Exploring the Relationships between EFL Learners' Foreign Language Classroom Boredom, Foreign Language Classroom Learning Engagement and Learning Achievement

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Abstract

The impact of emotions on the learning process and learning achievements has gained increasing attention in recent years, with particular emphasis on the significance of boredom. Boredom detrimentally influences learners' cognitive resources, hampers their level of engagement, and consequently restricts academic achievement. The current study explores the relationships between these factors using self-reported scales. The results indicate a significant negative correlation between boredom and engagement and a significant moderate negative correlation between boredom and English learning achievement. A significantly high positive correlation was found between engagement and English learning achievement. And these two factors were demonstrated to be significant predictors of English learning achievement. The findings broadened the nomological network of boredom, engagement, and learning achievement in the EFL context and provided insights to mitigate learners' boredom and enhance their engagement and learning achievement.

Keywords: foreign language classroom boredom, foreign language classroom learning engagement, English learning achievement, foreign language teaching and learning

1. Introduction

Emotions do not exist in a "vacuum" but rather interact with a wide range of individual variables to affect language access and development (Li, 2021). Boredom may reduce learners' learning engagement and cause their withdrawal or avoidance behaviors in foreign language (FL) classes (Xie, 2021). Studies have revealed that boredom can negatively affect learners in various aspects, including their thoughts, cognitive resources, and learning behaviors (Pekrun et al., 2010; Kruk, 2019; Li & Han, 2022). Learning engagement, a pivotal component of meaningful learning for learners, reflects the degree of student involvement in classroom activities (Hiver et al., 2021). It serves as both an "outcome" of individual factors like emotions and a "bridge" connecting teaching and learning (Oga-Baldwin, 2019), exerting a significant influence on learning achievement.

In 2019, researchers in China began investigating the influence of boredom on language learning in classrooms (Li & Lu, 2022). Yet, previous studies have primarily concentrated on the factors that lead to boredom in FL learning, rather than examining how boredom affects learners' engagement and achievement (Li & Lu, 2022). The primary objective of foreign language instruction is to facilitate learners in attaining proficiency in foreign languages (Li et al., 2021). Therefore, a pressing concern is to investigate the impact of boredom on FL learning achievement.

To gain deeper insights into the relationships between foreign language classroom boredom (FLCB), foreign language classroom learning engagement (FLCLE), and English learning achievement (ELA), this study utilized the "Foreign Language Classroom Boredom Scale" (Li et al., 2021) and the "Foreign Language Classroom Learning Engagement Scale" (Ren, 2021) to examine the overall patterns of FLCB and FLCLE, their relationships, and their predictive effects on ELA among Chinese EFL learners.

2. Literature Review

2.1 The Control-value Theory, Foreign Language Classroom Boredom and Foreign Language Classroom Learning Engagement

Achievement emotions refer to different emotional experiences around learning activities (e.g., learning materials and tasks) or learning outcomes (e.g., success and failure), including anxiety, pride, pleasure, and boredom, etc. (Pekrun, 2006; Pekrun et al., 2010). The Control-Value Theory (CVT) proposed by Pekrun (2000) constructs achievement emotions in three dimensions, namely, object focus, valence, and activation. Object focus classifies emotions into two categories: activity-related emotions that arise during learning activities (e.g., boredom) and outcome-related emotions that arise from uncontrollability or uncertainty about the outcome of learning (e.g., anxiety). Valence means the positive or negative nature of the emotion, i.e., positive or negative emotion. Activation refers to the degree of physiological activation or deactivation, e.g., high arousal emotions (e.g., enjoyment) and low arousal emotions (e.g., boredom). Moreover, CVT points to an interactive relationship between boredom and learning achievement: boredom could undermine learners' achievements by exerting a deleterious effect on learning resources (e.g., cognition, motivation, and engagement) (Pekrun et al., 2014).

