

Article

The Paradox of Enjoyment: Unpacking the Relationships Among Enjoyment, Engagement, Burnout, and L2 Achievement Among Left-Behind Students

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Abstract

This study investigates the dual pathways of foreign language enjoyment (FLE) among left-behind children (LBC), a population constituting more than 20% of China's child population and largely under investigated in the second-language learning context; the focus of this study is on the unique and joint contributions of FLE to learning engagement (LE) and learning burnout (LB) in determining academic achievement (AA). Our results confirm that FLE and LE are positively correlated with EFL achievement, while LB shows a significant negative correlation with EFL achievement. However, they also reveal counterintuitive positive correlations between FLE and LB and between LE and LB among LBC—contradicting prior findings from the general population. More importantly, our path analysis reveals a blocked positive association and an opened negative association: while FLE is significantly associated with LE, LE is not significantly linked to achievement; conversely, FLE is positively connected to LB, which is negatively associated with achievement. This “paradox of enjoyment” reveals that FLE acts as a double-edged sword for Chinese LBC, challenging the unidirectional positive view of FLE in second-language learning and demonstrating that positive emotions alone cannot drive sustainable EFL learning success within this vulnerable group. Our findings highlight the unique socioemotional complexities of LBC, underscoring that fostering enjoyment alone might be insufficient without targeted interventions to alleviate burnout and translate engagement into actual success, and offer valuable insights for educators and policy-makers aiming to improve foreign language education among LBC.

Keywords: academic achievement; foreign language enjoyment; learning engagement; learning burnout; left-behind children



Academic Editor: Meihua Liu

Received: 26 May 2026

Revised: 18 July 2026

Accepted: 25 July 2026

Published: 5 August 2026

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1. Introduction

Academic success, defined as the attainment of positive academic performance, is a key pursuit for individual students, families, and even nations, and it represents the ultimate outcome variable of interest in educational research globally. Given the pivotal role of academic achievement (AA), psychologists and educational researchers have identified the exploration of its determining factors as one of the core research priorities in education (Y. Wang et al., 2019). Second language (L2) learning is widely recognized as being a sustained, long-term endeavor (Zou et al., 2025); thus, the achievement of significant

success in foreign language (FL) learning relies on active and deep learning engagement (LE), as high language proficiency necessitates consistent learning and deliberate practice (Mercer & Dornyei, 2020).

LE refers to the intensity of time and energy that learners invest in various learning processes and activities, as well as their committed pursuit of learning objectives (Fredricks et al., 2004; Fredricks & McColskey, 2012; Luan et al., 2025; Reeve, 2012; Reeve & Tseng, 2011). LE is widely acknowledged as a foundational construct for understanding learning behaviors, as students' engagement in learning-related activities is closely associated with varied academic outcomes (Cong et al., 2024; Derakhshan & Azari Noughabi, 2024; Derakhshan & Yin, 2024; Fredricks, 2011; C. Li et al., 2023; Shi et al., 2022; Zou et al., 2025). Learners experience a wide range of emotions in academic settings, and these emotions profoundly influence academic outcomes, psychological well-being, and personal development (Pekrun, 2006; Pekrun et al., 2009; Pekrun & Linnenbrink-Garcia, 2012; Tan et al., 2021; Xie et al., 2025). In particular, with the rise and proliferation of positive psychology (PP) in educational research, positive emotional experiences during learning—such as enjoyment—have garnered increasing attention in FL learning in recent years. It is generally hypothesized that positive and negative emotions are inherently distinct and function differently in L2 teaching and learning (Dewaele & MacIntyre, 2016; C. Li et al., 2021). Current scholarly consensus holds that positive and negative emotions must be investigated together to gain a more comprehensive understanding of their underlying mechanisms (e.g., Derakhshan et al., 2022; Derakhshan & Yin, 2024; Dewaele & Li, 2021; Dewaele & MacIntyre, 2014, 2016). In fact, there has been growing research interest in examining positive and negative emotions in combination to provide a holistic understanding of their roles and potential effects on learners' academic development and performance (Y. Wang et al., 2021).

While burnout is not inherently an emotion (Maslach & Pines, 1977), this negative maladaptive state encompasses core emotional attributes—such as emotional exhaustion—and an increasing number of researchers have conceptualized learning burnout (LB) as a negative affective construct in educational research (Y. Wang et al., 2024; Zhou & Wang, 2024). Students are particularly vulnerable to academic burnout (H. Wu et al., 2025). Owing to its high prevalence, LB is now recognized as a widespread public health concern affecting students across all educational stages. Consistent with this growing attention, a substantial body of evidence has confirmed that burnout has a significant negative effect on students' learning behaviors and academic performance (Cong et al., 2024; C. Li et al., 2021; Y. Zhang et al., 2007; Zhen et al., 2017; see Madigan & Curran, 2021, for a meta-analysis). EFL learners are particularly prone to burnout, which in turn negatively affects their academic outcomes and psychological well-being (X. Zhang et al., 2024).

Moving beyond the traditional research focus on single negative emotions such as foreign language anxiety, scholars have recently focused increased attention on the unique roles of positive emotions, engagement, and maladaptive states (e.g., burnout) in L2 learning and their complex interactive effects (C. Li et al., 2021; J. Li et al., 2022; Madigan & Curran, 2021; Olivier et al., 2018; Y. Wang et al., 2022; Y. Zhang et al., 2007). Consequently, three constructs have emerged as central to understanding L2 learners' psychological experiences and academic success: FLE, LE, and LB.

Understanding how these psychological constructs interrelate and collectively shape learning behaviors and academic performance is particularly critical for developing evidence-based pedagogical practices that support students' holistic well-being, development, and long-term academic success.

2. Literature Review

2.1. FLE and L2 Achievement

According to the broaden-and-build theory (BBT), positive emotions such as enjoyment broaden learners' cognitive and behavioral repertoires and increase their psychological resilience and personal resources (Fredrickson, 2004; C. Li et al., 2018), thereby facilitating L2 achievement and language acquisition (Fredrickson, 2004; MacIntyre & Gregersen, 2012; Z. Zhang et al., 2024). In addition, emotions can affect students' motivation to learn, which in turn exerts a tangible influence on their academic outcomes (Xie et al., 2025). Moreover, experiencing positive emotions such as joy is suggested to enable students to derive pleasure from the learning process, which may further foster academic achievement (e.g., Fredrickson, 2004).

Empirical evidence supports such direct or indirect links between positive emotions and academic outcomes. For example, Carmona-Halty et al. (2021) reported that positive emotions influence psychological capital and school engagement, which are in turn related to academic performance. Importantly, in a study adopting cross-sectional, longitudinal, and experimental designs, King et al. (2015) reported that students with higher levels of positive affect demonstrate higher levels of school engagement and lower levels of disaffection. Notably, their experimental results revealed that students who experienced positive affect reported higher levels of perceived engagement than the control group did.

