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The Predictive Effects of Foreign Language Anxiety (FLA) and Foreign Language Boredom (FLB) on Matriculation English Test (MET) Scores in Chinese Second-Tier University Setting

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Abstract. This study responds to the growing interest in the emotional dimensions of second language acquisition. Informed by the fundamental principles of the control-value theory, this quantitative research employs a questionnaire survey method. The study investigated 451 non-English major freshmen at a second-tier Chinese university for their foreign language anxiety (FLA) and foreign language boredom (FLB), examining their correlations and predictive effects on Matriculation English Test (MET) scores. These students, at the beginning of their university education and having not yet started their courses, provided a unique opportunity to explore the impact of emotional factors on the MET within the context of second language acquisition (SLA). Data were collected using classical questionnaires for FLA and FLB, and analyzed with SPSS 26.0 using descriptive statistics, Pearson correlation, and multiple regression to examine their correlations and predictive effects on MET scores. The research results show that: a) both FLA and FLB have negative impacts on students' MET scores; and b) FLA emerges as the more influential factor, outweighing FLB in its effect on MET scores. In light of these empirical observations, this study contributes to the understanding of negative achievement emotions and their interwoven connection to language achievement, specifically for the MET.

Keywords: foreign language anxiety; foreign language boredom; Matriculation English Test; control-value theory; second language acquisition

1. Introduction

The past three decades have witnessed a growing interest in emotion research in second language (L2) learning and teaching (Horwitz et al., 1986; Imai, 2010). Numerous scholars have significantly contributed to this growing interest, where emotions are not mere by-products but essential components that influence learners' experiences and outcomes. The emotion research development in SLA has three distinct phases. The initial phase, termed as the "Emotion Avoidance Phase," spanned from the 1960s to the mid-1980s. The subsequent phase, known as the "Anxiety-Prevailing Phase," extended from the mid-1980s to the early 2010s. This era marked a significant shift in focus, with anxiety being the primary, if not exclusive, emotion studied within the context of SLA. The most recent phase, the "Positive and Negative Emotions Phase," has emerged over the past decade, characterized by a more balanced exploration of both positive and negative emotional constructs in SLA, which demonstrates a growing awareness of the complex interactions between positive and negative emotions and their interplayed impact on SLA (Dewaele & Li, 2020).

Researchers have already recognized that positive emotions can significantly enhance self-efficacy and the overall effectiveness of language learning, while negative emotions typically have an adverse effect on SLA (Dewaele, Botes, & Greiff, 2023; Dewaele, Botes, & Meftah, 2023; Li & Wei, 2023; Liu & Wang, 2023). However, the interaction effects between negative emotions and language achievement are rarely explored. Anxiety and boredom are two of the most commonly researched negative emotions in language learning, profoundly impacting learners' learning outcomes, and are indispensable dimensions in SLA (Dewaele, Botes, & Greiff, 2023; Dewaele, Botes, & Meftah, 2023; Tze et al., 2016; Zhao & Wang, 2023). As boredom has emerged as a novel focal point and anxiety has traditionally occupied a central role in emotional research in SLA (Horwitz et al., 1986; Horwitz, 2017), investigating the correlative effects of the two on key language assessments in China will yield significant insights into theoretical constructs and pedagogical practices.

The Chinese National College Entrance Examination, known as the *Gaokao*, is of great significance for Chinese students, marking the culmination of their high school education and determining their future academic and career paths. Due to the high importance placed on the Gaokao results, students experience considerable pressure and negative emotions. The MET, as one of the subjects in the Gaokao, carries significant weight in the overall score. Although research on negative emotions in SLA is emerging and highly regarded, studies focusing on the relationship between negative emotions and the MET are still lacking, despite its crucial role.

Firstly, students experience negative emotions such as anxiety and boredom during the Gaokao, yet the relationship between these emotions and MET remains an under-explored area. The Gaokao holds a significant position in China's educational system, and MET scores are critically influential for students' futures. Therefore, there is a pressing need for further exploration of how negative emotions such as anxiety and boredom impact MET.

Secondly, middle-level high school students constitute a substantial proportion of the total population. They receive less attention and resources compared to top-performing students. Students admitted to second-tier universities can be considered middle-level students in high school—they neither enter top-tier universities nor completely fail to pursue higher education. Since these students often face limited resources and attention and make up the majority of the student population, enhancing their performance is of great significance pedagogically.

