JSLTE

Journal of Studies in Learning and Teaching English

Online ISSN: 2476-7727, Print ISSN: 2251-8541

https://jslte.shiraz.iau.ir/

14(2), 2025, pp. 107-125

https://doi.org/10.82531/202411121190310

Research Article

Structural Modeling of EFL Academic Emotions, Motivation for Learning, Reading Performance and Writing Proficiency: Exploring the Mediating Role of Self-efficacy

Mina Exir [1], Mehrdad Rezaee *[2], Kourosh Akef [3]

1. Islamic Azad University of Tehran, Central Branch, Tehran, Iran

2, 3. Faculty Member of English Language Department at Islamic Azad University of Tehran, Central Branch, Tehran, Iran

* Corresponding author: **Mehrdad Rezaee,** Email: mehr351@yahoo.com

ARTICLE INFO

Submission History

Received: 2024-11-12
Accepted: 2025-04-27

Keywords

Structural Equation Modeling
EFL Learners' Self-efficacy
Academic emotions
Motivation for learning
Reading performance
Writing proficiency
Iranian EFL learners

ABSTRACT

This study employed structural equation modelling (SEM) to investigate the interplay among self-efficacy, academic emotions, motivation for learning, and speaking performance among 384 English as a Foreign Language (EFL) learners selected through convenience sampling. With a growing emphasis on the multifaceted nature of language learning, understanding the dynamics between these variables is crucial for designing effective language education interventions. The primary objective was to discern the direct and indirect relationships between self-efficacy, academic emotions, motivation for learning, and speaking performance among EFL learners. To achieve this, quantitative data were collected through surveys administered to a sample of EFL learners, and SEM was employed for data analysis. The results revealed several significant findings. Firstly, self-efficacy positively influenced both motivation for learning and academic emotions. Secondly, motivation for learning was found to be a key predictor of speaking performance, mediating the relationship between self-efficacy and speaking performance. Thirdly, academic emotions significantly shaped EFL learners' motivation for learning and speaking performance. These findings underscore the importance of addressing learners' self-efficacy beliefs, fostering positive academic emotions, and enhancing motivation for learning to improve speaking performance in EFL contexts. The study highlighted the need for educators to implement comprehensive approaches that consider learners' psychological factors alongside linguistic development. In conclusion, this research contributes to the existing literature by elucidating the intricate relationships between self-efficacy, academic emotions, motivation for learning, and speaking performance among EFL learners.

Introduction

Mastering a foreign language, mainly English, has become crucial for effective communication in today's globalized world. The ability to convey information and engage in a shared language fosters a common way of thinking, articulating, and sharing among stakeholders, thus enhancing the overall communication process (Khalil, et al., 2021). As a global lingua franca, English has seen widespread use over recent decades, making proficiency in this language essential for survival and success in various professional and personal spheres (Dewey, 2007). The modern information age further underscores the importance of learning a foreign language as a tool for personal advancement, enabling success across fields such as economics, social development, cultural affairs, and technological advancements (Folaron, 2006). Relying solely on one's native language for communication has become increasingly impractical. Despite its critical role, proficiency in a foreign language poses significant challenges for learners.

Academic achievement, exceptionally high scores, is crucial at all educational levels, yielding positive outcomes for students and educational programs. Identifying the factors influencing learners' academic success has been a focal point in educational psychology research (Mega et al., 2014). Among these factors, academic emotions have garnered considerable interest. Numerous studies (e.g., Başbay & Gözüm, 2019; Lee, 2022; Shen et al., 2023) highlight the interplay between motivation, fundamental psychological needs, and academic achievement in foreign language acquisition. The psychological well-being of English as a Foreign Language (EFL) learners has become a critical area of interest in higher education, with research increasingly focusing on how emotional experiences impact learning processes (Harley et al., 2019).

Emotions are integral to learning, requiring learners to manage their feelings to ensure academic success. Emotion regulation (ER) is a complex, dynamic process involving strategies to initiate, inhibit, or modulate personal responses (Gross, 1998; Gross, 2015). Academic Emotion Regulation (AER) is a guiding mechanism that helps learners navigate and control their emotional experiences in educational settings (Khajavy & Aghaee, 2022). The impact of ER extends to all cognitive aspects of learning, including language acquisition (Khajavy et al., 2020). Given the crucial role of AER in learners' emotional states and mental health, it is essential to understand how AER influences and is influenced by other learner-centred components.

The advent of positive psychology in second/foreign language learning has led scholars to explore new trends in language teaching, emphasizing well-being and positive constructs (Wang et al., 2021). Self-efficacy, a critical individual difference influencing foreign language learning, plays a significant role in students' well-being and academic success. Bandura (1997) defined self-efficacy as a belief in one's abilities to achieve goals, which correlates with various teacher and learner-related concepts. Effective teachers with high self-efficacy are more engaged and capable of managing classroom dynamics, whereas those with low self-efficacy may avoid challenging tasks (Schunk & Mullen, 2012). In the context of EFL learners, self-efficacy influences judgments about successful outcomes, interactions with academic achievement, engagement, higher-order thinking skills, and social interactions (Zheng & Zhou, 2022).

Self-efficacy is foundational to motivation, performance, and emotional well-being (Bandura, 2012). Learners with low self-efficacy often avoid challenging tasks, focusing on personal doubts and failures, whereas those with high self-efficacy

demonstrate the opposite behaviours. Since its introduction in the 1960s, self-efficacy has been extensively researched across various fields, including health interventions, engineering education, nursing education, computer-based instruction, and online education (Alibakhshi et al., 2020).

Academic Self-Efficacy (ASE) pertains to learners' beliefs about their classroom performance (Bandura, 2012) and includes self-regulated learning, which helps learners plan, manage, and evaluate their tasks and learning outcomes (Zimmerman et al., 2017). Extensive research has shown that ASE positively affects academic success, motivation, and perceptions of online learning systems (Lim et al., 2016).

Motivation, a fundamental determinant of learners' efforts and success in second language acquisition, has been extensively studied (Dornyei & Ryan, 2015). Motivation in language learning involves self-regulated learning, which requires significant effort and time (Pintrich, 1999). Self-regulatory strategies help learners maintain motivation and enhance academic achievement in second language learning (Tseng & Schmitt, 2008).

Understanding the complex interplay between self-efficacy, academic emotions, motivation, and language achievement is critical, particularly in unique cultural contexts such as Iran, where cultural nuances, societal expectations, and educational systems influence EFL learners' experiences (Alibakhshi et al., 2021). This study aims to address the research gap by exploring these interrelationships in the Iranian context, employing advanced methodological approaches like structural equation modelling (SEM) to provide a comprehensive understanding of these dynamics and offer practical strategies for educators and policymakers to enhance EFL education in Iran

Literature Review

In this part, the primary studies on learners' self-efficacy, academic emotions, academic achievement, and self-determined motivation are reviewed to comprehensively understand the interconnections among these constructs and their impact on educational outcomes.

Learners' Self-Efficacy

As defined by Pajares (1996), self-efficacy refers to one's subjective beliefs regarding competence in performing a specific task. Following Bandura's seminal work on self-efficacy in 2001, it has become a focal point in psychological research. Researchers, including Bandura (2001), have discussed how self-efficacy significantly influences an individual's psychological states, behaviours, and motivation. This influence extends to decision-making, effort exerted, and persistence in facing obstacles and failure (Usher & Pajares, 2008).