More importantly, a systematic meta-analysis revealed that positive emotions (e.g., enjoyment and pride) are positively correlated with both objective academic achievement and self-perceived achievement (Xie et al., 2025). All these findings from empirical studies and meta-analyses align with the BBT.

FLE refers to the positive emotional experience derived from overcoming challenges and accomplishing tasks in language learning (Dewaele & MacIntyre, 2014, 2016). FLE was first introduced into applied linguistics by Dewaele and MacIntyre (2014) in a foundational study that contrasted FLE with foreign language anxiety (Botes et al., 2022). Since then, research on enjoyment in FL learning has flourished (Z. Zhang et al., 2024). As the most prevalent positive emotion among foreign language learners (Z. Zhang et al., 2024) and an established, widely examined variable in applied linguistics research (Botes et al., 2022), FLE has attracted the most attention among the various positive emotions studied in FL learning.

A growing body of empirical studies and meta-analytic reviews have shown that FLE positively affects EFL learners' academic outcomes across various learning contexts (e.g., in class and online) and grade levels (Dewaele & MacIntyre, 2016; Feng & Hong, 2022; Peng & MacIntyre, 2025; Zhou & Wang, 2024). Specifically, FLE is positively associated with objective L2 achievement (Alqarni, 2024; Botes et al., 2022; C. Li, 2020; Peng & MacIntyre, 2025), self-perceived/self-reported achievement (Botes et al., 2022; Feng & Hong, 2022; C. Li, 2020), and willingness to communicate (WTC) (Botes et al., 2022; Peng & MacIntyre, 2025). These positive associations validate the pedagogical value of FLE in FL learning and further affirm the necessity of examining FLE in foreign language classrooms (Botes et al., 2022).

Notably, the relationship between academic emotions and academic outcomes may be bidirectional or reciprocal rather than unidirectional. For example, in a longitudinal study of 1102 Chinese middle school students applying a cross-lagged network panel model, Yuan et al. (2025) reported that the impact of English achievement on FLE is significantly stronger than the reverse effect. Similarly, in another longitudinal study with high school students as participants, Peng and MacIntyre (2025) reported that achievement at Time 1 significantly affects enjoyment and WTC at Time 2, whereas these two variables do not significantly influence achievement at either Time 2 or Time 3. However, the longitudinal link between enjoyment and WTC is not always robust (Derakhshan & Fathi, 2024).

In addition, the relationship between FLE and academic performance is not always direct: FLE itself may act as a mediator or moderator or be linked to academic outcomes through other mediating or moderating variables. For instance, academic buoyancy—defined as the ability to cope with daily academic setbacks—moderates the relationship between enjoyment and L2 test performance, with EFL test performance being the highest when both enjoyment and buoyancy are high (Zhou & Wang, 2024). These findings suggest that the positive effect of enjoyment on academic achievement is amplified by learners' academic resilience.

2.2. LE and L2 Achievement

LE is proposed as a positive state opposite to burnout (C. Li et al., 2021; Schaufeli et al., 2002; Y. Zhang et al., 2007). LE is generally considered a multidimensional construct, and it has been conceptualized in multiple ways. Fredricks et al. (2004) argued that engagement involves behavioral engagement, emotional engagement, and cognitive engagement.

Unlike Fredricks et al. (2004), Fredricks (2011), Schaufeli et al. (2002) conceptualized engagement as a trichotomous construct encompassing vigor, dedication, and absorption (Schaufeli et al., 2002; X. Zhang et al., 2024). Specifically, vigor is characterized by high levels of mental effort, energy, and mental resilience during learning and persistence in the face of obstacles (Schaufeli et al., 2002; Salmela-Aro & Upadaya, 2014). Dedication refers to a learner's strong involvement in learning and is characterized by a sense of significance, inspiration, and challenge (Schaufeli et al., 2002; X. Zhang et al., 2024). Absorption is regarded as the degree to which an individual is fully concentrated and deeply engaged in learning (Schaufeli et al., 2002; X. Zhang et al., 2024).

LE represents the intensity of time and the investment of energy that a learner devotes to various learning processes and activities and their commitment to the attainment of learning objectives (Fredricks et al., 2004; Fredricks & McColskey, 2012; Reeve & Tseng, 2011). Consequently, LE is critically important in educational settings, and it is a significant determinant of academic achievement in educational evaluations (J. Wu & Zhao, 2023).

In general, compared with disengaged learners, who are more likely to be absent, fail, or drop out of school, engaged students tend to achieve better academic performance and enjoy their learning experiences more (Perkmann et al., 2021; H. Wu et al., 2024). LE has consistently been shown to have a variety of positive effects on learning, even though it is conceptualized differently (X. Zhang et al., 2024). Several studies have demonstrated a positive correlation between LE and achievement-related outcomes (e.g., standardized tests, grades) for elementary, middle, and high school students as well as college students (Fredricks et al., 2004; H. Wang et al., 2023; J. Xu & Feng, 2024).

L2 learning is a long-term and continuous process that involves various learning challenges and thus requires learners to maintain high levels of learning engagement to achieve desirable academic achievement (J. Xu & Feng, 2024). In this sense, LE is especially important for L2 learning, as achieving high language proficiency requires continuous learning and practice (Fan et al., 2024; Mercer & Dornyei, 2020). Despite its great popularity in the educational field, there remains a paucity of research on school engagement in second language acquisition (SLA) (H. Wang et al., 2023), especially its links with L2 achievement. In other words, how LE functions in SLA and influences EFL achievement remains relatively underexplored (Feng & Hong, 2022).

In general, empirical studies have shown that LE positively affects EFL learners' performance across various contexts and grade levels (Feng & Hong, 2022; H. Wang et al., 2023; J. Xu & Feng, 2024). However, J. Xu and Feng (2024) explored the unique and joint contributions of mindset, resilience, and engagement to L2 achievement among Chinese college students learning English and reported that none of the individual factors

determine the level of L2 achievement unless they are configured to function together. These findings remind us that in addition to single constructs, the complex interactions and joint contributions of multiple focus variables in determining academic performance need to be examined.

Like FLE, LE does not always directly predict academic outcomes, and it often serves as a mediator or an outcome of other psychological factors (Cong et al., 2024; Feng & Hong, 2022; H. Wang et al., 2023). For example, H. Wang et al. (2023) conducted a study with 907 Chinese university EFL learners to explore the relationships among three academic emotions (FLE, foreign language classroom anxiety, and foreign language boredom), L2 engagement, and English achievement. The results showed that L2 engagement mediated the relationships between all three emotions and English achievement. Their findings highlight the key role of engagement in connecting EFL learners' emotions to their academic performance. Feng and Hong (2022) employed senior high school students as participants and reported similar findings. Notably, they reported that the mediating effect of engagement depends on specific emotions and is stronger in the relationship between foreign language classroom anxiety and achievement.