The current study was conducted at a second-tier university in the central region of China. The students perform moderately in SLA and have access to fewer educational resources; nevertheless, they represent the largest proportion of university students in China. This study investigates how anxiety and boredom, through their correlations and predictive effects, impact the MET among these university students. By revealing the interrelationship between negative emotions and language performance in this context, it is hoped that the study will provide pedagogical and theoretical insights.

Research Questions:

The study investigated the following research questions:

1. What is the relationship among FLA, FLB and MET scores among second-tier university students?
2. What are the combined effects of FLA and FLB in predicting MET scores?
3. To what extent do FLA and FLB predict language achievement respectively?

2. Literature Review

2.1 Emotions and the Control Value Theory

In contemporary society, the binary of success and failure holds significant implications in academic achievements. According to Pekrun and Perry (2014), individual academic accomplishments significantly influence one's trajectory from educational pursuits to professional life. These accomplishments, or their absence, profoundly impact different outcomes, ranging from educational completion to dropout, employment to layoff, and prosperity to poverty. In the process of pursuing academic success, emotions play a significant role in individual education experiences.

Termed as “achievement emotions,” these emotions are tied directly to achievement activities or achievement outcomes. The emotions that accompany the pursuit of educational achievement are rich and varied, which include, but are not limited to, pleasure, hope, pride, anger, anxiety, shame, boredom, and despair. To better understand the intricate relationship between achievement emotions and academic success, control-value theory (CVT) offers valuable insights by delving into the origins, antecedents, and consequences of achievement emotions within academic settings. Pioneered by Pekrun (2006), CVT offers a comprehensive lens through which the intricate relationship between emotions and academic achievement can be understood. CVT posits that achievement emotions are influenced by two primary factors: the sense of control

over achievement activities and the value placed on the achievement outcomes. These factors, in turn, give rise to a variety of emotional experiences that can either propel students towards success or hinder their academic progress.

CVT classifies achievement emotions across three dimensions—object focus, value, and activation—each contributing uniquely to our understanding of how emotions impact academic achievement. The object focus dimension distinguishes between emotions that are elicited by the activities themselves (such as the joy of learning or the tedium of repetitive tasks) and those that are tied to the outcomes of these activities (such as the anxiety of awaiting grades or the hope for success). The value dimension categorizes emotions into positive (e.g., enjoyment and pride) and negative (e.g., sadness and shame) based on their perceived desirability. The activation dimension further classifies emotions according to their physiological impact, differentiating between those that activate (e.g., anxiety) and those that deactivate (e.g., boredom) physiological arousal. Empirical research grounded in CVT (Li & Wei, 2023; Shao et al., 2020) provides valuable insights into the close relationship between the emotions and language achievements. However, there is a lack of research based on the context of Chinese young EFL learners regarding MET, and on the interplay of negative emotions and language achievements. Given the importance of the MET in China, delving into the emotional landscape within the MET context, especially the interplay between negative emotions and academic success in high-stakes testing scenarios, is fully significant.

2.2 Foreign Language Anxiety and Language Achievement

Anxiety, as subjectively experienced, manifests as tension, worry, nervousness, and apprehension. This phenomenon is not only an essential research focus in psychology but also represents the initial and consistently explored emotional factor in SLA. Horwitz (2017) states that it is a kind of discomfort that language learners experience because they lack the linguistic means to present themselves authentically, that is, learners feel distress due to their inability to be themselves and to connect authentically with other people through the limitation of new language. As a result, their self-esteem is vulnerable to the awareness that the range of communicative choices and authenticity is restricted (Horwitz et al., 1986; Horwitz, 2017).

The origins of foreign language anxiety are complex, encompassing academic, cognitive, and social factors. Academically, sources of anxiety include incorrect pronunciation, unrealistic learner expectations, and instructors' improper error corrections. Cognitively, anxiety stems from fears of identity loss, distorted self-perceptions of proficiency, personality traits such as shyness, and low self-esteem, impacting learners' engagement with the language. Socially, anxiety triggers include fear of ridicule, communication mishaps, cultural missteps, competitive settings, and interactions with native speakers (MacIntyre, 2017). A substantial body of empirical evidence indicates that foreign language anxiety has a negative impact on foreign language outcomes and achievements (Dewaele, Botes, & Greiff, 2023; Dewaele, Botes, & Meftah, 2023; Liu & Hong, 2021; Yeşilçınar & Erdemir, 2023).

