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Factors Influencing Chinese Language Learning Anxiety in the Classroom Setting

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Abstract

This study investigated the foreign language anxiety (FLA) construct of U.S. college learners of Chinese as a foreign language (N = 149) and examined whether the following factors, *gender*, *language class level*, and *whether foreign language(s) were learned prior to learning Chinese*, had significant influences on the learners' anxiety levels. A modified version of the Foreign Language Classroom Anxiety Scale (FLCAS) was used to collect data. The results of the factor analysis illustrated a 4-component solution including Chinese class performance anxiety, the lack of mastery of all four language skills, writing Chinese characters, and learner confidence. The results of the MANOVA test showed that a significance was found in the independent variable of gender on the learners' anxiety. The male learners were less anxious than the females when performing their Chinese language skills in class or when they had not fully mastered all four language skills.

Foreign language anxiety (FLA) is considered one of the key affective factors influencing learners' language learning. The widely cited definition of FLA is "a distinct complex set of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz, Horwitz, & Cope, 1986, p. 128). This anxiety, developed from the process of learning a foreign language, is considered a situation-specific anxiety, distinctive from other types of anxieties such as trait or state anxieties. An adequate amount of FLA could help learners to challenge themselves and make improvements. However, a high level of FLA is seen as a negatively affecting factor, which distracts learners' attention and impedes their cognitive capacity (Zhao & Whitchurch, 2011).

FLA might be in reciprocal paths with other learning factors such as a learner's motivation and perceived competence. For instance, Sultan (2012) found that college learners of English with low perceived competence also felt more anxious compared to their peers. Dewaele's (2005) study concluded that highly motivated students had very low anxiety and vice versa. Depending on the severity of a learner's FLA and its interactive effect with other affective factors, the additive effect of the factors could have a critically negative outcome on the learner's learning process and performance (Aida, 1994; Malallah, 2000).

Despite other affective factors that have interactive effects with FLA, the difficulty level of a foreign language could also account for a learner's anxiety level. Taking Mandarin Chinese as an example, the Foreign Service Institute's School of Language Studies, which has been teaching 65 languages to U.S. diplomats for 70 years, considered Mandarin a "super-hard language for native speakers of English" placing it at Category IV (U.S. Department of State, 2018). Compared to languages placed at Category I, Mandarin Chinese takes triple the time for an adult learner to master. Indeed, the difficulty of Chinese has been reflected in the high dropout rate in Chinese courses at the college level (Luo, 2013). More importantly, researchers (Bailey, Onwuegbuzie &

Daley, 2003; Gardner, Moorcroft, & MacIntyre, 1987) have found a positive correlation between high dropout rates and high level of FLA. Zhao and Whitchurch (2011) explained that for native speakers of alphabetic languages such as English, Chinese language learning could be a highly anxious task, especially in the area of Chinese character learning. Sung and Wu (2011) identified a few Chinese learning challenges such as the large number of Chinese characters to be learned in order to be functional in a Chinese-speaking community, the extensive time needed to master literacy skills as Chinese characters and their pronunciations have no correlation, and the large number of Chinese homophones making it difficult for learners to recall the correct characters and their meanings.

Although current literature has pinpointed the profound influence of FLA on language learning and achievement, little research has been conducted to gain understanding on the anxiety experienced by native English speakers learning Chinese as a foreign language (CFL). FLA, as Liu (2018) stated, "is a complex construct and most of the studies on FLA focuses on English as a foreign language/English as a second language learners, with little literature found on learners of other languages as a second or foreign language, even less on learners of Chinese as a second language/Chinese as a foreign language" (p. 56). Considering that the Chinese language has distinctive features and that it is more challenging to learn than most other languages in the world, the current study on the Chinese language learning anxiety of native English speakers is necessary to contribute important information that is currently lacking in the field. More information regarding CFL students' learning anxiety in the classroom will offer policy makers, administrators, and classroom instructors new insights and aid them in creating a suitable CFL learning environment and in developing effective CFL teaching strategies that decrease students' anxiety. Hence, this study intends to understand more about language learning anxiety by investigating components of anxiety possessed by college native English-speaking students learning CFL and looking into potential factors which influence students' anxiety. The research questions included in this study are:

1. What components of anxiety do native English-speaking college students who learn CFL in the United States possess?
2. Do U.S. college students' anxiety level differ based on the following learner differences: (a) gender, (b) language class level, and (c) whether other foreign languages were learned prior to learning Chinese?

