was the perceived increased difficult level of the reading passages in both workbook exercises and chapter tests and exams. In the background questionnaire, the reading passages in the workbook and tests were rated as more difficult by the intermediate students than the elementary students. Besides, the Intermediate Chinese class also read two Chinese parables written in authentic Chinese and the difficult level of the parables were much higher than the reading passages in the workbook exercises. Students could read the comparatively easy reading passages in the Elementary Chinese class without much effort and therefore the chances for them to experience reading anxiety were low. As the difficult level of reading passages increased in the Intermediate Chinese, students need more effort in reading and understanding the reading passages and chances for them to experience anxiety in reading Chinese were higher.
Target Country Experience and Foreign Language Reading Anxiety

The results provided in Chapter 4 indicated that having been to the target country did not make a difference among students in terms of their level of foreign language reading anxiety, $F(1, 117) = 3.436, p = 0.066$, Cohen’s $d = 0.252$. Although students who had been to China had a lower level of foreign language reading anxiety ($M = 51.38$) than those who have not been to China ($M = 54$), the difference did not reach statistical significance. This result is in congruence with the result obtained in Caruso (1996) in which it was found that going to a French speaking country did not have a significant effect on students’ foreign language anxiety level.

This result, however, is in conflict with the result obtained in Aida (1994), in which she found that the experience of going to Japan had a significant impact on the foreign language anxiety level of learners of Japanese. Those who have been to Japan had significantly lower level of foreign language anxiety. The different results between this study and Aida might be due to the different types of foreign language anxiety under investigation. Aida targeted the foreign language anxiety in general which had a focus on speaking while this study targeted at foreign language reading anxiety. Having been to Japan and having the opportunity to contact the Japanese culture and people gave students in Aida more opportunity to talk in Japanese. Similarly, having been to China might greatly decrease students’ general foreign language anxiety level but not their foreign language reading anxiety level. That is to say, having been to the target language country and therefore being immersed in the target language for a certain period of time might be more beneficial to the improvement of students’ speaking skills than their reading skills.

Although having been to China and being surrounded by Chinese characters did make students realize how often characters were used and make students value the importance of reading in Chinese, this experience did not greatly improve students’ reading skills. A student said, “Reading Chinese will always be a challenge but I believe that going over to China and seeing how much the written language is used has helped me to see that it is a useful skill to have.” However, reading was not as frequently used and practiced as speaking when students were in the target language country and therefore, students’ reading skill might not be
improved as noticeably as speaking. Students could easily notice the improvement they had in speaking by going to the target language country because they had to talk with the native speakers everyday in order to complete some daily routines such as taking a taxi, buying groceries, and buying movie tickets. Although students might be immersed in Chinese characters in China, they cannot recognize most of them or there was no need or pressure for them to read the characters. Table 18 listed some of student responses concerning the effect of their China experiences on reading Chinese

<table>
<thead>
<tr>
<th>Response Number</th>
<th>How did going to China help you learn Chinese in general and reading Chinese in specific?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>For all the signs, overloads of advertisements, and literature written in China...nothing really helped with the reading.</td>
</tr>
<tr>
<td>2</td>
<td>This experience helped my listening comprehension the most because all I heard is Chinese. My reading was not really helped by going to China. There were characters everywhere but a lot of the time I did not know what they meant.</td>
</tr>
<tr>
<td>3</td>
<td>I have been to China many times and I feel it does help a lot with the conversation part of learning Chinese but not with reading Chinese</td>
</tr>
</tbody>
</table>

This result can also be compared with Huang (2001), in which she found that the EFL students who did not plan to go to an English-speaking country had significantly higher level of foreign language reading anxiety than those who planned to go to an English speaking country. The EFL students in Huang who did not plan to go to an English speaking country were not motivated in learning English and considered English as useless but had to learn it because it was a mandatory course. Therefore, Huang concluded that high motivation had an important effect on decreasing foreign language reading anxiety. Chinese was not a
mandatory course to the students in this study and most students were highly motivated in learning Chinese. When asked if they plan to go to China only four out of the 125 students in this study said no. Therefore, even though students had not had the opportunity to go to China due to time conflicts or financial issues or other reasons, they were as highly motivated as those who had been to China. The high motivation shared by students who have been to China and who haven’t been to China might also contribute to the result that having been to China had no effect on the level of foreign language reading anxiety.

**Gender and Foreign Language Reading Anxiety**

Results reveal no gender effect on the foreign language reading anxiety level, F (1, 117) = 0.131, p = 0.718, Cohen’s d = 0.177. Although female students had a higher level of foreign language reading anxiety (M= 54.29) than male students (M = 52.46), the difference did not reach the significant level. This result was similar to the result provided by Huang (2001) in which she found that gender was not related to the foreign language reading anxiety level among EFL learners in Taiwan.