Boredom, unobtrusive and unnoticeable, is a pervasive silent emotion in the classroom that can be easily ignored by teachers (Pwalak et al., 2020; Li, 2022). Foreign language boredom is an unpleasant psychological and complex emotional state that includes disengagement, inattention, disinterest, mental lethargy, an absence of meaning and purpose, and a distorted perception of time (Kruk, 2016). Li (2021), the first Chinese scholar to focus on FL classroom boredom, conceptualized foreign language learning boredom (FLLB) as a negative, low-arousal activity-related academic emotion through the three-dimensional taxonomy of CVT (object focus, valence, and activation). It is characterized by low arousal and cognitive stimulation arising from ongoing activities and has exhibited both the characteristics of general academic boredom and the domain-specificity and context-dependent nature of boredom in FL learning.

The intricate and multifaceted nature of FLLB has motivated L2 scholars to tap into its structure, underlying factors, and measurements, resulting in varied findings. Pawlak et al. (2020) identified two factors of FL boredom and developed the Boredom in Practical English Language Classes Questionnaire (BPELC), including (F1) disengagement, monotony, and repetition, and (F2) lack of satisfaction and challenge. In the Chinese English learning context, the well-tested psychometric Foreign Language Learning Boredom Scale (FLLBS) was developed and validated by Li et al. (2020, p. 15) among 2223 Chinese non-English majors. The FLLBS included seven factors (also called seven sub-scales): a) Foreign Language Class Boredom (FLCB); b) Under-challenging Task Boredom (UCTB); c) PowerPoint Presentation Boredom (PPPB); d) Over-challenging or Meaningless Task Boredom (OCMTB); e) Homework Boredom (HB); f) Teacher-dislike Boredom (TB); and g) General Learning Trait Boredom (GLTB). The reliability and validity of the FLLBS and its sub-scales have been confirmed in subsequent studies (Li, 2022; Li & Dewaele, 2020; Li & Han, 2022; Li & Wei, 2022).

Learning engagement, also known as learning participation or involvement, refers to learners' actual state and performance in the execution of learning activities (Hiver et al., 2020). It serves as a vital indicator for assessing the caliber of learners' education and represents a fundamental element that impacts their learning achievements (Oga-Baldwin, 2019; Xu & Fan, 2019). Svalberg (2009) proposed the assessment of learning engagement across three dimensions: cognitive, social, and affective. Ellis (2010) employed the term 'engagement' to describe the way learners react to corrective feedback, e.g., learners exhibit higher levels of engagement in learning activities when teachers provide timely and appropriate feedback during classroom interactions. According to Philp and Duchesne (2016), learning engagement in the context of task-based language learning is a state characterized by increased attention and involvement. This state encompasses not only behavioral, affective, and cognitive dimensions but also social dimensions, such as listening to each other during peer interaction, providing feedback to each other. Hiver et al. (2020) suggested that FLCLE (foreign language classroom learning engagement) can be seen through two factors: learners' active involvement in the learning activity and learners' goal-oriented mental action. In the context of Chinese English learning, researchers have conducted research on FLCLE from two aspects: conceptualization and scale development. Guo and Liu (2016) provided a precise definition of FLCLE by thoroughly examining relevant studies in educational psychology. They identified that FLCLE refers to the degree of effort made by FL learners throughout the entire learning process, encompassing three dimensions: behavioral, cognitive, and emotional. Additionally, they suggested that FLCLE can be further categorized into three dimensions according to the targets of engagement: engagement in foreign language expertise, engagement in foreign language skills, and engagement in other related foreign language knowledge. Guo and Li (2018) incorporated the concept of "foreign language agentic engagement" into their three-dimensional model. This dimension specifically pertains to learners' proactive involvement in the learning

process. Ren (2021) defined FLCLE as the behavioral, cognitive, and affective states of learners when participating in learning activities, accompanied by sustained concentration, focused attention, and positive affective experiences. FLCLE is a complex and challenging topic based on the study of learners' cognitive, behavioral, and affective aspects throughout classroom learning activities. To capture these features, Ren (2021) developed the "Foreign Language Classroom Learning Engagement Scale" (FLCLES), consisting of three dimensions—behavioral engagement, cognitive engagement, and affective engagement—to explore learning engagement in university-level English classrooms. In another study, data gleaned from 1263 Chinese EFL learners demonstrated the high internal reliability and structural validity of FLCLES and provided evidence that FLCLE could help learners' effective learning (Ren, 2022).

