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Emotional intelligence as a moderator in the relationship between foreign language enjoyment and English proficiency among Chinese ethnic minority undergraduates

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Abstract

Chinese ethnic minority learners generally encounter greater difficulties in learning English and exhibit lower levels of English proficiency than their Han majority counterparts. Yet limited research has investigated the emotional factors that may influence the English achievement of ethnic minority undergraduate students in China. Therefore, this study aims to address this gap in the existing literature by examining the levels of emotional intelligence (EI), foreign language enjoyment (FLE), and English proficiency among ethnic minority undergraduates in China, as well as the effects of FLE and EI on English proficiency. Furthermore, this research seeks to investigate whether EI moderates the relationship between FLE and English achievement by influencing the strength and direction of this association. Employing a quantitative research approach with a cross-sectional survey-based PLS-SEM design and simple random sampling, this study collected data from 465 ethnic minority college students using three validated questionnaires. Results demonstrated that participants exhibited low-to-medium EI and medium FLE. The regression results demonstrated that the effect sizes of EI and FLE on English proficiency were large and small, respectively. In addition, the moderation analysis revealed that EI significantly and positively moderated the relationship between FLE and English achievement, with a large effect size. The results emphasize the significant impact of EI on promoting English proficiency among ethnic minority undergraduates. This could be achieved by integrating special activities into the curriculum to promote emotional regulation, creating a more conducive, holistic learning experience for students' language acquisition.

Keywords: Emotional intelligence (EI), English proficiency, Foreign language enjoyment (FLE), Moderation, Chinese undergraduates

Introduction

English is the most widely learned foreign language in China (Wei & Su, 2008). In line with this, China underscores the importance of strengthening international education criteria. A key objective of this plan is to develop globally competent talents with extensive knowledge of international practices, thereby fostering an international outlook and enhancing cross-cultural communication skills (AlSaqqaf et al., 2023). However, the latest English Proficiency Index by English First ranks China 86th out of 123 countries, reflecting a low level of English proficiency (English First, 2025). Learning English as a foreign language presents considerable challenges for Chinese learners due to the interaction of multiple variables in the acquisition process (Hu & AlSaqqaf, 2025). Results from many English proficiency assessments indicate that ethnic minority EFL learners consistently perform at lower levels than their Han Chinese counterparts (Liu, 2020).

The relatively lower English proficiency among ethnic minority learners could be attributed to the interaction of several factors, including disparities in educational resources and contexts, linguistic backgrounds, learning environments, and learners' affective experiences. Among these, emotional factors have attracted increasing scholarly attention because of their impact on language learning processes and achievement. Relevant literature indicates that EFL learning, particularly among learners facing additional linguistic and educational challenges, is emotionally intense for learners (Dörnyei & Ryan, 2015; Mierzwa-Kamińska, 2021; Richards, 2022; Chen, 2025), suggesting that language learning evokes a broad range of emotions, from the excitement of mastering new expressions to the anxiety associated with language use (Plonsky et al., 2022). Emotions, such as emotional intelligence (EI) and foreign language enjoyment (FLE), may directly impact multilingual English learners by enhancing their ability to manage anxiety, sustain motivation, and build confidence, which are essential for successful language acquisition (MacCann et al., 2020; Sánchez-Álvarez et al., 2020; Dewaele et al., 2024). On the other hand, this emotional intensity can also be influenced by exam-driven pressures, which may heighten anxiety while reducing enjoyment and motivation (Song, 2024).

FLE, as one of the most important positive emotions in foreign language learning, boosts learner engagement (Tsang & Dewaele, 2024), heightens motivation (Dewaele & Botes, 2025), and significantly predicts ideal L2 self (Fathi & Hejazi, 2024). In this regard, research reveals that Asian learners generally show lower FLE (Dewaele & MacIntyre, 2014). As far as the context of this research is concerned, related studies demonstrate that Chinese EFL learners with moderate to limited English proficiency exhibit significantly lower FLE compared to global samples (Su, 2022). Moreover, the emotional experiences of Chinese EFL learners in classroom settings are different from those of others (Jiang & Dewaele, 2019).

However, not all learners experience the same benefits from enjoyment, as individual differences in EI may weaken or strengthen the positive effects of enjoyment on learners' ability to build lasting personal resources, such that EI may serve as a key moderator shaping the strength and direction of the relationship between FLE and the broadening of cognitive and behavioral capacities. However, the role of EI in moderating this relationship remains underexplored, particularly among ethnic minority university students in China. These learners face unique challenges arising from their trilingual background (mother tongue–Chinese-English) and limited linguistic resources. Consequently, it is crucial to effectively manage and regulate learners' emotions in EFL contexts (Oz et al., 2015).

Therefore, exploring how EI and FLE interact is vital in influencing English learning proficiency. Yet little is known about how Chinese ethnic minority undergraduates' emotional capacities interact with enjoyment to shape their English proficiency. To address this gap, the

present study investigates the moderating effect of EI on the relationship between FLE and English achievement among Chinese ethnic minority undergraduates, offering a novel framework that promotes emotionally responsive language education for this under-researched population. To theorize the relationship, this study is grounded in the broaden-and-build theory (BBT) of Positive Psychology (PP). PP prioritizes individual and societal flourishing by shifting focus from human weaknesses toward the understanding and cultivation of personal strengths (Seligman & Csikszentmihalyi, 2000). BBT posits that positive emotions can expand an individual's awareness, encourage creative and exploratory thinking and behaviours, and finally help to build abilities and personal assets (Fredrickson, 2001). It is suggested that positive emotions can increase learners' involvement in activities and strengthen their perseverance (Pekrun et al., 2002; Zhang et al., 2020). This broadening effect facilitates the adoption of diverse language learning strategies, enhances learning motivation and self-efficacy, and contributes to learners' intercultural sensitivity and communication proficiency (Liu, 2022).

Within the framework of BBT of PP, this study conceptualizes FLE as a positive emotion that broadens learners' thought–action repertoires, leading them to engage more actively in learning and employ a wider range of strategies. Consequently, higher levels of FLE are expected to be associated with better English achievement. EI, on the other hand, represents a personal resource that enables learners to perceive, understand, and regulate emotions effectively. From a BBT perspective, learners with higher levels of EI may be better able to manage anxiety, maintain positive emotional experiences and leverage the benefits of FLE, thereby strengthening its positive influence on English achievement. Consequently, BBT provides a theoretical basis for expecting a positive relationship between FLE and English achievement, as well as a moderating effect of EI on this relationship, whereby the positive association between FLE and English achievement becomes stronger among learners with higher levels of EI.