Bandura (1997) proposed four sources contributing to self-efficacy: mastery experiences, vicarious experiences, social persuasion, and physiological and emotional states. Mastery experiences suggest that past successes raise self-efficacy, while failures lower it. Vicarious experiences involve observing others, providing opportunities for comparison and learning, and enhancing self-efficacy through competent models (Bandura, 2012). Social persuasion, encompassing encouragement and positive feedback, strengthens self-efficacy, whereas punishment and negative comments weaken it (Bandura, 2001).

Jalaluddin et al. (2010) supported the notion that teacher feedback and assistance influence students' self-efficacy in writing. Bong and Skaalvik (2003) concluded that only constructive feedback had a positive impact, effective when the source was reputable and reliable. Therefore, realistic verbal encouragement is crucial for promoting students'

self-efficacy. Additionally, students' physiological and emotional states, such as apprehension, negatively correlate with self-efficacy (Wang et al, 2020). Enhancing self-efficacy involves reducing aversive arousal and fostering positive sentiments.

Zimmerman et al. (2017) reported that self-efficacy contributes to learners' motivational perceptions and educational achievement. Previous studies in second language learning also illustrated that self-efficacy is a profound indicator of learners' accomplishment in English learning. Kim et al. (2015) posited that Korean learners with high self-efficacy employed more self-regulated learning strategies and experienced higher language learning success than their peers with low self-efficacy. Wang et al. (2021) found similar results in a Chinese university setting, indicating a strong correlation between self-efficacy levels and English language learning success.

Academic self-efficacy refers to a student's confidence in learning or executing specific tasks in a particular learning atmosphere (Bai et al., 2021). It is connected to learning motivation; learners with high self-efficacy tend to engage in challenging activities, make numerous attempts to perform them, and remain committed despite difficulty (Chowdhury & Shahabuddin, 2007). High self-efficacy learners adopt more effective learning strategies and experience less stress (Zajacova et al., 2005). Academic stress, learning strategies, and learning motivation mediate the association between academic self-efficacy and success.

A significant body of research concentrates on the self-efficacy of EFL learners. Ho (2016) reported that younger learners exhibited lower self-efficacy for English writing than older learners. In a meta-analysis, Goetze and Driver (2022) found systematic discrepancies in the effect size for students' first language, second language, competence level, self-efficacy and achievement type. Yelgeç and Dağyar (2020) found that Turkish EFL learners' metacognitive awareness did not mediate the association between foreign language anxiety and self-efficacy beliefs.

Academic Achievement

The promotion of learners' academic success is a primary goal of education. Variables relevant to academic success are addressed in various studies (Lim et al., 2016). As Lee (2022) proposed, these variables include family background, educational context, instructor, and learner. Lee and Ha (2016) explored learning-related variables that impact the academic success of South Korean learners using structural equation modelling. They found that academic self-efficacy, learning motivation, and learning strategy significantly influenced learning success.

Lee and Chung (2014) examined the structural linkage of factors influencing academic success. They suggested that learners' academic success relies on active engagement, participation, learning motivation, and support from instructors and peers. Maleki et al. (2024) highlighted self-regulated learning and teacher-learner interaction as critical variables in EFL learners' academic achievement. Atchia and Chinapah (2023) found that school leadership, learners, tuition teachers, school teachers, and socioeconomic factors affect learners' academic success.

Academic Emotions

Hargreaves (1998) argued that the concept of emotion originates from the Latin word "emovere," implying that emotions stimulate individuals to act in specific ways. Emotions are considered multi-component concepts with various dimensions explored in history, physiology, sociology, and philosophy (Hargreaves, 1998). Academic emotions are assorted based on their valence (positive or negative) and activation (activating or deactivating) (Pekrun et al., 2017). Positive

emotions facilitate learning, while negative ones hinder achievement (Rentzios & Karagiannopoulou, 2021).

Recent research in positive psychology has focused on the role of positive emotions in learning (Villavicencio & Bernardo, 2013). Boekaerts (2003) suggested that positive and negative emotions coexist, making their relationship more complex. Positive emotion is negatively linked to achievement when it indicates overconfidence (Robinson et al., 2017). Though often associated with poor performance, negative emotions can signal the need for more effort and attention, leading to adaptive learning outcomes (Robinson et al., 2017).

Studies have shown the intricate relationship between academic emotions and personal factors (Rentzios & Karagiannopoulou, 2021; Sander et al., 2020). For example, the need for cognition and a sense of coherence are linked with academic emotions and contribute to learning perceptions. The last two decades have seen a surge in studies on emotions in second/foreign language learning, driven by the positive psychology movement (Derakhshan, 2022; Dewaele et al., 2019; Wang et al., 2021; Wang & Jiang., 2022).

Heydarnejad et al. (2022) found that raising learners' awareness of their personality traits and self-assessment can promote practical learning and assessment. Zheng and Zhu (2022) highlighted the positive impact of collaborative learning and emotion regulation on EFL learners' foreign language enjoyment. Shen et al. (2023) concluded that Chinese university EFL learners exhibited medium levels of positive emotions, low levels of anger and anxiety, and medium to low-frequency use of self-regulated learning strategies.

Academic Motivation

Academic motivation is critical for learning, and decreased motivation often leads to academic failure (Esmaeilpour-Bandboni et al., 2017). Academic motivation involves internal processes that motivate individuals to engage in tasks and persevere in achieving academic goals (Haji Vosoogh et al., 2022). According to self-determination theory, academic motivation includes internal motivation, external motivation, and motivation (Deci & Ryan, 2012).

Lee et al. (2022) examined the relationship between language learning motivation, vocabulary learning strategies, and vocabulary knowledge. They found that motivation directly predicts vocabulary learning strategies and knowledge, with intrinsic motivation having a more substantial effect than extrinsic motivation. Li et al. (2022) identified four profiles of Chinese university students' motivation and engagement in foreign language learning, each exhibiting different levels of enjoyment, anxiety, and academic achievement.

Self-Efficacy and Academic Achievements

Self-efficacy, the belief in one's ability to achieve specific goals, has been consistently linked to academic success across various educational contexts. This relationship is multifaceted, encompassing aspects such as motivation, emotional regulation, and learning strategies.Self-efficacy plays a pivotal role in determining students' academic outcomes by influencing their persistence, resilience, and approach to challenges. Recent studies confirm its direct correlation with academic achievement, underscoring its role as a predictor of success. For instance, Xu (2024) found that self-efficacy mediates the effects of teacher support on academic outcomes, demonstrating its critical role in linking external motivators with internal learning capacities. Additionally, Theobald (2021) highlighted that self-regulated learning training programs, which enhance self-efficacy, significantly boost academic performance and motivation.

Moreover, self-efficacy is closely tied to emotional regulation and psychological well-being, which are essential for sustaining academic engagement. Xiyun et al. (2022) showed that teachers with high self-efficacy are better at managing their emotions, which positively impacts their students' learning experiences. This interplay suggests that interventions aimed at improving self-efficacy can also address emotional challenges, fostering a supportive and productive learning environment.

The ability of self-efficacy to foster effective motivation and self-regulation strategies is another vital dimension. According to Trautner and Schwinger (2020), students with strong self-efficacy beliefs are more likely to adopt and sustain effective learning strategies, leading to enhanced self-regulation and academic success. This capacity for self-direction not only improves immediate academic performance but also equips students with lifelong learning skills.

In addition to its universal benefits, self-efficacy interacts with contextual factors such as cultural adaptation and specific educational goals. Zhang et al. (2024) explored its role in an EFL context, finding that self-efficacy fosters resilience and a willingness to communicate, which are crucial for language learning. Such findings underscore the adaptability of self-efficacy across diverse academic environments, from general education to specialized fields like language acquisition.