Several highly representative meta-analyses have been published that scrutinize the relationship between foreign language anxiety (FLA) and language achievement (Botes et al., 2020; Teimouri et al., 2019). Teimouri et al. (2019) carried out a comprehensive meta-analysis encompassing 97 studies across 23 countries to assess the impact of second language anxiety on language achievement. Botes et al. (2020) investigated the relationship between foreign language classroom anxiety (FLCA) and academic achievement, encompassing 67 studies from multiple countries. These findings revealed a moderate negative correlation between FLCA and all categories of academic outcomes, with a correlation coefficient of -0.36 and -0.39, respectively.

Apart from these conclusive meta-analyses, recent studies continue to explore the relationship between FLA and language achievement. In 2023, Dewaele, Botes and Greiff and his colleagues conducted an online questionnaire survey involving 332 learners from various nationalities (predominantly British) and with diverse course backgrounds. The survey reveals that factors such as students' attitudes towards learning, along with the frequency and unpredictability of teachers' use of foreign languages, significantly influence students' foreign language anxiety. This anxiety, in turn, shows a significant negative correlation with foreign language performance (Dewaele, Botes, & Greiff, 2023). That same year, Dewaele and his team conducted a survey with 502 EFL learners in Morocco, confirming that FLA consistently acts as a crucial negative predictor of language performance in the Moroccan context, which outweighed the moderate negative effect of FLB (Dewaele, Botes, & Meftah, 2023). Additionally, in Turkey, it was found that the sources of FLCA include individuals, peers, teachers, and teaching methods, and students with better grades exhibited lower anxiety levels (Yeşilçınar & Erdemir, 2023).

In China, research on the relationship between FLA and language achievements is also very active. Li and Wei (2023) conducted a longitudinal study exploring the relationships among foreign language enjoyment (FLE), foreign language anxiety (FLA), foreign language boredom (FLB), and language achievement among Chinese rural high school students. The participants were under-resourced EFL learners in China. The results revealed that when combined, FLE was the strongest predictor, followed by FLA, while FLB was the weakest predictor among the three in this longitudinal study.

Actually, students at second-tier universities in China also experience resource limitations since they are part of a less-focused group, therefore research on emotions in this group remains lacking. There is a need to focus on this group of students. Furthermore, to enhance the reliability of this study, actual MET scores are utilized instead of the simulated scores commonly employed in earlier studies. This allows for a more accurate assessment of the emotional experiences, and authentic language achievement in second language acquisition.

2.3 Foreign Language Boredom and Language Achievement

Foreign language learning boredom (FLLB), alternatively referred to as foreign language boredom (FLB) and adapted in the current study, has gained significant attention recently (Li, 2021; Kruk et al., 2021; Pawlak et al., 2020; Tze et al., 2016). It evolves from academic boredom, a negative and passive emotion caused by a lack of challenges or perceived value in an academic context, leading to adverse academic outcomes (Goetz & Hall, 2014). This state is further delineated by a distinct experiential perception, such as the sensation of time either slowing down or coming to a standstill, coupled with a pronounced inclination towards behavioral disengagement (Goetz & Hall, 2014; Li, 2021).

Within the context of foreign language learning, academic boredom specifically manifests as foreign language boredom. According to Li (2021), FLB is defined as an emotional state characterized by a reduction in physiological arousal and cognitive engagement in foreign language learning. FLB stems from various sources: monotonous and repetitive course contents, overchallenging or underchallenging learning tasks, boredom induced by teachers, or personal learning trait boredom (Li & Wei, 2023; Pawlak et al., 2020), which lead to negative language learning outcomes and achievements (Dewaele, Botes, & Greiff, 2023; Dewaele, Botes, & Meftah, 2023; Tze et al., 2016; Zhao & Wang, 2023). Foreign language boredom is a prevalent phenomenon in foreign language learning. According to control-value theory (Pekrun, 2006), foreign language boredom is related to learners' lack of control and perceived value in foreign language learning activities. Learners tend to be unable to control the foreign language learning process effectively or properly perceive the value of foreign language learning activities.

As an emerging research focus, empirical studies on foreign language boredom are relatively insufficient. However, the research on the impact of academic boredom on different learning aspects can shed light on and give us insight into the relationship between foreign language boredom and learning outcomes. A meta-analysis (Tze et al., 2016) included 29 studies that investigated the relationship between academic boredom and students' learning motivation, strategies, behaviors, and performance in different contexts. The results show that academic boredom has a generally negative impact on motivation, strategy use, and academic performance. Academic boredom distracts students by reducing their interest and engagement in learning, thereby decreasing intrinsic motivation and leading students to adopt more superficial learning strategies, ultimately leading to poorer academic performance. The overall negative relationship ($r = -0.24$) between academic boredom and academic outcomes supports the detrimental effects of boredom in academic settings.