Literature Review

Foreign Language Enjoyment

In recent years, there has been a rising interest in applying positive psychology (PP) to Second Language Acquisition (SLA) research (MacIntyre, 2021; Derakhshan, 2022; Wang, 2024). PP focuses on understanding the factors that contribute to well-being and human flourishing, examining what leads to a fulfilling life (Fredrickson, 2003). Foreign language learning emphasizes what enhances the learning experience in the classroom. Increasingly, research has highlighted the positive emotions in facilitating the acquisition of a second language (L2) or a foreign language (FL).

There has been a notable increase in positive emotions research, particularly FLE, which is an emotional experience that emerges while language learners exceed their anticipations and achieve an unanticipated outcome. Enjoyment is defined as the satisfactory sense and reward derived from the process and the activity results (Ainley & Hidi, 2014). Essentially, FLE encapsulates the positive emotions individuals encounter when facing learning challenges, finishing academic assignments, and satisfying their emotional needs in foreign language learning. A two-factor structure of FLE was confirmed by Dewaele and MacIntyre (2014). Namely, FLE-Private (FP) is the emotional response unified by a sense of success, and FLE-social (FS) comes from optimistic emotions, inspiring peers, friendly educators, and a helpful setting (Dewaele & MacIntyre, 2016).

In the extant literature, FLE has been primarily investigated in relation to its role in enhancing EFL by motivating learners to innovatively engage with new linguistic and cultural settings (Dewaele & MacIntyre, 2016). Studies have demonstrated that FLE positively

influences the foreign language (FL) classroom, leading to improved academic performance (Li, 2020), accelerated improvement in comprehensibility (Saito et al., 2018), increased inspiration (Pavelescu, 2019), and predictors of deep learning (Santosa et al., 2026). FLE boosts student engagement (Tsang & Dewaele, 2024) and an increased readiness to communicate and self-perceived proficiency (Botes et al., 2022). Ultimately, stronger motivation and engagement contribute to the advancement of language competence, especially in oral skills (AlSaqqaf et al., 2023; Hu & AlSaqqaf, 2025). Studies suggest that enjoyment promotes English learning by creating a psychologically safe situation that encourages linguistic and cultural exploration. FLE emerges when learners successfully meet their emotional requirements (Botes et al., 2020). In addition, Li et al. (2020) examined the interdependent correlation between English performance and emotional experiences in the classroom among Chinese EFL learners.

Although there has been some advancement in exploring the connection between FLE and English proficiency, limited research has focused on FLE as an independent factor influencing English proficiency in Chinese multilingual and multicultural contexts among ethnic minority college students. This study aims to expand the research to gain a comprehensive understanding and propose potential strategies to improve English proficiency.

Emotional Intelligence

EI refers to the capacity to perceive, integrate, comprehend and manage emotions within oneself and others to facilitate emotional and cognitive development (Mayer & Salovey, 1997). It has been recognized as a key factor influencing adaptive behaviors in various contexts, as it covers how differently individuals identify, interpret, regulate, and use their emotions and those of others (Petrides & Furnham, 2001). EI consists of three core components: the ability to appraise and express emotions (AOE), regulate emotions (ROE), and use emotions effectively (UOE) (Salovey et al., 2009). Fiori and Maillefer (2018) emphasize that the defining feature of the ability-based approach to EI is its conceptualization as a type of intelligence. This perspective asserts that emotional processing involves cognitive functions and can be examined using performance-based measurement requiring individuals to complete specific duties and resolve defined issues (Mayer et al., 2016). Nevertheless, emotions remain one of the most influential yet least understood factors affecting foreign language learning and achievement (Scovel, 2000), and their importance has frequently been overlooked in second and foreign language education research and classroom practice (Richards, 2022).

Research suggests a significant correlation between EI and individuals' scholastic proficiency (MacCann et al., 2020). This relationship is particularly relevant in EFL learning, which is widely regarded as an emotionally intensive experience (Mierzwa-Kamińska, 2021). Consequently, scholars have increasingly recognized the crucial role emotions play in language acquisition, leading to a growing body of research on emotional factors in foreign and second language learning (Boudreau et al., 2018; Dewaele & Li, 2020; Wang & Liu, 2026).

In a multilingual context, individuals with greater multilingual proficiency and higher self-perceived competence in foreign languages report substantially increased FLE and reduced anxiety (Botes et al., 2020). Other studies have also found that higher levels of multilingualism are associated with greater FLE (Dewaele et al., 2024). Dewaele and Botes (2020) showed that being multilingual affects personality. Alqarni and Dewaele (2018) reported that bilinguals scored higher than monolinguals on EI, suggesting possible emotional benefits of bilingualism. Additionally, MacCann et al. (2020) found that multilingual minority groups may show a deeper connection regarding EI and academic proficiency. They also noted that low EI could pose a more significant challenge in disadvantaged environments, and EI is crucial

for managing everyday difficulties, in contrast to more encouraging contexts. Within this line of inquiry, studies further indicate that the emotional experiences of Chinese EFL learners in classroom settings differ significantly from those of other learner populations (Jiang & Dewaele, 2019).

This study addresses notable gaps in existing second-language research by examining the combined roles of FLE and EI, alongside understudied minority learner populations. Firstly, prior studies have treated FLE and EI as independent single variables to explore their effects on English learning achievement. Limited research has addressed the intricate interplay among FLE, EI, and English proficiency holistically. Secondly, despite evidence that FLE and EI boost English proficiency, few studies have examined whether EI moderates the FLE–proficiency relationship. This moderation effect may reveal for whom and when FLE actually leads to better outcomes, as low EI may disproportionately harm disadvantaged learners. Understanding this dynamic can guide targeted interventions that combine enjoyment with EI training. Thirdly, ethnic minority students were selected as the primary participants for several key reasons. Distinct from mainstream bilingual learners in China, this group lives in typical trilingual or multilingual settings, where they firstly acquire their ethnic minority language and Mandarin and learn English only as a third language that is rarely used in daily communication and largely restricted to classroom learning and examinations. Additionally, existing studies on foreign language emotion and language development have largely centered on Han students (mostly bilingual), while minority learners' unique linguistic difficulties, cultural backgrounds and third-language learning challenges remain under-researched. Therefore, focusing on ethnic minority participants can effectively address the current research gap, deepen the understanding of the interplay between emotional factors and third-language proficiency in multilingual contexts, and provide targeted pedagogical references for localized English teaching in ethnic minority areas.