The cumulative evidence points to self-efficacy as a cornerstone of academic achievement, functioning through its effects on motivation, emotional resilience, and self-regulation. Its influence spans multiple domains, demonstrating its critical role in enhancing students' educational experiences and outcomes. Moreover, fostering self-efficacy is not only beneficial for learners but also for educators, as it promotes a reciprocal cycle of positive reinforcement in the teaching-learning dynamic.

Self-efficacy is a significant predictor of GPA among college students and contributes uniquely to academic outcomes (Komarraju & Nadler, 2013). The correlation between self-efficacy and GPA is partly mediated by effort regulation, with self-efficacious students exhibiting heightened effort regulation and disciplined behaviour, fostering higher GPAs.

However, the literature presents nuanced perspectives. Galla et al. (2014) found predictive effects of self-efficacy on reading scores but not on mathematics scores, potentially due to standardized tests rather than GPA. Self-efficacy also mediates the relationship between learning outcomes and various factors, including academic attitudes, prior achievement, and homework quality.

Self-Efficacy and Language Proficiency

The association between self-efficacy and academic achievements extends to language proficiency (Nevill, 2008; Sanders-Reio et al., 2014). Writing self-efficacy, for instance, significantly predicts students' writing performance, influencing planning and revising efforts, with higher self-efficacy linked to superior writing outcomes (Sanders-Reio et al., 2014). Self-efficacy also positively correlates with language test performance (Raoofi et al., 2012). High self-efficacy learners adopt effective strategies, such as setting specific goals and self-monitoring, enhancing their language learning efficiency (Kazemkhah Hasankiadeh & Azari Noughabi, 2023). Vasseleu et al. (2021) observed that self-efficacy beliefs positively influence EFL learning through their impact on self-regulation.

Learners' Self-Efficacy and Academic Motivation

Self-efficacy and academic motivation are deeply intertwined, with each influencing learners'

engagement, persistence, and performance. Recent research has emphasized their critical roles in enhancing educational outcomes across diverse settings. Learners with high self-efficacy exhibit stronger motivation, as they believe in their ability to succeed. This belief fosters intrinsic motivation, encouraging learners to take on challenges and persist in the face of obstacles. Xu (2024) highlighted the mediating role of self-efficacy in shaping academic emotions and motivation, demonstrating that students with greater self-efficacy experience positive emotions and exhibit sustained effort in learning tasks. Furthermore, Zhang et al. (2024) found that self-efficacy significantly enhances willingness to communicate and resilience, particularly in language learning contexts, linking it directly to academic motivation.

Motivated learners are more likely to develop strong self-efficacy beliefs, creating a reciprocal relationship. Theobald (2021) emphasized that self-regulated learning training programs improve both self-efficacy and motivation, leading to better academic outcomes. Similarly, Trautner and Schwinger (2020) explored how motivation regulation strategies, influenced by self-efficacy beliefs, support learners' sustained academic engagement. These findings underline the cyclical interaction between these constructs, where motivation reinforces self-efficacy, and vice versa.

The interaction between self-efficacy and motivation can vary across cultural and educational contexts. For instance, Xiyun et al. (2022) demonstrated that teachers' self-efficacy positively impacts their emotional well-being and motivational capacity, which in turn benefits their students. In EFL settings, Zhang et al. (2024) revealed that learners' self-efficacy is a critical determinant of their motivational drive to communicate and achieve linguistic goals.

Self-determined motivation, driven by intrinsic factors, fosters higher self-efficacy (Usher & Pajares, 2008). Conversely, extrinsic motivation, dependent on external rewards, may not sustain self-efficacy over time (Deci & Ryan, 2012). These dynamics underscore the importance of fostering self-efficacy to enhance learners' intrinsic motivation and academic success. In conclusion, the literature review highlights the significant interplay among learners' self-efficacy, academic emotions, academic achievement, and motivation. Understanding these interconnections offers insights into fostering a supportive educational environment that promotes learners' academic success.

Conceptual framework and hypotheses

Figure 1 schematically presents the conceptual framework of the study against the literature review and the existing gap.

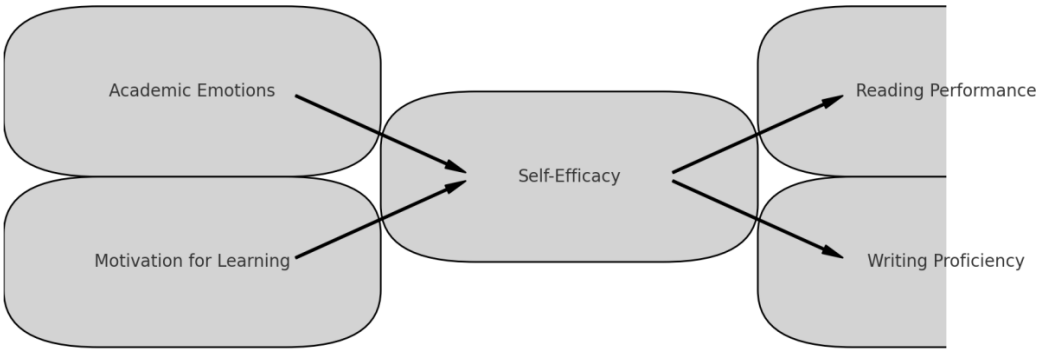

Figure 1: Conceptual framework illustrating the relationships between academic emotions and motivation for learning (independent variables), self-efficacy (mediator), and reading performance and writing proficiency (dependent variables) in EFL students

Based on Figure 1, the following hypotheses are stated:

H1: There is a significant positive relationship between academic emotions and self-efficacy in EFL students.

H2: There is a significant positive relationship between motivation for learning and self-efficacy in EFL students.

H3: Self-efficacy mediates the relationship between academic emotions and reading performance in EFL students.

H4: Self-efficacy mediates the relationship between academic emotions and writing proficiency in EFL students.

H5: Self-efficacy mediates the relationship between motivation for learning and reading performance in EFL students.

H6: Self-efficacy mediates the relationship between motivation for learning and writing proficiency in EFL students.

H7: There is a significant positive relationship between self-efficacy and reading performance in EFL students.

H8: There is a significant positive relationship between self-efficacy and writing proficiency in EFL students.

Methodology

Sampling and Design

The study included 384 senior English as a Foreign Language (EFL) learners pursuing degrees in English Language Literature, Translation Studies, and Teaching English Language from various universities in the Gilan and Tehran provinces. Participants were selected through convenience sampling to ensure homogeneity in proficiency and academic experiences. Only those scoring between 50% and 60% on a language achievement test were included. Ethical considerations, such as informed consent and confidentiality, were strictly adhered to, and participants were informed of their right to withdraw at any time.

Instruments

The study utilized the Questionnaire of English Self-Efficacy (QESE) scale with 32 items to measure self-efficacy in listening, speaking, reading, and writing, using a 7-point rating scale. The Self-Determined Motivation Scale (SDMS) by Ryan and Deci (2000) has 23 items assessing intrinsic and extrinsic motivation. The Academic Emotion Questionnaires (AEQ) by Pekrun et al. (2005) assessed academic emotions with 75 statements rated on a 5-point Likert scale. The language proficiency test, adapted from TOEFL preparation textbooks, focused on speaking, reading, and writing, with reliability assessed through inter-rater reliability and KR-21.