2.3. LB and L2 Achievement

The concept of "burnout" initially originated from industrial and organizational psychology, where it was used to describe physical and emotional symptoms of exhaustion and depletion among social service workers (H. Wu et al., 2025). Parallels between school and professional environments have prompted researchers to investigate student burnout (Salmela-Aro et al., 2008). As a distinctly vulnerable population, students appear to be particularly susceptible to burnout (H. Wu et al., 2025), and the construct has thus been extended to the academic realm, where it has garnered increased attention in educational research (Sukamto et al., 2026).

Burnout is widely considered the opposite of engagement (Q. Hu et al., 2024). As a multidimensional construct, LB is conceptualized as comprising emotional exhaustion, cynicism, and academic inefficacy (Liu et al., 2020; Schaufeli et al., 2002; X. Zhang et al., 2024). Emotional exhaustion refers to the mental fatigue students experience in academic settings due to persistent academic stress (J. Y. Zhang et al., 2021). Cynicism denotes a negative, pessimistic, and skeptical attitude toward learning and school-related activities (Ma, 2024). Academic inefficacy reflects a sense of incompetence and inadequacy regarding one's academic capabilities (Emerson et al., 2022; Ma, 2024).

Most studies generally document a negative relationship between burnout and academic performance; however, this association is not consistent across different student samples. For example, Madigan and Curran (2021) conducted the first meta-analysis on the link between academic burnout and academic achievement, which encompassed more than 100,000 student participants. Their findings confirmed a significant small-to-medium negative correlation between total burnout and academic achievement ($r = -0.24$); all three burnout dimensions exhibited negative associations with achievement, with academic inefficacy ($r = -0.39$) showing the strongest link, followed by cynicism ($r = -0.24$) and emotional exhaustion ($r = -0.15$). However, in a longitudinal study of Finnish adolescents, M. Wang et al. (2015) failed to identify a significant correlation between burnout and grade point average (GPA) or changes in GPA over time.

L2 learners are particularly prone to burnout, as language learning involves not only overcoming linguistic barriers and academic stress but also navigating cultural complexities (H. Wu et al., 2024, 2025). As an intense negative psychological state, LB is believed to have detrimental effects on L2 learning outcomes, including reduced academic self-

efficacy, diminished learning engagement, poorer classroom performance, and lower overall academic success (Cong et al., 2024; L. Hu & Wang, 2023; Ma, 2024; H. Wu et al., 2025).

L2 learning burnout is characterized by prolonged emotional exhaustion from language learning, a detached and negative attitude toward L2 learning, and feelings of inadequacy regarding linguistic competence. A growing body of theoretical and empirical research has documented consistent negative associations between LB and FL learning outcomes among secondary school students (Fan et al., 2024), as well as among college and adult learners (Cong et al., 2024; Zhou & Wang, 2024); these findings are supported by recent empirical studies and meta-analytic reviews.

For example, Liu et al. (2024) examined the impact of burnout on L2 academic achievement and the mediating role of English learning resilience in this relationship among 334 Chinese senior high school EFL learners. They reported that burnout directly negatively affects both academic achievement and English learning resilience, whereas resilience positively predicts achievement and mediates the relationship between burnout and achievement. Similarly, using latent moderated structural equation modeling, Zhou and Wang (2024) confirmed that burnout directly and negatively predicts EFL test performance among college EFL students.

Like with FLE and LE, the relationship between burnout and L2 performance is not always direct. For instance, academic resilience has been shown to mediate the link between English learning burnout and academic achievement (Liu et al., 2024), indicating that resilient students are better able to limit the negative effects of burnout on their academic performance. Additionally, empirical evidence shows that academic buoyancy moderates the burnout–achievement relationship: EFL achievement is highest when burnout levels are low and academic buoyancy is high (Zhou & Wang, 2024).

2.4. Interaction Among Enjoyment, Engagement, Burnout, and School Outcomes

FLE, LE, and LB do not operate in isolation in the L2 learning process. Instead, the relationships among these three constructs are often reciprocal, and they form an interactive dynamic system that collectively shapes L2 academic achievement. On the one hand, they may directly influence L2 performance; on the other hand, they may act as mediators or moderators linked to L2 academic performance or exert indirect effects on L2 learning outcomes through other mediating or moderating variables.

With respect to the relationships among these three core constructs, existing research generally confirms that FLE has a positive effect on LE (Song, 2024; L. Wang & Wang, 2025; Zou et al., 2025) and a negative influence on LB (Song, 2024). For instance, FLE has been found to significantly predict LE, with academic self-efficacy serving as a significant mediator in the relationship between FLE and LE among college students in AI-assisted English learning contexts (L. Wang & Wang, 2025). Song (2024) further reported that FLE positively influences motivated learning behavior and mitigates LB, whereas LB negatively affects learning motivation. In addition, LE has been shown to mediate the relationship between FLE and self-reported L2 academic achievement (Feng & Hong, 2022).

Dong et al. (2026) reported that, compared with traditional classrooms, AI-assisted instruction significantly enhances both FLE and LE; additionally, FLE plays a key mediating role in the relationship between AI-assisted teaching and LE. To date, only one study has explored the tripartite interrelationships among FLE, LE, and LB in the L2 context. In this research, X. Zhang et al. (2024) reported strong negative associations between LB and both FLE and LE and a significant positive correlation between FLE and LE. Additionally, the study revealed that FLE, rather than LB, significantly predicts L2 LE and, notably, that FLE fully mediates the relationship between LE and LB. However, a key limitation of X. Zhang et al.'s (2024) study is that it only examined the intercorrelations among the three

constructs and failed to incorporate L2 academic achievement as an outcome variable into its analytical framework.

2.5. Left-Behind Children as a “Special” Population

With rapid economic development and urbanization in China, numerous rural residents have migrated to urban areas in pursuit of more favorable labor market opportunities. Consequently, the number of “left-behind” children (LBC)—children with one or both parents absent from home—has risen steadily (Qiu et al., 2024). According to the Seventh National Population Census in 2020, there are approximately 66.93 million LBC in China, accounting for 22% of the nation’s total child population (Y. Xu et al., 2025), and this ratio may have increased in recent years with further urbanization.

As a distinct special group, LBC grow up without adequate parental supervision and face pronounced developmental challenges. For instance, a recent meta-analysis revealed that compared with non-left-behind children (non-LBC), LBC in China are 1.75 times more likely to experience physical neglect and 2.29 times more likely to experience emotional neglect (Y. Wen et al., 2021). Owing to the lack of parental supervision, LBC often perceive less support and warmth from caregivers, which in turn fosters feelings of insecurity. A meta-analysis of 111 studies involving more than 100,000 LBC further revealed that this group faces an increased risk of depression, with higher depression and anxiety scores, suicidal ideation, conduct disorder, substance use, and growth-related issues such as wasting and stunting (Fellmeth et al., 2018).

