

RESEARCH ARTICLE

Exploring EFL Teachers' Emotional Intelligence: A Mixed-Methods Approach

Baochen Liu¹ Honggang Liu^{2*}¹ Changchun Sixth high school of CAIDA, Changchun, Jilin 130024, China² School of Foreign Languages, Soochow University, Soochow, Jiangsu 215006, China

Correspondence to: Honggang Liu, School of Foreign Languages, Soochow University, Soochow, Jiangsu, China; E-mail: liuhonggang@suda.edu.cn

Received: November 30, 2024;

Accepted: February 15, 2025;

Published: February 18, 2025.

Citation: Liu, B., & Liu, H. (2025). Exploring EFL Teachers' Emotional Intelligence: A Mixed-Methods Approach. *Advances in Developmental and Educational Psychology*, 5(1), 196-205. <https://doi.org/10.25082/ADEP.2024.01.003>

Copyright: © 2025 Baochen Liu et al. This is an open access article distributed under the terms of the [Creative Commons Attribution-Noncommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/), which permits all noncommercial use, distribution, and reproduction in any medium, provided the original author and source are credited.



Abstract: This study explores the emotional intelligence of middle school English as a foreign language (EFL) teachers in Northeast China, aiming to assess its factor structure and factor levels. Using a revised version of the Emotional Intelligence Questionnaire, data were collected from 1,017 participants. The results indicate that the teachers generally exhibited a high level of emotional intelligence (EI), with relatively high scores in all four sub-dimensions: self-awareness, self-regulation, motivation, and interpersonal connectivity. Additionally, the study employed both quantitative and qualitative methods to validate the factor structure of EI. The findings reveal that teachers with higher EI tend to show greater self-awareness, emotional regulation, and motivation, which contributes to their overall job satisfaction and effective teaching practices. The results also underscore the importance of EI in coping with emotional challenges in the classroom and its potential role in improving educational quality.

Keywords: emotional intelligence, factor structure, junior high school EFL teacher

1 Introduction

The “emotional turn” in educational psychology has led to an increasing recognition of the importance of emotions in the teaching profession. In recent years, a substantial body of research has focused on understanding teacher emotions, highlighting the profound impact emotions have on teaching and learning (Keller et al., 2014). Emotions occupy a central position in the classroom, influencing not only teachers' well-being but also the overall educational experience for both teachers and students. High-quality teaching is often characterized by positive emotional experiences, such as enthusiasm, empathy, and a sense of accomplishment, which contribute to creating an engaging and supportive learning environment (Hargreaves, 1998). Teaching, by its very nature, is an emotionally charged profession, with teachers regularly navigating a complex range of emotions that stem from their interactions with students, colleagues, and the broader school environment (Cowie, 2011). Emotional intelligence (EI), as a crucial social-emotional competence, plays a pivotal role in managing these emotions effectively. EI helps teachers regulate their own emotional responses, understand and empathize with students, and maintain positive relationships, all of which are essential for sustaining psychological well-being and job satisfaction (Schonert-Reichl, 2017). Moreover, teachers with high EI are better equipped to handle the stresses and challenges that arise in the teaching profession, such as student misbehavior, heavy workloads, and the emotional demands of supporting diverse student needs (Liu et al., 2024). Given the significant influence of EI on teachers' professional effectiveness and mental health, the purpose of this study is to explore the factor structure of EI among middle school English as a foreign language (EFL) teachers and assess the levels of EI across its different dimensions.

2 Literature Review

EI refers to the capacity to process and effectively utilize emotional information, which enables individuals to make sound personal decisions, resolve conflicts, and motivate themselves and others. According to Goleman (1995, 1998), EI is defined through five core dimensions: self-awareness, self-regulation, motivation, empathy, and social skills. Self-awareness involves the ability to recognize and understand one's own emotions, while self-regulation refers to the capacity to manage and control these emotions. Motivation is the drive to pursue goals and persist in the face of challenges. Empathy allows individuals to perceive and understand

the emotions of others, and social skills are essential for building and maintaining positive interpersonal relationships. Together, these dimensions form the framework of EI, facilitating effective decision-making and interaction in complex emotional and social contexts.

