

An Investigation on Foreign Language Learning Boredom and Foreign Language Classroom Anxiety among Chinese Non-English-Major EFL Undergraduate Students

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Abstract

The present study adopted a quantitative approach to investigate the Foreign Language Learning Boredom (FLLB) and Foreign Language Classroom Anxiety (FLCA) among Chinese non-English-major EFL (English as Foreign Language) undergraduate students and the complex relations of FLLB, FLCB (Foreign Language Classroom Boredom) and English Achievement. 374 participants answered the Foreign Language Learning Boredom Scale (FLLBS) and a short form of the Foreign Language Classroom Anxiety Scale (FLCAS) during the winter vacation, and necessary background information and their English achievement scores are also collected. Results demonstrated that (1) participants are at intermediate levels of both FLLB and FLCA, and there is no significant differences of FLLB among different genders and disciplines and of FLCA between genders, but a significant difference of FLCA exists among different disciplines. (2) positive correlations can be seen among FLLB, FLCB and FLCA. FLLB and FLCA are strongly correlated, while FLCB and FLCA are intermediately correlated. (3) according to the results of regression analyses, FLLB and FLCA can significantly negatively predict foreign language academic achievement scores.

Keywords

Foreign Language Learning Boredom, Foreign Language Classroom Anxiety, Gender, Discipline, English Achievement.

1. Introduction

With the introduction of positive psychology into the field of applied linguistics, more and more researchers have completed a series of studies on foreign language learning emotions, such as anxiety, enjoyment, etc. A large amount of research via various methods has been conducted to investigate Foreign Language Classroom Anxiety (FLCA), as a kind of the situation-specific Foreign Language Anxiety (FLA). However, research on Foreign Language Learning Boredom (FLLB), which is defined as an unpleasant emotional or psychological state, associated with low physical arousal and cognitive stimulation, as well as specific time perceptions and action tendencies [1], has just begun in recent years. Meanwhile, the relations of FLLB and FLCA, FLCB (Foreign Language Classroom Boredom) as well as specific comparisons of FLLB and FLCA among different genders and disciplines are still under-researched. Thus, the present study was conducted via quantitative method, also via a questionnaire survey, trying to fill the research gap mentioned above.

2. Literature Review

2.1. Foreign Language Learning Boredom

Chapman first began to pay attention to the boredom of German classroom learners (2013), and subsequently extensive research on boredom in EFL (English as Foreign Language)

teaching in Poland were conducted, and large amounts of them focus on English manors (e.g. Kruk et al. 2018; Pawlak et al. 2020; Zawodniak et al. 2021) [2, 3, 4]. In recent years, research on FLLB has attracted widespread attention from Asian scholars. Since 2020, the number of studies on FLLB has shown a fragmented growth [5].

Boredom can also be roughly divided into two categories: State Boredom and Trait Boredom [6]. Boredom exists in almost all educational settings, negatively affects individual behavior, engagement, cognition, interest, curiosity, motivation, and debilitates individual learning outcomes [7].

Under the guidance of the Control-Value theory [8], the exploration of the sources of boredom among EFL learners based on their perception of the learning context suggests that if learners have a perception of low value and low control over learning tasks, negative emotions such as boredom may arise [3]. The main causes for boredom included both learner-internal and learner-external factors [9], and these factors can be mainly summarized into three scales: tasks or teaching methods, teacher characteristics, and student characteristics [10]. Specifically, these include insufficient teacher engagement, repeated use of the same teaching tools, uninteresting topics, a lack of meaning in learning [11], or more generally, task characteristics, teaching and learning activities, student factors, course content, classroom factors, teacher factors, and feeling unoccupied in the class [9]. With the popularization of online learning, researchers have also discovered that technical problems encountered by EFL learners in online learning, such as poor network signal, can also lead to boredom [12].