Notably, in addition to these adverse outcomes, LBC also exhibit poorer executive functions and academic performance (e.g., in reading and mathematics) even in the early stages of development (B. Hu et al., 2020). Research has shown that compared with non-LBC, LBC tend to have delayed learning and developmental outcomes in early primary grades, and this achievement gap typically widens as they advance to secondary school (M. Wen & Lin, 2012). More alarmingly, LBC are also more likely to, like their parents, become migrant workers themselves in adulthood (B. Hu et al., 2020). In summary, compared with their rural non-LBC peers, LBC demonstrate a host of developmental disadvantages.

In general, LBC in China predominantly originate from low-income rural families. Empirical evidence has shown that students from lower socioeconomic backgrounds report lower LE and higher LB (Huttunen et al., 2024; Motti-Stefanidi et al., 2015; Salmela-Aro et al., 2018). Given that LBC account for 22% of China’s total child population—a ratio that is even higher in rural areas—and that the vast majority of these children choose to learn English as a foreign language (EFL), it is imperative to explore L2 academic emotions (e.g., enjoyment, burnout) and their relationships with academic achievement in this special population. However, to the best of our knowledge, no empirical study has yet examined this critical issue.

3. Current Study

LBC constitute almost 40% of rural children and more than 20% of the national child population in China (Y. Xu et al., 2025), and they face unique developmental vulnerabilities because of parental migration. These vulnerabilities include insufficient academic support, more frequent emotional fluctuations, more emotional neglect, less engagement, and more burnout—all of which critically shape their EFL learning outcomes (Huttunen et al., 2024; Motti-Stefanidi et al., 2015; Salmela-Aro et al., 2018). However, the academic emotions of LBC remain critically understudied within the field of SLA.

To this end, the present study aimed to fill these research gaps by unpacking the complex interactions among FLE, LE, and LB, as well as their unique and joint contributions to L2 academic achievement among Chinese left-behind EFL children and adolescents. Specifically, we focus on examining how one positive emotion (i.e., FLE) is associated with the emergence of a positive state (i.e., LE) or a negative state, i.e., LB) and how these states in turn enhance or undermine L2 academic performance—a desirable learning outcome. Our study focuses on LBC—a group largely overlooked in EFL academic emotion research. Specifically, the present study was designed to answer the following research questions:

RQ1: What are the complex relationships among FLE, LE, and LB among LBC?

RQ2: Are FLE, LE, and LB associated with L2 academic achievement among LBC?

RQ3: Does LE serve as a positive mediator in the link between FLE and L2 academic achievement?

RQ4: Does LB serve as a negative mediator in the link between FLE and L2 academic achievement?

Given the scant empirical evidence on left-behind children's L2 learning and associated affective factors, the present study proposes the following hypotheses and conceptual model (Figure 1) on the basis of relevant theories and prior empirical findings.

H1. *FLE is positively associated with LE, whereas both FLE and LE are negatively associated with LB.*

H2. *FLE and LE are positively associated with L2 academic achievement, whereas LB is negatively linked to L2 academic achievement.*

H3. *LE serves as a positive mediator in the relationship between FLE and L2 academic achievement.*

H4. *LB serves as a negative mediator in the relationship between FLE and L2 academic achievement.*

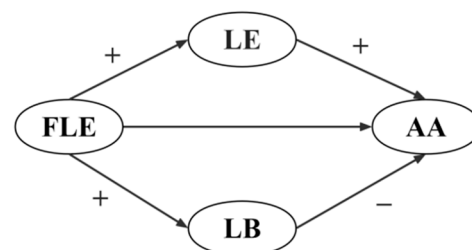


Figure 1. The hypothesized structural model. Note. FLE = foreign language enjoyment; LE = learning engagement; LB = learning burnout; and AA = academic achievement. + represents a positive effect; – represents a negative effect.

4. Methods

4.1. Participants and Procedures

The data used in the present study were collected from 816 middle school students at a rural private boarding school in Southwest China. All the students learn English as a required second language. One or both of their parents had migrated for a long period to obtain work. Among the participants, 51.4% ($n = 419$) were male, and 48.6% ($n = 397$) were female. Grades 7, 8, and 9 accounted for 31.2% ($n = 255$), 27.3% ($n = 223$), and 41.5% ($n = 338$), respectively. The average age was 14.10 years ($SD = 0.85$, ranging from 12 to 15 years). Participants completed an online questionnaire in a dedicated computer room under the supervision of trained research assistants who provided assistance when needed. Prior to data collection, approval was obtained from the school administration, homeroom teachers, and the participants themselves. All the participants were informed that they could withdraw from the study at any time without penalty.

In accordance with the definition of left-behind children (LBC) provided by China's Ministry of Civil Affairs and previous research, participants were classified as LBC if they met the following criteria: (1) lived in rural areas; (2) were under 16 years of age; (3) had at least one parent who had migrated for work; and (4) were from intact, married two-biological-parent families (Y. Xu et al., 2025).

4.2. Measures

4.2.1. Foreign Language Enjoyment

FLE was measured using the shortened Chinese version of the Foreign Language Enjoyment Scale (Y. Jiang & Dewaele, 2019). The scale consists of 10 items rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The initial CFA model yielded suboptimal fit ($\chi^2/\text{df} = 22.51$, CFI = 0.891, TLI = 0.860, SRMR = 0.055, RMSEA = 0.145, 90% CI [0.136, 0.154]). Inspection of modification indices indicated local dependencies between FLE3–FLE4 and FLE8–FLE9 due to similar wording; we therefore allowed their residual covariances to correlate (Kline, 2023). The revised model demonstrated acceptable fit: $\chi^2/\text{df} = 8.97$, CFI = 0.950, TLI = 0.941, SRMR = 0.040, RMSEA = 0.099, 90% CI [0.089, 0.109]. Although the RMSEA remained slightly above the stringent 0.08 cutoff, the lower bound of its 90% confidence interval (0.089) approached 0.08, and the CFI and TLI both exceeded the recommended 0.90 threshold (L. T. Hu & Bentler, 1999). All standardized factor loadings were statistically significant ($p < 0.001$) and ranged from 0.62 to 0.90. The scale demonstrated excellent internal consistency, with Cronbach's $\alpha = 0.926$.

4.2.2. Learning Engagement

The Chinese version of the 14-item Utrecht Work Engagement Scale–Student (UWES-S) was used to assess participants' learning engagement. The scale comprises three subscales: vigor (5 items), dedication (5 items), and absorption (4 items) (Schaufeli et al., 2002). For the purpose of this study, the word “English” was added to each item to target EFL-specific learning engagement (Luan et al., 2025). This scale has been validated across diverse educational contexts and exhibits good psychometric properties (Carmona-Halty et al., 2021; Schaufeli et al., 2002). In the present study, the Cronbach's alpha coefficients were 0.928 for vigor, 0.923 for dedication, 0.898 for absorption, and 0.965 for the total scale. Confirmatory factor analysis also supported the structure of the scale, with acceptable fit indices ($\chi^2/\text{df} = 8.00$, CFI = 0.962, TLI = 0.954, SRMR = 0.030, RMSEA = 0.083, 90% CI [0.077–0.089]).