In the highly emotional context of teaching (Cowie, 2011), EI plays a crucial role in helping teachers navigate complex emotional challenges, improve job satisfaction, and reduce work-related stress and burnout (Day & Gu, 2009; Powell & Kusuma-Powell, 2010). Research suggests that teachers' EI is strongly associated with their emotion regulation and coping abilities, which are essential for maintaining professional stability and adaptability under the high emotional demands of the teaching profession (Jennings & Greenberg, 2009). Specifically, previous studies have demonstrated that EI contributes significantly to teachers' emotion regulation and resilience, enabling them to better manage the emotional complexities of their work (Gregersen et al., 2014; Liu & Chu, 2023; Liu et al., 2023; Liu et al., 2024; Peña-Sarrionandia et al., 2015). As such, EI not only supports teachers in managing their own emotions but also enhances their ability to foster positive relationships with students and colleagues, ultimately improving their professional effectiveness and long-term career satisfaction. While studies have demonstrated the importance of EI for teachers' well-being and pedagogical effectiveness (Mercer & Gkonou, 2017; Jennings & Greenberg, 2009), there is still limited empirical research focusing specifically on the factor structure of teachers' EI, especially within the realm of foreign language teaching.

The aforementioned research draws upon two distinct perspectives on EI, each offering valuable insights for understanding its role in the teaching profession. One perspective conceptualizes EI as a unified entity that encompasses psychological abilities, motivation, awareness states (such as "flow"), and social activities, forming a mixed model (Bar-On, 1997; Goleman, 1995). In contrast, the second perspective views EI as a purely psychological ability, focusing on the interaction between emotions and cognition (Mayer & Salovey, 1997; Salovey & Mayer, 1990). Measurement tools based on the mixed EI model, such as those developed by Bar-On (1997), Petrides & Furnham (2006), and Schutte et al. (1998), assess a broad range of emotional competencies, including emotion recognition, expression, and regulation. This multidimensional approach provides a comprehensive framework for evaluating individual EI levels, which aligns closely with the real-world demands of the teaching profession. Teachers' EI is undoubtedly a complex, multidimensional structure, incorporating emotional, cognitive, social, and motivational components that are interrelated and collectively impact teachers' emotional well-being and professional performance. Given the multifaceted nature of teachers' EI, it is essential to adopt a mixed EI model that encompasses these diverse dimensions (Goleman, 1995; Bar-On, 1997). This model offers a more robust and nuanced understanding of the complexity inherent in teachers' EI, thus serving as a reliable theoretical foundation for exploring its factor structure in this study.

This study chooses Goleman's EI model, partly because his work has made the concept of EI widely known and accepted. Given the unique challenges of foreign language teaching, where emotional engagement and interpersonal relationships play a significant role in both teaching effectiveness and student outcomes, Goleman's model offers a valuable framework for understanding how teachers' emotional competencies can influence their pedagogical approaches and overall professional development. Additionally, in the field of foreign language education, Mercer and Gkonou (2017) utilized Goleman's model to explore the impact of EI on teaching practice and students' learning experiences, demonstrating its good reliability in this context. However, further validation of this model with this specific group is needed to confirm the applicability of the five-dimensional EI model in the context of foreign language education, ensuring its relevance for the unique emotional and relational demands faced by language teachers. To address this gap, this study seeks to answer two key research questions:

- (1) What is the factor structure of EI among middle school EFL teachers?
- (2) What are the levels of EI across different factors among middle school EFL teachers?