To measure boredom in foreign language class, Kruk and Zawodniak (2017) [14] developed the Boredom in Practical English Language Classes Questionnaire (BPELC). However, it is worth noticing that the theoretical basis of the scale is not yet clear, and the development process is not transparent. The psychological measurement characteristics such as construct validity, aggregate validity, discriminant validity, criterion validity, and reliability are unknown [10]. Later, Li, Dewaele and Hu (2020) developed the 32-item Foreign Language Learning Boredom Scale (FLLBS), which covers 7 dimensions: Foreign Language Classroom Boredom, Under-Challenging Task Boredom, PowerPoint Presentation Boredom, Homework Boredom, Teacher-Dislike Boredom, General Learning Trait Boredom and Over-Challenging or Meaningless Task Boredom. And this scale has been applied to and validated in several recent studies (e.g. [13]). And various methods, quantitative, qualitative, and mixed-method, were frequently used in research on FLLB.

Meanwhile, several studies have conducted in order to figure out the relations of FLLB and other Foreign Language Learning Emotions and motivations. For instance, Kruk (2022) studied two Polish adult English learners and found that boredom is negatively correlated with communicative willingness and motivation, but positively correlated with language learning anxiety [15]; Li (2022) found a strong negative correlation between foreign language pleasure and foreign language boredom among 868 Chinese university students [16].

2.2. Foreign Language Classroom Anxiety

The study of emotions in foreign language teaching began in the 1970s (Brown 1973), and was later driven by Krashen's hypothesis theory (1982), gradually gaining more and more attention. Krashen believes that classroom environments that easily cause anxiety and tension can promote the formation of affective filters and ultimately hinder easy acquisition of the target language. Subsequently, a large number of studies on anxiety emerged. And Foreign Language Anxiety (FLA) has been defined as an important affective factor affecting FL learning that is situation-specific, thus FLA can be further divided into several categories, for instance, Foreign Language Classroom Anxiety (FLCA), Foreign Language Reading Anxiety (FLRA), Foreign Language Listening Anxiety (FLLA), Foreign Language Speaking Anxiety (FLSA), etc.

Foreign Language Classroom Anxiety (FLCA) is a kind of FLA, and is defined as “a distinct complex of self perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process.” [17]. They have also proposed the Foreign language classroom anxiety theory that FLCA was associated with communication apprehension, test anxiety, and fear of negative evaluation. The 33-item five-point Likert Foreign Language Classroom Anxiety Scale (FLCAS), was also developed at that time to identify anxious language learners and measure their level of anxiety, and this scale has been widely applied into a large amount of empirical research as well as modified and validated according to specific contexts (e.g. Dewaele & MacIntyre 2014; Liu 2021) [18, 19].

In terms of the relation of boredom and anxiety, Li and Han (2022) surveyed 348 non-English major freshmen on their feelings of pleasure, anxiety, and boredom during online classes. The results showed a moderate to high degree of negative correlation between boredom and pleasure, while a small to moderate degree of positive correlation with anxiety.

However, studies on the relations of FLLB and FLCA, the gender and discipline differences of FLLB, and other specific internal mechanism and influences of FLLB remain insufficient. Thus, the present study is conducted with the following objectives: (1) to provide more empirical evidence for FLLB and analyze the general levels of FLLB and FLCA among Chinese non-English-major EFL undergraduate students; (2) to innovatively analyze the relation of FLLB and FLCA; (3) to provide more evidence to figure out the predictive effects of FLLB and FLCA on learners' Foreign Language Achievement.

2.3. Research Questions

What are the general levels of FLLB and FLCA among non-English-major undergraduate students? And how are they related to gender and discipline?

What is the relation of FLLB, FLCB and FLCA?

What is the relation of FLLB, FLCA and learners' foreign language academic achievement?

3. Research Design

3.1. Participants and Context

The present study was conducted during the winter vacation of 2024 in China, a short time after the final exams of last semester and it is ensured that all participants have taken the course “College English”, a compulsory comprehensive English course for all non-English majors, during last semester and have gained and checked their English achievement test scores which comes from their final exams of the course.

The participants in this study are all EFL undergraduate students of two different universities, one in Hunan Province (N=266, 71.12%), the other in Sichuan Province (N=108, 28.87%), which all belong to China's first-class universities and rank similarly in Best Chinese Universities Ranking (BCUR). And a good similarity can be seen in the distribution of majors and their English teaching system and English achievement test system between these two universities.

A total of 374 non-English-major undergraduate students of different grades participated in the present study (see Table 1), and they came from four disciplines: Science, Engineering, Medicine and Humanities and Social Sciences. And the male (N=182, 48.7%) to female (N=192, 51.3%) ratio of the participants is relatively similar.