The research that has emerged in recent years regarding the relationship between FLB and language achievement supports this viewpoint. Wu and Kang (2023) investigated the relationship between EFL boredom and EFL achievement among 235 Chinese middle school students aged 12 to 14, concluding that there is a negative correlation between the two. The current study examines the impact of

FLB on authentic MET scores and explores the relationship between them in order to provide evidence for more effective teaching interventions in the future.

3. Methodology

3.1 Participants and Data Collection

The data collection took place in September 2023, and employed a purposive sampling approach. All the participants in the current study were freshmen who took the college entrance examination that year, and they had not commenced university courses as they were undergoing military training. This ensured that the recall of their English achievement emotions pertained to their high school experiences, thereby guaranteeing the fulfillment of the research objectives. The research received approval from the Public Foreign Language Department at a second-tier university in China, and the MET scores of all freshmen for that year were officially provided for research purposes, with confidentiality assured. The first author then contacted tutors of various departments and they shared the questionnaire links through WeChat and QQ (mainstream social media applications in China) to students' WeChat groups or QQ groups.

Before filling out the online questionnaire, participants were informed of the purpose and nature of the survey, as well as their right to participate or withdraw from the survey. Participants were asked to provide their names and metric numbers in the questionnaire, since their data had to be matched based on their names and metric numbers to their MET scores as well as predicting the relationship between independent variables (FLA and FLB) and the dependent variable (MET scores). However, they were given the assurance that their names and information would not appear in publications. A total of 586 students participated in the project. Owing to incomplete answers and improper responses to reverse-scored questions, 116 responses were discarded, resulting in a final valid questionnaire count of 451. The final sample included 118 individuals majoring in computer science (26.2%), 95 in accounting (21%), 74 in journalism (16.4%), 86 in medical science (19.1%), and 78 in fine art (17.3%). The average age of participants was 18.36 years (SD = 0.66), ranging from 17 to 21 years. There were 266 male participants (58.98%) and 185 female participants (41.02%).

Table 1: Profiles of the participants at the second-tier university

Variable	Categories	Frequency N=451	Percentage 100%
Gender	Male	266	58.98%
	Female	185	41.02%
Age	17 years	13	2.9%
	18 years	291	64.5%
	19 years	124	27.5%
	20 years	18	4.0%
	21 years	5	1.1%
Major	Accounting	95	21%
	Computer Science	118	26.2%
	Fine Art	78	17.3%
	Journalism	74	16.4%
	Medical Science	86	19.1%

3.2 Research Instruments

A composite questionnaire and actual MET scores were employed for the survey. Demographic information (such as gender, age, major), the foreign language anxiety scale and foreign language learning boredom scale comprised the composite questionnaire. All the questionnaire items were answered on a five-point Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree). To ensure the full understanding of the content, the questionnaire was written in Chinese, and to ensure full expression, the author invited five college English teachers to double-check the translation to assess the conformity and appropriateness between the Chinese version and the original version.

3.2.1 Foreign Language (Classroom) Anxiety Scale (FLCAS)

The Foreign Language (Classroom) Anxiety Scale (FLCAS) (Horwitz et al., 1986) was used to measure participants’ anxiety experiences in English classes. It consists of 33 items, some of which are reverse-scored. To ensure consistency across all scores, reverse-scored items were processed before data analysis. FLCAS is a well-established tool, widely applied and validated globally in various contexts (MacIntyre, 2017). It has consistently been reported to have good reliability. The author conducted the pilot study for FLA scale and the internal reliability was very good ($\alpha = .93$, $N = 125$), which had a similar result as Shao’s report ($\alpha = .92$, $N = 510$) (Shao et al., 2013).

3.2.2 Foreign Language Learning Boredom Scale (FLLBS)

The FLLBS was developed and validated by Li et al. (2023) among more than 3,000 Chinese university students. It consists of 32 items measuring seven factors related to FLLB. The Cronbach’s alpha coefficient for the test and retest for the FLLBS was as high as .949 and .957, respectively (Li et al., 2023). The Questionnaire Star (Wen Juan Xing) was employed for the aforementioned questionnaires (FLCAS and FLLBS) to collect data among the participants. Questionnaire Star is an online survey tool by means of which people collect data and other information (e.g. answering time, IP) which can be seen by the initiator.