This result was in conflict with Shi and Liu (2006) in which they found that male EFL students in mainland China had a significantly higher level of foreign language reading anxiety than the female EFL students. The difference in results between this study and Shi and Liu might be due to the different cultures students were in. In China, female students were usually considered as better foreign language learners (Shi & Liu, 2006). Female students scored significantly higher than male students in a large standardized English test College English Test (CET) in Shi and Liu. In many universities in China, students had to pass CET in order to be granted the Bachelor’s degree. Usually reading passages accounted for 40% of the total score on the CET and students considered reading as a very important component on the CET that decided whether or not they could pass the exam. Because male students were usually lower in English proficiency than female students, they were usually more worried about their reading performance and thus felt more anxious in reading English. In this study, female students and male students did not have to pass important exams such as the CET as the EFL students in Shi and Liu did and they had similar average reading scores.
Female students had a mean reading score of 91.0 and male students had a mean reading score of 90.1. The similar reading performance between female students and male students might be a reason why there was no gender effect on the foreign language reading anxiety level.

Female and male had been found to have either same or different reading habits, reading beliefs, reading achievement and self-perceptions of readers by the previous research among different groups of students (e.g., Lynch, 2002; Oxford, 1995). The relation between gender and FLRAS was likely to be affected by the above mentioned factors. In the background information questionnaire, students were asked to choose how much time they spent in reading Chinese, their purpose of reading Chinese, their perceived level of difficulty of reading passages in the workbook and the self-rated reading ability in Chinese. A closer look at the result showed that female students and male students gave very similar responses to these questions. For instance, female students spent an average of 5.52 hours in reading Chinese each week and male students 5.31 hours. Female students perceived their reading proficiency level at 4.76 with 10 being the best and male students perceived their reading proficiency level at 4.59. Female students rated the level of difficulty of the reading passages in the workbook an average of 4.83 with 10 as being very difficult and male rated a mean of 5.54. In terms of reading purposes, 100% female students and 100% male students read Chinese for tests; 96.3% female students and 97.2% male students read for assignments; 25.9% female students and 29.6% male students read for fun. In the present sample, it has been found that female students and male students were similar in reading achievements, perceived reading ability, reading purposes, perceived level of difficulty of reading passages and time spent in reading Chinese. These similarities might be the reason why gender did not have an effect on the level of foreign language reading anxiety.

**Foreign Language Reading Anxiety and Foreign Language Reading Performance**

Results indicate a significantly negative relationship between foreign language reading anxiety and foreign language reading performance score, $r(123) = -0.352$, $p<0.001$. Students with higher foreign language reading anxiety tended to score lower in the foreign
language reading performance.

This finding conforms to the result obtained by Shi and Liu (2006), in which they found the foreign language reading anxiety was negatively correlated to the reading performance scores among the college EFL students in China. The foreign language reading anxiety level in Shi and Liu was also measured by the FLRAS. Students in their study did eight reading passages from two standardized CET tests and the reading scores were used as an index for the reading performance.

This result is also consistent with the previous research which studied the correlation between foreign language anxiety and foreign language performance (e.g., Aida, 1994; Horwitz et al., 1986; Phillips, 1992; MacIntyre & Gardner, 1989; Saito & Samimy, 1996). As the cognitive psychologists explained, humans were limited in their processing capacity in language learning (Eysenck, 1992). The reading anxiety that students had might occupy their cognitive processing capacity and reduce the attention that they could allocate on the reading task. With less attention on the reading task, the more anxious students might need more time to decipher meanings from words or given the same time the more anxious students might not achieve the same reading effect as the less anxious students. Therefore, the students with higher foreign language reading anxiety might score less in foreign language reading performances.

However, this result is in conflict with the results obtained in the research of Mills, Pajares and Herron (2006) and Brantmeier (2005) in which they found no significant relationship between anxiety and foreign language reading performance. In Mills et al., the participants were third and fourth semester students learning French as a foreign language in the U.S. The possible reason of the lack of relationship might be due to “the low stakes test-taking condition” (p.291) which affected the reliability of the test score. The proficiency test took items from the University of Minnesota’s Graduate Standard Reading proficiency tests but students knew that their performance on this proficiency test would not affect their grade and there was no proficiency test to pass to fulfill the foreign language requirement. Therefore, students might have put less effort in doing the proficiency test and have a lower level of anxiety (Mills, Pajares, & Herron, 2006). In this study, students’ reading scores were taken from the reading performance scores on chapter tests and the final exam. Students were
usually very serious in how they treated these tests and tried their best in doing the tests because the test performance affected their final grade. Their reading performance scores on these tests were a more faithful reflection of their reading proficiency level than the low stakes test in Mills, Pajares and Herron.

In Brantmeier (2005), no significant correlation was found between anxiety factors and the reading comprehension scores among learners of Spanish. Anxiety factors were measured through a questionnaire which included 10 items adapted from the FLCAS and the Reading Anxiety Scale (RAS). The reading performance of the advanced Spanish learners was measured via written recall task and ten multiple choice questions after they finished reading a short story in Spanish. Brantmeier found no correlation between the reading performance score and all the reading anxiety related items, such as “I become anxious when I have to read in Spanish,” and “I become anxious when I am asked to write compositions.” It can be argued that the rating of a single anxiety item was not valid enough to represent a students’ foreign language reading anxiety level. Therefore, it cannot be concluded that there was no significant correlation between anxiety and foreign language reading performance based on the correlation between the reading performance score and only one single reading anxiety related item in the questionnaire.