Table 1. Characteristics of the participants (N=374)

	Frequency	Percent		Frequency	Percent
Freshman	88	23.5%	Science	89	23.8%
Sophomore	166	44.4%	Engineering	132	35.3%
Junior	60	16%	Medicine	64	17.1%
Senior	60	16%	Humanities and Social Sciences	89	23.8%

This investigation was conducted via an online anonymous questionnaire survey due to the time and space restriction during winter vacation time. And the instruments used are as follows.

3.2. The Foreign Language Boredom Scale (FLLB)

The 32-item Foreign Language Learning Boredom Scale (FLLBS) developed and validated by Li et al. (2021) was used with small modification: the 20th item in factor 4 Homework Boredom in the original scale, saying that “ Doing English homework is a dull activity”, was omitted to save the time for participants to finish the questionnaire. Thus, a 31-item online questionnaire which is all rated on 5-point Likert scales with values 1-5 assigned to each of the descriptors ranging from “Strongly Disagree” to “Strong Agree”, was developed and distributed. A total of 374 valid responses was collected in 7 days. Thus, the higher the FLLBS score is, the more boredom was experienced in participants’ English learning.

Specifically, 7 factors were included in the FLLBS covers based on an investigation among Chinese non-English-major students and English teachers’ real experiences (Li et al. 2021), covering different possible aspects of non-English majors’ English learning process.

An reliability test and a validity test were conducted via SPSS 26.0. The test results indicate that the scale has good internal consistency (Cronbach’s $\alpha=.966$), and the result of KMO test also indicated that the scale has good internal structure (KMO=.954, $p=.000<.001$).

3.3. The Foreign Language Classroom Anxiety Scale (FLCAS)

A Short form of Foreign Language Classroom Anxiety Scale (FLCAS) developed and validated by Botes et al. (2022) was translated into Chinese and then used in the present study as a tool to analyze the FLCA levels among non-English-major undergraduate students, also rated on 5-point Likert scales with values 1-5.

This scale includes 8 items, and an reliability test and a validity test were conducted to validate the scale. It turns out that this scale is well-organized and can be a good tool in the present study. (Cronbach’s $\alpha=.835$, KMO=.869, $p=.000<.001$)

3.4. Background Information and English Achievement

3 items were added at the beginning of the questionnaire, before the FLLBS and FLCAS, to collect such information of the participants as grade, gender and discipline.

At the end of the questionnaire, participants’ newest scores in their “College English” final examination in the last semester were collected as an indication of their English Achievement which can be used to further analyze the potential influences of FLLB.

3.5. Data Collection and Analyses

The online questionnaire was developed and improved by reading amounts of relevant literature as well as a pilot study among 15 non-English-major undergraduate students. Then, the questionnaire was distributed with the help of the author’s friends and teachers in the two universities and 376 responses were collected, 2 of which were invalid due to the total sameness of the responses and the fact that the duration of finishing the questionnaire was too short.

To analyze the data collected, tests were conducted in SPSS 26.0. First, descriptive statistics were computed to provide direct data for the analyses of the general levels of FLLB and FLCA

among non-English-major undergraduate students. Second, t-tests and ANOVA tests were conducted after grouping the participants based on gender and discipline. Third, Pearson correlation analyses and linear regression analyses were conducted to analyze the relation between FLLB, FLCB, FLCA and students' English achievement.

4. Results and Discussions

4.1. General Level of FLLB

According to the criteria of the Likert 5-level scale by Oxford and Burry Stock, when Mean is less than or equal to 2.4, it is considered as low-frequency. When it is between 2.5 and 3.4, it is considered as intermediate frequency, and when it is greater than or equal to 3.5, it is then high-frequency use.

Thus, it can be inferred that the overall level of FLLB among non-English-major students in these two universities is intermediate ($2.4 < M = 2.93 < 3.4$). In terms of specific factors (see Table 2), it can be seen that PowerPoint Presentation Boredom is at the highest level ($M = 3.57 > 3.4$), followed by Under-Challenging Task Boredom ($2.4 < M = 3.11 < 3.4$), while the Teacher-Dislike Boredom is at the lowest level ($2.4 < M = 2.42 < 3.4$). It is indicated that PowerPoint Presentation is the factor that most likely to cause boredom among non-English majors during their foreign language learning process, showing the great importance of using interesting and highly-interactive PowerPoint presentation during class time to help non-English majors to acquire better foreign language learning experiences that will probably gradually help them to improve their English abilities and achieve more in foreign language learning.