3.2.3 Actual MET scores

All the participants took part in the MET in 2023. The MET includes a listening test, reading comprehension, cloze test, filling in the blanks, correction, and writing (aimed at testing participants’ language abilities in listening, reading, comprehension, writing, and vocabulary). The examination duration is 120 minutes, with a total score of 150 (30, 40, 30, 15, 10, and 25, respectively). The scores used in this study are the actual MET scores, making data and research more authoritative and persuasive.

3.3 Data Analyses

The data were digitized using SPSS 26.0. Preliminary analysis of the data included descriptive analyses for each observed variable and normality tests. Subsequently, Pearson correlation analyses were conducted to examine the relationships between MET scores, FLA, and FLB. Finally, the three variables were incorporated into a regression model to examine the predictive relationship of FLA and FLB as independent variables on the dependent variable of college entrance exam scores.

4. Results

4.1 Descriptive Results

The descriptive results are presented in Table 2. The minimum score for the MET is 21, the maximum score is 128, and the average score is 83.1. While the high scores are not particularly high, the low scores are exceptionally low, indicating that the English proficiency of the participants is at a low to medium level. These participants exhibited mean scores of 99.3 and 104.3 in anxiety and boredom, respectively, suggesting that during their high school years, they considered English learning to be boring and felt anxious; that is, although the low-proficiency students feel anxious about their learning outcomes, they conceal this with indifference and a lack of interest. The skewness and kurtosis of MET, FLA and FLB are acceptable with the normal distribution (Curran et al., 1996).

Table 2: Descriptive results of MET, FLA and FLB

	N(Sample Size)	Min.	Max.	Mean	Standard Deviation	Skewness	Kurtosis
MET	451	21	128	83.1	16.8	-.553	.881
FLA	451	34	154	99.3	12.8	-1.006	5.603
FLB	451	32	160	104.3	18.1	.414	1.608

Note: MET = Matriculation English Test, FLA = Foreign Language Anxiety, FLB = Foreign Language Boredom.

4.2 Interrelationships Participants' MET Scores, FLA and FLB

Pearson correlation results show that MET scores were moderate negatively related to both FLA and FLB ($r = -.490, p < .01$; $-.478, p < .01$). This suggests that participants who reported higher levels of FLA and FLB were more likely to obtain lower scores in MET. The results also show a positive medium relationship between FLA and FLB ($r = .591, p < .01$), indicating that students who reported having higher levels of FLA have comparatively higher levels of FLB as well.

Table 3: Correlation between MET scores, FLA and FLB

	MET	FLA	FLB
MET	—		
FLA	-.490**	—	
FLB	-.478**	.591**	—

Note. ** $p < .01$

4.3 Joint Predictive Effects of FLA and FLB on MET Scores

The regression results are shown in Table 4. The proposed model acceptably fits the data (Adjusted $R^2 = .291, p < .001$), indicating that students' FLA and FLB can independently and jointly predict MET scores. Specifically, in this model, FLA is a stronger predictor of MET scores ($\beta = -.319, p < .001$) than FLB ($\beta = -.290, p < .001$). This may be because, in the context of the Gaokao, students are more focused on the results rather than on process. In other words, students have a higher tolerance for activity-related negative emotions (boredom) compared to outcome-related negative emotions (anxiety). FLA is more likely to affect students' English examination performance negatively than FLB.

Table 4: Interactive effects of FLA and FLB on MET scores

Regression equations		Fit Index	Coefficient
Predictor	Dependent variable	Adjusted R^2	β
FLA	MET	.291***	-.319***
FLB			-.290***

Note. *** $p < .001$

5. Discussion

The current study aims to investigate the relationship between FLA, FLB, and MET and to determine how FLA and FLB individually and jointly predict MET performance. The first research question investigates the relationship between FLA, FLB, and MET scores. A moderate negative correlation was observed between FLA and MET scores, as well as between FLB and MET scores, while a positive correlation was found between FLA and FLB. This indicates that students with higher levels of FLA or FLB tend to have relatively lower MET scores. In the context of MET, students who frequently experience FLA are also more likely to feel bored in their foreign language learning. The second and third research questions examine how FLA and FLB collectively and individually affect MET performance within a regression model. The results show that both FLA and FLB have a moderate negative impact on MET performance in the regression model, with the influence of FLA being slightly stronger than that of FLB.