Theoretical Framework

Horwitz et al. (1986) stated that FLA was derived from the construct of three performance anxieties: communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension refers to anxiety communicating with others, which includes speaking one-on-one, in a small group, or public speaking. When applying the concept of communication apprehension in foreign language learning, one can imagine that individuals who already have communication anxiety in their native language would probably encounter even more anxiety in a second language they have not fully mastered.

Since most foreign language classes use certain rubrics to evaluate student progress and performance, test anxiety is a relevant type of anxiety to include in FLA. Test anxiety is related to the worry of failure. In the context of foreign language learning, it is almost impossible to make absolutely no language error in all tests. Hence, it is likely that foreign language students might have a certain level of test anxiety.

Fear of negative evaluation is a type of anxiety that one feels in a social evaluative situation such as speaking in a job interview or in a foreign language. In applying fear of negative evaluation in the foreign language classroom, students might feel anxious when speaking in front of fluent speakers, the teacher, or be anxious about what their peers think of their language production in class.

This study adopted the FLA scale developed by Horwitz et al. (1986) as the data collection instrument, which followed the theoretical construct of the three-component anxiety model described above. The theoretical model was used in this study to conceptualize the findings and is referred to later in this study to help interpret the study results.

Empirical Literature Review

FLA studies have flourished for over the past three decades with the seminal piece conducted by Horwitz et al. (1986). The researchers created and tested the Foreign Language Classroom Anxiety Scale (FLCAS), a 33-item anxiety survey, based on the three foreign anxiety component model mentioned in the Theoretical Framework section. The pilot study using the FLCAS with 75 college beginning Spanish students reported that several kinds of FLA were found. Some students rated high on speech anxiety, some feared that they were not as competent as their peers, while others were afraid of making language mistakes. More importantly, some of them felt more anxious in their language classes than in their other classes, which supported Horwitz et al.'s claim that FLA is a unique type of anxiety in response to foreign language learning.

Many recent studies adopted Horwitz et al.'s (1986) FLCAS scale to expand the anxiety research scope in different learning contexts. The results of these studies have demonstrated that different constructs of FLA exist in different contexts. For example, Thompson and Lee (2013) identified the anxiety component of fear of ambiguity in English by Korean learners of English as a foreign language (EFL), which is related to the level of tolerance an individual has toward ambiguous situations (e.g. not feeling sure of oneself when speaking a target language). This factor was not found in the original FLA study by Horwitz et al.; however, the same component was also identified in the context of EFL learners in Turkey (Thompson & Khawaja, 2016). Hence, Thompson and Khawaja (2016) pointed out that the finding of the factor illustrated the importance of context and cultural implications regarding FLA. This implication suggests the need to look into new contexts such as Chinese language learning, that are still in need of more anxiety research. Moreover, the current literature reported inconsistent findings on the relationship between FLA and other variables; hence, this study included three that were suggested as in need of more research by the literature. The following sub-sections offer an in-depth discussion of each variable and its relationship with FLA.

FLA and Multilingual Learners

A few studies have found FLA differences between monolingual and multilingual learners. Phongsa, Ismail and Low (2018) investigated the English language learning anxiety levels of 240 tertiary Lao EFL students and found that, even though both monolingual and multilingual students encountered moderate to high levels of foreign language learning anxiety, the multilinguals were more comfortable being around native English speakers and were more confident in using the target language. Similar findings were reported by Dewaele (2007) who compared the FLA levels of bilingual with those of trilingual and quadrilingual college learners. The study results indicated that the more languages the participants knew, the lower their anxiety was in learning a new language. In Thompson and Lee's (2013) study of Korean EFL college learners, multilinguals with

at least intermediate proficiencies tended to have less anxiety when learning English. These studies all highlighted the effect of multilinguals' self-confidence and prior language learning experiences in reducing their language learning anxiety. However, all of these studies only focused on populations learning the alphabetic language, English. On the other hand, how multilingualism affects the anxiety level of Chinese language learning is unknown.