Table 2. Descriptive Statistics of FLLB

	N	Minimum	Maximum	Mean	Std. Deviation
FLCB	374	1.00	5.00	2.99	1.07
UCTB	374	1.00	5.00	3.11	1.07
OC/MTB	374	1.00	5.00	3.07	1.08
PPTB	374	1.00	5.00	3.57*	1.11
HWB	374	1.00	5.00	3.02	1.10
TDB	374	1.00	5.00	2.42	1.08
GLTB	374	1.00	5.00	2.55	1.04
Total	374	1.00	5.00	2.93	0.85

Note: FLCB=Foreign Language Classroom Boredom, UCTB=Under-Challenging Task Boredom, OC/MTB=Over-Challenging or Meaningless Task Boredom, PPTB=PowerPoint Presentation Boredom, HWB=Homework Boredom, TDB=Teacher-Dislike Boredom, GLTB=General Learning Trait Boredom. (*3.57>3.4)

4.2. FLLB, Gender and Discipline

In this study, independent sample t-tests and one-way ANOVA tests were conducted after grouping the participants based on gender and discipline, to analyze the relationships between FLLB and Gender, as well as FLLB and Discipline.

Relation between FLLB and Gender

Table 3. Differences of FLLB in Specific Factors Based on Gender

	Gender	N	Mean	Std. Deviation	t	Sig.
FLCB	Female	192	3.00	0.99	0.25	0.81
	Male	182	2.98	1.15		
UCTB	Female	192	3.14	0.99	0.54	0.59
	Male	182	3.08	1.13		
OC/MTB	Female	192	3.14	0.99	1.35	0.17
	Male	182	2.99	1.17		
PPTB	Female	192	3.72	0.98	2.70	0.01*
	Male	182	3.41	1.22		
HWB	Female	192	3.07	1.01	0.93	0.11
	Male	182	2.97	1.18		
TDB	Female	192	2.39	0.98	-0.68	0.50
	Male	182	2.46	1.18		
GLTB	Female	192	2.53	0.99	-0.28	0.78
	Male	182	2.56	1.10		
Total	Female	192	2.96	0.71	0.67	0.50
	Male	182	2.90	0.98		

(*Sig.=0.01<0.05)

Table 4. Differences of FLLB in Specific Factors Based on Discipline

	Discipline	N	Mean	Std. Deviation	F	Sig.	Comparison
FLCB	HSS	89	3.06	1.06	3.29	0.02*	E>H>S>M
	Science	89	2.84	1.10			
	Engineering	132	3.17	1.05			
	Medicine	64	2.72	1.05			
UCTB	HSS	89	3.18	0.97	1.09	0.36	E>H>M>S
	Science	89	2.96	1.17			
	Engineering	132	3.20	1.01			
	Medicine	64	3.06	1.15			
OC/MTB	HSS	89	3.14	1.07	0.52	0.67	H>E>M>S
	Science	89	2.95	1.11			
	Engineering	132	3.09	1.05			
	Medicine	64	3.08	1.12			
PPTB	HSS	89	3.63	1.00	3.30	0.02*	E>H>M>S
	Science	89	3.23	1.22			
	Engineering	132	3.73	1.07			
	Medicine	64	3.60	1.15			
HWB	HSS	89	3.15	1.08	2.00	0.11	H>E>M>S
	Science	89	2.78	1.11			
	Engineering	132	3.09	1.08			
	Medicine	64	3.04	1.09			
TDB	HSS	89	2.52	1.13	0.53	0.66	H>E>S>M
	Science	89	2.40	1.09			
	Engineering	132	2.43	1.04			
	Medicine	64	2.30	1.08			
GLTB	HSS	89	2.68	1.08	0.73	0.54	H>E>S>M
	Science	89	2.49	0.94			
	Engineering	132	2.54	1.05			
	Medicine	64	2.46	1.12			
Total	HSS	89	3.02	0.77	1.84	0.14	H>E>S>M
	Science	89	2.79	0.94			
	Engineering	132	3.01	0.81			
	Medicine	64	2.84	0.89			