4.2.3. Learning Burnout

Learning burnout was assessed using the Chinese version of the School Burnout Inventory (SBI) (S. Jiang et al., 2021). The scale consists of nine items measuring three dimensions: exhaustion (four items), cynicism (three items), and sense of inadequacy (two items). To capture EFL-specific burnout, either the phrase “English” or “English learning” was added to each item (Luan et al., 2025). All the items were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the present study, the Cronbach's alpha coefficients for the exhaustion, cynicism, and sense of inadequacy subscales and the total burnout scale were 0.724, 0.864, 0.561, and 0.866, respectively. Although the coefficient for sense of inadequacy was relatively low, such values are acceptable for individual subscales when the total scale demonstrates good reliability (Kline, 2023). Confirmatory factor analysis (CFA) also yielded satisfactory model fit indices ($\chi^2/\text{df} = 6.42$, CFI = 0.942, TLI = 0.913, SRMR = 0.050, RMSEA = 0.073, 90% CI [0.064–0.081]).

4.2.4. Academic Achievement

Students' final English exam scores provided by the school were used as the measure of academic achievement (J. Xu & Feng, 2024; Yuan et al., 2025; Zhao & Wang, 2023). The English examination consisted of five components: listening comprehension, blank filling, the cloze test, reading comprehension, and writing. The total duration of the exam was 120 min, with a maximum score of 150 points (20, 20, 30, 50, and 30 points for each section, respectively). Compared with standardized achievement tests, school-based assessments provide a more authentic reflection of actual learning outcomes and demonstrate better ecological validity (Q. Hu et al., 2024). Prior to statistical analysis, students' English test scores were standardized within each grade level (Yuan et al., 2025).

4.3. Data Analysis

Prior to data analysis, a systematic data screening procedure was conducted to detect outliers, missing values, and invalid responses. Data analysis followed standard structural equation modeling (SEM) guidelines (Kline, 2023) and was performed using RStudio (version 4.2.1) with the lavaan package. First, confirmatory factor analysis (CFA) was carried out for each scale to evaluate the measurement model. Next, descriptive statistics and Pearson bivariate correlations were computed for FLE, LE, LB, and English academic achievement. Finally, a structural equation model was tested with FLE as the independent variable, LE and LB as the mediators, and English academic achievement as the dependent variable. Based on the CFA results, the residual covariances between FLE3–FLE4 and FLE8–FLE9 were freely estimated in the SEM to account for local dependencies due to similar item wording (Kline, 2023). The 95% bias-corrected and accelerated (BCa) confidence intervals for indirect effects were estimated using 5000 bootstrap resamples (Carmona-Halty et al., 2021). Model fit was assessed using multiple indices, including χ^2 , CFI, TLI, RMSEA, and SRMR. Model fit was deemed acceptable if CFI/TLI $\geq$ 0.90, RMSEA $\leq$ 0.08, and SRMR $\leq$ 0.08 (L. T. Hu & Bentler, 1999).

5. Results

5.1. Results of Confirmatory Factor Analysis

To examine the construct validity of the measures, we conducted confirmatory factor analysis (CFA) for the three key variables. The fit indices for each scale are presented in Table 1. For LE and LB, all fit indices met the recommended criteria, indicating satisfactory model fit. For FLE, the revised model demonstrated acceptable fit: the CFI (0.950) and TLI (0.941) exceeded the 0.90 threshold, and although the RMSEA (0.099) remained slightly above the 0.08 cutoff, the lower bound of its 90% confidence interval (0.089) approached 0.08 (L. T. Hu & Bentler, 1999).

Table 1. CFA of foreign language enjoyment, engagement, and burnout.

Variables	χ^2/df	CFI	TLI	RMSEA (90% CI)	SRMR
FLE	8.97	0.950	0.941	0.099 (0.089–0.109)	0.040
LE	8.00	0.962	0.954	0.083 (0.077–0.089)	0.030
LB	6.42	0.942	0.913	0.073 (0.064–0.081)	0.050

Note. FLE = foreign language enjoyment; LE = learning engagement; and LB = learning burnout.

5.2. Descriptive Statistics and Preliminary Analyses

Table 2 presents the mean (M), standard deviation (SD), skewness, kurtosis, and Cronbach's alpha for FLE, LE, and LB. The Cronbach's α coefficients for all key variables exceeded 0.86, indicating good internal consistency. The skewness and kurtosis values met the recommended criteria ($|skewness| < 3$, $|original\ kurtosis| < 8$), suggesting that the

data were approximately normally distributed and appropriate for subsequent parametric testing (Kline, 2023).

Table 2. Descriptive statistics.

Variables	M	SD	Skewness	Kurtosis	Cronbach's α
FLE	3.20	0.95	0.00	−0.37	0.926
LE	3.18	0.94	0.14	−0.23	0.965
LB	2.76	0.84	0.54	0.48	0.866

Note. FLE = foreign language enjoyment; LE = learning engagement; and LB = Learning burnout.

Bivariate correlations among FLE, LE, LB, and AA are presented in Table 3. FLE was significantly and positively correlated with AA ($r = 0.232$, $p < 0.01$), strongly positively associated with LE ($r = 0.623$, $p < 0.01$), and weakly positively related to LB ($r = 0.162$, $p < 0.01$). In addition, LE was weakly positively correlated with AA, whereas LB was significantly negatively correlated with AA ($r = -0.107$, $p < 0.01$).

Table 3. Bivariate correlations among key variables.

Variables	AA	FLE	LE	LB
AA	1			
FLE	0.232 **	1		
LE	0.171 **	0.623 **	1	
LB	−0.107 **	0.162 **	0.128 **	1

Note. FLE = foreign language enjoyment; LE = learning engagement; LB = learning burnout; and AA = academic achievement. ** $p < 0.01$.

5.3. Structural Model

A structural equation model was constructed with FLE as the latent independent variable, AA as the dependent variable, and LE and LB as latent mediating variables. The model was evaluated using multiple fit indices (Kline, 2023), including the chi-square statistic relative to degrees of freedom (χ^2/df), the comparative fit index (CFI), the Tucker–Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR), as shown in Table 4. The chi-square test was significant, and the CFI, TLI and SRMR met the recommended threshold, indicating good fit. Although the RMSEA (0.099) was slightly above the conventional 0.08 cutoff, the lower bound of its 90% confidence interval (0.089) approached this threshold (L. T. Hu & Bentler, 1999), suggesting that the degree of misspecification was marginal and that the overall model fit was acceptable.