FLA and Gender

Inconsistent results have been found with the variable of gender in anxiety research. In other words, some studies reported gender differences on the level of FLA while some did not find any significance. For example, Zhao and Whitchurch (2011) examined the gender variable in relation to Chinese language learning anxiety at the college level and reported no significant difference between male and female U.S. university students. Luo's (2013) study of U.S. college students studying Chinese as a foreign language and Aida's (1994) study of U.S. college students taking Japanese as a foreign language also yielded similar results, which found no significance of gender on anxiety. However, Luo (2014) later conducted a similar study with a focus on Chinese speaking anxiety, and found that gender played a role in the learners' speaking anxiety levels. The female students were much more anxious in speaking than the males. Several other studies involving EFL learners of different nations: Korea (Park & French, 2013), Thailand (Koul, Roy, Kaewkuekool, & Ploisawaschai, 2009), Ethiopia (Gerencheal & Deepanjali, 2019) and Pakistan (Sultan, 2012), all reported gender difference with females having higher anxiety level than male learners. This inconsistency in gender finding prompted the researchers to include gender as a variable for investigation in this study.

FLA and Language Class Level

A meta-analysis conducted by Zhang (2019) using 55 independent samples involving more than 10,000 participants reported that foreign language performance anxiety existed across groups with different target language proficiency levels. Hence, it would be relevant to look into whether there are anxiety differences at different proficiency levels. Similar to the variable of gender, contradictory findings were reported on the variable of language class level in anxiety studies. In a study of novice American college learners of Spanish conducted by Casado and Dereshiwsky (2001), the learners were found to have consistent levels of anxiety from the beginning to the end of the academic year; however, in a different study conducted by Jee (2014), beginning U.S. college learners of Korean were reported to have increased their level as they moved from first to second semester courses. Studies with a focus on Chinese language learning also had conflicting results. Luo's (2013) study on Chinese language learning anxiety of U.S. college students reported that the learners' language levels was a variable influencing their levels of anxiety; that is, the learners' anxiety level decreased as they moved to more advanced levels. In contrast, Zhao and Whitchurch's (2011) study of U.S. college students' Chinese learning anxiety illustrated that the learners' language levels were not a significant factor influencing their anxiety levels. Due to the inconsistency in research, more research on the variable of language level is needed to help explain the findings.

The Gap in Current Literature

Current literature on FLA and the relationship between FLA and other variables has reported inconsistent findings. In addition, some of the literature made the implications that the components

of FLA and its relationship with other factors were influenced by the type of foreign language learned and the sociocultural backgrounds of the learners. Hence, researchers in the FLA field called for more research in distinctive language learning contexts. In the CFL field, there were only a few studies which measured the learners' anxiety levels (Luo, 2013; Luo, 2014; Zhao & Whitchurch, 2011) with Zhao and Whitchurch's study involving native English-speaking college learners and Luo's studies including both heritage and non-heritage learners. All three studies reported moderate levels of anxiety with means between 2.5 and 2.7 on a five-point Likert scale. Since the studies mentioned above were conducted in various situational contexts with CFL learners from distinct backgrounds, the results of the current study on college CFL learners with three different background factors help add information to the current literature.

Method

Participants

This study involved learners of Chinese at various language class levels enrolled in universities in the United States. The researchers sent out research invitations with an Institutional Review Board (IRB) approved survey link to random Chinese instructors who teach at U.S. universities. In the emails, the instructors were asked to kindly forward the survey link to their students. Initially, a total of 208 online surveys were collected; however, 20 of them were incomplete and were excluded from this study. Moreover, among the 188 completed surveys, 39 of them were either Chinese heritage learners or native speakers of other languages; hence, those 39 surveys were excluded from this study. At the end, this study involved 149 native speakers of English taking Chinese as a foreign language at university level. Among the 77 male and 72 female learners, 56 of them were Chinese beginners, 49 were intermediate learners, and 44 were advanced, ranking in age from 18 to 33 years (M = 21.2, SD = 3.64).