Note: HSS=Humanities and Social Sciences; H=HSS=Humanities and Social Sciences, E=Engineering, S=Science, M=Medicine (*Sig.=0.02<0.05)

The differences in specific factors between two genders can be seen according to the table above (see Table 3). The fact that female students tend to experience slightly more boredom in five out of seven scales is indicated by Means, and there is a significant difference in PowerPoint Presentation Boredom between two genders ($\text{Sig.}=0.01<0.05$). One possible reason for this might be that females tend to be more sensitive about PowerPoint Presentation, especially about the use of colors, set type and other components that will largely affect their evaluations of effectiveness, interactive impressions and other factors of the PowerPoint Presentation. While the total $\text{Sig.}=0.50>0.05$, showing that there is statistically no significant difference between two genders.

Relation between FLLB and Discipline

Generally, it can be concluded that statistically there's no significant difference in FLLB among students of different disciplines ($\text{Sig.}=0.14>0.05$). According to Means (see Table 4), students of Humanities and Social Sciences are at the highest level of FLLB, followed by students of Engineering. While students of Medicine are at the lowest FLLB level, following that of Sciences. When it comes to specific subscales or factors, significant differences can be seen in Foreign Language Classroom Boredom and PowerPoint Presentation Boredom, with students of engineering at the highest level, followed by students of Humanities and Social Sciences. And students of Sciences and Medicine tend to be at the lower FLLB level in all factors.

4.3. General Level of FLCA and The Relations of FLCA, Gender and Discipline

It can be inferred that the overall level of FLCA among non-English-major students in these two universities is intermediate ($2.4<M=2.78<3.4$). Specifically, most participants agree that "I can feel my heart pounding when I'm going to be called on in my English class", as one of their FLCA experiences ($2.4<M=3.15<3.4$), followed by the anxiety of impromptu speaking ($M=3.10$).

The differences of FLCA between two gender can be seen according to Means that Female students ($M=3.04$) tend to at higher level of FLCA than male counterparts ($M=2.90$). But the result of the independent Samples Test shows that there is statistically no significant difference between two genders ($\text{Sig.}=0.085>0.05$).

A significant difference of FLCA among different disciplines can be seen according to the results of the One-Way ANOVA test ($\text{Sig.}=0.013<0.05$). According to Means, students of medicine are at the highest level of FLCA (see Table 5), followed by students of engineering, then humanities and social sciences. Students of Science are at the lowest level of FLCA. It can be inferred that students of medicine tend to be more anxious in English classroom context, while students of science tend to be less anxious than undergraduates of other disciplines.

Table 5. Descriptive Statistics of FLCA Based on Discipline

	N	Minimum	Maximum	Mean	Std. Deviation
HSS	89	0.75	4.75	2.83	0.82
Science	89	0.88	4.50	2.54	0.75
Engineering	132	1.25	4.75	2.86	0.76
Medicine	64	1.25	4.75	2.88	0.90
Total	374	0.75	4.75	2.78	0.81

4.4. FLLB, FLCB and FLCA

FLCB (Foreign Language Classroom Boredom) is one factor of FLLB [20]. It plays an great important role in foreign language learning process. A Pearson correlation test was conducted to recheck the relation of FLCB and FLLB. Results of the Pearson correlation test shows that FLCB are strongly correlated to FLLB ($r=.868, p<0.001$).

Table 6. Results of Correlation Tests

	Pearson Correlation	Sig.	N
FLLB and FLCB	.868**	.000	374
FLLB and FLCA	.528**	.000	374
FLCB and FLCA	.455**	.000	374

** . Correlation is significant at the 0.01 level (2-tailed).

As shown in the Table 6, FLLB and FLCA are strongly positively correlated ($r=.528, p<.001$). This is to say, students at higher FLLB level tend to be more anxious at practical English classroom, which is mostly consistent with existing research findings which have found that boredom is positively correlated with anxiety (e.g. Kruk 2022; Li and Han 2022) [15, 21].