Table 4. Model fit metrics.

Fitting Parameter	Value	Reference Standard
χ^2	188.73	
df	14	
CFI	0.962	>0.90
TLI	0.929	>0.90
RMSEA	0.096	<0.08
RMSEA 90% CI	[0.830, 0.109]	
SRMR	0.067	<0.08

5.4. Path Coefficients and Direct Effects

The standardized path coefficients are shown in Figure 2 and Table 5. FLE showed a strong positive direct association with LE ($\beta = 0.643$, 95% BCa CI [0.612, 0.685]) and

a weak positive direct association with LB ($\beta = 0.111$, 95% BCa CI [0.012, 0.203]). LB was significantly negatively associated with L2 academic achievement ($\beta = -0.166$, 95% BCa CI [−0.257, −0.100]), whereas the effect of LE on L2 achievement was not significant ($\beta = 0.037$, 95% BCa CI [−0.038, 0.118]). The direct effect of FLE on academic achievement was also significant ($\beta = 0.229$, 95% BCa CI [0.152, 0.288]).

Table 5. Estimates of standardized path coefficients and direct effects.

Path Direction	β	SE	95% CI
FLE → LE	0.643 ***	0.025	[0.612, 0.685]
FLE → LB	0.111 *	0.050	[0.012, 0.203]
LE → AA	0.037	0.041	[−0.038, 0.118]
LB → AA	−0.166 ***	0.032	[−0.257, −0.100]
FLE → AA (direct effect)	0.229 ***	0.037	[0.152, 0.288]

Note: FLE = foreign language enjoyment; LE = learning engagement; LB = learning burnout; AA = academic achievement; and SE = standard error. β denotes fully standardized coefficients; 95% CI represents bootstrap bias-corrected confidence intervals. * $p < 0.05$, *** $p < 0.001$.

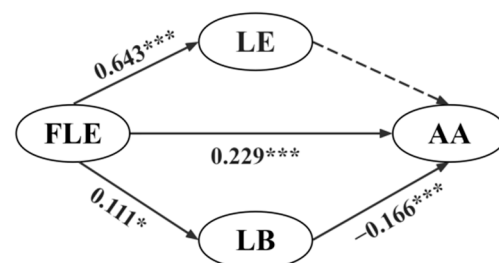


Figure 2. The finalized structural model. Note. LE = learning engagement; LB = learning burnout; FLE = foreign language enjoyment; and AA = academic achievement. The solid lines indicate statistically significant paths; the dashed line indicates a nonsignificant path. * $p < 0.05$, *** $p < 0.001$.

5.5. Mediation Analysis

Bootstrap mediation analysis was conducted to test the hypothesized mediating role of learning engagement and learning burnout (Table 6). As expected, the indirect effect of FLE on academic achievement via LB was statistically significant ($\beta = -0.021$, 95% BCa CI [−0.048, −0.001]), consistent with our hypothesis. In contrast, the proposed indirect association via LE (FLE → LE → AA) was not significant ($\beta = 0.025$, 95% BCa CI [−0.025, 0.073]). Thus, the hypothesis that LE acts as a positive mediator was not supported. The total indirect effect was not significant ($\beta = 0.005$, 95% BCa CI [−0.049, 0.056]), whereas the direct effect ($\beta = 0.226$, 95% BCa CI [0.153, 0.283]) and total effect ($\beta = 0.231$, 95% BCa CI [0.174, 0.287]) of FLE on academic achievement were both significant. These findings suggest that LB plays a competitive mediating role in the link between FLE and academic achievement, whereas LE does not function as a mediator in this model.

Table 6. Results of the mediation analysis (based on 5000 bootstrap samples).

Mediating Path	β	SE	95% BCa CI	Significance
FLE → LE → AA	0.025	0.025	[−0.025, 0.073]	Nonsignificant
FLE → LB → AA	−0.021	0.007	[−0.048, −0.001]	Significant
Total indirect effect	0.005	0.025	[−0.049, 0.056]	Nonsignificant
Direct effect	0.226	0.032	[0.153, 0.283]	Significant
Total effect	0.231	0.029	[0.174, 0.287]	Significant

Note: LE = learning engagement; LB = learning burnout; FLE = foreign language enjoyment; and AA = academic achievement. The criterion for determining statistical significance is whether the 95% confidence interval includes 0; BCa CI refers to the bias-corrected and accelerated confidence interval.

6. Discussion

The present study aimed to unpack the complex interactions among FLE, LE, and LB, as well as their unique and joint contributions to L2 achievement among Chinese left-behind EFL learners. Specifically, we focused on the parallel mediating mechanisms of LE and LB in the FLE–academic achievement relationship and hypothesized that LE acts as a positive mediator, whereas LB functions as a negative mediator in this association.

Our results reveal that the emotional landscape of this group is complex and multifaceted and cannot be reduced to simple or one-dimensional characterizations. While our correlational analysis confirms the well-established positive associations between FLE, LE, and academic achievement (Feng & Hong, 2022; Madigan & Curran, 2021; Peng & MacIntyre, 2025; J. Xu & Feng, 2024; Xie et al., 2025; X. Zhang et al., 2024), as well as the expected negative impact of LB on L2 achievement (Fan et al., 2024; Song, 2024; Zhou & Wang, 2024), we also revealed positive correlations between FLE and LB and between LE and LB among LBC—findings that contradict the majority of prior empirical findings on the relationship among FLE, LE, and LB in L2 learning.

More importantly, our mediation analysis uncovers a paradox regarding foreign language enjoyment: on the one hand, we failed to find a significant facilitative effect of LE in the relationship between FLE and academic achievement, despite our hypotheses positing this association; on the other hand, we demonstrated a robust negative effect of LB in the link between FLE and L2 achievement, which confirms our research hypotheses. These findings challenge the classic broaden-and-build theory (BBT) and conventional tenets of positive psychology, which posit that positive emotions such as enjoyment broaden learners' cognitive and behavioral repertoires and build their psychological resilience and personal resources (Fredrickson, 2004; C. Li et al., 2018), thereby fostering academic achievement and SLA. These counterintuitive results highlight the need to reexamine how positive achievement emotions operate within the unique educational context of LBC.

6.1. *The Absent Positive Link: Why Enjoyment Fails to Catalyze Achievement?*

It is posited that positive emotions such as enjoyment foster adaptive learning behaviors (e.g., engagement) that contribute to long-term academic success (Fredrickson, 2004; C. Li et al., 2018; MacIntyre & Gregersen, 2012; X. Zhang et al., 2024). In the field of SLA, a wealth of empirical evidence supports this proposition (Dewaele & MacIntyre, 2014; MacIntyre & Gregersen, 2012; Zou et al., 2025). Our initial correlational findings align with this established body of literature, revealing positive associations among FLE, engagement, and L2 academic achievement.