This result also showed a trend that although the female students with Asian background scored high in the reading performance tests they still had high foreign language reading anxiety. The correlation between the foreign language reading performance and the foreign language reading anxiety was still negative among the female students with Asian backgrounds but not significant. It is likely that female students with Asian background might have a higher requirement for themselves and thus higher anxiety in reading. Their Asian heritage to an extent helped them in learning the new language because they were more familiar with the Chinese culture or Chinese language due to their family members who could speak Chinese or know about the Chinese culture. Therefore, although they might be more anxious due to their high self-expectation, they still obtained high reading scores. Although this study did not have enough female students with Asian backgrounds to make a generalization, the relationship between foreign language reading anxiety and foreign language performance among this sample should be further studied.
Summary of Findings

Learners of Chinese experienced a similar level of foreign language reading anxiety and general foreign language anxiety, which supported Saito et al. (1999) that claimed reading was anxiety provoking to some foreign language learners. The major source of foreign language reading anxiety identified in this study was unfamiliar scripts, which also supported one of the hypothesized sources of foreign language reading anxiety proposed by Saito et al. (1999). The two inefficient word recognition processes identified by previous research (e.g., Everson, 1994; Hayes, 1988) were also supported by this study. Relying on Pinyin for sound mediation in word recognition was inefficient because of the many homophones in Chinese and the indirect relationship between the sound and the form. Relying on the visual characteristics of characters also made word recognition inefficient because of the many words which look similar. The finding that the Intermediate class students had a higher level of foreign language reading anxiety than the Elementary class students supported the conclusion made by researchers such as Kitano (2001) and Samimy and Tabuse (1992) that in learning a non-western non-cognate foreign language, the level of foreign language anxiety increased as students entered higher level classes. The negative correlation between foreign language reading anxiety and foreign language reading performance conformed to the findings that such a negative correlation existed between foreign language anxiety and foreign language performance (Aida, 1994; Horwitz et al., 1986; Saito & Samimy, 1996; Shi and Liu, 2006)

Limitations of the Study

This section addresses the limitations of this study in the areas of research design and statistical analysis. The limitations in research design mainly came from the following aspects: the exclusion of advanced class students, the cancellation of the face to face small group discussion, the inclusion of the researcher’s students and the use of non-standardized reading scores. Thirteen students from the two advanced Chinese classes completed the questionnaires; however, due to the small number of this group of students, the advanced level students were not included in the statistical analysis. The advanced class students used
different textbooks than the one used in the elementary and intermediate classes, in which the reading passages were written in Chinese characters and no Pinyin was provided. The reading passages were longer including more complicated words and authentic Chinese expressions, more advanced grammatical structures, and covered more social, cultural and economic topics. The reading passages required more efficient word recognition skills and the combined activation of syntactic knowledge, discourse knowledge and cultural background. The inclusion of advanced level students would provide more insight into the relation between foreign language reading anxiety and course level, topics, and styles.

The researcher had planned for small group discussion to triangulate the results from survey questionnaires and enrich the data. Due to students’ conflicting schedules, face to face small group discussion was replaced by email interview. The benefit of email interview was that the researcher could obtain more feedback in a short time and did not have to transcribe the responses. The small group discussion might have given the researcher more opportunity to follow up students’ responses and obtain more detailed explanations.

Participants also included the two classes that the researcher taught. The researcher’s role as both the teacher and the researcher might have influenced the participants’ answers to an extent. The students in the researcher’s class might not be as honest and frank as students from other classes knowing that their answers would be read by the researcher, i.e., their teacher. The researcher had reassured the participants that the questionnaires were anonymous and the researcher could not match their responses with their names. However, to what extent the researcher’s role had influenced the participants’ answers from her class could not be evaluated. Besides, the email interviews were only sent out to the researcher’s classes.

The reading performance score was obtained by adding up three or four reading performance scores taken from chapter tests and the final exam. In each chapter test, there was a test item called “reading comprehension” which asked students to read one or two reading passages and complete some true or false questions. The reading comprehension accounted for fifteen to thirty percent of the total test score. Although these reading passages were considered as having good content validity and face validity, their reliability had not been tested. Students reading performance might be more accurately tested through a more
standardized reading test with high validity and reliability.

The limitations with the statistical analysis were mainly the mean replacement of the missing data, the small cell size in the ANOVA analysis and the ceiling effect of the reading score. The missing item scores were replaced by the mean of the item based on scores from other subjects. Although mean replacement for missing data was easy to do, it was not recommended by many researchers due to the reduced variances resulted in adding constant values and the biased parameter estimates. Instead, the multiple imputation method was recommended to replace missing data (Graham, Cumsille, & Elek-Fisk, 2002; Tate, 1998). Due to the researcher’s limited knowledge in multiple imputation and the low missing data rate, the researcher adopted the mean replacement method in this study.

In a factorial ANOVA design, it is usually suggested that there are at least five observations in each cell (Hatch & Lazaraton, 1991). Small cell size might result in less precision of the calculation of the mean value of the cell. However, in this study because the researcher could not control how many participants appear in each cell, there was a cell which had four observations. This small cell size might have influenced the accurate interpretation of the ANOVA analysis and readers should take account into this when interpreting the results of this study.