3 Research Design

3.1 Research Participant

The participants in this study were EFL teachers from several middle schools in Northeast China, comprising 144 male and 873 female teachers. Participants had diverse educational qualifications and professional titles, with teaching experience ranging from 5 to over 30 years. Although the participants were primarily from the north-eastern region, they represent the broader context of China. This is evident in the distributions of gender, professional titles, and

teaching experience among high school teachers reflected in data from the Ministry of Education of the People's Republic of China. (see in [Table 1](#))

Table 1 Information about the Research Participants

Profile	Number	%
Gender		
Male	144	14.2
Female	873	85.8
Educational background		
Bachelor degree	897	88.2
Master degree	80	7.9
Professional title		
Doctoral degree	40	3.9
Second-level teacher	248	24.4
First-level teacher	460	45.2
Senior teacher	308	30.3
Specialist teacher	1	0.1

Based on the contact information provided by the participants at the end of the survey, 12 potential interviewees were initially identified. Ten individuals were successfully contacted, but only five agreed to participate in the interviews. Data saturation was achieved based on the responses of these five participants (see in [Table 2](#)). To protect the privacy of the interviewees, pseudonyms such as “Teacher A” and “Teacher B” were used throughout the study. Through their experiences and perspectives, the study aims to provide richer insights to complement the interpretation of the quantitative results.

Table 2 Information about the Interviewees

Teacher	Gender	Level of EI
A	Male	Moderate to high
B	Female	High
C	Female	Low to moderate
D	Male	High
E	Female	High

3.2 Research Instrument

In the field of EFL language teaching, [Mercer and Gkonou \(2017\)](#) developed the EFL Teachers' Emotional and Social Intelligence Questionnaire based on [Goleman's \(1995\)](#) EI framework. The items of this questionnaire were adapted from the TEIQue-SF ([Petrides & Furnham, 2006](#)). [Mercer and Gkonou \(2017\)](#) noted that this adaptation was necessary because the original TEIQue-SF did not clearly distinguish between the specific dimensions of EI that correspond to different items.

In this study, the EFL Teachers' Emotional Intelligence Questionnaire developed by [Mercer and Gkonou \(2017\)](#) was adopted and revised to assess the EI of EFL teachers. During the revision process, specific items related to EI were selected from the original questionnaire, while components related to social intelligence were excluded. Additionally, context-specific EI items were removed and replaced with general EI items. This decision was based on the finding that no significant differences were observed between the two methods in terms of results. Another key reason for this choice was to standardize the format of the questionnaire items to ensure consistency across all items. Below are examples of some of the items. (see in [Table 3](#))

Table 3 Information of the EFL Teachers' Emotional Intelligence Questionnaire

Dimension	Item No.	Sample items
Self-awareness	Q01-Q04	Q01: I am not always able to recognize what emotion I'm feeling in respect to my job.
Self-regulation	Q05-Q08	Q05: I usually find it difficult to control my emotions in the classroom.
Motivation	Q09-Q12	Q09: On the whole, I am a highly motivated teacher.
Empathy	Q13-Q16	Q13: If a colleague is complaining, I find it easy to see things from their point of view.
Social Skill	Q17-Q20	Q17: I can work effectively with colleagues.

3.3 Data Collection

The EFL Teachers' EI Questionnaire was employed to collect data. The questionnaire was distributed through Questionnaire Star between May 6 and June 8, 2023. Participants

were informed of the research purpose and provided with instructions before completing the questionnaire. They were also advised that they could withdraw at any time. As for the interviews, each session lasted for 30 minutes to ensure comprehensive coverage of relevant topics. The interviews were conducted via Tencent Meeting, providing participants with a comfortable and convenient online environment to freely share their authentic experiences. To ensure the reliability and accuracy of the data, the researcher recorded the interviews using audio recording devices and later transcribed and analyzed the content. Additionally, if participants felt any discomfort during the interview, they had the option to stop at any time.

As for the ethical considerations, participants' comprehensive understanding of the research's purpose, associated risks, benefits, and voluntary participation is guaranteed, with the option to withdraw at any stage. A paramount focus on the protection of privacy was maintained throughout, detailing measures enacted during data collection, storage, and analysis to ensure the confidentiality of participants' personal information.