However, the nonsignificant mediating effect of engagement on the link between FLE and L2 achievement has important theoretical and practical implications for LBC. These findings indicate that for this group, the commonly assumed mechanism—whereby positive emotions (e.g., enjoyment) inherently promote learner engagement and thus enhance academic performance—appears to be impaired or disrupted. Our results challenge the classic BBT, which was originally developed for the general population and cannot adequately explain the patterns observed in this vulnerable group. This blocked facilitative effect of LE on the FLE–L2 achievement association highlights the need to reevaluate the functional mechanisms through which enjoyment and engagement shape L2 achievement among LBC.

It is plausible that in the LBC context, FLE predominantly fosters affective engagement—a sense of liking, happiness, and interest in the foreign language classroom—or superficial behavioral engagement, such as passive compliance and minimal participation without deep cognitive investment. That is, this form of engagement, while affectively positive

or behaviorally observable, may be insufficient to drive measurable gains in formal L2 academic achievement as captured by test scores.

Alternatively, this disruption of the facilitative effect may reflect uniquely salient contextual and experiential factors among LBC. Owing to long-term separation from one or both parents, LBC navigate their schooling journeys while experiencing insufficient academic support (Huang & Gong, 2022), less learning engagement and more learning burnout (Huttunen et al., 2024; Motti-Stefanidi et al., 2015; Salmela-Aro et al., 2018), chronic physical and emotional neglect (Y. Wen et al., 2021), heightened levels of loneliness and feelings of abandonment (W. Xu et al., 2018), limited interaction with one or both parents (W. Xu et al., 2018), and potential emotional stressors stemming from family separation (Fellmeth et al., 2018). In such adverse learning and developmental environments, even robust foreign language enjoyment and the engagement it fosters may be gradually diminished and even undermined by a host of unfavorable external constraints and a compromised psychological state. In other words, the supportive scaffolding necessary to translate positive emotions (e.g., enjoyment) into strategic learning behaviors and academic mastery is systematically lacking in the educational ecosystems of left-behind children.

Additionally, it is possible that the measurement of LE may not capture the specific facets of engagement most relevant to test performance (e.g., deep cognitive strategy use vs. general behavioral engagement). It is also possible that the relationship between LE and achievement is moderated by other variables, such as self-regulation strategies or perceived teacher support. Future research could explore these potential moderators to clarify under what conditions LE contributes more strongly to academic outcomes.

6.2. Counterintuitive Yet Significant Negative Link: The Paradox of Enjoyment and Burnout

In general, FLE is negatively associated with foreign language learning burnout (Song, 2024; X. Zhang et al., 2024), and in line with this association, burnout is negatively linked to L2 academic achievement (Cong et al., 2024; Fan et al., 2024; Liu et al., 2024). However, strikingly, our mediation analysis of burnout revealed that FLE is positively associated with LB, which is in turn negatively connected to academic achievement. These counterintuitive findings present a compelling positive emotion paradox in vulnerable populations.

Combined with the findings from the two mediation analyses, our results suggest a potential “dark side”, or more accurately, a complex dual potential of positive academic emotions—particularly for vulnerable populations such as LBC. More specifically, when the positive academic emotion (i.e., enjoyment) interacts with the positive state (i.e., engagement), it fails to foster L2 academic achievement, whereas when it interacts with the negative state (i.e., burnout), it does inhibit L2 academic achievement among LBC. This raises a critical question: how can these counterintuitive and paradoxical findings be reconciled?

At first glance, this association seems counterintuitive. However, it aligns with the conservation of resources (COR) theory. According to the COR theory, individuals strive to obtain, retain, foster, and protect valuable personal resources (Hobfoll, 1989; Hobfoll et al., 2018). With respect to LBC, FLE may initially generate abundant psychological resources in the foreign language classroom and motivate them to invest substantial amounts of emotional resources in L2 learning. On the one hand, this intense emotional investment, in the absence of adequate external emotional support, can deplete psychological resources, leading to emotional exhaustion and cynicism—the core components of learning burnout (Schaufeli et al., 2002; X. Zhang et al., 2024). On the other hand, when they encounter inevitable academic difficulties or fail to achieve success despite significant effort, they may experience excessive learning pressure, which in turn leads to emotional fatigue and stress, heightened academic burnout, and ultimately diminished L2 academic achievement.

In this sense, enjoyment does not necessarily preclude or reduce burnout; under specific conditions—such as high levels of learning pressure, limited emotional and academic support, or overly high parental educational expectations—it may even accelerate burnout by increasing the emotional costs of learning engagement.

In addition, enjoyment itself is a multifaceted construct. As a positive emotion, it inherently has reward attributes. If a student's FLE is predominantly derived from social enjoyment (e.g., teacher praise) rather than personal enjoyment (e.g., intellectual curiosity) (Dewaele & MacIntyre, 2014), their L2 learning motivation may become overly reliant on external factors, making it fragile. In such contexts, L2 learning offers only delayed social rewards, making the foundation of their enjoyment unstable and potentially giving way to feelings of exhaustion and disengagement from L2 learning.

It should be noted that the positive association between FLE and burnout, while statistically significant, was unexpectedly small in magnitude and warrants cautious interpretation. Several alternative explanations may account for this pattern. First, the small effect size suggests that, despite its statistical significance, the practical salience of this relationship is limited. In complex educational settings, many individual and contextual factors jointly influence burnout, and it is not surprising that FLE alone accounts for only a modest portion of its variance. Second, this association may be partially attributable to measurement overlap. Items assessing FLE—particularly those tapping emotional arousal or intense involvement—may share conceptual proximity with burnout subdimensions such as emotional exhaustion, potentially inflating their observed correlation. Thus, the positive link may partly reflect shared item content rather than a meaningful substantive relationship. Third, we cannot rule out omitted variable bias. Unmeasured factors such as trait neuroticism, academic resilience, or perceived teacher support could plausibly influence both FLE and burnout, rendering the observed association spurious or confounded.

Taken together, these theoretical perspectives indicate that the relationships among FLE, LB, and L2 academic outcomes are context dependent and resource sensitive. For vulnerable groups such as LBC, owing to a lack of adequate family support, positive academic emotions may operate within a more challenging ecological context and carry hidden emotional costs—costs that ultimately impair rather than foster L2 academic achievement.

6.3. *The Emotional Symphony: Coactivation and Dynamism*

The coexistence of these two indirect links—one positive yet blocked and the other counterintuitive yet active—calls for a move beyond simple bipolar models of emotion (positive vs. negative) toward a framework of emotional complexity and dynamism. L2 learning among LBC is not simply a matter of either enjoyment or burnout; rather, it resembles an emotional symphony in which positive and negative emotions coexist—sometimes harmoniously, sometimes in tension.