Instrument

This study utilized the online survey instrument to investigate FLA. The first part of the survey collected participants' demographic information including age, native language, gender, Chinese heritage status, language class level, and numbers of foreign languages learned prior to Chinese. The second part of the survey adopted the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986), which consisted of 33 items regarding learners' foreign language learning anxiety. In addition to the original 33 items in FLCAS, nine items (see Appendix) were added to the scale to reflect the challenges of learning the Chinese language system, namely Chinese characters, which included the need to remember a large number of characters before being literate (Wong, Li, Xu, & Zhang, 2010), a lack of correspondence between pronunciation and its character, and many homophonic characters (Wang, 1998). These challenges of learning Chinese characters could possibly create specific language learning anxiety in the classroom and need to be explored in research. Each survey item in the second part was placed on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This scale was first pilot-studied in person with a group of CFL learners for clarity, reliability and content validity. The Cronbach's Alpha of the scale is 0.86 indicating a good internal consistency of the items. A few of the newly added items regarding Chinese characters were paraphrased to avoid ambiguity. The scale was then completed toward the end of the participants' spring semester.

Method of Analysis

The survey results were analyzed through SPSS version 25.0. All the statistical tests run in this study had a minimum conventional level of significance, $p < 0.05$. Moreover, the null hypothesis was assumed in the tests. For the first research question, *What components of anxiety do college students who learn CFL in the United States possess?*, the use of factor analysis was needed to see the commonalities among the 42 anxiety items listed in the FLCAS scale. Following Gorsuch's (1983) recommendation that a minimum of 100 subjects is needed to yield reliable study results, the total number of participants (N =149) is satisfactory. Moreover, the responses of the following 12 items: 2, 5, 8, 11, 14, 18, 22, 28, 32, 36, 37, and 40, reflects a lack of anxiety while the other items reflect anxiety; hence the 12 items were reversely coded so that high item scores consistently reflected higher levels of Chinese language anxiety. Finally, reliability tests were run for the scale and each single factor. Cronbach's alpha of each test was reported in the results section to illustrate the internal consistency of the items and factors in the scale.

MANOVA was used to answer the second research question, *Do U.S. college students' anxiety levels differ based on the following learner differences: (a) gender, (b) language class level, and (c) whether other foreign languages were learned prior to learning Chinese*?. MANOVA was chosen in this study to reduce Type I errors and to help determine the effects of the three independent variables (gender, language class level, and whether other foreign languages were learned prior to Chinese) on the dependent variables (the factors found in the factor analysis) simultaneously. The participants were divided into sub-groups in the following ways. There were a male and a female group for the *gender* variable, beginning, intermediate, and advanced groups for the *language class level* variable, and learners who did not learn a foreign language other than Chinese and learners who learned one or more foreign languages other than Chinese for the *whether other foreign languages were learned* variable. Table 1 illustrates the descriptive statistics of the divided groups for each factor.

Table 1. *Descriptive Statistics of the Groups in the MANOVA Tests*

Learner Factors	**Categories**	**N (%)**
Gender	Male	77 (52%)
	Female	72 (48%)
Language Class Level	Beginning	56 (38%)
	Intermediate	49 (33%)
	Advanced	44 (29%)
Whether other foreign languages were learned prior to learning Chinese	Learners who did not learn a foreign language other than Chinese	64 (43%)
	Learners who learned one or more foreign language(s) before learning Chinese	85 (57%)

Results

Four Components of Chinese FLA

The result of the internal consistency reliability of the 42 items in the FLCAS showed that the Cronbach's alpha was 0.924 with F (148, 41) = 43.362, $p < 0.000$ indicating that there was a good internal consistency of the items being assessed (George & Mallery, 2005). In addition, the