Several students scored a 100 in the reading performance variable and thus there was a ceiling effect of reading performance score. The occurrence of the ceiling effect might be due to the comparatively easy reading passages in the chapter tests and final exam. Due to the ceiling effect, the distribution of the reading performance score was a little bit skewed and thus slightly violated one assumption of the correlation analysis. Later research design might want to use more standardized reading tests which could more accurately assess students’ reading performance.

**Recommendation for Future Research**

The findings of a study should not only add to the existing knowledge of the field but also point out problems waiting further exploration. Based on the results from this study, recommendations for future research are offered. in foreign language reading anxiety. The
researcher provided the following suggestions for the future research in foreign language reading anxiety based on the present research process and research results.

Advanced-level students should be included in foreign language reading anxiety study because advanced level students read more authentic articles that covered more topics. The future research can look at the word recognition process of the advanced students and examine if they rely less on the sound mediation and salient graphic features of a character in mapping meaning to characters than the elementary level students. As the advanced students have more opportunities to read different topics, different styles of reading passages (e.g., dialogues or essays), and have more frequent encounters with Chinese cultural elements, future research can also explore if different reading topics and styles of reading passages are related to the level of foreign language reading anxiety. Besides, in this study participants did not identify unfamiliar cultural elements as a possible source of foreign language reading anxiety and the possible reason was that the reading passages at this level did not incorporate many cultural elements in them. Future studies can explore if unfamiliar cultural element incurs foreign language reading anxiety as learners have more opportunities to read passages which have unfamiliar culture elements embedded (Saito et al., 1999).

In the interview, many students mentioned that they relied a lot on Pinyin mediation in recognizing characters, which was not very efficient. Sellers (1999) found that highly anxious students used more local strategies while less anxious students approached the reading text more holistically. Future study might look at how foreign language reading anxiety is related to the reading process, especially word recognition strategies. Do learners with higher reading anxiety rely more on sound mediation or graphic cues of a character in word recognition than less anxious students in reading Chinese? Do less anxious students use more discourse knowledge and background knowledge than the highly anxious students? The think-aloud techniques might be used to explore these questions (Brantmeier, 2005).

This study showed a course level effect on foreign language reading anxiety level. Students in higher level classes had a higher level of their foreign language reading anxiety than students in lower level classes. Future research can adopt a longitudinal research method to detect the changes of foreign language reading anxiety level among the same sample of students. Campbell (1999) found that the foreign language reading anxiety increased by 9%
among male learners while dropped by 7% among female learners two weeks after the semester began. The future longitudinal research may further explore the interaction effect of time and gender on the level of foreign language reading anxiety.

This study found a negative correlation between foreign language reading performance and foreign language reading anxiety. The use of correlation analysis did not permit making claims about causal relationship between foreign language reading anxiety and foreign language reading performance. In the future research, it would be interesting to include foreign language reading anxiety as a possible predicting factor in a multiple regression analysis together with other factors in Bernhart’s (2001) interactive model such as L1 literacy and L2 language knowledge. If foreign language reading anxiety is still found to be significant in the regression model, Bernhart’s proposal of including affective factors in L2 reading model will be supported.

The three-way interaction in the ANOVA was not statistically significant but had a large effect size. The researcher suspected that the course by having been to China interaction was different among female students and male students. The insignificant results might be due to the small sample size. A replication study with a larger sample size is also suggested for future research to explore if such a three-way interaction exists.

All the participants in this study came from the same university, which makes the findings less generalizable as Chinese programs in other universities might use different curriculums, different textbooks, different reading test formats, and there might be different teacher student interaction patterns or different peer interaction patterns. All these above-mentioned differences might have an influence on the level of students’ foreign language reading. Future research is suggested to recruit students from more than one university and examine if the findings of this study still hold water for learners of Chinese in other universities and also how level of foreign language reading anxiety is related to reading test formats and teacher students interaction patterns.

**Pedagogical Implications**

The results of this study show that reading in Chinese was anxiety provoking to some
learners of Chinese. Anxiety related to speaking an L2 is usually more easily detected by instructors while anxiety related to reading is not easily noticed since reading does not require the interaction that speaking does. Therefore, this finding reminded Chinese instructors of the existence of reading anxiety. With this awareness, the Chinese instructors will be more likely to detect students with high reading anxiety, show a sympathetic attitude towards the problems students are facing and adopt according measures to help students. In a word, instructors should be understanding and sensitive to students’ anxiety about foreign language learning (Vogely, 1998) in general and foreign language reading in particular.

Cognitive psychologists explained that humans were limited in their cognitive capacity and anxiety took up cognitive capacities (e.g., Eysenck, 1992). Therefore, in reading a foreign language passage, it is likely that anxiety takes up part of the cognitive capacity that otherwise can be used in processing the reading passage. The social atmosphere that the instructor sets up in the classroom has a big impact on students’ affective state (Young, 1991). Instructors are suggested to use some classroom activities to reduce students’ anxiety in reading. For instance, instructors may organize more group reading activities or do teacher guided reading. When asked about why students like or not like group readings in the interview, many students said that they liked group reading because other students provided necessary help when they stuck with a word and also because they could relate to other students in the difficulty of learning Chinese. When the level of difficulty of the reading passage is high or the topics are not very familiar to students, group reading is likely to reduce students’ anxiety. The instructors should also be careful when using group reading as some students with higher proficiency commented that group reading did not help them much. Ideally, students should be given the opportunity to choose either to participate in a group reading or to do an individual reading.