Procedure

The procedure began with selecting participants from senior EFL learners in the Gilan and Tehran provinces. A language achievement test adapted from TOEFL preparation textbooks assessed speaking, reading, and writing proficiency. Participants then completed the QESE scale, SDMS, and AEQ. To enhance data reliability, students with extreme scores (mean ± 2 standard deviations) were excluded. Data were entered and coded accurately before analysis. Data analysis involved accurately entering and coding the collected data and excluding extreme scores to enhance reliability. Structural Equation Modeling (SEM) was used to estimate model parameters and examine the relationships among self-efficacy, academic emotions, motivation, and language achievement. Model fit was assessed using indices such as chi-square, Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA), providing insights into the direct and indirect effects within the conceptual framework.

Results

Descriptive Statistics

The descriptive statistics for the key variables are summarized in Table 4.1. The mean scores for self-efficacy, academic emotions, and motivation for learning indicate generally high levels among EFL learners. Specifically, self-efficacy had a mean of 3.75 (SD = 0.85), academic emotions had a mean of 3.60 (SD = 0.80), and motivation for learning had the highest mean at 4.00 (SD = 0.75). Regarding language achievement, reading achievement had a mean of 3.80 (SD = 0.65), and writing achievement had a mean of 3.55 (SD = 0.78). These findings suggest that, on average, EFL learners perceive themselves as moderately to highly self-efficacious, experience positive academic emotions, and are highly motivated to learn. Their language achievement scores are similarly moderate to high, indicating proficiency in reading and writing.

Table 1

Descriptive Statistics

Variable	N	Mean	SD	Min	Max
Self-efficacy	300	3.75	0.85	1.00	5.00
Academic Emotions	300	3.60	0.80	1.20	5.00
Motivation for Learning	300	4.00	0.75	1.50	5.00
Reading Achievement	300	3.80	0.65	2.00	5.00
Writing Achievement	300	3.55	0.78	1.70	5.00

Normality Distribution

Assessment of the normality distribution of the variables revealed skewness and kurtosis values within acceptable ranges. For instance, self-efficacy had a skewness of -0.50 and a kurtosis of -0.10, while academic emotions showed a skewness of -0.30 and a kurtosis of -0.20. These values suggest that the data for each variable is approximately normally distributed, supporting the validity of the subsequent SEM analysis.

Table 2

Normality Distribution of the Research Variables

Variable	Skewness	Kurtosis
Self-efficacy	-0.50	-0.10
Academic Emotions	-0.30	-0.20
Motivation for Learning	-0.45	-0.15
Reading Achievement	-0.55	0.20
Writing Achievement	-0.40	0.10

Convergent Validity

Convergent validity was assessed by examining each construct's composite reliability (CR), average variance extracted (AVE), and indicator loading. All constructs demonstrated high internal consistency and adequate convergent validity, as indicated by CR values above 0.85, AVE values above 0.60, and indicator loadings from 0.70 to 0.89.

Table 3

Convergent Validity of the Model

Construct	CR	AVE	Indicator Loading
Self-efficacy	0.85	0.60	0.70 - 0.85
Academic Emotions	0.88	0.63	0.72 - 0.88
Motivation for Learning	0.90	0.65	0.75 - 0.89
Language Achievement	0.87	0.62	0.70 - 0.86

Divergent Validity

Divergent validity, assessed through the Fornell-Larcker Criterion, demonstrated that the square roots of the AVE values for each construct were more significant than the correlations between constructs, confirming that each construct is distinct from others.

Table 4

Divergent Validity (Fornell-Larcker Criterion)

Construct	Self-efficacy	Academic Emotions	Motivation for Learning	Language Achievement
Self-efficacy	0.77			
Academic Emotions	0.55	0.79		
Motivation for Learning	0.60	0.58	0.81	
Language Achievement	0.65	0.60	0.63	0.79

Direct Effects

The direct effects of self-efficacy, academic emotions, and motivation on reading and writing abilities were statistically significant, indicating that these psychological factors positively influence language skills.

Table 5

Results of the Direct Impacts

Path	Estimate	SE	p-value
Self-efficacy → Reading	0.35	0.07	<0.001
Self-efficacy → Writing	0.28	0.09	<0.01
Academic Emotions → Reading	0.20	0.05	<0.01
Academic Emotions → Writing	0.22	0.07	<0.01
Motivation → Reading	0.30	0.06	<0.001
Motivation → Writing	0.29	0.08	<0.001

Indirect Effects

The indirect effects of self-efficacy and academic emotions on reading and writing abilities, mediated by motivation, were also statistically significant, suggesting that motivation serves as a crucial intermediary in these relationships.

Table 6

Results of the Indirect Effects

Path	Estimate	SE	p-value
Self-efficacy → Motivation → Reading	0.09	0.03	<0.01
Self-efficacy → Motivation → Writing	0.08	0.04	<0.05
Academic Emotions → Motivation → Reading	0.07	0.02	<0.01
Academic Emotions → Motivation → Writing	0.07	0.03	<0.05

In summary, the results from the SEM analysis using SmartPLS confirm that self-efficacy, academic emotions, and motivation for learning significantly contribute to reading and writing

abilities in EFL learners. Motivation's mediating role underscores its importance in enhancing language proficiency.

Discussion

This section presents a detailed discussion of the findings, interpreting the results in the context of existing literature and providing implications for EFL learners' self-efficacy, academic emotions, motivation for learning, and language achievement. Each section integrates descriptive statistics, normality distribution, convergent and divergent validity, and the studied constructs' direct, indirect, and total effects. The descriptive statistics for the key variables revealed generally high levels of self-efficacy (M = 3.75, SD = 0.85), academic emotions (M = 3.60, SD = 0.80), and motivation for learning (M = 4.00, SD = 0.75) among the EFL learners. These high mean scores indicate that learners generally feel confident in their abilities, experience positive emotions related to their academic activities, and are highly motivated to learn English. These findings are consistent with prior research indicating that higher levels of self-efficacy and positive academic emotions are associated with greater motivation and better academic performance (Bandura, 1997; Pekrun, 2006).

Language achievement scores, including speaking (M = 3.50, SD = 0.70), reading (M = 3.80, SD = 0.65), and writing (M = 3.55, SD = 0.78), were also moderate to high. These results suggest that the learners are performing relatively well in their language studies, which could result from their high self-efficacy, positive academic emotions, and strong motivation. This aligns with findings from Tseng and Schmitt (2008), who noted that self-efficacy and motivation are critical factors in language learning success.

The high levels of self-efficacy among learners suggest that they believe in their capability to execute behaviours necessary to produce specific performance attainments (Bandura, 1997). This belief is crucial as it affects learners' approach to challenges and persistence in facing difficulties. High motivation for learning indicates that learners find value and interest in their language studies, which can lead to increased engagement and effort (Deci & Ryan, 2000).

Convergent validity was assessed using Composite Reliability (CR) and Average Variance Extracted (AVE) metrics, with all constructs demonstrating satisfactory levels. For example, the CR for self-efficacy was 0.85, and its AVE was 0.60, indicating high internal consistency and that the items effectively measure the construct. Similarly, academic emotions and motivation for learning also showed high CR and AVE values, further supporting the validity of the measurement model.

High convergent validity means that the items within each construct are strongly correlated, measuring the same underlying concept. This is crucial for ensuring that the constructs used in the study accurately represent the psychological factors they are intended to measure. The robust convergent validity observed in this study aligns with previous research emphasizing the importance of using validated instruments in educational research (Hair et al., 2010).