3.4 Data Analysis

This study analyzed the factor structure of EI among middle school EFL teachers using SPSS 26.0 and AMOS 24.0. Data quality was ensured through normality tests, item analysis, and appropriate handling of missing values. Reliability was assessed using Cronbach's α , with internal consistency checked for both the overall questionnaire and its sub-scales.

Exploratory factor analysis was conducted on a subset of 510 participants, followed by confirmatory factor analysis on 507 participants to validate the identified factor structure. Convergent validity was assessed using factor loadings and average variance extracted (AVE), while discriminant validity was examined through correlation coefficients. Composite reliability (CR) was also evaluated to ensure the internal consistency of the latent variables.

Path analysis using Maximum Likelihood Estimation confirmed that the model fit the data well, with fit indices such as GFI, AGFI, CFI, NFI, TLI, RMSEA, and RMR meeting the recommended thresholds (Kline, 2016). The qualitative interview data were analyzed using NVivo 12.0 and thematic analysis, providing supplementary insights into the practical manifestations of the EI sub-dimensions.

4 Results and Discussion

4.1 Factor Structure of Emotional Intelligence Among Middle School EFL Teachers

The results indicated that the EFL TEIQ used in this study demonstrated strong internal consistency, with a Cronbach's α coefficient of 0.86. This value suggests a high degree of consistency between the items, indicating the scale's high reliability in measuring the EI of EFL teachers. This reliability result aligns with findings from related literature, which also show stable consistency of the scale across different samples (Mercer & Gkonou, 2017). This suggests that the measurement tool consistently captures the intended construct across various contexts, thereby enhancing the credibility of the results.

Before conducting the factor analysis, items Q01 and Q13, which had low item-total correlations, were removed. For the remaining 18 items, principal component analysis combined with orthogonal rotation was employed for exploratory factor analysis. The factor analysis results revealed the extraction and retention of four factors, while items Q05, Q10, Q18, and Q19, which had low factor loadings, were deleted. The total variance explained by the four retained factors was 58.99%, exceeding the recommended threshold of 55% for exploratory factor analysis (Plonsky & Gonulal, 2015), confirming the rationality of the factor structure. These four retained factors were self-awareness, self-regulation, motivation, and a new factor—interpersonal connectivity. The interpersonal connectivity factor encompassed the first two EI dimensions in Goleman's framework, namely empathy and social skills. Interpersonal connectivity combines the individual's empathy and understanding of others' emotions with their performance in social interactions, including communication, collaboration, and leadership. (see in Table 4)

In the context of Chinese EFL education, the decision to combine social skills and empathy into one factor was based on several considerations. In Goleman's EI model, empathy and social skills are defined as distinct dimensions, each emphasizing different aspects of EI. Empathy focuses on an individual's sensitivity to and understanding of others' emotions, while social skills emphasize performance in social interactions, such as communication, collaboration, and

Table 4 Results of EFA for EFL Teachers' EI

Excerpts of Items	Interpersonal Connectivity	Motivation	Self-regulation	Self-awareness	Communality
Q14 I am able to get into learners' shoes	0.697	0.155	0.099	0.164	0.546
Q16 I am able to quickly notice when someone in the class is feeling uncomfortable.	0.694	0.006	0.259	0.158	0.574
Q17 I can work effectively with my colleagues.	0.641	0.196	0.243	0.114	0.521
Q15 When a learner does something that induces anger, I try to think about the reason	0.638	0.153	0.081	-0.053	0.440
Q20 I am able to develop a positive rapport with groups of learners.	0.541	0.134	0.344	0.254	0.494
Q06 I am able to deal with stress at work.	0.030	0.825	0.143	0.191	0.739
Q07 I am able to keep calm in the face of problems with colleagues.	0.264	0.768	0.132	0.112	0.690
Q08 I am able to monitor my own thinking and self-talk in respect to my job.	0.465	0.575	0.154	0.011	0.571
Q12 I believe that things will work out fine in teaching.	0.165	0.157	0.792	0.079	0.685
Q09 On the whole, I am a highly motivated teacher.	0.268	0.002	0.719	0.138	0.609
Q11 I am pleased with my job.	0.237	0.385	0.642	-0.014	0.617
Q03 I often think about my feelings about job.	0.051	-0.020	0.057	0.829	0.693
Q04 I am able to recognize when emotions influence my decisions in the classroom.	0.352	0.218	-0.016	0.598	0.530
Q02 I know my strengths as a teacher.	0.049	0.288	0.330	0.526	0.470
Cumulative % of variance explained	34.480	42.999	51.082	58.411	-