The findings also indicated that students in higher-level classes had a higher level of foreign language reading anxiety. The possible reason for this increase was the increased level of difficulty of the reading passage in terms of both vocabulary and syntactic structures. Instructors, therefore, may discuss with students about the difficult level of the reading passages and choose reading passages that are a little bit higher but still comprehensible to students according to Krashen’s (1981) comprehensible input hypothesis. Attention should be
given to the problems and anxiety that students have when the textbook changes the format from providing Pinyin with character text to character text only. Instructor guided reading is necessary in helping students get accustomed to this transition. For instance, while guiding students reading, instructors may adopt different word recognition strategies such as inferring the meaning of a word through radicals, the word order or the neighboring words. At the syntactic level, the students can be taught how to find the ‘trunk’ of a sentence so that students can grasp the rough meaning of the sentence so long as they know the trunk of the sentence (Zhou & Li, 2004).

Sources of foreign language reading anxiety among learners of Chinese were: unfamiliar writing scripts, unfamiliar topics and general worry about reading effect. Not surprisingly, unfamiliar writing scripts were identified as the major source of foreign language reading anxiety in this study. Facing the unfamiliar writing scripts, many students relied on Pinyin in recognizing characters. However, due to the non direct relationship between the form and pronunciation of characters, relying on Pinyin as sound mediation became very inefficient. Research with the native Chinese speakers have found that native Chinese speakers recognize words especially the high-frequency words on a visual basis without phonological mediation (Seidenberg, 1985; Zhou, Shu & Shi, 1999). Zhou, Shu and Shi (1999) argued that “for written Chinese direct visual access was the predominant way to access information in the mental lexicon” (p. 136). Instructors are suggested to encourage students gradually move from using Pinyin for mediation to forming a direct connection between form and meaning. Instructors can also give students some fast reading exercises to help students form such a direct connection.

Relying on graphic features to recognize words can be overwhelming as students learn more words and therefore the instructors are suggested to raise students’ radical awareness. About 90% Chinese characters are pictographic words with usually one semantic radical and one phonetic radical (Ho & Bryant, 1997a). Although the meaning of the semantic radical and the meaning of the whole word is not exactly the same, they are related to a larger or lesser extent. There are more than fifty thousand Chinese characters in existence but a person only needs to know around three thousand characters to be considered literate in China. Compared to the total number of characters, there are only a small number of radicals.
One hundred and eighty-nine radicals are usually included in contemporary Chinese
dictionaries (Yao et al., 2005). If students are familiar with the radicals and are aware that
they can infer the meaning of words based on the radicals, students will find it easier to
recognize and remember characters that they have learned and also infer meanings of the
unknown characters they might come across in reading a passage.

Shu and Anderson (1997) found that the third and fifth grade native Chinese speakers
had already learned to use radicals to derive meaning from unfamiliar characters and
remember recently learned characters. Radical awareness is possible to foster among the
learners of Chinese, as a student who had learned Japanese for several years mentioned, “I
find the radicals to be generally helpful in trying to determine a loose connection for new
words.” Another student in the intermediate-level class also mentioned, “It is very helpful to
know the radicals and what they mean because many times you can recognize words by the
radicals it have on it.” Teachers could give students radical identification exercises to raise
their radical awareness. For instance, the teacher might give students several characters
(preferably some learned and some unknown) which share the same semantic radical and ask
them to identify the commonly shared radical and infer the meaning of the unknown
characters. The use of radicals and the gradual formation of direct relation between form and
meaning will greatly reduce the time students spend on word recognition so that students may
allocate more time in activating syntactic knowledge, discourse knowledge and prior
knowledge, which are also considered as important components within Bernhardt’s (1990) L2
text reconstruction framework.

Unfamiliar topics and general worry about reading effect were also identified as
sources of foreign language reading anxiety. These sources underscored the importance of
introducing background information related to the reading passage before the reading activity
and providing evaluation feedback after the reading activity. Instructors’ introduction to the
topics might activate students’ prior knowledge about the topic and arouse their interest in
reading the passage so that students can better process the reading passages based on what he
already know about the topic. As Ausubel (1968) stated, what the learner had already known
had a big influence on what he was going to learn. Shepard (2000) viewed teacher’s close
assessment of students’ understanding, feedback from peers and student self-assessment as
the central part of the social processes that mediated the construction of knowledge and development of intellectual abilities. Giving students’ chances to ask questions, making comment about the difficult level of the reading passages and asking comprehension questions may provide students chances of evaluating their understanding of the reading passage and decrease the worry of improper understanding of the passage.

Concluding Remarks

By employing a survey research method, the researcher collected data through one background questionnaire and two survey instruments the FLRAS and the FLCAS. The email interview data enriched the findings and provided vivid examples for the discussion. The use of statistical tests in data analysis such as 2*2*2 ANOVA, Cronbach’s alpha, effect sizes and correlation analysis presented answers to the research questions.