Cronbach's alpha in each component ranges from 0.571 to 0.948 indicating fair to high degree of reliability. The purpose of the rotated factor analysis was to detect whether there was any multidimensionality within the 42 anxiety items and how they might be varying together. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.867, which showed that the data was well-suited for factor analysis. The significance level of Bartlett test of sphericity was 0.000 illustrating that the data was approximately multivariate normal and acceptable for factor analysis. The scree plot revealed that four components were on the steep portion of the graph with eigenvalues exceeding two. Hence, these four components were retained for further investigation. The results of the Varimax rotation showed that 32 items strongly or moderately loaded on one of the four factors. The subsequent four-factor solution explained 47% of the variance, with Factor 1 contributing 29%, Factor 2 contributing 7%, Factor 3 contributing 6% and Factor 4 contributing 5% (see Table 2).

Table 2. *Four-Factor Solution*

Factors	Factor Loading	h2	*M* (SD)
Factor 1 Chinese Class Performance Anxiety (α = 0.947)			
I feel very self-conscious about speaking the foreign language in front of other students.	.813	.714	2.99 (1.17)
I tremble when I know that I'm going to be called on in language class.	.805	.689	2.44 (1.19)
I can feel my heart pounding when I'm going to be called on in language class.	.805	.706	2.60 (1.21)
I start to panic when I have to speak without preparation in language class.	.789	.689	2.99 (1.15)
I get nervous and confused when I am speaking in my language class.	.786	.694	2.69 (1.04)
I always feel that the other students speak the language better than I do.	.779	.811	3.11 (1.24)
It embarrasses me to volunteer answers in my language class.	.770	.647	2.59 (1.12)
Even if I am well prepared for language class. I feel anxious about it.	.740	.708	2.64 (1.12)
I get nervous when the language teacher asks questions which I haven't prepared in advance.	.719	.711	3.03 (1.09)
I keep thinking that the other students are better at languages than I am.	.706	.752	3.37 (1.22)
In language class, I can get so nervous I forget things I know.	.681	.593	3.12 (1.12)
I am afraid that the other students will laugh at me when I speak the foreign language.	.668	.635	2.23 (1.13)
I feel more tense and nervous in my language than in my other classes.	.643	.692	2.87 (1.12)
I never feel quite sure of myself when I am speaking in my foreign language class.	.620	.687	3.09 (1.16)
It frightens me when I don't understand what the teacher is saying in the foreign language.	.600	.700	2.74 (1.09)
Language class moves so quickly I worry about getting left behind.	.536	.642	3.11 (1.21)
The more I study for a language test, the more confused I get.	.469	.608	1.81 (0.82)

Factor 2 Lack of Mastery of All Four Language Skills (α = 0.828)			
I feel frustrated when I don't know the characters I want to write for a writing assignment.	.689	.645	3.48 (1.12)
I get nervous when I don't understand every word the language teacher says.	.655	.744	2.79 (1.06)
I get upset when I don't understand what the teacher is correcting.	.602	.616	2.89 (1.04)
I feel anxious when the teacher asks the class to read a passage and I don't understand many of the characters in the passage.	.559	.680	3.20 (1.14)
I feel overwhelmed by the number of rules you have to learn to speak a foreign language.	.543	.578	2.85 (1.02)
I am afraid that my language teacher is ready to correct every mistake I make.	.520	.604	2.33 (1.06)
Factor 3 Writing Chinese Characters (α = 0.754)			
I feel nervous when I have to write Chinese characters	.781	.666	2.50 (1.20)
When writing Chinese characters, I always know that I'm going to miss a stroke.	.759	.716	2.35 (1.00)
I don't like other people looking at my Chinese characters because I think my characters are ugly.	.713	.706	2.25 (1.03)
I look up Chinese characters even when I know how to write them because I'm afraid of making a mistake.	.632	.546	3.22 (1.14)
I feel comfortable when writing Chinese characters that do not contain many strokes.	.469	.508	1.77 (0.60)
Factor 4 Learner Confidence (α = 0.571)			
I am usually at ease during tests in my language class.	.694	.627	2.07 (0.60)
I don't worry about making mistakes in language class.	.689	.643	1.93 (0.57)
I don't understand why some people get so upset over foreign language classes.	.603	.528	2.12 (0.68)
I feel confident when I speak in foreign language class.	.502	.546	2.21 (0.64)