English Proficiency

English proficiency encompasses the ability to effectively speak, write, read, and comprehend the English language. The National College English Test (CET) is widely utilized as a measure of English proficiency in China, particularly for evaluating the effectiveness of English teaching among non-English majors (Zhang, 2022; Zhang, 2024). However, despite its potential to offer valuable insights into English language development within a multilingual context, the CET has rarely been applied in studies focusing on trilingual ethnic minority students (Adamson, 2011; Wang, 2022). As a standardized assessment, the CET evaluates various language skills, including listening, reading, translation, and writing. It is widely recognized as a benchmark for assessing English language proficiency. Although the CET is no longer a mandatory requirement for university graduation, possessing a CET certificate continues to hold significant value in employment opportunities (Chen, 2022). Given the current study's aim to investigate the moderating role of EI in the relationship between FLE and English proficiency among ethnic minority college students in China's multilingual context, the standardized assessment for evaluating English proficiency at Band 4 (CET-4) was chosen as the measurement instrument for English proficiency. By addressing the emotional and linguistic complexities faced by this population, the study seeks to provide insights into how emotional factors, such as EI and FLE, influence English learning outcomes in a trilingual context.

Conceptual Framework of the Study

Figure 1 below illustrates the relationships between EI, FLE, and English proficiency in the study.

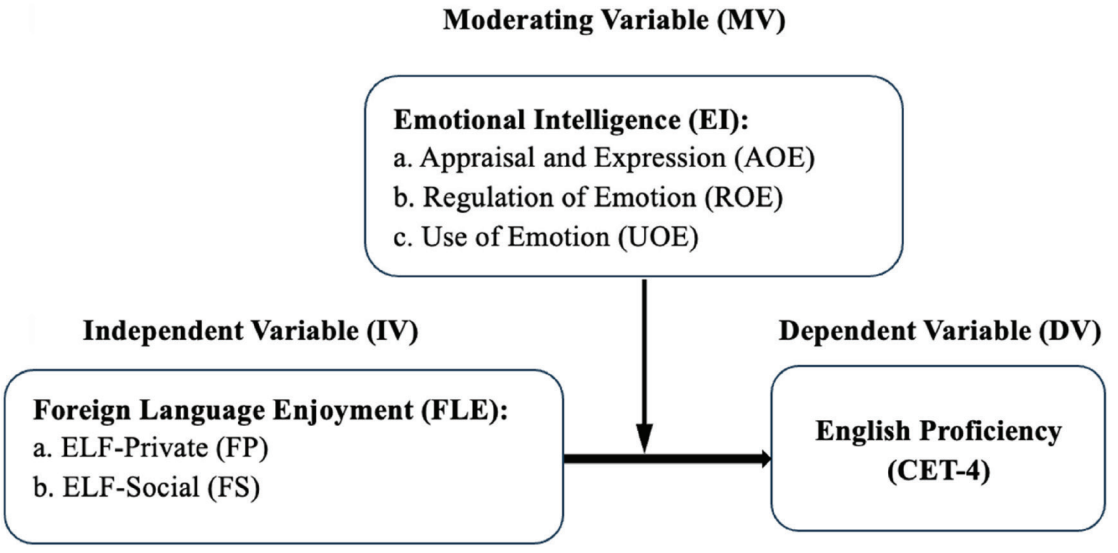

Figure 1. *Conceptual framework of the study*

Figure 1 suggests that FLE is the independent variable, acting as a key driver of English learning through its factors of FP and FS. It is proposed that higher levels of FLE lead to increased commitment, dedication, and perseverance in learning English. These enhanced motivational factors, in turn, ultimately promote English proficiency, which is the dependent variable in this context. EI functions as a moderator in the relationship between FLE and English proficiency. EI can influence and possibly modify this relationship through its cognitive components: AOE, ROE, and UOE. EI moderates the connection between FLE and English proficiency, either enhancing or reducing the effect. Based on the conceptual framework, this study proposed four research questions (RQs) as follows:

RQ1. What are the levels of EI, FLE, and English proficiency among Chinese ethnic minority undergraduates?
RQ2. Does FLE affect English proficiency among Chinese ethnic minority undergraduates?
RQ3. Does EI affect English proficiency among Chinese ethnic minority undergraduates?
RQ4. Does EI moderate the relationship between FLE and English proficiency among Chinese ethnic minority undergraduates?

Methodology

The following section outlines the research approach and design, sampling technique, sample size and instruments, data analysis procedures, and the preliminary analysis of the collected data, including the reliability and validity of the research instruments.

Research Approach and Design

A quantitative research approach is employed to examine the relationships between EI and FLE with English proficiency. This approach utilizes data collection instruments and facilitates the analysis of numerical data through statistical procedures (Creswell, 2018). Within the realm of

quantitative research, survey research is commonly used, typically employing questionnaires to assess the levels of variables and their interrelationships. The study adopted a cross-sectional design because it allows for the collection of data at a single point in time, enabling an examination of the current state of EI, FLE, and English proficiency. Furthermore, the collected data were analyzed using linear regression analysis to investigate whether FLE affects English proficiency among ethnic minority college students in Yunnan Province, China. Linear regression is a method that measures the linear relationship between one or more independent variables and a dependent variable, offering deeper insight into the predictive power of the variables under investigation (George & Mallery, 2019). Additionally, moderation analysis was also utilized to examine whether EI moderates the relationship between FLE and English proficiency. Specifically, this analysis investigates whether the strength or direction of the relationship between FLE and English proficiency changes depending on the level of EI. In other words, it explores whether the impact of FLE on English proficiency differs for students with high versus low emotional intelligence.

Sampling Technique

Considering the objectives of the study, a simple random sampling method was employed. This approach ensures that each member of the population has an equal opportunity of being selected, thereby providing a fair and representative sample (Creswell, 2018). To determine the appropriate sample size, a sampling table proposed by Krejcie and Morgan (1970) was consulted. According to this table, a minimum of 384 samples is recommended to achieve a representative distribution for the population being studied. Additionally, to enhance the validity of the responses, a consent form was used to recruit the desired respondents. Before participating in the survey, respondents were required to confirm that they were from minority groups and were studying at the undergraduate level. This step helped to avoid invalid responses and ensured that the sample met the study's criteria. Besides the above steps, ethical considerations were also prioritized (Creswell, 2018). Specifically, voluntary participation was ensured, with no potential risks to participants. Also, confidentiality and anonymity were maintained throughout the study to protect the privacy of the participants.