2.2 The Interaction between FLCB, FLCLE, and ELA

It has been discussed that both FLCB and FLCLE influence foreign language learning, yet the interrelationship between these factors is under-investigated. Chapman (2013) conducted an inquiry into the phenomenon of boredom among American students in German classrooms and discovered that FLCB manifested itself in behavioral aspects (e.g., dozing, playing with cell phones, or checking the time from time to time) and in cognitive aspects (e.g., non-engagement and inattention). Li et al. (2021) found that FLCB can negatively affect learners' behavior, cognition, and psychology. In terms of behavior, learners often exhibit withdrawal or avoidance behaviors due to a loss of sense of purpose; in terms of cognition, it leads to a state of disengagement and distraction; in terms of psychology, it evokes negative emotions such as restlessness, impatience, sadness, helplessness, and fatigue. CVT states that these negative effects of boredom can further hinder the learning process and lead to learners' poorer academic performance. Li and Han (2022) utilized the Foreign Language Class Boredom Scale (FLCBS) with 348 non-English freshmen and reported the predictive role of boredom in college English online classes on learning achievement during the COVID-19 pandemic. FLCB was reported to negatively predict online English learning achievement with a moderate effect size. Dewaele et al. (2021) used the FLCBS to examine the classroom boredom of 332 foreign language learners from different countries and found that the effect of the FLCB on ELA was not statistically significant. Li et al. (2022) suggested that this finding might be attributed to the stronger relationship between ELA and outcome-related emotions, such as anxiety. In contrast to this finding, Li and Wei (2022) used the Foreign Language Learning Boredom Scale (FLLBS) with 954 seventh-grade learners and found a dynamic negative relationship between FLCB and ELA. Similarly, Li et al. (2022) found a significant negative predictive effect of FLCB on ELA among 665 rural elementary school learners in both samples when compared with the sample of urban elementary school learners. These studies suggest that boredom has an intricate relationship with foreign language learning.

Studies exploring the relationships between FLCLE and ELA have yielded mixed findings. Eren et al. (2020) collected data from 526 Turkish EFL university learners and found that agentic engagement significantly predicted ELA, while behavioral engagement, cognitive engagement, and emotional engagement did not exhibit significance. Conversely, Lou et al. (2022) identified a positive relationship between FLCLE and ELA among 234 first-year undergraduates in Western Canada. In the Chinese English learning setting, Guo (2018) employed data from 315 undergraduates from three universities in a Chinese province and discovered that affective engagement had a positive predictive effect on ELA. Liu and Guo (2018) examined the impact mechanism of FLCLE on ELA in an English-flipped classroom setting among 202 non-English majors. The results indicated that behavioral engagement in foreign language learning directly and positively predicted ELA, while affective engagement indirectly influenced ELA, mediated by behavioral engagement. In addition, Guo et al. (2022) investigated the effects of FLCLE on ELA among 1929 EFL learners across China. The findings showed that only cognitive engagement significantly and positively predicted learners' ELA. These findings indicate that different dimensions of FLCLE have varying degrees of impact and predictive power on ELA. Thus, the predictive effect of FLCLE on ELA needs further exploration.