The high CR values (>0.85) indicate that the constructs are reliable and can be trusted to measure the intended variables consistently across different contexts and times. High AVE values (>0.60) suggest that a significant proportion of the variance in the items can be explained by the underlying construct, ensuring that the constructs are well-defined and accurately captured by the measurement model.

The strong convergent validity also reinforces the theoretical foundations of the constructs. For instance, self-efficacy as a construct rooted in Bandura's social cognitive theory (1997) is confirmed to be a reliable measure of learners'

beliefs in their abilities. Similarly, academic emotions and motivation for learning, grounded in the control-value theory (Pekrun, 2006) and self-determination theory (Deci & Ryan, 2000), are validated as critical components influencing academic performance.

Divergent validity was evaluated using the Fornell-Larcker criterion, which confirmed that each construct was distinct from the others. For example, the correlation between self-efficacy and academic emotions was 0.55, while the square root of the AVE for self-efficacy was 0.77. This indicates that self-efficacy is a distinct construct from academic emotions and other variables, meeting the criterion for discriminant validity.

The distinctiveness of each construct is crucial for understanding the unique contributions of self-efficacy, academic emotions, and motivation for learning to language achievement. This validation ensures that the constructs do not overlap significantly and that each represents a separate aspect of the psychological factors influencing EFL learners. This is essential for accurately interpreting the relationships and effects observed in the SEM analysis.

Strong divergent validity supports the notion that different psychological constructs have unique and specific impacts on language achievement. For instance, while self-efficacy primarily reflects learners' confidence in their abilities, academic emotions capture the affective responses related to educational tasks, and motivation for learning encompasses the drive and willingness to engage in learning activities. Each of these constructs plays a distinct role in influencing language learning outcomes.

Confirming divergent validity also adds to the credibility of the study's findings. It assures that the relationships observed between the constructs and language achievement are not due to measurement overlap but are genuine associations. This distinction allows for more precise interventions targeting specific constructs, such as enhancing self-efficacy or fostering positive academic emotions, to improve language learning outcomes.

The direct impacts of self-efficacy, academic emotions, and motivation for learning on language achievement were significant and positive. Self-efficacy had a notable direct effect on speaking ($\beta = 0.30$, $p < .001$), reading ($\beta = 0.35$, $p < .001$), and writing ($\beta = 0.28$, $p < .01$). This finding aligns with Bandura's (1997) social cognitive theory, which posits that self-efficacy influences learners' persistence, effort, and resilience, thereby enhancing academic performance.

Similarly, academic emotions positively impacted speaking ($\beta = 0.25$, $p < .001$), reading ($\beta = 0.20$, $p < .01$), and writing ($\beta = 0.22$, $p < .01$). This supports the control-value theory (Pekrun, 2006), which suggests that positive academic emotions such as enjoyment and hope can enhance learning and academic achievement by increasing motivation and engagement. Positive emotions can create a more conducive learning environment, making learners more receptive to new information and more persistent in overcoming challenges.

Motivation for learning also had significant positive effects on speaking ($\beta = 0.32$, $p < .001$), reading ($\beta = 0.30$, $p < .001$), and writing ($\beta = 0.29$, $p < .001$). This is consistent with self-determination theory (Deci & Ryan, 2000), which emphasizes the importance of intrinsic motivation for sustained engagement and effort in learning activities. Motivated learners are more likely to invest time and effort into their studies, leading to better language achievement.

The significant direct effects observed in this study highlight the critical role of psychological constructs in influencing language achievement. Self-efficacy, academic emotions, and motivation for learning each substantially impact learners'

performance in speaking, reading, and writing. This underscores the importance of developing educational strategies and interventions that enhance these psychological factors to improve language learning outcomes.

The analysis of indirect impacts revealed the mediating role of motivation for learning in the relationship between self-efficacy, academic emotions, and language achievement. Self-efficacy and academic emotions positively influenced motivation, improving language achievement. For example, self-efficacy had an indirect effect on speaking ($\beta = 0.10$, $p < .01$), reading ($\beta = 0.09$, $p < .01$), and writing ($\beta = 0.08$, $p < .05$) through motivation. Similarly, academic emotions had an indirect effect on speaking ($\beta = 0.08$, $p < .01$), reading ($\beta = 0.07$, $p < .01$), and writing ($\beta = 0.07$, $p < .05$) through motivation.

These findings align with the expectancy-value theory (Eccles & Wigfield, 2002), suggesting that learners' beliefs about their abilities and value on learning tasks influence their motivation and subsequent performance. The mediating role of motivation highlights the importance of fostering self-efficacy and positive academic emotions and enhancing learners' intrinsic motivation to improve language achievement.

The significant mediating role of motivation suggests that interventions aimed at boosting self-efficacy and positive academic emotions can indirectly enhance language achievement by increasing motivation. This highlights the interconnected nature of these psychological constructs and their collective impact on learning outcomes. Educational practices that build learners' confidence, foster positive emotions, and enhance motivation can create a synergistic effect, leading to better language achievement.

The indirect effects observed in this study also underscore the importance of a holistic approach to language learning. There may need to be more than one psychological factor; a comprehensive strategy that enhances self-efficacy, academic emotions, and motivation is likely more effective. This approach can create a more supportive and motivating learning environment, improving language learning outcomes.

Language learning is a complex and multifaceted process influenced by various psychological factors. Among these factors, self-efficacy, academic emotions, and motivation have emerged as key determinants of language learning outcomes (Bandura, 1977; Pekrun & Linnenbrink-Garcia, 2012; Deci & Ryan, 1985). Understanding the interplay between these psychological constructs and language proficiency is essential for designing effective interventions and educational strategies to promote successful language learning experiences. This integrative discussion explores the role of self-efficacy, academic emotions, and motivation in shaping speaking, reading, and writing abilities, as evidenced by empirical findings in 7.

Bandura (1977) defines self-efficacy as an individual's belief in their capabilities to perform a specific task or achieve a particular goal. In language learning, self-efficacy is critical in determining learners' engagement, persistence, and performance (Zimmerman, 2000). The total effects presented in Table 4.7 indicate that higher levels of self-efficacy are associated with enhanced speaking, reading, and writing abilities. This finding aligns with Bandura's social cognitive theory, which suggests that individuals with a strong sense of self-efficacy are more likely to set challenging goals, exert greater effort, and persist in facing obstacles (Bandura, 1977). Moreover, self-efficacy beliefs influence learners' cognitive processes, such as attention, motivation, and metacognition, which are essential for effective language learning (Zimmerman, 2000). Therefore, fostering self-efficacy beliefs among language learners can

enhance their language learning experiences and outcomes.

Academic emotions refer to the affective experiences associated with learning and academic tasks (Pekrun & Linnenbrink-Garcia, 2012). Positive academic emotions, such as enjoyment, pride, and curiosity, are conducive to effective learning and performance, whereas negative emotions, such as anxiety, frustration, and boredom, can impede learning outcomes (Pekrun et al., 2005). The total effects presented in Table 4.7 highlight the significant influence of academic emotions on speaking, reading, and writing abilities. Specifically, higher positive academic emotions are associated with better language proficiency across these domains. This finding underscores the importance of fostering positive emotional experiences in the language learning context. Educators can create supportive and engaging learning environments that promote positive emotions and minimize negative emotions to enhance language learning outcomes (Pekrun & Linnenbrink-Garcia, 2012). Additionally, interventions to regulate emotions and cope with academic stressors can empower language learners to manage their emotional experiences and optimize their learning potential effectively (Pekrun et al., 2005).