Instrument

In this study, two questionnaires were employed to measure the variables of interest. The EI questionnaire used in this study consists of 33 items and is modified from the version developed by Schutte et al. (1998). It includes three constructs: AOE, ROE, and UOE. While the FLE questionnaire (21 items) was revised from the Foreign Language Enjoyment Scale (FLES) by Dewaele and MacIntyre (2014), with two subscales, FP and FS, which capture different dimensions of enjoyment in learning a foreign language. English proficiency in this research was assessed using the scores from the CET-4 test. This standardized test is widely used for non-English major students in China to evaluate their English proficiency. Respondents were asked to provide their CET-4 scores while completing the questionnaires, allowing for a comprehensive analysis of the relationships between EI, FLE, and English proficiency.

To ensure the quality and relevance of the questionnaire items, face validity and content validity were assessed (Creswell, 2018). Face validity was checked by non-testers, who confirmed that the items were understandable and appropriate. Content validity was evaluated by three experts in relevant fields, who agreed that the items effectively reflected the theoretical framework. Both groups of validators concurred that the questionnaire items were well-aligned with the study's objectives and constructs.

Data Analysis Procedures

IBM SPSS Statistics (Version 29) was used to analyze the data for RQ1, which examined the levels of emotional intelligence (EI), foreign language enjoyment (FLE), and English proficiency among Chinese ethnic minority undergraduates. In addition, SmartPLS, a software for Partial Least Squares Structural Equation Modeling (PLS-SEM), was employed to address RQ2 and RQ3, which investigated the effects of FLE and EI on English proficiency, respectively, as well as RQ4, which examined the moderating role of EI in the relationship between FLE and English proficiency.

Preliminary Analysis of the Data Collected

This section presents the preliminary analysis of the collected data, including the respondents' profiles and the reliability and validity of the EI and FLE questionnaires. These analyses ensure the data are suitable for further statistical testing and that the instruments demonstrate acceptable measurement quality.

Profile of the Respondents

A total of 465 Chinese ethnic minority undergraduates aged 18 to 22 (M = 20.63) from six comprehensive universities in Yunnan Province participated in this study. Yunnan is one of the most ethnically diverse provinces in Southwest China, and the participants represented diverse academic fields, including the humanities, sciences, economics, management, and law. Having started learning English in the third grade of primary school, these students had studied the language for approximately 10 years before entering university, where their English proficiency generally ranged from CEFR B1 to B2 levels (Jin et al., 2022).

Reliability and Validity Measurements (EI Questionnaire)

To ensure the reliability and validity of the Emotional Intelligence (EI) questionnaire, several statistical analyses were conducted for the EI constructs, namely Appraisal and Expression of Emotion (AOE), Use of Emotion (UOE), and Regulation of Emotion (ROE). Covariance-based Structural Equation Modeling (CB-SEM) was employed to test the Confirmatory Factor Analysis (CFA), as it provides model fit indices and is suitable for factor-based models (Dash & Paul, 2021).

Table 1. *Construct reliability and validity of the EI questionnaire*

	Cronbach's alpha (standardized)	Cronbach's alpha (unstandardized)	Composite reliability (rho_c)	Average variance extracted (AVE)
AOE	0.960	0.960	0.960	0.648
UOE	0.949	0.949	0.950	0.653
ROE	0.958	0.958	0.958	0.697

As shown in Table 1, the internal consistency reliability values are 0.960 for AOE, 0.958 for ROE, and 0.949 for UOE, all of which exceed the threshold of 0.70 (Hair et al., 2022). Likewise,

the AVE values for AOE (0.648), ROE (0.697), and UOE (0.653) are all above 0.50, indicating satisfactory convergent validity (Hair et al., 2022).

Table 2. *Discriminant validity heterotrait-monotrait ratio (HTMT) of EI*

	AOE	UOE	ROE
AOE			
UOE	0.429		
ROE	0.419	0.392	

Based on Henseler et al. (2015), it is proposed that the heterotrait-monotrait ratio (HTMT) is an accurate approach for evaluating discriminant validity. To establish discriminant validity, the HTMT value should be less than 0.85 or 0.90. As presented in Table 2 above, the HTMT values of 0.429, 0.419, and 0.392 are all below 0.85, thereby meeting the requirement for discriminant validity.

Table 3. *Fit analysis for EI*

	Estimated model	
Chi-square	722.487	
P value	0	
ChiSqr/df	1.468	<5
RMSEA	0.032	<0.08
GFI	0.913	>0.9
AGFI	0.901	>0.9
SRMR	0.031	<0.08
NFI	0.946	>0.9
TLI	0.981	>0.9
CFI	0.982	>0.9

As shown in Table 3, the Chi-square/degrees of freedom ratio (ChiSq/df) is presented as one of the commonly used indices for assessing model fit. A Chi-square value of 3.0 or below (or, in some cases, 5.0 or below) is generally considered indicative of an acceptable model fit (Dash & Paul, 2021). The Tucker–Lewis Index (TLI) value is 0.981, which exceeds the recommended threshold of 0.90. Similarly, the Comparative Fit Index (CFI) evaluates the fit of the proposed model relative to a baseline (null) model while accounting for sample size and model complexity. Higher CFI values indicate a better model fit, with values of 0.90 and above considered acceptable (Hair et al., 2020). Overall, the reported fit indices indicate that the model demonstrates a good fit to the data.

Reliability and Validity Measurements (FLE questionnaire)

The same procedures applied to the EI questionnaire were also used to evaluate the reliability and validity of the FLE questionnaire, which comprised two constructs: FLE-private (FP) and FLE-social (FS). The specific details are as follows:

Table 4. *Internal consistency reliability of FLE*

	Cronbach's alpha (standardized)	Cronbach's alpha (unstandardized)	Composite reliability (rho_c)	Average variance extracted (AVE)
FP	0.968	0.968	0.968	0.716
FS	0.943	0.943	0.944	0.651

As illustrated in Table 4, the two constructs are FP (0.968) and FS (0.943). Cronbach's alpha coefficient is above the minimum of 0.70, which serves as a good representation of a construct's good reliability. For the FP dimension, the AVE value is 0.716, for the FS dimension, the AVE value is 0.651, and the AVE values for both dimensions exceed the recommended threshold of 0.5, confirming that the measurements demonstrate good convergent validity.

Table 5. *Discriminant validity heterotrait-monotrait ratio (HTMT) of FLE*

FP	FP	FS
FS	0.541	

As Table 5 shows, the HTMT of FP and FS is 0.541, it is below 0.85, so it meets the requirement of discriminant validity.