Our statistical model, which shows independent links from FLE to both LE and LB, captures this potential for emotional coactivation and mixed affective experiences. Students can, within a single lesson, experience both the enjoyment of academic success and the cynicism toward repetitive mechanical exercises. These mixed, coexistent emotions are not mutually exclusive experiences but rather interconnected psychological states or affective experiences that jointly shape L2 academic outcomes.

In this sense, the educational goal is not only to maximize enjoyment and minimize burnout as isolated targets but also to foster psychological resilience, emotional buoyancy, and adaptive emotion regulation strategies.

Notably, recent studies have shown that academic resilience, as an adaptive psychological resource and coping mechanism (Emerson et al., 2022), is positively associated with enjoyment (Derakhshan et al., 2022), engagement (Y. Wang et al., 2024; J. Xu & Feng, 2024),

and L2 learning outcomes (Liu et al., 2024; J. Xu & Feng, 2024) and negatively linked to burnout (Emerson et al., 2022; Liu et al., 2024; Y. Wang et al., 2024). Furthermore, academic buoyancy has been shown to moderate the burnout–achievement relationship and the FLE–achievement relationship: academic achievement is higher when burnout is low and buoyancy is high or when FLE and buoyancy are both high (Zhou & Wang, 2024). These findings suggest that the positive effect of enjoyment on academic achievement is magnified by the emotional resilience and buoyancy of learners.

Taken together, both existing studies and our findings indicate that fostering and cultivating psychological resilience, emotional buoyancy, and emotion regulation strategies among LBC is especially important. They need to learn to experience enjoyment without overreliance on it for learning motivation and to manage negative feelings such as boredom, frustration, and exhaustion without being derailed from their learning goals. Most importantly, they should develop a more mature understanding of L2 learning and recognize that effort, difficulty, and occasional negative emotions are normal and necessary components of the language learning process.

6.4. Practical Implications

Our findings have important practical implications for educators, policy-makers, and caregivers of rural LBC. First, foreign language education for left-behind students must move beyond a purely “fun-centric” pedagogy. While fostering FLE is a vital starting point, it alone is insufficient to underpin effective L2 teaching and learning for LBC. Instead, L2 instructional design should intentionally channel such positive affect into deep, strategic cognitive engagement and authentic behavioral engagement—only in this way can positive academic emotions be translated into genuine learning engagement, which in turn drives improvements in students’ academic performance.

Second, foreign language education systems need to proactively build protective buffers against learning burnout among LBC, who are prone to experiencing higher levels of academic burnout. More importantly, the results of the present study reveal that LBC may still be at risk of L2 learning burnout even when they experience positive emotions such as foreign language enjoyment. This highlights the need to identify the unique protective and risk factors for burnout specific to LBC; educational environments must therefore integrate targeted protective factors to mitigate and buffer against potential burnout in their L2 learning.

Third, educators should provide personalized, targeted support to LBC in their foreign language learning. Childhood and adolescence represent critical stages of individual development, yet they are also periods of heightened psychological vulnerability—this is particularly true for LBC, who face multiple developmental disadvantages and tend to invest more emotional energy in school learning. This dual characteristic may render them more susceptible to both the positive benefits of FLE and its potential pitfalls in L2 learning. In this context, educators should take a two-pronged approach: on the one hand, they should provide additional academic mentoring and psychological–emotional support for LBC during their daily foreign language learning practices; on the other hand, they should intentionally foster psychological resilience, academic buoyancy, and adaptive emotion regulation strategies within this group. This cultivation is critical because resilient students are able to better buffer the negative effects of learning burnout on their academic performance (Liu et al., 2024), thereby enhancing their overall emotional coping capacity in L2 learning.

Ultimately, unpacking the complex interplay of emotions present as LBC engage in foreign language learning is merely the starting point for targeted educational intervention. Nevertheless, it constitutes a critical step toward designing foreign language learning

environments that not only teach LBC a linguistic skill but also support their holistic and harmonious development. In doing so, educators and policy-makers can equip LBC with the emotional and cognitive tools necessary to navigate academic learning and daily life and achieve sustainable success in their long-term development.

This study yields valuable insights into the unique mechanism of positive academic emotion in connecting to L2 achievement, yet several limitations point to clear avenues for future research. Its cross-sectional design precludes the establishment of a definitive causal relationship between academic emotion and academic achievement. Future research should therefore adopt longitudinal and mixed-methods designs to trace the temporal dynamics among FLE, engagement, and burnout—this longitudinal approach will help verify the causal directionality between the variables.

In addition, the ‘sense of inadequacy’ subscale of the LB measure showed a Cronbach’s α of 0.561, which falls below the generally accepted threshold of 0.70. Therefore, findings involving this specific subscale should be interpreted with caution. Future research may consider refining the item pool (e.g., through item revision, deletion, or replacement) or employing alternative operationalization of this construct to enhance its internal consistency.

7. Conclusions

In conclusion, this study reveals that FLE is a powerful yet double-edged emotional force for LBC. Its traditional role as an engine for productive engagement and academic achievement is not guaranteed and appears disrupted in this specific population, as evidenced by the nonsignificant path from engagement to L2 achievement in our model. More surprisingly, FLE is significantly positively associated with learning burnout, suggesting that for vulnerable groups such as LBC, the experience and pursuit of foreign language enjoyment may paradoxically contribute to motivational depletion. These findings challenge and extend the unidirectional, inherently beneficial view of positive emotions in SLA research and advocate for more complex and dynamic theoretical models that account for contextual and population-specific characteristics. Crucially, our findings also underscore that fostering FLE alone is insufficient for achieving L2 learning success within this group; positive affect must be intentionally channeled into deep, strategic cognitive and authentic behavioral engagement, and targeted protective buffers against burnout should be built into L2 educational environments to mitigate the potential pitfalls of positive emotions for this group.

Author Contributions: Conceptualization, Y.W. and J.G.; methodology, J.G. and Y. L.; software, J.G., Y.L.; validation, Y.W., J.G. and Y.L.; formal analysis, J.G.; investigation, Y.L.; resources, Y.W.; data curation, Y.L.; writing—original draft preparation, J.G., Y.W.; writing—review and editing, Y.W.; visualization, J.G.; supervision, Y.W.; project administration, Y.L.; funding acquisition, Y.W. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the “Brain Science and Brain-like Intelligence Technology-National Science and Technology Major Project” (2021ZD0200500).

Institutional Review Board Statement: Ethical Approval Study procedures were approved by the Institutional Review Board of Beijing Normal University. (protocol code IRB_A_0026_2021001 and date of approval 26 February 2021).

Informed Consent Statement: Informed consents were obtained from all participants, teachers, and school administration before the data collection.

Data Availability Statement: Data are available from the corresponding author on reasonable request.

Acknowledgments: We gratefully acknowledge funding from the “Brain Science and Brain-like Intelligence Technology—National Science and Technology Major Project” (2021ZD0200500) and thank the participants who took part in this study. We also extend our gratitude to the team members who contributed to this research.

Conflicts of Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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