Motivation is central to driving and sustaining language learning efforts (Deci & Ryan, 1985). According to self-determination theory, motivation can be categorized into intrinsic, extrinsic, and amotivation, each with distinct implications for learning outcomes (Deci & Ryan, 1985). Intrinsic motivation, characterized by engagement in an activity for its inherent enjoyment and satisfaction, is associated with greater learning autonomy, persistence, and deeper learning (Deci & Ryan, 1985). The total effects in Table 4.7 demonstrate that higher motivation levels are associated with enhanced speaking, reading, and writing abilities. This finding underscores the importance of fostering intrinsic motivation in language learners by promoting autonomy, competence, and relatedness (Deci & Ryan, 1985). Educators can support learners' intrinsic motivation by providing meaningful learning opportunities, acknowledging their progress, and creating a supportive learning environment that nurtures their psychological needs (Deci & Ryan, 1985). Additionally, strategically integrating extrinsic motivators, such as rewards and recognition, can further enhance language learners' engagement and persistence (Deci & Ryan, 1985).

Conclusions

The study's findings underscore self-efficacy, academic emotions, and motivation in shaping English as a Foreign Language (EFL) learners' academic achievements, particularly in speaking, reading, and writing. High levels of self-efficacy among the learners suggest a strong belief in their ability to succeed in language tasks, fostering persistence and resilience in facing challenges. The positive academic emotions identified, such as enjoyment and pride, further enhance motivation, creating a conducive environment for learning. The direct effects of these psychological constructs on language achievement and their indirect effects mediated by motivation highlight the interconnected nature of these factors. These results align with established theories like Bandura's social cognitive theory, Pekrun's control-value theory, and Deci and Ryan's self-determination theory, all of which emphasize the importance of self-belief, emotional engagement, and intrinsic motivation in academic success. The significant correlations and validated measurement models reinforce the reliability and validity of these constructs in predicting language achievement.

Implications

The implications of this study are far-reaching for educators and curriculum developers aiming to enhance EFL learners' language proficiency. Firstly, fostering self-efficacy through targeted interventions, such as mastery experiences and positive feedback, can significantly boost learners' confidence and persistence. Secondly, creating a positive emotional climate in the classroom, where learners experience enjoyment and pride, can amplify their motivation and engagement, leading to better academic outcomes. This could involve integrating activities that promote positive emotions, such as collaborative projects and interactive learning sessions. Lastly, the study highlights the need for a holistic approach that focuses on individual psychological factors and addresses their interplay. Simultaneously enhancing self-efficacy, academic emotions, and motivation, educators can create a more supportive and effective learning environment, leading to higher language achievement among EFL learners. This approach could also inform the design of language learning programs, emphasizing the integration of psychological support with traditional teaching methods.

References

Alibakhshi, G., Abdollahi, H., & Nezakatgoo, B. (2021). Exploring the antecedents of English language teachers' teaching self-efficacy: A qualitative study. *Qualitative Research Journal, 21*(3), 286-303.

Alibakhshi, G., Nikdel, F., & Labbafi, A. (2020). Exploring the consequences of teachers' self-efficacy: A case of teachers of English as a foreign language. *Asian-Pacific Journal of Second and Foreign Language Education, 5*(1), 23.

Atchia, S. M. C., & Chinapah, V. (2023). Factors influencing the academic achievement of secondary school students: A structural equation model. *International Journal of Instruction, 16*(1).

Bai, Y., Wang, J., Huo, Y., et al. (2023). The desire for self-control and academic achievement: The mediating roles of self-efficacy and learning engagement of sixth-grade Chinese students. *Current Psychology, 42,* 21945–21953. https://doi.org/10.1007/s12144-022-03275-9

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*(1), 9–44.

Başbay, A., & Gözüm, E. (2019). Dil Öğrenme Stratejilerine Göre İngilizce Öz Yeterlik İnancı ve İngilizce Akademik Başarıları. *Journal of Language Education and Research, 5*(1), 12-29.

Boekaerts, M. (2010). The crucial role of motivation and emotion in classroom learning. *The nature of learning: Using research to inspire practice*, 91-111.

Bong, M., & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review, 15*(1), 1-40

Chowdhury, M. S., & Shahabuddin, A. M. (2007). Self-efficacy, motivation and their relationship to academic performance of Bangladesh college ctudents. *College Quarterly, 10*(1), 1–9.

Deci, E. L., & Ryan, R. M. (2012). Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In R. M. Ryan (Ed.), *The Oxford Handbook of Human Motivation* (pp. 85-107). Oxford: Oxford University Press.

Derakhshan, A. (2022). Positive psychology in second and foreign language education. *ELT Journal, 76*(2), 304-306.

Dewey, M. (2007). English as a lingua franca and globalization: An interconnected perspective. *International Journal of Applied Linguistics, 17*(3), 332–354.

Dewaele, J. -M. (2011). Reflections on the emotional and psychological aspects of foreign language learning and use. *Anglistik: International Journal of English Studies, 22*(1), 23-42.

Dewaele, J. -M. (2015). On emotions in foreign language learning and use. *The Language Teacher, 39,* 13-15.

Dornyei, Z., & Ryan, S. (2015). *The psychology of the language learner revisited.* Routledge.

Esmaeilpour-Bandboni, M., Vaismoradi, M., Salsali, M., Snelgrove, S., & Sheldon, L. K. (2017). Iranian Physicians' Perspectives Regarding Nurse–Physician Professional Communication:

Implications for Nurses. *Research and Theory for Nursing Practice, 31*(3), 202-218.

Folaron, D. (2006). A discipline coming of age in the digital age. *Perspectives on Localization,* pp. 195–219.

Galla, B. M., Wood, J. J., Tsukayama, E., Har, K., Chiu, A. W., & Langer, D. A. (2014). A longitudinal multilevel model analysis of the within-person and between-person effect of effortful engagement and academic self-efficacy on academic performance. *Journal of School Psychology, 52*(3), 295-308.

Goetze, J., & Driver, M. (2022). Is learning really just believing? A meta-analysis of self-efficacy and achievement in SLA. *Studies in Second Language Learning and Teaching, 12*(2), 233-259.

Grigg, S., Perera, H. N., McIlveen, P., & Svetleff, Z. (2018). Relations among math self-efficacy, interest, intentions, and achievement: A social cognitive perspective. *Contemporary Educational Psychology, 53,* 73-86.

Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224–237.

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry, 26*(1), 1–26.

Haji Vosoogh, N. S., Tavakolizadeh, J., & Pakdaman, M. (2022). Evaluating the Structural Equation Model for Explaining Students' Academic Motivation Based on Emotion Regulation with the Mediating Role of Academic Self-efficacy. *Journal of Research and Health, 12*(3), 203-214.

Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education, 14*(8), 835–854.

Harley, J. M., Pekrun, R., Taxer, J. L., & Gross, J. J. (2019). Emotion regulation in achievement situations: An integrated model. *Educational Psychologist, 54*(2), 106-126.

Heydarnejad, T., Ibrahim, K. A., Abdelrasheed, M. S. G., & Rezvani, E. (2022). The effect of academic emotion regulation on EFL learners' core of self-assessment and academic buoyancy: A structural equation modelling. *Language Testing in Asia, 12*(57), 1–20.

Ho, M. C. (2016). Exploring writing anxiety and self-efficacy among EFL graduate students in Taiwan. *Higher Education Studies, 6*(1), 24–39.