Note: Extraction method: Principal Components; four factors extracted. Six iterations required.

leadership. However, in practice, these two dimensions often overlap to some extent. Individuals with high empathy are typically better able to establish strong interpersonal relationships, which in turn creates favorable conditions for demonstrating effective social skills.

This overlap is particularly pronounced within the Chinese educational context. Chinese educational culture emphasizes the holistic development of individuals, prioritizing moral and emotional growth. Social skills and empathy are often viewed as key elements of a teacher's success in fulfilling their responsibilities, as both contribute to effective communication and emotional connection with students, parents, and colleagues (Yu & Jiang, 2017). Furthermore, Chinese EFL teachers frequently face the need for close collaboration with students and colleagues. Effective social skills help teachers build positive interpersonal relationships during the teaching process, while empathy enables them to better understand the needs and emotional states of students, resulting in a warmer and more supportive teaching environment, ultimately contributing to improved educational quality. Therefore, the decision to combine social skills and empathy into a single factor is consistent with relevant theoretical frameworks and better reflects the comprehensive competencies required by teachers in the Chinese EFL education context, promoting a more emotionally connected teaching environment (Song, 2022).

A confirmatory factor analysis was conducted to verify whether the new four-factor structure of EI for EFL teachers would also be supported by the data from the second half of the current sample (N = 507). Regarding the data quality of this subsample, the skewness values for each item ranged from -2 to +2, and the kurtosis values ranged from -7 to +7, indicating that the data followed a normal distribution (Hair et al., 2019). Based on the criteria for assessing model fit indices ($\chi^2/df \leq 8$; GFI ≥ 0.90 ; AGFI ≥ 0.90 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; TLI ≥ 0.90 ; RMSEA ≤ 0.08 ; RMR ≤ 0.10 ; Kline, 2016), only one round of CFA was conducted to obtain an acceptable model, with all items retained. (see in Table 5)

Table 5 Goodness-of-fit for the EFL TEIQ with Measurement Models

Model Fit Indices	χ^2/df	<i>p</i>	GFI	AGFI	CFI	NFI	TLI	RMSEA	RMR
Benchmark	≤ 8	≥ 0.05	≥ 0.90	≤ 0.08	≤ 0.10				
Current Model	2.063	0.000	.961	0.942	0.965	0.934	0.952	0.046	0.014

Table 5 presents the results of the confirmatory factor analysis. Specifically, the χ^2/df , RMSEA, and RMR values were 2.063 (≤ 8), 0.046 (≤ 0.08), and 0.014 (≤ 0.10), respectively. In the current model, the GFI, AGFI, and CFI all exceeded 0.90. The four-factor model, comprising 14 items, indicates that EFL teachers' EI encompasses the factors of self-awareness, self-regulation, motivation, and interpersonal connectivity. The factor loadings of these four latent variables (see in Figure 1) ranged from 0.55 to 0.80 and were statistically significant ($p < 0.05$; Hair et al., 2019), suggesting that the observed variables serve as good measures of the latent constructs.