The results of this study align with the findings of Deweale, Botes, and Greiff in 2023. They concluded that in the non-industrialized and less affluent environments of Morocco, both FLA and FLB had negative impacts on EFL learners' language achievement, with FLA having the strongest negative effect, stronger than FLB. They emphasized that FL teachers and learners should not underestimate the impact of anxiety on language learning (Dewaele, Botes, & Meftah, 2023). Li and Wei (2023) found in their longitudinal research that, although both FLA and FLB have a negative impact on language achievement, FLA has a stronger and more enduring negative impact on language achievement than FLB. This finding is partially consistent with the results of this study. In 2023, Deweale and his team published another study exploring the relationships among FLA, FLE, and FLB (Dewaele, Botes, & Greiff, 2023). A well-fitting structural equation model revealed the associations among these three emotions. However, the study found that only FLA had a negative impact on academic achievement. This further illustrates that, in different contexts, the impact of FLA is stronger than that of FLB. The results of this study partially support their conclusions.

This study supports the CVT and reveals that both activating negative emotions (FLA) and deactivating negative emotions (FLB) are negative predictors of MET scores. Furthermore, the findings demonstrate that CVT posits achievement emotions play a crucial role in the pursuit of academic success, with academic achievement significantly impacting academic completion, personal accomplishment, and overall life satisfaction. In addition, these findings carry significant pedagogical implications. The high-pressure environment of the

college entrance examination not only affects students' psychological well-being but also directly impacts their academic performance. Therefore, educators and policymakers need to implement comprehensive emotional support systems within schools. Such systems should incorporate stress management and relaxation techniques into the daily language learning curriculum. Teachers can play a pivotal role by creating a classroom atmosphere that reduces anxiety and boredom. This can be achieved through engaging teaching methods, fostering a supportive classroom environment, and providing personalized feedback that encourages student participation and motivation. Moreover, understanding the different sources of FLA and FLB in the context of MET can help educators tailor their approaches more effectively, which could also serve as a focus for future research. Future studies could also explore the relationships between other emotions (such as enjoyment, joy, shame, confidence, and guilt) and other language achievements (such as TOEFL, IELTS, and CETs), as well as the interplay between emotions, motivation, and language learning strategies.

6. Conclusion

This research investigated foreign language anxiety and boredom in the English learning process among 451 freshmen who had completed the college entrance examination but did not commence their university courses at a second-tier university in China. The findings revealed that both FLA and FLB have negative impacts on MET scores, with FLA presenting a marginally greater negative effect than FLB, which supported the theoretical frame of CVT. Based on the findings of this study, educators can potentially improve the negative impacts of negative emotions in foreign language learning, especially in MET, by implementing targeted interventions, thereby enhancing language achievement.

However, there exist limitations of the current study. The sample was drawn solely from a single second-tier university, which restricts the generalizability of the findings. Future research should consider including a more diverse range of universities to enhance the external validity of the results. Additionally, the data collection relied primarily on self-reported questionnaires, which may be subject to social desirability bias and recall bias. Participants might provide responses based on what they believe the researchers expect, or their responses may be influenced by inaccurate memory recall. These factors could lead to data bias, thereby affecting the accuracy of the study's findings. Future research should consider incorporating multiple data collection methods, such as classroom observations and interviews, to mitigate these biases.

In conclusion, revealing adverse effects of FLA and FLB on language achievement paves the way for future investigations into pedagogical interventions and the causes and sources of these emotions, offering a foundational perspective for further exploration.

7. References

- Botes, E., Dewaele, J. M., & Greiff, S. (2020). The Foreign Language Classroom Anxiety Scale and academic achievement: An overview of the prevailing literature and a meta-analysis. *Journal for the Psychology of Language Learning*, 2(1), 26–56. <https://doi.org/10.52598/jpll/2/1/3>

- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29. <https://doi.org/10.1037/1082-989X.1.1.16>
- Dewaele, J.-M., Botes, E., & Greiff, S. (2023). Sources and effects of foreign language enjoyment, anxiety, and boredom: A structural equation modeling approach. *Studies in Second Language Acquisition*, 45(2), 461–479. <https://doi.org/10.1017/S0272263122000328>
- Dewaele, J.-M., Botes, E., & Meftah, R. (2023). A three-body problem: The effects of foreign language anxiety, enjoyment, and boredom on academic achievement. *Annual Review of Applied Linguistics*, 43, 7–22. <https://doi.org/10.1017/S0267190523000016>
- Dewaele, J.-M., & Li, C. (2020). Emotions in second language acquisition: A critical review and research agenda. *Foreign Language World*, 196(1), 34–49. <https://eprints.bbk.ac.uk/id/eprint/32797/3/32797.pdf>
- Goetz, T., & Hall, N. C. (2014). Academic boredom. In L. Robertson (Ed.), *International handbook of emotions in education* (pp. 311–330). Routledge. <https://doi.org/10.4324/9780203148211>
- Horwitz, E. (2017). On the misreading of Horwitz, Horwitz and Cope (1986) and the need to balance anxiety research and the experiences of anxious language learners. In C. Gkonou, M. Daubney, & J. Dewaele (Eds.), *New insights into language anxiety: Theory, research and educational implications* (pp. 31–47). Multilingual Matters. <https://doi.org/10.21832/9781783097722-004>
- Horwitz, E., Horwitz, M., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125–132. <https://doi.org/10.2307/327317>
- Imai, Y. (2010). Emotions in SLA: New insights from collaborative learning for an EFL classroom. *The Modern Language Journal*, 94(2), 278–292. <https://doi.org/10.1111/j.1540-4781.2010.01021.x>
- Kruk, M., Pawlak, M., & Zawodniak, J. (2021). Another look at boredom in language instruction: The role of the predictable and the unexpected. *Studies in Second Language Learning and Teaching*, 11(1), 15–40. <https://doi.org/10.14746/ssl.2021.11.1.2>
- Li, C. (2021). A control-value theory approach to boredom in English classes among university students in China. *Modern Language Journal*, 105(1), 317–334. <https://doi.org/10.1111/modl.12693>
- Li, C., Dewaele, J. M., & Hu, Y. (2023). Foreign language learning boredom: Conceptualization and measurement. *Applied Linguistics Review*, 14(2), 223–249. <https://doi.org/10.1515/applirev-2020-0124>
- Li, C., & Wei, L. (2023). Anxiety, enjoyment, and boredom in language learning amongst junior secondary students in rural China: How do they contribute to L2 achievement? *Studies in Second Language Acquisition*, 45(1), 93–108. <https://doi.org/10.1017/S0272263122000031>
- Liu, M., & Hong, M. (2021). English language classroom anxiety and enjoyment in Chinese young learners. *SAGE Open*, 11(4), Article 21582440211047550. <https://doi.org/10.1177/21582440211047550>
- Liu, E., & Wang, J. (2023). The effects of student and teacher variables on anxiety, enjoyment, and boredom among Chinese high school EFL learners. *International Journal of Multilingualism*, 21(3), 1454–1475. <https://doi.org/10.1080/14790718.2023.2177653>
- MacIntyre, P. (2017). An overview of language anxiety research and trends in its development. In C. Gkonou, M. Daubney, & J. Dewaele (Eds.), *New insights into language anxiety: Theory, research and educational implications*. Multilingual Matters. <https://doi.org/10.21832/9781783097722-003>

- Pawlak, M., Kruk, M., Zawodniak, J., & Pasikowski, S. (2020). Investigating factors responsible for boredom in English classes: The case of advanced learners. *System*, 91, Article 102259. <https://doi.org/10.1016/j.system.2020.102259>
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18, 315–341. <https://doi.org/10.1007/s10648-006-9029-9>
- Pekrun, R., & Perry, R. P. (2014). Control-value theory of achievement emotions. In C. Gkonou, M. Daubney, & J. Dewaele (Eds.), *New insights into language anxiety: Theory, research and educational implications*. Multilingual Matters.
- Shao, K., Yu, W., & Ji, Z. (2013). An exploration of Chinese EFL students' emotional intelligence and foreign language anxiety. *The Modern Language Journal*, 97(4), 917–929. <https://doi.org/10.1111/j.1540-4781.2013.12042.x>
- Shao, K., Pekrun, R., Marsh, H. W., & Loderer, K. (2020). Control-value appraisals, achievement emotions, and foreign language performance: A latent interaction analysis. *Learning and Instruction*, 69, Article 101356. <https://doi.org/10.1016/j.learninstruc.2020.101356>
- Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement: A meta-analysis. *Studies in Second Language Acquisition*, 41(2), 363–387. <https://doi.org/10.1017/S0272263118000311>
- Tze, V. M. C., Daniels, L. M., & Klassen, R. M. (2016). Evaluating the relationship between boredom and academic outcomes: A meta-analysis. *Educational Psychology Review*, 28(1), 119–144. <https://doi.org/10.1007/s10648-015-9301-y>
- Wu, Y., & Kang, X. (2023). The relationship between academic boredom and EFL achievement: Examining the mediating role of behavioral engagement. *Journal of Language Teaching*, 3(2), 1–10. <https://doi.org/10.54475/jlt.2023.002>
- Yeşilçınar, S., & Erdemir, N. (2023). Are enjoyment and anxiety specific to culture? An investigation into the sources of Turkish EFL learners' foreign language enjoyment and anxiety. *Innovation in Language Learning and Teaching*, 17(2), 453–468. <https://doi.org/10.1080/17501229.2022.2063295>
- Zhao, X., & Wang, D. (2023). The role of enjoyment and boredom in shaping English language achievement among ethnic minority learners. *Journal of Multilingual and Multicultural Development*, 1–13. <https://doi.org/10.1080/01434632.2023.2194872>