This study provides evidence for the existence of foreign language reading anxiety among university students learning Chinese as a foreign language in the U.S. Students had a similar level of foreign language reading anxiety and general foreign language anxiety. It also offers support to Saito et al. (1999) that unfamiliar writing script was a major source of foreign language reading anxiety. Too much reliance on Pinyin mediation and graphic features in word recognition made the reading process inefficient. The finding suggests that for learners of a noncognate, nonwestern language such as Chinese, the level of foreign language reading anxiety increased as learners proceeded to higher level classes. The finding of the significant negative correlation between foreign language reading anxiety and foreign language reading performance calls for further investigation of the role that affective factors might play in predicting foreign language reading performance.

The major pedagogical implication of this study is that instructors should be aware of the existence of reading anxiety among learners of Chinese so that they may adopt appropriate methods such as group reading and teacher guided reading in class to reduce this anxiety. Instructors are suggested to raise students’ radical awareness in word recognition and choose reading passages that is a little bit beyond students’ comprehensible level according to Krashen’s (1981) comprehensible input hypothesis. To reduce anxiety incurred by unfamiliar
topics and lessen worry about reading effect, it is also suggested that instructors introduce background information related to the passage before students read and provide feedback about the level of difficulty of the reading passages and students’ understanding after the reading activity.

It is hoped that this study, by including Chinese as a target language in foreign language reading anxiety, will contribute to the research about foreign language reading anxiety and also the reading process of learners of Chinese. It is also hoped that future research can draw from and build on the findings of the present research and avoid the limitations that this study had.
APPENDIX A

SAMPLE OF CONSENT FORM

Dear Students:

I am a graduate student under the direction of Professor Deborah Hasson (at 850-644-2117) in the program of Multilingual Multicultural Education, Department of Middle and Secondary Education, College of Education at the Florida State University. I am conducting a research for the doctoral dissertation to explore the affective feelings students hold towards learning Chinese as a foreign language. The research will be conducted for two months starting from October 15, 2007 through December 15, 2007.

You participation will involve filling in two surveys and one background information questionnaire, which will take approximately 20 minutes during a regular class period. Your chapter test scores and final exam score will be collected from your instructors at the end of the semester. For those who also agree to participate in the follow up interview, the interview will be conducted in two weeks after the survey data is collected. The interview will be audio taped and will last for about 20 minutes. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. It will not affect your grade. The questionnaire is anonymous. The results of the research study may be published, but your name will not be used.

Information obtained during the course of the study will remain confidential, to the extent allowed by law. The surveys, students’ background information, students’ test scores and the audio recordings will be kept in a cabinet in the researcher’s office. To ensure anonymous, students’ ID (the last six digits of social security number) instead of names will be used in the data collection. Only the researcher has access to the collected data and it will not be revealed to others for any other purpose.

Although there may be no direct benefit to you, the possible benefit of your participation is that you are helping the foreign language instructors to have a better understanding of the affective feelings of their students so that they will come up with better ways of teaching.

If you have any questions concerning this research study, please call me at Office: (850) 644-5735
Or email me at az044@fsu.edu
Or you can contact my major professor Deborah Hasson at (850) 644-2117

Sincerely,
Aiping Zhao
I have read the above informed consent form. I understand that I may withdraw my consent and discontinue participation at any time without penalty. I understand that the data will be kept in safe and confidential place and only the researcher will have access to it. I give my consent to participate in the above study.

______________________________   ______________________
Name                                      Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Vice President for the Office of Research at (850) 644-8633.

HUMAN SUBJECTS APPROVAL MEMORANDUM

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 . FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 5/16/2007

To: Aiping Zhao

Address: 180 MOORE COURT 2, TALLAHASSEE, FL, 32310
Dept.: MIDDLE AND SECONDARY EDUCATION

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Foreign language reading anxiety: A case with American students learning Chinese as a foreign language

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 5/13/2008 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.
You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Deborah Hasson, Advisor
HSC No. 2007.454
APPENDIX C

FOREIGN LANGUAGE CLASSROOM ANXIETY SCALE

Directions: Statements 1 through 33 refer to how you feel about learning Chinese. For each statement, please indicate whether you (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, or (5) strongly disagree by circling the appropriate number on the line following each statement. Please give your first reaction to each statement and circle an answer for every statement.