Although previous studies have unanimously emphasized an emotional component in engagement, few to date have targeted the link between emotions and engagement (Dewaele & Li, 2021). In foreign language teaching and learning, a relatively small body of research concentrates on the relationship between FLCB and FLCLE among secondary or tertiary students. For instance, Dewaele and Li (2021) found a significant negative relationship between boredom and learning engagement among 2002 non-English major undergraduates in an offline teaching context. This negative correlation was also confirmed in the Wang et al. (2023) study, which examined the relationship between FLCB and FLCLE of 907 Chinese tertiary EFL learners. Wu and Kang (2023) found a negative relationship between academic boredom and behavioral engagement among 235 Chinese secondary EFL learners.

Taken together, there is a strong relationship between foreign language classroom boredom, foreign language

classroom learning engagement, and English learning achievement, but their interrelationship has not been investigated in depth, and more empirical studies are needed to provide more evidence to analyze the correlation among them. To this end, this study intends to examine the relationships between foreign language classroom boredom (FLCB), foreign language classroom learning engagement (FLCLE), and English learning achievement (ELA) among English major sophomores at a university located in northwest China. The research questions were as follows:

RQ1: What are the overall patterns of foreign language classroom boredom, foreign language classroom learning engagement, and English learning achievement among EFL learners?

RQ2: Is there a correlation between foreign language classroom boredom, foreign language classroom learning engagement, and English learning achievement?

RQ3: To what extent do foreign language classroom boredom and foreign language classroom learning engagement predict English learning achievement?

3. Method

3.1 Participants and Context

This study used convenience sampling. Two classes of English sophomores (N = 53) from a university based in northwest China participated in the study. Participants were first informed that their responses to the questionnaire would not interfere with their course scores. Since this study was correlational research, all participants were required to provide their names for later matching with academic achievement data. Invalid instruments were removed from the data, resulting in 48 samples. There were 6 males and 42 females, with a mean age of 19.96 years (SD = .68). At the time of sampling, all students in both classes were enrolled in the English Extensive Reading course taught by the same course instructor.

3.2 Instruments

FLCBS (Li et al., 2021) and FLCLES (Ren, 2021) are designed and validated for Chinese teaching setting. Participants completed FLCBS followed by FLCLES. These questionnaires were in Chinese with a 5-point Likert scale. A pilot study was implemented to examine the clarity of the wording and the approximate time needed for the completion of the questionnaire.

The FLCBS contains 8 items, and its reliability (Cronbach's alpha) in this study was proven to be satisfactory (Cronbach's alpha = .927). The FLCLES, with a total of 35 items, comprised three dimensions (behavioral engagement, emotional engagement, and cognitive engagement). In this study, it showed favorable reliability (Cronbach's alpha = .947).

The participants' English learning achievement was measured by their exam scores in the extensive English reading course. The exam was composed of reading comprehension and a short essay writing. The total score was 100, with reading comprehension accounting for 70% and writing for 30%. With the participants' consent, the exam scores were provided by their teacher.

3.3 Data Collection and Analysis

Participants were provided with the nature, purpose, and estimated time of this study and were informed of the confidentiality of their responses and personal data used for only academic research purposes and in line with ethical norms. After their informed consent was obtained, the author distributed the questionnaires and collected them after they were finished.

The results were submitted to SPSS 26.0 for analysis. To address RQ 1, descriptive statistical analysis and tests for normal distribution were conducted. RQ 2 was examined through Pearson correlation analysis to determine the relationships among the variables. For RQ 3, both simple linear regression analysis and multiple regression analysis were employed to assess the independently and jointly predictive effects of FLCB and FLCLE on English learning achievement.

4. Results

This section presents the findings of the research analysis. Table 1 displays the overall patterns of FLCB, FLCLE, and English learning achievement among English major sophomores. Table 2 reports the correlation among these three variables, and Tables 3, 4, and 5 report the predictive effects of FLCB and FLCLE on English learning achievement, respectively, as well as their jointly predictive effects.