Table 2 reveals that Factor 1 includes 17 items loading heavily on items that center on the learners' class performance anxiety. Many of the items describe the anxiety the learners might have when they need to speak in front of the class in different situations such as when the teacher asks for volunteers to answer questions, or when the learners are called on. This factor also contains a few items that distinguishes FLA from other anxieties. For example, the following items, "I feel more tense and nervous in my Chinese language class than in my other classes," "Even if I am well prepared for the Chinese language class, I feel anxious about it," and "In the Chinese language class, I can get so nervous I forget things I know" all reveal the uniqueness of foreign language class performance anxiety in the Chinese language courses.

The six items in Factor 2 represent anxiety associated with the lack of mastery of all four language skills (listening, speaking, reading, and writing). The items describe how learners might feel anxious about speaking the target language, or when they do not understand what their teachers say, or when they are uncertain about their reading and writing. Due to the lack of full mastery of the four language skills, the learners were anxious about their teachers being ready to correct their mistakes.

Five items are loaded in Factor 3, which all deal with anxiety derived from writing Chinese characters. The items describe the different anxious feelings one might have when writing characters, such as being afraid of making a writing mistake (e.g. missing a stroke), feeling nervous

when writing, and thinking that the characters are poorly written, therefore not wanting other people to read the writing.

Four items are loaded in Factor 4, which describe the confidence levels in different aspects of Chinese language learning, such as anxiety related to speaking the target language, making language mistakes, and taking language tests.

Gender Difference in Chinese FLA

The result of the Box's Test of Equality of Covariance Matrices table showed that the covariance matrices for the dependent variables, the four types of anxiety, were not significantly different ($p > 0.05$), which indicates that the robustness of the MANOVA test was guaranteed. The results of the MANOVA test illustrated that there was no main effect on the two independent variables, namely, learners' language class levels and whether they learned one or more foreign languages prior to learning Chinese. In other words, whether a participant was a beginning, intermediate, or advanced learner, or if they had studied a foreign language before Chinese, had no significant influence on their Chinese language learning anxiety. However, a significance was found in the independent variable of gender on the learners' anxiety with $F(4, 134) = 3.065$, $p < 0.05$, $\eta 2 = 0.084$, Power = 0.796. The gender variable accounted for 8.4% of the total variability in the learners' anxiety. The MANOVA results did not find any significant interactions.

Given that the results for the independent variable, gender, was significant, the gender variable needed to be further examined. The results of the between-subjects effects shown in Table 3 illustrated that the participants' gender mediated their anxiety levels in Factor 1 (Chinese Class Performance Anxiety) and Factor 2 (The Mastery of All four Language Skills).

Table 3. *Multivariate Analysis of Variance: Between-Subjects Effects*

Between-Subjects Effects	F	Df	Sig.	Partial η^2	Observed Power
Gender Factor 1	10.70	1	.001	.072	.901
Gender Factor 2	8.31	1	.005	.057	.817

The results of the MANOVA test have illustrated that the gender factor mediated the participants' anxiety levels on their Chinese class performance, and their mastery of all four language skills. Therefore, the groups in the gender factor need to be investigated closely. Table 4 shows that in the gender groups, the male participants scored significantly lower on the survey items loaded in Factors 1 and 2. In other words, the male group felt less anxious than the female group when performing their Chinese language skills in class or when they had not fully mastered all four language skills.