1. I never feel quite sure of myself when I am speaking in my Chinese class.
   SA  A  N  D  SD

2. I don’t worry about making mistakes in Chinese class.
   SA  A  N  D  SD

3. I tremble when I know that I’m going to be called on in Chinese class.
   SA  A  N  D  SD

4. It frightens me when I don’t understand what the teacher is saying in Chinese class.
   SA  A  N  D  SD

5. It wouldn’t bother me at all to take more Chinese classes.
   SA  A  N  D  SD

6. During Chinese class, I find myself thinking about things that have nothing to do with the course.
   SA  A  N  D  SD

7. I keep thinking that the other students are better at Chinese than I am.
   SA  A  N  D  SD

8. I am usually at ease during tests in my Chinese class.
   SA  A  N  D  SD

9. I start to panic when I have to speak without preparation in Chinese class.
   SA  A  N  D  SD

10. I worry about the consequences of failing my Chinese class.
    SA  A  N  D  SD

11. I don’t understand why some people get so upset over Chinese class.
    SA  A  N  D  SD

12. In Chinese class, I can get so nervous I forget things I know.
    SA  A  N  D  SD

13. It embarrasses me to volunteer answers in my Chinese class.
    SA  A  N  D  SD

14. I would not be nervous speaking Chinese with native Chinese speakers.
    SA  A  N  D  SD

15. I get upset when I don’t understand what the teacher is correcting.
    SA  A  N  D  SD

16. Even if I am well prepared for Chinese class, I feel anxious about it.
    SA  A  N  D  SD
17. I often feel like not going to Chinese class. SA A N D SD
18. I feel confident when I speak in Chinese class. SA A N D SD
19. I am afraid that my Chinese teacher is ready to correct every mistake I make. SA A N D SD
20. I can feel my heart pounding when I’m going to be called on in Chinese class. SA A N D SD
21. The more I study for a Chinese test, the more confused I get. SA A N D SD
22. I don’t feel pressure to prepare very well for Chinese class. SA A N D SD
23. I always feel that the other students speak Chinese better than I do. SA A N D SD
24. I feel very self-conscious about speaking Chinese in front of other students. SA A N D SD
25. Chinese class moves so quickly I worry about getting left behind. SA A N D SD
26. I feel more tense and nervous in my Chinese class than in my other classes. SA A N D SD
27. I get nervous and confused when I am speaking in my Chinese class. SA A N D SD
28. When I’m on my way to Chinese class, I feel very sure and relaxed. SA A N D SD
29. I get nervous when I don’t understand every word the Chinese teacher says. SA A N D SD
30. I feel overwhelmed by the number of rules you have to learn to speak Chinese. SA A N D SD
31. I am afraid that the other students will laugh at me when I speak Chinese. SA A N D SD
32. I would probably feel comfortable around native speakers of Chinese. SA A N D SD
33. I get nervous when the Chinese teacher asks questions which I haven’t prepared in advance. SA A N D SD

APPENDIX D
FOREIGN LANGUAGE READING ANXIETY SCALE

Directions: Statements 1 through 20 refer to how you feel about reading Chinese. For each statement, please indicate whether you (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, or (5) strongly disagree by circling the appropriate number on the line following each statement. Please give your first reaction to each statement and circle an answer for every statement.

1. I get upset when I’m not sure whether I understand what I am reading in Chinese.
   SA  A  N  D  SD

2. When reading Chinese, I often understand the words but still can’t quite understand what the author is saying.
   SA  A  N  D  SD

3. When I’m reading Chinese, I get so confused I can’t remember what I’m reading.
   SA  A  N  D  SD

4. I feel intimidated whenever I see a whole page of Chinese in front of me.
   SA  A  N  D  SD

5. I am nervous when I am reading a passage in Chinese when I am not familiar with the topic.
   SA  A  N  D  SD

6. I get upset whenever I encounter unknown grammar when reading Chinese.
   SA  A  N  D  SD

7. When reading Chinese, I get nervous and confused when I don’t understand every word.
   SA  A  N  D  SD

8. It bothers me to encounter words I can’t pronounce while reading Chinese.
   SA  A  N  D  SD

9. I usually end up translating word by word when I’m reading Chinese.
   SA  A  N  D  SD

10. By the time you get past the funny letters and symbols in Chinese, it’s hard to remember what you’re reading about.
    SA  A  N  D  SD

11. I am worried about all the new symbols I have to learn in order to read Chinese.
    SA  A  N  D  SD

12. I enjoy reading Chinese.
    SA  A  N  D  SD
13. I feel confident when I am reading in Chinese. SA A N D SD

14. Once you get used to it, reading Chinese is not so difficult. SA A N D SD

15. The hardest part of learning Chinese is learning to read. SA A N D SD

16. I would be happy to learn to speak Chinese rather than having to learn to read as well. SA A N D SD

17. I don’t mind reading to myself, but I feel very uncomfortable when I have to read Chinese aloud. SA A N D SD

18. I am satisfied with the level of reading ability in Chinese that I have achieved so far. SA A N D SD

19. Chinese culture and ideas seem very foreign to me. SA A N D SD

20. You have to know so much about Chinese history and culture in order to read Chinese. SA A N D SD

This instrument is adapted from “Foreign language reading anxiety” by Saito, Y., Horwitz, E. K., & Garza, T. J. (1999). Modern Language Journal, 83(2), 205-207.
APPENDIX E

BACKGROUND INFORMATION QUESTIONNAIRE

Note: This questionnaire is confidential. The results will be recorded by the number assigned to each questionnaire.

Student ID_______________________(Last six digits of social security number)

Gender: Male_____Female______

Age_____

Ethnicity: White_____ Black________ Asian________ Latino_________ others (please specify)_________

Major: ______________________

Year in college

Freshman_________Sophomore_______, Junior_______, Senior_________,

Master______, Doctoral______

Native language _______

What other foreign languages have you learned?

Foreign Language 1_______ Proficiency level: low  intermediate  advanced  near-native

Foreign Language 2_______ Proficiency level: low  intermediate  advanced  near-native

Foreign Language 3_______ Proficiency level: low  intermediate  advanced  near-native

Do you consider your other foreign language learning experiences as successful?