While an intermediate correlation ($r=.455, p<.001$) can be seen according to the results of the Pearson correlation test between FLCB and FLCA, which are all under practical English classroom context, showing the tendency that students of higher level of FLCB may be of higher level of FLCA. But this correlation is not as strong as that of FLLB and FLCA.

4.5. FLLB, FLCA and English Achievement

A linear regression was conducted to analyze the predictive effect of foreign language learning boredom on English achievement scores. The analysis results are detailed in Table 7.1. According to the regression analysis results, $p=0.000/0.002$, significantly less than 0.05, indicating the validity of the linear regression analysis model. Thus, it can be concluded that there is a close linear correlation between foreign language boredom and English achievement scores. Therefore, the regression equation can be obtained as follows: English achievement score = $89.752 + (-1.924) * FLLB$, indicating that FLLB can significantly negatively predict English achievement scores.

The same testing method was also used to analyze the predictive effect of FLCA on English achievement scores. According to the regression analysis results (see Table 7.2), $p=0.000$, indicating that the linear regression analysis model is valid. Thus, it can be concluded that there is another close linear correlation between FLCA and English achievement scores. Therefore, the regression equation can be concluded as follows: English achievement score = $93.153 + (-3.255) * FLCA$, indicating that FLCA can significantly negatively predict English scores. By comparison, FLCA's predictive ability is larger than that of FLLB, but both of them can negatively predict English achievement scores.

Table 7.1 Results of the Regression Analysis of FLLB and English Achievement Scores

	Unstandardized B	Coefficient s Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B	
						Lower Bound	Upper Bound
(Constant)	89.752	1.925		46.633	.000	85.967	93.537
FLLB	-1.924	.631	-.156	-3.051	.002	-3.164	-.684

Dependent Variable: English Achievement Score

Table 7.2 Results of the Regression Analysis of FLCA and English Achievement Scores

	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B	
						Lower Bound	Upper Bound
(Constant)	93.153	1.875		49.677	.000	89.466	96.840
FLCA	-3.255	.648	-.252	-5.022	.000	-4.529	-1.980

Dependent Variable: English Achievement Score

5. Conclusion

5.1. Major Findings

The present study adopted a quantitative approach to investigate the general levels of Foreign Language Learning Boredom (FLLB) and Foreign Language Classroom Anxiety (FLCA) among non-English-major undergraduate students and the complex relations of Foreign Language Learning Boredom, Foreign Language Classroom Boredom (FLCB), Foreign Language Classroom Anxiety and English Achievement.

To begin with, as for the general levels of FLLB and FLCA among non-English-major EFL undergraduate students, participants reported intermediate levels of FLLB ($M=2.93$) and intermediate levels of FLCA ($M=2.78$). As for the levels of the seven dimensions of FLLB, PowerPoint Presentation Boredom is the highest ($M=3.57$), while other dimensions tend to be middle, with Teacher-Dislike Boredom being the lowest.

Secondly, the relations of FLLB, FLCA, gender and discipline are also analyzed in the present study. On one hand, there is no significant differences ($Sig=.67$; $Sig=.14$) of FLLB among different genders and disciplines, while in terms of specific dimensions, female students tend to be at higher level of FLLB, and a significant difference ($Sig=.01$) of PowerPoint Presentation Boredom can be seen. And in terms of disciplines, students of Humanities and Social Sciences and Engineering are at higher levels than students of Science and Medicine. On the other hand, there is statistically no significant difference ($Sig=.085$) of FLCA between two genders. However, a significant difference of FLCA ($Sig=.013$) exists among different disciplines, with students of Medicine at the highest level of FLCA ($M=2.88$), followed by students of Engineering ($M=2.86$), then Humanities and Social Sciences ($M=2.83$). Students of Science are at the lowest level of FLCA ($M=2.54$).

Thirdly, positive correlations can be seen among FLLB and FLCB, FLLB and FLCA, and FLCB and FLCA. FLLB and FLCB, and FLLB and FLCA are strongly correlated ($r=.868$, $p<.001$; $r=.528$, $p<.001$), while FLCB and FLCA are intermediately correlated ($r=.455$, $p<.001$). This is to say, the higher level of FLCB, the higher level of FLLB; the higher level of FLLB, the higher level of FLCA; and the higher level of FLCB, the higher level of FLCA.