Table 6. *Fit analysis for FLE*

	Estimated model	
Chi-square	662.067	
P value	0	
ChiSqr/df	3.522	<5
RMSEA	0.074	<0.08
GFI	0.869	>0.85
AGFI	0.838	<0.85
SRMR	0.042	<0.08
NFI	0.93	>0.9
TLI	0.943	>0.9
CFI	0.949	>0.9

As Table 6 shows, the value for ChiSq/df is 3.522, which indicates a good model fit. TLI value is 0.943. CFI is 0.949. All key indices meet or exceed the thresholds for a good model fit, indicating that the tested model is robust and well-suited for the data.

Research Results

The results of the four research questions will be discussed in the following sections.

Levels of EI, FLE, and English Proficiency Among Chinese Ethnic Minority Undergraduates (RQ1)

Following the guidelines proposed by Oxford and Burry-Stock (1995), the mean value index was used to assess the levels of EI and FLE, with the index values categorized into three levels: low (1.0–2.4), medium (2.5–3.4), and high (3.5–5.0).

Table 7. *Descriptive statistics of the study variables*

Variable	N	Minimum	Maximum	Mean	Std. deviation
EI	465	1.70	3.23	2.4627	.31507
FLE	465	1.39	4.77	3.1019	.64584
CET-4	465	3.25	4.87	4.0817	.37132

As shown in Table 7, the overall EI score is 2.46, classified as low (1.0–2.4), with a standard deviation of .31507. This suggests that, on average, participants may find it challenging to accurately recognize, regulate, and apply emotions to improve their performance. The overall score for FLE is 3.10 (medium), with Std. Deviation of 31507. This suggests moderate enjoyment in learning a foreign language among the participants. The mean score of 408.17 for the CET-4 is below the passing threshold of 425, where the maximum is 710. This shows that participants who scored below the level were generally considered to demonstrate insufficient English proficiency. This average implies that many test-takers may struggle with some areas of English, mainly as assessed by the CET-4, which often emphasizes reading comprehension, translation, writing, and listening skills. The lower-than-expected mean score suggests that, despite potential effort or interest, there may be gaps in effective study strategies or instructional quality impacting these students' CET-4 performance. The mean value of FLE is medium, and the EI level is low, but these factors may play a role in motivation and learning outcomes, though they do not fully support high CET-4 performance.

Effects of FLE on English Proficiency Among Ethnic Minority Undergraduates (RQ2)

To address RQ2, firstly, correlation analysis was conducted to examine the relationship between FLE and English proficiency and to determine the strength of this association. Hair et al. (2020) suggested that a correlation of 0 signifies no relationship, while a correlation of ±1.0 indicates a perfect relationship. For interpreting correlations between 0 and 1.0, Cohen's (1988) guidelines were used: correlations (r) between ±0.1 and ±0.29 indicate a small relationship, those between ±0.30 and ±0.49 indicate a medium relationship, and correlations above ±0.50 indicate a strong relationship.

Secondly, regression analysis investigates how FLE and EI affect English proficiency. The analysis aims to determine whether these factors significantly predict students' performance in

English. By quantifying these relationships using regression coefficients and significance levels, this analysis offers insights into which factors are crucial to fostering English proficiency in this context. A $p < .05$ is generally interpreted as indicating a statistically significant effect (Pallant, 2016). The following formula was included in Cohen's (1988) measure of the effect size in regression f^2.

$$f^2 = \frac{R^2}{1 - R^2}$$

This analysis examines the effect of the independent variable (IV) on the dependent variable (DV). Effect sizes are interpreted using Cohen's (1988) guidelines, where $f^2 \geq 0.02$, $f^2 \geq 0.15$, and $f^2 \geq 0.35$ indicate small, medium, and large effects, respectively. The R^2 value represents the variance in the dependent variable explained by the independent variable(s).

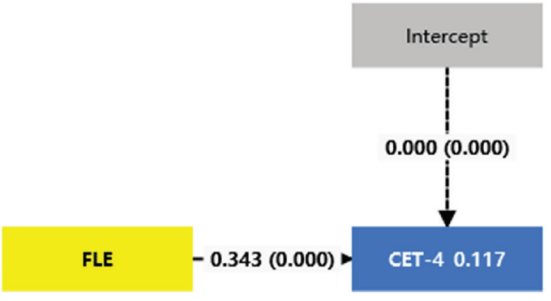

Figure 2. *Path model for the effect of FLE on English proficiency (CET-4)*

Figure 2 shows the result of RQ 2, where the path coefficient is 0.343, indicating a medium positive correlation of FLE with English proficiency. The significance level is 0.000, which means this relationship is statistically significant ($p < 0.05$), suggesting that greater FLE is associated with better English proficiency. Furthermore, R-square is 0.117. Applying Cohen's (1988) formula, the effect size of FLE on English proficiency was $f^2 = 0.117 / (1 - 0.117) = 0.133$. This value represents a small effect size, approaching the threshold for a medium effect. The effect size of FLE on English proficiency is small.

Effects of EI on English Proficiency Among Ethnic Minority Undergraduates (RQ3)

Similar to the analysis of RQ2 (i.e., the effect of FLE on English proficiency), EI was also analyzed using correlation and regression analyses to examine its relationships and effects.

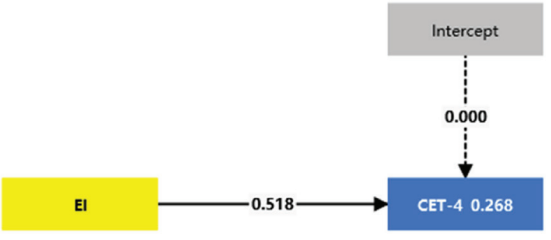

Figure 3. *Path model for the effect of EI on English proficiency (CET-4)*

Figure 3 shows that the path coefficient is 0.518, indicating that there is a strong positive relationship between EI and English proficiency. The P value is 0.000, confirming that this relationship is statistically significant, suggesting that higher EI is associated with better English proficiency. The R-square value is 0.268. Based on Cohen's (1988) formula, the effect size of EI is $f^2 = 0.268 / (1 - 0.268) = 0.366$, indicating a large effect. This suggests that EI has a significantly positive impact on students' English proficiency.