Yes____  No______

Have you ever been classified as having reading deficiency in English? Yes____ No______

Chinese Course Number (the one you are taking now) ________________

List all the Chinese courses you have taken:

_________________________________________________________________

What long have you studied Chinese (including this semester) ___________ semester (s)

What is your motivation for learning Chinese? ________________________________

_______________________________________________________________________.

Have you ever been to China? Yes_____ No_______
If yes, how long (total period of time)? ______ Year(s)_________ Month(s)  
For what purpose? ____________________________________________________________  
Heritage speaker of Chinese: Yes____ No______  
Do you use Chinese as a L2 to talk with your parents or other family members?  
Yes____ No______  
How much time do you spend in reading Chinese each week? _______ hours  
For what purpose? Tests/exams______, assignments________, fun______, others (please specify )_____________  
Rate you overall Chinese ability on 1 to 10 continuum, 10 being excellent.  
1     2     3     4    5    6    7    8    9     10  
Rate your Chinese reading ability on a 1 to 10 continuum, 10 being excellent.  
1     2     3     4    5    6    7    8    9     10  
Rate the difficult level of the reading materials in chapter tests and exams on a 1 to 10 continuum, 10 being very difficult.  
1     2     3     4    5    6    7    8    9     10  
Rate the difficult level of the reading comprehension passages in the Workbook on a 1 to 10 continuum, 10 being very difficult.  
1     2     3     4    5    6    7    8    9     10  
What after-reading tasks are most difficult for you? Please order these tasks according to their difficult level.  
a. True/False questions  
b. Multiple Choice questions  
c. open-ended written questions  
d. open-ended oral questions  
Most difficult _______  _______  _______  _______  Least difficult  
Reading Chinese will be much easier if I only need to read Pinyin instead of Characters.  
Strongly agree____  Agree _____  Neutral______ Disagree_____  Strongly Disagree______  
Chinese is harder than I expected before I enrolled in the course. Yes______ No_______  
If you would like to participate in a focus group discussion about difficulties and problems encountered in learning Chinese, please leave your email address: ___________________.  
Your participation will be greatly appreciated and will be very valuable to the present research project.
APPENDIX F

A SAMPLE OF READING COMPREHENSION TEST ITEM IN CHAPTER TESTS

Read the following passage and answer the questions: (20 points)

小高是大学生。昨天是他的生日，他请了小李、小张、小白和小王四个同学去他家吃美国饭。可是小李不喜欢美国饭，没有去；小张昨天很忙，也没有去。小高的家很大，也很漂亮。小白和小王看了小高的家都很喜欢。小高介绍他妹妹认识了小白和小王。小高的妈妈是老师，她在小高的学校工作。他们七点钟吃晚饭。小高的爸爸是医生，昨天很忙，九点钟才回家吃饭。小高的哥哥和姐姐都不在家吃饭。小白、小王和小高的爸爸妈妈一起喝茶、聊天。小高、小白和小王一起看电视。小高的妹妹不喜欢美国电视，没有看。小白和小王十一点半才回家。

Questions (True/False):

( ) 1) Little Gao invited his classmates to have dinner at his house yesterday because his house was beautiful.

( ) 2) Four classmates accepted Little Gao’s invitation.

( ) 3) Little Zhang did not go to Xiao Gao’s house because he was busy.

( ) 4) Little Bai and Little Wang had a good impression of Little Gao’s house.

( ) 5) Little Gao’s younger sister had met with Little Bai before.

( ) 6) Little Gao’s mother is a professor, but not at Little Bai and Little Wang’s university.

( ) 7) Little Gao’s father was late for dinner last night.

( ) 8) Little Gao’s old brother and old sister were not home yesterday.

( ) 9) Mr. and Mrs. Gao drank tea and watched TV together with their son’s friends.

( ) 10) Miss Gao didn’t watch TV yesterday because it was an American show.
APPENDIX G

QUESTIONS FOR FOCUS GROUP DISCUSSION

1. How did you become interested in learning Chinese?
2. What motivates you to continue learning Chinese?
3. What are the challenges you have in learning Chinese?
4. What bothers you most in the Chinese class?
5. What upsets or frustrates you in reading Chinese?
6. Describes your Chinese reading process.
7. What strategies do you use to recognize words in reading Chinese?
8. What strategies do you use to deal with the unknown cultural background in reading Chinese?
9. What strategies do you use to deal with the unknown grammatical structures in reading Chinese?
10. What classroom practices help you in reading Chinese?
11. How do you like group reading in Chinese class?
12. Have you been to China? If yes, how does this experience help you in learning Chinese? In reading Chinese?
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BIOGRAPHICAL SKETCH

Aipeng Zhao is the daughter of Huazhong Zhao and Mingzhen Xu, both of Qinzhou, China. She obtained a B.A in English in 2000 from Southeast University and a M.A. in English Language and Literature (with a specification in translation) in 2003 from Shandong University. Aipeng grew up in Qingzhou, Shandong Province in China and also lived in Nanjing and Jinan in China for significant periods of time. Before she came to the U.S., she was an English teacher in Shandong University. She currently lives in Tallahassee, Florida with her son Aiden. In Tallahassee, Aipeng has been able to pursue her Ph.D. in Multilingual/Multicultural Education in the School of Education and work as a teaching assistant in the Department of Modern Languages and Linguistics at the Florida State University.