Appendix 1: Foreign Language Classroom Anxiety Scale (FLCA) (Horwitz et al., 1986)

1. I never feel quite sure of myself when I am speaking in my foreign language class.
2. I don't worry about making mistakes in language class.
3. I tremble when I know that I'm going to be called on in language class.
4. It frightens me when I don't understand what the teacher is saying in the foreign language.
5. It wouldn't bother me at all to take more foreign language classes.
6. During language class, I find myself thinking about things that have nothing to do with the course.
7. I keep thinking that the other students are better at languages than I am.
8. I am usually at ease during tests in my language class.
9. I start to panic when I have to speak without preparation in language class.
10. I worry about the consequences of failing my foreign language class.
11. I don't understand why some people get so upset over foreign language classes.
12. In language class, I can get so nervous I forget things I know.
13. It embarrasses me to volunteer answers in my language class.
14. I would not be nervous speaking the foreign language with native speakers.
15. I get upset when I don't understand what the teacher is correcting.
16. Even if I am well prepared for language class, I feel anxious about it.
17. I often feel like not going to my language class.
18. I feel confident when I speak in foreign language class.
19. I am afraid that my language teacher is ready to correct every mistake I make.
20. I can feel my heart pounding when I'm going to be called on in language class.
21. The more I study for a language test, the more confused I get.
22. I don't feel pressure to prepare very well for language class.
23. I always feel that the other students speak the foreign language better than I do.
24. I feel very self-conscious about speaking the foreign language in front of other students.
25. Language class moves so quickly I worry about getting left behind.
26. I feel more tense and nervous in my language class than in my other classes.
27. I get nervous and confused when I am speaking in my language class.
28. When I'm on my way to language class, I feel very sure and relaxed.
29. I get nervous when I don't understand every word the language teacher says.
30. I feel overwhelmed by the number of rules you have to learn to speak a foreign language.
31. I am afraid that the other students will laugh at me when I speak the foreign language.
32. I would probably feel comfortable around native speakers of the foreign language.
33. I get nervous when the language teacher asks questions which I haven't prepared in advance.

Appendix 2: Foreign Language Boredom Scale (Li et al., 2023)

The English class bores me.

1. I start yawning in English class because I'm so bored.
2. My mind begins to wander in the English class.
3. I am only physically in the classroom, while my mind is wandering outside the English class.
4. It is difficult for me to concentrate in the English class.
5. Time is dragging on in English class.
6. I get restless and can't wait for the English class to end.
7. I always think about what else I might be doing to kill the time rather than sitting in this English class.
8. I believe an analysis of long text in English is really dreary.
9. It is really boring to repeat the (English) text after the modeling audio.
10. So many similar types of (English) exercises make me lose interest.
11. So much practice on a same (English-related) subject matter makes me restless.
12. The (English-related) exercise or a subject matter lasts too long, and I feel bored.
13. It would have been more interesting if other multimedia resources were utilized in class rather than PPT slides loaded with text.
14. PPT slides filled up with solely script but without interactions make me bored.
15. Reading from script in the PPT slides bores me.
16. Just thinking of my English homework makes me feel bored.
17. I get bored with too much English homework.
18. English homework is over-challenging and I don't want to do it.
19. Doing homework is a dull activity.
20. I am not interested in English class, because the English teacher isn't likable (e.g., tone, pitch or facial appearance).
21. The English teacher is uninteresting, so the English class is dull.
22. I really dislike the English teacher spending so much time making personal comments.
23. I feel agitated because the English teacher spends too much time saying things that are irrelevant to the teaching material.
24. I'm always bored when I study.
25. I'm somebody who is not interested in study.
26. Not only learning English, studying is dull in general.
27. Other subjects are similarly boring and dull like English.
28. I'm forced to learn all the subjects, including English.
29. I don't care about teaching and learning activities that the English teacher does not value.
30. When the English teacher seems unmotivated to teach, I lose my motivation to listen to him/her as well.
31. If I cannot understand classmates' presentations, I become really bored.