Lastly, linear regression tests were used to analyze the predictive effect of FLLB, FLCA on English Achievement Scores. According to the regression analysis results, $p=0.000/0.002$, indicating the validity of the linear regression analysis model. Close linear correlations between FLLB and English achievement scores, and between FLCA and the latter can be seen. The regression equation can be obtained as follows: English achievement score = $89.752 + (-1.924) * FLLB$; English achievement score = $93.153 + (-3.255) * FLCA$, indicating that FLLB and FLCA can significantly negatively predict English scores.

5.2. Implications, Limitations and Future Directions

Theoretically, as one of the few studies investigating the relations of FLLB and FLCA, the present study provided empirical support for the existing research findings. In terms of research method, this study applied and validated the Foreign Language Learning Boredom Scale (FLLBS)

developed by Li et al. Research results showed that this scale is an effective tool for measuring FLLB that is in line with the local context of China. Meanwhile, the short form of Foreign Language Classroom Anxiety Scale (FLCAS) also tended to be of good applicability under this context. The present study, which is conducted during winter vacation and in which the questionnaire used were anonymous, being undisturbed by many psychology factors of the students, for example, shyness to directly give judgement and negative feedback to teachers and classes, is of good reliability and validity, and suggests that vacation or holiday time could be a good chance to conduct investigation on FLLB.

Pedagogically, the following implications based on the findings of this study were put forward, trying to help educators, especially TEFL (Teaching English as a Foreign Language) teachers who give classed to non-English-major EFL undergraduate students, to improve foreign language class quality, thus helping learners to reduce negative emotions, such as FLCB, FLLB, FLCA, etc., then to positively influence their foreign language learning achievement. Generally, based on the general levels of FLLB and FLCA, it is of great importance to adapt various methods to make the classroom environment more enjoyable. And this requires that teachers are supposed to be more more emotionally intelligent and invest effective emotional efforts in their students' emotional well-being [22], as undoubtedly, caring, supportive, encouraging, thoughtful, respectful, attentive, and emotionally available teachers are more likely to establish a positive psychosocial classroom environment for students [23]. There are many methods to reach it, for instance, use more encouraging words, gestures, and expressions, use more measures to encourage learners to participate in classroom activities, and most importantly, set up more student-centered activities [18], adapting multimedia instruction [24], and so on.

Specifically, as is shown in the present study, one factor that the highest level of FLLB lies in and a significant difference of FLLB between genders exists is the PowerPoint Presentation Boredom. Thus, it is necessary for teachers to adapt more interactive PPT and use it more properly, rather than just reading PPT to learners with no interaction, for instance, using conversations in PPT and invite students to read them through role-play or other cooperative work, using proper color schemes and layout, using videos or mind maps to optimize PPT design, and so on. While as there is a significant difference of FLCA among disciplines, it is of great help to adjust class arrangements according to the characteristics of students of different disciplines, for example, students of medicine tend to be at higher level of FLCA, thus they may anticipate a more relaxing and enjoyable classroom environment which can be reached by giving time for students to get prepared for their speech, etc.

There are also some limitations of this study. Firstly, participants in this study come from two different universities. On one hand, even if it is ensured that two universities have similar TEFL system and quality, some other variables, such as the evaluation criteria of different teachers, specific classroom environments, or specific settings for the final exams, may contribute to the final results of FLLB, FLCA, and most importantly the English achievement scores of the participants. On the other hand, the present study did not take into account the possible dynamic changes of FLLB and FLCA in ages and foreign language proficiency.

Some directions for future studies could also be derived from the present study. Firstly, this study has explored the relations of FLLB and FLCA, however, FLA is situation-specific, that is to say, the relations of FLLB and other types of FLA are still under-investigated, thus future researchers could explore the relationships between FLLB and other kinds of FLA, or other emotions. Secondly, this investigation was conducted during winter vacation time and under Chinese educational context, and only among non-English-major EFL undergraduate students, thus the generality of the findings should be further confirmed both in the similar context and other contexts, for instance, future investigations could be done among English-major students, among graduate students, among primary school students, etc. Thirdly, a quantitative

questionnaire survey can not capture dynamic changes, thus more longitudinal studies on FLLB are also expected in the future.

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