EI as a Moderator Between FLE and English Proficiency Among Ethnic Minority Undergraduates (RQ4)

When interpreting the results of a moderation analysis, the focus is on the significance of the interaction term. If the interaction term significantly affects English proficiency, it indicates that the moderator EI has a significant moderating role in the relationship between the IV and DV. This assessment is carried out using PLS bootstrapping. Based on Chua (2024), to test the moderation effect, the β (Beta coefficient), T-statistics and P-value should be reported. For β, this value represents the strength and direction of the moderation effect. A positive or negative β value indicates how the moderator influences the relationship between FLE and English proficiency. The T-statistic is used to determine whether the β coefficient is significantly different from zero (no effect). The larger the absolute value of the T-statistic, the more likely it is that the effect is statistically significant. A p-value less than 0.05 is typically considered statistically significant.

According to Hair et al. (2022), in moderation, it is important to focus on the f^2 effect size of the interaction effect, which reveals the extent to which the moderation contributes to explaining the variation in the endogenous construct. In addition, the moderation analysis calls for the reporting of f^2 effect sizes (Memon et al., 2019). Regarding moderation, Kenny (2018) proposed a guideline for interpreting the effect size of moderating effects.

Table 8. *Guidelines for the moderating effect size of EI*

Moderating effect	Value
Small	0.005
Medium/Moderate	0.010
Strong	0.025

Table 8 presents the guidelines for interpreting moderating effect sizes, where values of 0.005, 0.010, and 0.025 indicate small, moderate, and large effects, respectively. These thresholds reflect the magnitude of the moderator's contribution to explaining the relationship between the IV and DV. On the other hand, Figure 4 below illustrates the path model showing the relationships among FLE, EI, and English proficiency.

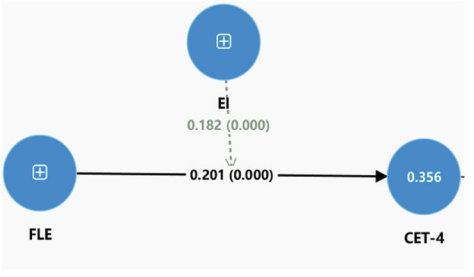

Figure 4. *Moderation model of EI between FLE and English proficiency (CET-4)*

Table 9. *Path coefficients*

	Path coefficients
FLE -> CET-4	0.201
EI x FLE -> CET-4	0.182

As shown in Table 9, the regression coefficient for the interaction term "EI x FLE" is significant ($\beta = 0.182$, $p = 0.000$).

Table 10. *F-Square list*

	f-square
EI -> CET-4	0.257
FLE -> CET-4	0.041
EI x FLE-> CET-4	0.093

Table 10 shows that EI significantly and positively moderates the relationship between FLE and English proficiency, with a moderation effect size of 0.093 (large), more significant than 0.025 as suggested by Kenny (2018), indicating that EI significantly and positively moderates the relationship between FLE and English proficiency.

To compare Figure 2 regression analysis of FLE and CET-4 with Figure 4 path model of moderation, it can be seen that the straightforward regression model in Figure 1: FLE → CET-4 (without Moderator EI), FLE has a significant positive effect on CET-4 scores. The explained variance (R^2 for CET-4) is 0.117, meaning that FLE alone explains about 11.7% of the variance in CET performance. In Figure 5, the explained variance (R^2 for CET-4) is 0.356; R^2 increases from 0.117 to 0.356, showing that the model with EI accounts for much more variance in CET-4 scores. EI appears to play a moderating role in the relationship between FLE and CET-4. The differences demonstrate that EI significantly contributes to the prediction of CET-4 performance and enhances the explanatory power of the model, reflecting the idea that students with higher emotional intelligence may better leverage their enjoyment in learning to achieve higher performance.

To explain the moderation effects of EI, the simple slope analysis is presented in Figure 5. It illustrates how EI moderates the relationship between FLE and CET-4 scores.

When EI is low (red line at -1 SD), the impact of FLE on CET-4 is minimal or nearly flat, suggesting that enjoyment alone has little effect on performance if a student lacks emotional intelligence. At an average level of EI (blue line), FLE still has a positive influence on CET-4 scores, but the effect is less pronounced. In contrast, when EI is high (represented by the green line at +1 SD), the positive effect of FLE on CET-4 is the strongest, indicating that students with higher EI are better able to translate their enjoyment of language learning into improved test performance. These results highlight the importance of EI in enhancing the benefits of foreign language enjoyment on English proficiency.

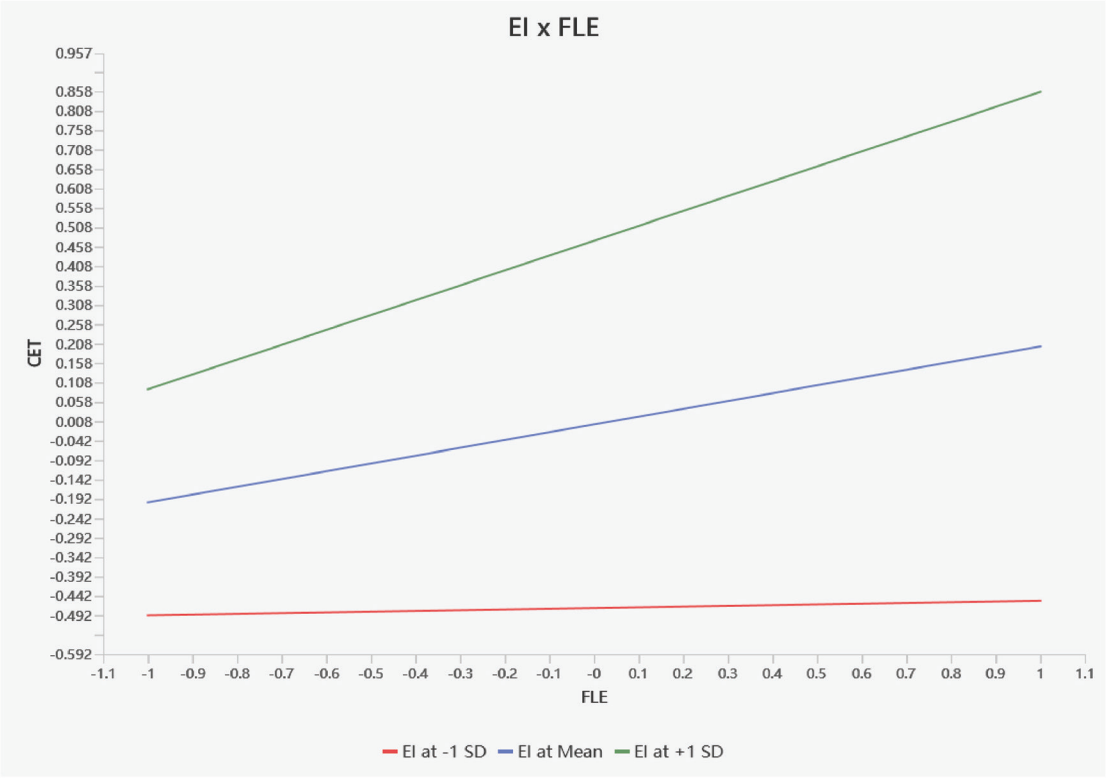

Figure 5. *Simple slope graph*

Discussion of the Results

This section discusses the research findings based on RQs 1 to 4. The details of the findings are presented as follows.