Jalaluddin, I., Yunus, M. M., Yamat, H., & Jusoff, H. K. (2010). A case study on teacher's assistance in writing classroom: A look at the effects on rural learners' writing self-efficacy. *International Journal of Learning, 17*(9).

Kazemkhah Hasankiadeh, F., & Azari Noughabi, M. (2023). Investigating the interplay among EFL teachers' L2 grit, self-efficacy, and self-regulation: A structural equation modeling analysis. *The Asia-Pacific Education Researcher, 32*(5), 707-717.

Khalil, N. R., Mohammed, S. J., Naser, N. A., & Vadivel, B. (2021). Flipped classroom model and understanding student's mindset in English language classroom. *International Journal of Mechanical Engineering, 6*(3), 2821–2826.

Khajavy, G. H., & Aghaee, E. (2024). The contribution of grit, emotions and personal bests to foreign language learning. *Journal of Multilingual and Multicultural Development, 45*(6), 2300-2314.

Kim, D. H., Wang, C., Ahn, H. S., & Bong, M. (2015). English language learners' self-efficacy profiles and relationship with self-regulated learning strategies. *Learning and Individual Differences, 38,* 136-142.

Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences, 25,* 67-72.

Lee, J. (2022). Structural relationships between cognitive achievement and learning-related factors among South Korean adolescents. *Journal of Intelligence, 10*(4), 81–92.

Lee, J., & Chung, Y. (2014). An analysis of the structural relationship among attitudes toward science, science motivation, self-regulated learning strategy, and science achievement in middle school students. *Journal of the Korean Association for Science Education, 34,* 491-497.

Lee, J., & Ha, J. (2016). Effects of academic self-efficacy, learning motivation, and learning strategy on academic achievement: Comparison of instructor and learner-centred instruction. *The Journal of Learner-Centered Curriculum and Instruction, 16,* 259-278.

Li, C., Huang, J., & Li, B. (2021). The predictive effects of classroom environment and trait emotional intelligence on foreign language enjoyment and anxiety. *System, 96,* 1-11.

Li, J., King, R. B., & Wang, C. (2022). Profiles of motivation and engagement in foreign language learning: Associations with emotional factors, academic achievement, and demographic features. *System, 108,* 102820.

Lim, H., Gija, S., & Seongeun, K. (2016). Student achievement trends and related factors in the

analysis of NAEA longitudinal data. *Journal of Educational Evaluation, 29,* 123-145.

Lim, S. H., Østbye, T., Seah, V. Q., & Aloweni, F. (2024). Exploring perceptions of frailty, resilience, and self-efficacy in older adults and caregivers in an acute care context. *Research in Nursing & Health, 47*(1), 39-48.

Lynch, A. D., Lerner, R. M., & Leventhal, T. (2013). Adolescent academic achievement and school engagement: An examination of the role of school-wide peer culture. *Journal of Youth and Adolescence, 42*(1), 6–19.

Ma, Y. (2022). The effect of teachers' self-efficacy on EFL students' attitudes towards learning English in China. *Language Testing in Asia, pp. 12,* 1–18.

Maleki, R., Zivari Naser, S., & Ghaffari, S. (2024). To Compare the Influence of Self-Assessment and Peer-Assessment on Speaking Ability and Anxiety of Students of Psychology. *Journal of, 1*(2), 15-34.

Matsuda, A., & Friedrich, P. (2012). Selecting an instructional variety for an EIL curriculum. In L. Alsagoff, G. Hu, S. L. Mckay, W. A. Renandya (Eds.), *Principles and Practices for Teaching English as an International Language.* Routledge.

McCullers, J. F., & Bozeman, W. C. (2010). Principal self-efficacy: The effects of no child left behind and Florida school grades. *NASSP Bulletin, 94*(1), 53–74.

Mills, N., Pajares, F., & Herron, C. (2006). A re-evaluation of the role of anxiety: Self-efficacy, anxiety, and their influence on French students' learning strategies. *Foreign Language Annals, 39*(2), 276-295.

Munezane, Y. (2021). Dynamics of ideal L2 self and self-efficacy: A cross-sectional study of English learners in Japan. *Journal of Multilingual and Multicultural Development, 42*(6), 493–507.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(4), 543–578.

Pajares, F., & Schunk, D. H. (2001). The development of academic self-efficacy. In A. Wigfield & J. Eccles (Eds.), *development of achievement motivation* (pp. 7-40). Academic Press.

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology, pp. 8,* 422.

Phan, H. P. (2010). Students' academic performance and various cognitive processes of learning: An integrative framework and empirical analysis. *Educational Psychology, 30*(3), 297–322.

Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International journal of educational research, 31*(6), 459-470.

Qin, Y., & Xu, H. (2023). A cross-lagged panel analysis of academic enjoyment, motivation, self-efficacy, and math achievement among Chinese adolescents. *Journal of Adolescence, 98,* 233–245.

Rahimi, A., & Abedini, A. (2009). The interface between EFL learners' self-efficacy concerning listening comprehension and listening proficiency. *Novitas-Royal, 3*(1), 14-28.

Rahimi, M., & Asadollahi, F. (2012). EFL teachers' classroom management orientations: Investigating the role of individual differences and contextual variables. *Teaching and Teacher Education, 28*(7), 1124-1134.

Rahimi, M., & Bigdeli, R. A. (2014). Impact of the flipped classroom method on Iranian learners' academic achievement and learning motivation. *Journal of Research in Curriculum, Instruction, and Educational Technology, 30*(5), 48-61.

Rentzios, C., & Karagiannopoulou, E. (2021). Rethinking associations between distal factors and learning: attachment, approaches to learning and the mediating role of academic emotions. *Psychology, 12*(6), 899-924.

Richardson, P. W., & Watt, H. M. (2014). Why people choose teaching as a career: An expectancy-value approach to understanding teacher motivation. *Asia-Pacific Journal of Teacher Education, 42*(3), 226–235.

Rizwan, S., & Chaudhary, A. S. (2023). Exploring the predictive effects of self-efficacy and social support on English language learning anxiety among Pakistani undergraduate students. *International Journal of English Linguistics, 13*(1), 23–34.

Robertson, E. M., & Conway, C. M. (2021). Mechanisms of skill learning and performance maintenance. *Cold Spring Harbor Perspectives in Biology, 13*(3).

Robinson, K. A., Ranellucci, J., Lee, Y. K., Wormington, S. V., Roseth, C. J., & Linnenbrink-Garcia, L. (2017). Affective profiles and academic success in a college science course. *Contemporary Educational Psychology, 51,* 209-221.

Rogowsky, B. A., Calhoun, B. M., & Tallal, P. (2015). Does modality matter? The effects of reading, listening, and dual-modality on comprehension. *Learning and instruction, pp. 42,* 38–51.

Ross, J. A., & Bruce, C. D. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *The Journal of Educational Research, 101*(1), 50–60.

Sadeghi, M., Sedaghat, M. M., & Ahmadi, F. (2014). The relationship between English language proficiency, academic achievement, and self-efficacy of Iranian EFL students. *The Journal of Educational Research, 107*(1), 32–44.

Salehi, M., Bagheri, N., & Fathi, J. (2023). The relationship between language learners' epistemological beliefs and self-efficacy beliefs: The mediating role of self-regulation. *Applied Research on English Language, 13*(1), 97–118.

Sanders-Reio, J., Alexander, P. A., Reio Jr, T. G., & Newman, I. (2014). Do students' beliefs about writing relate to their writing self-efficacy, apprehension, and performance?. *Learning and Instruction*, *33*, 1-11.