Table 1. Descriptive Statistics of FLCB, FLCLE and ELA (N = 48)

Variable	M	SD
FLCLE	3.79	.47
FLCB	2.51	.69
ELA	81.63	5.28

Note: FLCLE: foreign language classroom learning engagement; FLCB: foreign language classroom boredom; ELA: English learning achievement

Table 1 displays the mean and standard deviation of foreign language classroom boredom, foreign language classroom learning engagement, and English learning engagement. As shown in Table 1, participants exhibited a high and low-to-moderate level of FLCLE and FLCB, respectively (FLCLE: M = 3.79, SD = .47; FLCB: M = 2.51, SD = .69).

Table 2. Correlations of FLCB, FLCLE and ELA (N = 48)

	FLCB	FLCLE	ELA
FLCB	1		
FLCLE	-.321*	1	
ELA	-.531**	.705**	1

Note: FLCLE: foreign language classroom learning engagement; FLCB: foreign language classroom boredom; ELA: English learning achievement; *. p<.05. **. p<.01.

As shown in Table 2, both FLCB and FLCLE showed a significant correlation with English learning achievement. According to the criteria proposed in the field of applied linguistics (Plonsky & Oswald, 2014), FLCB showed a significantly negative correlation with FLCLE and ELA, with a small-to-medium effect size (r = -.321, p < .05) and a moderate-to-large effect size (r = -.531, p < .01), respectively, whereas FLCLE turned out to have a large and positive relationship with ELA (r = .705, p < .01).

Table 3. The independently predictive effect of FLCB on ELA (N = 48)

Regression Equations		Fit Index			Coefficient			95% CI for B	
Predictor	Outcome	R	R^2	F	β	B	t	Lower	Upper
FLCB	ELA	.531	.282	18.074***	-.531	-4.046	-4.251**	-5.911	-2.181

Note: FLCB: foreign language classroom boredom; ELA: English learning achievement *** p < .001

The linear regression analyses (enter method) conducted in this study satisfied the assumptions of a normal distribution of errors and the absence of correlation between errors and predictor variables.

As seen in Table 3, FLCB was entered into the same model as predictors of the dependent variable of ELA. It can be observed that the unstandardized regression coefficient for FLCB is -4.046 (*t* = -4.251, *p* < .001), indicating a significant negative effect of FLCB on ELA. The analysis of variance (ANOVA) findings indicated that the regression equation exhibited a statistically significant level of predictive ability (*F* (1,46) = 18.074, *p* < .001). The 95% confidence interval of the predictive effect not straddling zero also suggested that the path was indeed significant. The model equation is expressed as follows: ELA = 91.761-4.046*FLCB. The R-squared value indicated that FLCB can predict 28.2% of the variance in ELA.

Table 4. The independently predictive effect of FLCLE on ELA (N = 48)

Regression Equations		Fit Index			Coefficient			95% CI for B	
Predictor	Outcome	R	R^2	F	β	B	t	Lower	Upper
FLCLE	ELA	.705	.497	45.404***	.705	7.902	6.738**	5.603	10.200

Note: FLCLE: foreign language classroom learning engagement; ELA: English learning achievement ***p < .001

According to Table 4, FLCLE was entered into the same model as a predictor of the dependent variable of ELA. The unstandardized regression coefficient value for FLCLE was 7.902 (t = 6.738, p < .001), indicating a significant positive effect of FLCLE on ELA. The analysis of ANOVA results revealed that the model demonstrates significant predictive power based on the F-test (F (1, 46) = 45.404, p < .001). Moreover, the 95% confidence interval of the predictive effect not straddling zero also provided further evidence for the reliability of the significant path obtained. The model equation can be expressed as follows: ELA = 51.712 + 7.902*FLCLE. The R-squared value indicated that 49.7% of the variances in ELA were explained by the model.