Levels of EI, FLE, and English Proficiency Among Chinese Ethnic Minority Undergraduates: A Discussion of Key Results

The results obtained in this study demonstrated that the general level of EI score is low among ethnic minority students in Yunnan province, indicating that participants may find it challenging to accurately appraise, express, manage, and utilize emotions to improve their performance. Low EI can impact various aspects of personal and social functioning, potentially affecting participants' motivation, resilience, and interpersonal skills in academic and social settings.

The EI levels in this study fell within the low range and were lower than those reported in previous research involving mixed student samples, in which over 90% were EFL Han majority learners (Shao et al., 2013; Yu et al., 2015; Li, 2020). This pattern aligns with Li (2018), who reported that bilingual learners in China generally perceived their EI levels as moderate to high, suggesting comparatively higher EI among the majority bilingual learners. Similarly, Alqarni and Dewaele (2018) found that bilinguals scored higher than monolinguals on EI in Arabic.

This result may be attributed to several possible reasons. Firstly, ethnic minority undergraduates' low English proficiency may affect their EI. Since various English proficiency tests revealed that the ethnic minority learners lag far behind their counterparts of the Han Chinese (Liu, 2020; Wang, 2022) and that this difference is more significant in the western region

of China, especially in Yunnan and other provinces inhabited by ethnic minorities. Secondly, the lower EI of trilingual ethnic minority students can be attributed to their moderate or low proficiency across multiple languages (mother tongue and Chinese), which significantly affects their emotional and social development. A majority of these students rate their proficiency as average in their native language (63.2%), Mandarin (48.8%), and English (56.8%), with 25.2% even considering their English skills as poor. This limited proficiency impacts their ability to express emotions clearly and effectively, especially in Mandarin and English, which are often the primary languages used in educational and social settings. Difficulty in articulating emotions can lead to frustration and reduced emotional self-awareness, the key components of EI.

The medium level of FLE echoes that of Huang (2021), who states that the levels of ethnic minority participants' FLE were at a medium level. This suggests that ethnic minority college students generally exhibit an average level of FLE, indicating that while they do not experience exceptionally high levels of enjoyment, they still find learning a foreign language a somewhat positive and meaningful experience. This suggests they derive satisfaction from acquiring new language skills, as these abilities can open up academic, professional, and social opportunities. Given their multilingual backgrounds, these students may view foreign language learning as an extension of their linguistic repertoire, allowing them to engage more effectively with diverse cultures and broaden their communication skills.

Due to their English insufficiency, it might be that minority students face challenges and underperform in mainstream English classrooms. Several factors affect students' English learning, including discourses of ethnic difference, an examination-oriented approach, limited linguistic capital (Chen & Manosuthikit, 2025), lower intrinsic interest motivation than Han majority (Jiao et al., 2022) and low perceived value of English, as well as the linguistic distance of third language (Yang, 2005), and resource limitation (Chakraborty et al., 2026).

In summary, ethnic minority college students' EI and FLE levels are influenced by sociocultural (Li, 2018) and psychological factors (Zhao et al., 2024). Their multilingual and multicultural contexts create emotional and cognitive challenges (Feng & Adamson, 2018), while cultural norms and educational pressures may further hinder emotional regulation. Despite these difficulties, they find foreign language learning moderately enjoyable, viewing it as a valuable skill for academic, professional, and social growth.

Discussion of the Effect of FLE on English Proficiency Among Chinese Ethnic Minority Undergraduates

Firstly, the research result in Figure 2 showed that FLE would statistically significantly and positively (effect size, small) affect English proficiency among ethnic minority college students in Yunnan Province. This relationship can be explained through the BBT, which posits that positive emotions play a crucial role in cognitive, emotional, and academic development. As a key positive academic emotion, FLE contributes to English proficiency by broadening thought-action repertoires, undoing negative emotions, enhancing psychological resilience, and building personal resources. This result corresponds to Jiang and Dewaele (2019), Khajavy et al. (2018) and Yang (2021) that FLE predicts FL proficiency, enhances greater willingness to communicate in the target language and encourages learners to explore unfamiliar linguistic and cultural contexts creatively. When students enjoy learning English, they are more likely to be motivated, engaged, and persistent, leading to improved academic performance. In Yunnan's multilingual and multicultural environment, FLE is critical in reducing anxiety and fostering a positive emotional connection with the language. Students who enjoy the social aspects of language learning, such as communicating with peers in English, are more likely to actively participate

in the learning process, which ultimately boosts their English proficiency. This highlights the importance of creating enjoyable and interactive learning experiences to enhance language acquisition and academic success among ethnic minority students.

However, the small effect size supports previous research (Li, 2025), which found that the total effect size of FLE on English proficiency is higher among high-proficiency/advanced-stage foreign language learners than among low-proficiency/early-stage foreign language learners in China, as reflected in the participants' scores, which fell below the level considered indicative of English language deficits. In this research, 81% of participants rated their self-perceived English proficiency as poor to average, while 96.1% had actual English proficiency levels ranging from elementary (220–430) to lower intermediate (431–500). The maximum score is 710, and the passing score is 425. Self-perceptions of one's own English proficiency level are found to be linked to levels of FLE (Botes et al., 2022; Li, 2025). This suggests that the participants' relatively low English proficiency may have limited FLE's overall impact on their English proficiency, meaning that learners with weaker language skills may face greater challenges in translating enjoyment into measurable English learning success. Factors such as the complexity of multilingual learning environments, varying proficiency levels, learning strategies and styles (Liu, 2023) and religious affiliation (Zhao & Wang, 2025) may contribute to the limited effect size. This indicates that other variables, such as EI or FLE, might play a more significant role in shaping English proficiency in this group.