Table 4. *Between-Subjects Effects: Gender*

Gender	Factor	M	SD
Male	Factor 1: Chinese Class Performance Anxiety	2.59	.79
Female		3.05	.84
Male	Factor 2: The Mastery of All Four Language Skills	2.75	.70
Female		3.13	.83

Discussion

The current study intended to investigate the understudied U.S. college learners' Chinese language anxiety and its relationship with various learner background variables; and offers Chinese instructors, school administrators, and policy makers useful information to consider when creating effective instructions and programs which take into account learners' Chinese FLA. However, this study was not without limitations and its results need to be read with caution. One limitation was the lack of participants' explanations in aiding the interpretations of the statistical results. Future research will be needed to elicit participants' elaborated answers through interviews to gain more insight into their Chinese FLA. A second limitation was that the study was conducted at a single point in time, thus only reflected the participants' Chinese FLA during a brief moment. However, learning a foreign language is a complex process, which takes several years. Whether or how learners' Chinese FLA fluctuates over time and how it interacts with time and other variables are important questions for future research. Finally, this study was exploratory in nature and was small-scaled with only 149 participants. Future studies with larger scales will be needed to verify the Chinese FLA construct found in this study.

Despite the limitations, for the first research question, *What components of anxiety do college native English-speaking students who learn Chinese as a foreign language in the United States possess?*, a four-factor anxiety construct was found. They were Chinese class performance anxiety, the lack of mastery of all four language skills, writing Chinese characters, and learner confidence. The items in the first factor, Chinese class performance anxiety, were consistent with the construct of fear of negative evaluation. The participants indicated their fear of having their Chinese judged in class by their teachers and peers. The second factor, the lack of mastery of all four language skills, mostly correlates with the construct of comprehension apprehension. The participants were anxious when communicating with their teachers or peers in class or through assignments due to their under-developed Chinese language skills. The third factor, writing Chinese characters is related to fear of negative evaluation with a focus on Chinese character writing. The participants were anxious to recall and write characters from memory, and were embarrassed that their characters were not legible. The fourth factor, learner confidence, refers to how anxious or confident the participants felt when they needed to be evaluated for the class, which is closely related to test anxiety.

Compared to other studies which conducted a factor analysis on the FLCAS, some of the factors found in this study are similar to those found in the other studies. For instance, in Thompson and Lee's (2013) and Thompson and Khawaja's (2016) studies, the majority of the anxiety items loading onto the factor of class performance anxiety were identical with the ones loaded onto the same factor in this study. Moreover, Thompson and Khawaja identified a second factor related to learners' confidence with the target language, in which the majority of the items loaded were identical to the ones in the factor, learner confidence, in this study. The similar findings of the components of language learners' class performance and confidence in the anxiety construct illustrate that these two factors might be a common FLA phenomenon occurring in different learning contexts. On the other hand, a couple of factors found in the anxiety construct in this study are distinct. The first distinct factor is writing Chinese characters in which five of the nine items that reflect the learning of Chinese characters were loaded. The identification of the factor of writing Chinese characters in this study illustrates that distinct anxiety constructs could exist in specific learning contexts. The second distinct factor, the lack of mastery of all four language skills, again proved that the unique learning situation in the Chinese language classrooms generate specific types of anxiety. Compared to other studies (e.g. Aida, 1994) which identified speaking

as a factor for anxiety, this study shows that in Chinese classrooms, all four language skills contribute to anxiety. This finding could be due to the high difficulty level of mastering the Chinese language script as mentioned in the introduction.

In answering the second research question, *Do U.S. college students' anxiety levels differ based on the following learner differences: (a) gender, (b) language class level, and (c) whether other foreign languages were learned prior to learning Chinese?*, the results of the MANOVA test show that in this study, the only significant factor found was gender. The male participants had lower anxiety levels than the females on class performance anxiety and the lack of mastery of all four language skills. This finding is in support of the other studies in various learning contexts (Koul, et al., 2009; Luo, 2014; Park & French, 2013; Sultan, 2012). Both Koul et al. and Park and French posited that this result could be due to female learners in general having higher motivational goals, which were tied to their self-perceived levels of FLA. As long as the anxiety level was not overly high, having a higher level of anxiety could actually lead to better performance as found in Park and French's study. However, some of the previous studies (Aida, 1994; Luo, 2013; Zhao & Whitchurch, 2011) did not find any significance in gender. Zhao and Whitchurch explained that gender factor is influenced by other variables such as the learners' socio-cultural backgrounds; hence, research will be needed to further investigate how the socio-cultural variables affect the relationship of gender and FLA.