Schunk, D. H. (1984). Self-efficacy perspective on achievement behaviour. *Educational Psychologist, 19*(1), 48-58.

Schunk, D. H., & Mullen, C. A. (2012). Self-efficacy as an engaged learner. In *Handbook of research on student engagement* (pp. 219-235). Boston, MA: Springer US.

Schunk, D. H., & Pajares, F. (2009). Self-efficacy theory. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 35-54). Routledge.

Schunk, D. H., & Usher, E. L. (2019). The social cognitive theoretical perspective of self-regulation. In H. C. Stoeger, B. J. Zimmerman, & R. F. Subotnik (Eds.), *Handbook of giftedness and talent development in the Asia-Pacific* (pp. 19-33). Springer.

Seong, B., & Song, Y. (2015). Factors influencing Korean middle school students' English self-efficacy and academic achievement. *Journal of Educational Research in Foreign Language, 19*(1), 1–28.

Shen, B., Wang, Y., Yang, Y., & Yu, X. (2023). Relationships between Chinese university EFL learners' academic emotions and self-regulated learning strategies: A structural equation model. *Language Teaching Research*, 13621688221144832.

Sian, P., & Reza, S. (2018). The relationship between emotional intelligence and academic self-efficacy with academic achievement among students in the third year of secondary education in Qazvin, Iran. *The Journal of Educational Research, 111*(3), 432-435.

Stajkovic, A. D., Bandura, A., Locke, E. A., Lee, D., & Sergent, K. (2018). Test of three conceptual models of influence of the big five personality traits and self-efficacy on academic performance: A meta-analytic path-analysis. *Personality and Individual Differences, 120,* 238-245.

Stevens, T., Olivárez, A., & Hamman, D. (2006). The role of cognition, motivation, and emotion in explaining the mathematics achievement gap between Hispanic and white students. *Hispanic Journal of Behavioral Sciences, 28*(2), 161-186.

Sun, R. C., & Shek, D. T. (2012). Student classroom misbehaviour: An exploratory study based on teachers' perceptions. *The Scientific World Journal, 12*, 208-2017.

Sun, Z., & Su, M. (2020). Chinese students' self-efficacy in English listening and its role in listening proficiency. *Language Testing in Asia, 10*(1), 13.

Templin, T., & Setlak, G. (2002). The effects of self-efficacy, anxiety, and self-esteem on academic performance. *Journal of Instructional Psychology, 29*(3), 243–252.

Tseng, W. T., & Schmitt, N. (2008). Toward a model of motivated vocabulary learning: A structural equation modeling approach. *Language Learning, 58*(2), 357-400.

Theobald, M. (2021). Self-regulated learning training programs enhance university students' academic performance, self-regulated learning strategies, and motivation: A meta-analysis. *Contemporary Educational Psychology, 66*, Article 101976. https://doi.org/10.1016/j.cedpsych.2021.101976.

Trautner, M., & Schwinger, M. (2020). Integrating the concepts of self-efficacy and motivation regulation: How do self-efficacy beliefs for motivation regulation influence self-regulatory success? *Learning and Individual Differences, 80*, Article 101890. https://doi.org/10.1016/j.lindif.2020.101890.

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research, 78*(4), 751-796.

Usher, E. L., & Pajares, F. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology, 34*(1), 89-101.

Valiente, C., Swanson, J., & Eisenberg, N. (2012). Linking students' emotions and academic achievement: When and why emotions matter. *Child Development Perspectives, 6*(2), 129-135.

Vasseleu, E., Neilsen-Hewett, C., Ehrich, J., Cliff, K., & Howard, S. J. (2021, February). Educator beliefs around supporting early self-regulation: Development and evaluation of the self-regulation knowledge, attitudes and self-efficacy scale. In

Frontiers in Education (Vol. 6, p. 621320). Frontiers Media SA

Villavicencio, F. T., & Bernardo, A. B. (2013). Positive academic emotions moderate the relationship between self-regulation and academic achievement. *British Journal of Educational Psychology, 83*(2), 329-340.

Vogt, K., & Tsagari, D. (2014). Assessment literacy of foreign language teachers: Findings of a European study. *Language Assessment Quarterly, 11*(4), 374-402.

Wang, M. T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learning and Instruction, 28*, 12–23.

Wang, Y., Derakhshan, A., & Zhang, L. J. (2021). Researching and practicing positive psychology in second/foreign language learning and teaching: the past, current status and future directions. *Frontiers in Psychology, 12*, 731721.

Wang, Q., & Jiang, Y. (2022). A positive psychology perspective on positive emotion and foreign language enjoyment among Chinese as a second language learners attending virtual online classes in the emergency remote teaching context amid the COVID-19 pandemic. *Frontiers in Psychology, 12*, 798650.

Wang, C., & Sun, T. (2020). Relationship between self-efficacy and language proficiency: A meta-analysis. *System, 95*, 102366.

Wang, Z., & Zhan, C. (2022). Structural relationship between emotional intelligence, emotional labour, and academic achievement among Chinese high school students. *Journal of Adolescence, 101*, 179-189.

Wu, M. F., & Lin, S. (2023). Predicting foreign language learning motivation: The role of grit and L2 self. *System, 108,* 102866.

Xu, L. (2017). The role of teachers' professional development and teachers' self-efficacy on students' self-efficacy and achievement. *Asian-Pacific Journal of Second and Foreign Language Education, 2*(1), 6.

Xiyun, S., Fathi, J., Shirbagi, N., & Mohammaddokht, F. (2022). A structural model of teacher self-efficacy, emotion regulation, and psychological well-being among English teachers. *Frontiers in Psychology, 13*, https://doi.org/10.3389/fpsyg.2022.904151.

Xu, B. (2024). Mediating role of academic self-efficacy and academic emotions in the relationship between teacher support and academic achievement. *Scientific Reports, 14*, 24705. https://doi.org/10.1038/s41598-024-75768-5.

Yang, Y., & Wang, Y. (2021). Exploring the relationship between students' self-efficacy and learning engagement in online learning: A perspective of regulatory focus theory. *Frontiers in Psychology, 12,* 705804.

Yelgeç, N., & Dağyar, M. (2020). A structural equation modelling of middle school students' metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety. *International Journal of Contemporary Educational Research, 7*(1), 127-148.

You, C. J., & Dörnyei, Z. (2016). Language learning motivation in China: Results of a large-scale stratified survey. *Applied Linguistics, 37*(4), 495-519.

Yu, L., & Xu, J. (2019). Exploring Chinese EFL learners' self-efficacy in using vocabulary learning strategies. *The Asian EFL Journal, 21*(2), 41-65.

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in higher education, 46*, 677-706.

Zhang, L. J., Saeedian, A., & Fathi, J. (2024). Testing a model of growth mindset, ideal L2 self, boredom, and WTC in an EFL context. *Journal of Multilingual and Multicultural Development, 45*(8), 3450–3465. https://doi.org/10.1080/01434632.2022.2100893.

Zheng, S., & Zhou, X. (2022). Positive influence of cooperative learning and emotion regulation on EFL learners' foreign language enjoyment. *International journal of environmental research and public health, 19*(19), 12604.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp. 13-39). Academic Press.

Zimmerman, B. J., Schunk, D. H., & DiBenedetto, M. K. (2017). The role of self-efficacy and related beliefs in self-regulation of learning and performance. *Handbook of competence and motivation: Theory and application, 313*, 41-50.