A second possible reason could be the way English proficiency is evaluated. This study measures English proficiency using CET-4, a standardized exam primarily assessing receptive skills, listening, reading, translation and writing, with little emphasis on speaking and real-world communication. Since FLE is closely linked to students' willingness to communicate, motivation, and engagement in enjoyable learning activities, its impact may be more pronounced in subjective or classroom-based performance evaluations, where speaking and interactive skills are considered. However, in a standardized test like CET-4, which focuses on structured knowledge over communicative fluency, the influence of FLE may be diminished. This could explain why FLE has a limited direct effect on English proficiency in this context, as CET-4 might not fully capture the benefits of positive emotions in language learning.

Discussion of the Effect of EI on English Proficiency Among Chinese Ethnic Minority Undergraduates

The research result in Figure 3 showed that there is a strong correlation between EI and English proficiency, and the effect size of EI on English proficiency is large. This result is in line with Hamdzah et al. (2020) and Li (2020), who suggest that EI significantly predicts the students' English performance; students with higher overall EI tend to perform better in English proficiency.

In a Chinese multilingual context, it can be justified that EI helps students manage stress and anxiety from juggling multiple languages, allowing them to stay focused on English learning. EI enhances communication and collaboration skills (Zheng & Zhou, 2022), enabling students to practice English effectively while navigating a trilingual context (Dekeyser et al., 2024). EI fosters a positive attitude and persistence, enabling students to overcome challenges in a trilingual environment. Multilingual individuals may exhibit higher levels of empathy than monolinguals, and bilinguals may have higher cultural intelligence, which may make them more empathetic (Chen & Fang, 2022). The effect of EI on foreign language proficiency is stronger for people from collectivistic cultures that value group harmony and cooperation (Wang & Liu, 2023).

Discussion of EI as a Moderator Between FLE and English Proficiency Among Ethnic Minority Undergraduates

As discussed in 4.3, EI significantly and positively moderates the relationship between FLE and English proficiency. Specifically, higher levels of EI and greater enjoyment in learning English are linked to better English proficiency. This result echoes Chen et al. (2024) that EI strongly predicted FLE and played a crucial role in its significant interactions with foreign language anxiety and FLE. EFL learners, who are more emotionally intelligent, reported enjoying their English classes more (Resnik et al., 2021), and EI had a substantial positive influence on FLE (Wang & Wang, 2024). The result also supports the research that effective management and regulation of emotions is a critical component of the language learning process (Oz et al., 2015; Ranjbar & Khomeijani, 2026).

In the Chinese multilingual context, EI significantly moderates the relationship between FLE and English proficiency. When FLE is high, students with higher EI experience a greater positive impact on their English proficiency. They can better manage emotions and navigate language-learning challenges, allowing them to maximize the benefits of their enjoyment. Conversely, for students with lower EI, the positive effects of high FLE are less pronounced, because the weaker emotional regulation may hinder their ability to affect enjoyment fully. When FLE is low, high EI helps reduce the negative impact, enabling students to maintain resilience and perform well despite limited enjoyment. This is particularly crucial in a multilingual and culturally diverse learning environment where language anxiety and self-efficacy issues are common. EI is an important resource, strengthening the effect of FLE. However, ethnic minority undergraduates' FLE may also be moderated by unstable emotions from academic pressures and linguistic challenges, as Ikizer and Ramírez-Esparza (2017) showed that being more multilingual resulted in significantly lower emotional stability. While they find value in language learning, difficulties such as unfamiliar grammatical structures and pronunciation differences may hinder their enjoyment.

Pedagogical Implications

This study suggests practical implications for policymakers, school principals, and English language teachers. Including EI training in the curriculum, creating a supportive learning environment, and providing targeted support for ethnic minority students can collectively promote students' holistic development. This study highlights the need to move beyond traditional language teaching methods and to incorporate strategies that foster students' emotional and psychological well-being as part of language learning.

Given the importance of EI, it is essential to develop students' appraisal, regulation, and use of emotions in English learning within a supportive classroom environment where they feel comfortable expressing themselves. Teachers can model emotional regulation by remaining calm and empathetic, demonstrating constructive ways of managing frustration and stress. Encouraging reflection through journaling or discussions can enhance self-awareness, while activities such as role-playing and perspective-taking can foster empathy and social awareness. Integrating mindfulness practices, constructive feedback, and emotional learning activities further supports self-regulation, emotional expression, and positive interpersonal relationships. This approach not only enhances language learning but also promotes a more inclusive, emotionally intelligent classroom environment, equipping students with greater emotional resilience and supporting their academic success in diverse multilingual contexts.

Conclusion

This research explores the relationship between EI, FLE, and English proficiency among ethnic minority undergraduates in Yunnan, China. The results show that students have low EI and

average FLE, indicating they face emotional challenges when dealing with different languages and cultures. While FLE positively influences English proficiency, its effect is modest, likely because of students' lower proficiency levels and the limitations of standardized testing, which focuses on receptive skills instead of communicative abilities. Importantly, EI plays a significant moderating role in enhancing the positive impact of FLE on English proficiency and helping students manage emotional challenges in the learning process. These results highlight the need for teaching methods that build EI and offer engaging, culturally relevant learning experiences. This will help ethnic minority students overcome language and emotional challenges, leading to better language skills and academic success.

The research provides some contributions. First, it establishes EI as a moderating variable between FLE and English achievement, indicating that the beneficial effect of FLE on English learning outcomes is contingent upon students' EI capacities. Second, it advances multilingual learning theory by demonstrating the critical moderating role of EI, an underexplored dimension in existing multilingual acquisition models. Third, it reveals a novel role for EI within China's multilingual minority student population, highlighting its importance in shaping language learning outcomes. Together, these findings advocate for a holistic educational approach that nurtures both emotional and academic growth, ultimately improving student outcomes.

Despite the strengths in this study, there are also some limitations. Firstly, the study did not consider cultural differences among different ethnic minority groups, which can influence how EI and FLE are understood and experienced. Secondly, the diversity of the sample, such as unequal representation of different ethnic groups or variations in educational resources across regions, may have influenced the results and reduced the generalizability of the findings. To address these limitations, future research can take several directions. Firstly, longitudinal research can be conducted to provide deeper insights. For example, studies that track students over an extended period can help explore the long-term impacts of EI and FLE on English proficiency. In addition, introducing experimental or intervention-based designs can further enrich the findings. For instance, emotion-regulation training programs may be implemented to test the causal relationships among EI, FLE, and English learning outcomes more rigorously. These approaches would not only strengthen the validity of the research but also offer practical implications for language education.

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