Table 5. The jointly predictive effects of FLCB and FLCLE on ELA (N = 48)

Regression Equations		Fit Index			Coefficient			95% CI for B	
Predictor	Outcome	R	R^2	F	β	B	t	Lower	Upper
FLCB	ELA	.775	.600	33.790***	-.340	-2.588	-3.414**	-4.074	-1.103
FLCLE					.596	7.902	5.985**	4.491	8.865

Note: FLCB: foreign language classroom boredom; FLCLE: foreign language classroom learning engagement; ELA: English learning achievement *** p < .001

As can be seen from Table 5, the unstandardized regression coefficients of FLCB and FLCLE as predictors and ELA as dependent variable were -2.588 (t = -3.414, p < .001) and 6.678 (t = 5.985, p < .001), respectively. It indicates that FLCB can have a significant negative effect on ELA, and FLCLE can have a significant positive effect on ELA. The results of the ANOVA indicated that the predictive power of the regression equation was significant (F (2,45) = 33.790, p < .001). In addition, the 95% confidence interval of the predictive effect not straddling zero also demonstrated a significant path. The model equation was ELA = 62.829-2.588*FLCB + 6.678*FLCLE. And the R-squared value of the model showed that FLCB and FLCLE could co-predict 60.0% of the variance in ELA.

5. Discussion

This study investigated the interrelationships between foreign language classroom boredom, foreign language classroom learning engagement, and English learning achievement among EFL learners.

As for RQ 1, the findings revealed that FLCB was reported at a low to moderate level, which supports the findings from Li and Dewaele (2020). It indicates that learners experienced boredom in the classroom, providing evidence for the notion that boredom is experienced across various academic stages, as proposed by Pawlak et al. (2020). However, the result was inconsistent with Pawlak et al. (2020) in the class component, which has been found to be a boredom-evoking factor in previous studies (Pawlak et al., 2020; Zawodniak et al., 2021; Pawlak et al., 2022). For example, students are more inclined to be bored in repetitive, monotonous grammar classes than in listening classes with a variety of topics and tasks. The current study was conducted in an extensive reading course, while the participants in Pawlak et al.'s study were conducted in an intensive practical English language course filled mostly with receptive and productive language skills, such as grammar, pronunciation, and writing. Various courses, including diverse instructional practices (e.g., activity, task, and class management), may lead to different levels of boredom.

In terms of FLCLE, the current study found that learners exhibited a high level of FLCLE, which conforms to the previous findings with Chinese EFL learners (Dewaele & Li, 2021; Guo, 2021) but contradicts the findings of the study with 287 Iranian English majors (Derakhshan et al., 2022). A potential explanation for this difference may relate to the complexity of tasks, as it was pointed out that learning engagement is task-dependent (nature, complexity, familiarity, and purpose) (Aubrey et al., 2022). The tasks performed in foundation English courses by English majors may be relatively uncomplicated, while some English majors may not fully master relevant skills and the necessary expertise to accomplish the relatively difficult tasks in advanced courses. If this situation lasts in the long run, they will lose interest in learning and have poor initiative and lower engagement.

Regarding RQ 2, this study found a significant correlation between FLCB, FLCLE, and ELA. First, there was a significant low negative correlation between FLCB and FLCLE. In other words, bored learners tend to be less engaged in the ongoing activity or task. Such a tendency is in line with the earlier findings with EFL learners, which have suggested a close negative relationship between the two constructs (Dewaele & Li, 2021; Derakhshan et al., 2022; Zhao & Yang, 2022; Wang et al., 2023; Wu & Kang, 2023). Second, FLCB showed a significant, moderately negative correlation with ELA, i.e., learners with lower levels of boredom in the foreign language classroom were more likely to achieve higher grades, and vice versa. This finding is in line with that of

Pekrun et al. (2014); however, it differs from the findings of Li and Han (2022). This might be caused by different teaching modes; this study focused on boredom in offline classrooms, where factors such as classroom interaction, teachers' feedback, and learning resources are different from those in online classrooms, thus the level of FLCB experienced by learners is also different. The findings also verify the claims of CVT that negative achievement emotions (e.g., boredom) have an adverse relationship with the learning process (e.g., learners' cognitive resources, learning engagement) and academic achievement.