This study reported no significant influence of the factor, whether other foreign languages were learned prior to learning Chinese, on Chinese language anxiety. This finding contradicts the previous studies (Dewaele, 2007; Phongsa, Ismail, & Low, 2018; Thompson & Lee, 2013) on EFL learners of different nations. The distinctive results show that the multilinguals' self-confidence and prior language learning experiences had a positive effect in reducing the EFL learners' anxiety; however, the effect was not found in the English-speaking learners of Chinese as a foreign language. This possibly implies that both the high difficulty level of learning Chinese and the distinctive language features between Chinese and other foreign languages learned by the participants might have hindered the learners in the current study to utilize previous learning experiences (e.g. previously adopted language learning strategies) in the learning of Chinese. However, more studies will be needed to confirm this finding and assumption.

This study also found no significant influence of the factor, language class level, on Chinese language anxiety. This finding is in support of Casado and Dereshiwsky's (2001) and Zhao and Whitchurch's (2011) studies, in which the participants were found to have a steady level of anxiety throughout different proficiency levels. This finding could be explained by Zhao and Whitchurch's claim that on the one hand, the increased level of proficiency means increased level of language learning difficulty, which leads to a higher level of anxiety; on the other hand, as learners move on to the higher level of proficiency, they are more familiar with the target language, which decreases the anxiety level. The effects of the two situations combined might cancel out the learners' increasing or decreasing level of anxiety, which results in the finding of a consistent level of anxiety. Other possibilities which result in a decrease or increase of anxiety at different proficiency levels might be related to the differences in curriculum design or instructors' expectations, which explained the significant finding of Luo's (2013) and Jee's (2014) studies.

Conclusion and Implication

This study found four components of Chinese FLA, namely, Chinese class performance anxiety, the lack of mastery of all four language skills, writing Chinese characters, and learner confidence. Among the four components, writing Chinese characters and the lack of mastery of all

four language skills were distinctive findings compared to other studies, most of which identified speaking as the main source of anxiety. This suggests that compared to other foreign languages, Chinese adds another layer of difficulty to learners which contributes to the creation of new aspects of learner anxiety. This finding implies that policy makers and instructors should think of ways to decrease CFL learners' anxious feelings when learning all four language skills, especially when learning Chinese characters. For instructors, any fun and effective activities that promote group learning should be used to decrease anxiety and increase motivation levels in learning this challenging language. For policy makers, thinking of ways to create a warm and non-judgmental learning atmosphere (e.g., setting a budget to host cultural events that promote the use of all four skills in the target language in an authentic environment instead of giving a standardized test) will be needed to avoid a high level of student anxiousness. In addition, policy makers and instructors should bear in mind the fundamental difference in gender in the particular socio-cultural context they teach or administer. Only when policy makers and instructors understand the particular socio-cultural expectations towards different genders and use strategies or make rules that fit the cultural backgrounds of the learners can they find effective ways to help learners of different genders to cope with their anxiety.

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Appendix

NINE ITEMS ADDED TO THE FLCAS

- I feel nervous when I have to write Chinese characters.
- When writing Chinese characters, I always know that I'm going to miss a stroke.
- I feel confident when taking dictation quizzes.
- I feel comfortable when writing Chinese characters that do not contain many strokes.
- I look up Chinese characters even when I know how to write them because I'm afraid of making a mistake.
- I don't like other people looking at my Chinese characters because I think my characters are ugly.
- I like how my Chinese characters look when I write them.
- I feel anxious when the teacher asks the class to read a passage and I don't understand many of the characters in the passage.
- I feel frustrated when I don't know the characters I want to write for a writing assignment.