Regarding the relationship between FLCLE and ELA, a strong positive correlation was identified. Learners who exhibit higher levels of concentration, attention, and proactivity and employ self-management strategies more frequently are more likely to achieve better achievement. This finding aligns with the conclusions drawn by previous studies (Lou & Noels, 2022; Liu & Guo, 2018; Wang et al., 2023), which indicates that enhancing learners' level of FLCLE is an effective way to improve their academic performance.

Concerning RQ 3, the regression analysis was conducted and reported significant correlations among FLCB, FLCLE, and ELA. Firstly, FLCB exhibited a significant negative predictive effect on ELA, which corroborates the findings of Li and Han (2022) as well as Li et al. (2022). It shows that FLCB has a negative impact on ELA that is consistent across educational environments (online and traditional teaching modes) and educational levels (primary and higher education), which supports the generalizability of the association between academic emotions and learning achievement put forth by the control-value theory. Secondly, the result that FLCLE significantly predicted 49.7% of the variance in ELA aligns with the research conducted by Liu and Guo (2018), who highlighted that learners with higher levels of FLCLE maintain heightened focus and attention, actively seek learning opportunities, and promptly manage any negative emotions arising during classroom learning and thus achieve better academic achievement. Finally, similar to Wang et al.'s (2023) conclusion, FLCB and FLCLE can co-predict 60% of the variance in ELA when they are compounded. Given that English learning achievement is influenced by various factors such as learners' emotional intelligence (e.g., Li & Dewaele, 2020), learning grit (e.g., Khajavy, 2021), as well as teacher-related factors like care and instructional methods, it's important to acknowledge that this study solely focuses on foreign language classroom boredom and foreign language classroom learning engagement as predictors, thus providing only a partial explanation of English learning achievement.

6. Conclusion

The study examined the relationship between foreign language classroom boredom, foreign language classroom learning engagement, and English learning achievement among 48 English majors and found that both foreign language classroom boredom and learning engagement were significantly related to English learning achievement. Specifically, foreign language classroom boredom negatively predicted English learning achievement, while foreign language classroom learning engagement positively predicted English learning achievement. However, due to the small sample size of this study, the findings can partially validate the control-value theory: negative emotions had a pernicious relationship with learners' learning engagement and their academic achievement, which provides empirical support for the control-value theory in the context of foreign language learning.

The research findings have important implications. First, learners may focus on developing the ability to self-regulate their emotions and improve their emotional experiences in the foreign language learning process because individual emotions are diverse and intricate. Secondly, learners might promptly adjust any negative emotions encountered during classroom learning, recognize their strengths in the learning process, and find positive values to transform them into positive emotional experiences to improve their academic well-being. Finally, teachers might place more emphasis on individual differences in learners' emotions while attending to their academic achievement and make efforts to adjust teaching behaviors in the classroom and create a positive learning atmosphere to enhance learners' engagement and thus contribute to their academic achievement. For example, teachers could design appropriately difficult English tasks that target learners' "zone of proximal development" to stimulate their potential and enthusiasm for foreign language learning, motivate them, and increase their learning engagement.

The current study is not without deficiencies. Firstly, all the data were gleaned from the participants' self-reported close-ended scales. Despite their positive role in helping identify the overall trends in large populations, they can be, to some extent, subjective and biased (Short et al., 2009). Future investigations into the two constructs are advised to integrate a macro-perspective with a micro-perspective (e.g., Pawlak et al., 2021) or ecological perspective (e.g., Mercer, 2020; Kruk et al., 2022) to collect more detailed and profound information about the two constructs. Secondly, the sample size is too limited for our study. Future large-sample

studies may be needed. Finally, as complex and obscure constructs, boredom and engagement are difficult to grasp, and thus future longitudinal studies are needed to explore their dynamic interplay.

7. Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

8. Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

9. Declaration of Conflicting Interests

The authors declare no competing interests.

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