Additionally, this study considered both convergent validity and discriminant validity. The revised EI questionnaire demonstrated good reliability ($\alpha = 0.87$). To assess the internal consistency and reliability of the measurement model, CR was used, which provided a comprehensive

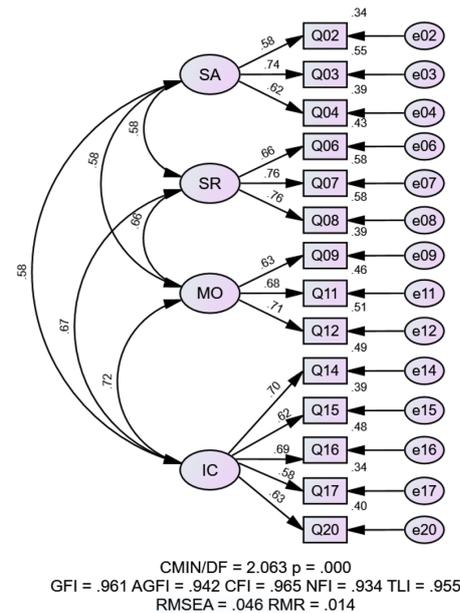


Figure 1 Graphical Representation of the Four-Factor Model of EI and Factor Loadings in the CFA

evaluation of the reliability of each latent factor. Although the generally accepted threshold is 0.7 or higher (Kline, 2016), the CR values calculated in this study ranged from 0.6 to 0.8. It is important to note that a CR value of 0.6 is slightly below the conventional threshold but should be interpreted within the context of the study. The complexity of the EI model, which includes multiple latent factors and their intricate interrelationships, may account for the observed CR values. Thus, these findings suggest that the latent factors in the model are reliable measures, contributing to the overall validity of the measurement tool. (see in Table 6)

Table 6 Convergent Validity and Discriminant Validity of Each Subscale of EI

Factor	Convergent Validity			Discriminant Validity (r)			
	p	CR	AVE	SA	SR	MO	IC
SA	0.000	0.68	0.4228	0.65			
SR	0.000	0.77	0.5303	0.58	0.73		
MO	0.000	0.71	0.4545	0.58	0.66	0.67	
IC	0.000	0.78	0.4168	0.58	0.67	0.72	0.65

The correlation coefficients ranged from 0.58 to 0.72. Some of the square roots of the AVE values were lower than the corresponding correlation coefficients (Fornell & Larcker, 1981), which may indicate potential issues with discriminant validity (see in Table 6). However, in practical terms, correlations slightly below 0.1 may be acceptable, especially when the correlations between latent variables are not particularly high. If the uniqueness of the latent variables is theoretically supported and the model fits well, correlations slightly below 0.1 can be considered acceptable. To conclude, despite the slight concerns regarding discriminant validity and the CR values being slightly below the conventional threshold, the overall reliability of the EI model in this study remains strong.

4.2 Levels of Emotional Intelligence Across Different Factors Among Middle School EFL Teachers

This study adopted the criteria proposed by Liu & Chu (2022), which are as follows: low (mean below 3.0), moderate (3.0-3.5), moderate-high (3.5-4.0), and high (above 4.0). Overall, EFL teachers demonstrated a relatively high level of EI (M = 4.03, SD = 0.39). Among the four sub-dimensions of EI, EFL teachers exhibited relatively high levels of self-awareness (M = 4.01, SD = 0.53), self-regulation (M = 4.01, SD = 0.52), motivation (M = 4.07, SD = 0.52), and interpersonal connectivity (M = 4.05, SD = 0.39).

The findings of this study align with previous research (Liu et al., 2023; Mercer & Gkonou, 2017; Moafian & Ghanizadeh, 2009; Sha et al., 2022), indicating that EFL teachers exhibit a

high level of EI. Moafian & Ghanizadeh (2009) investigated the relationship between EI and self-efficacy among Iranian EFL teachers in language institutes, and found that their EI was at a moderately high level. Similarly, in the study by Mercer & Gkonou (2017), they found that EFL teachers from various regions around the world exhibited moderately high EI ($M = 5.37$ on a 7-point scale). These findings may be closely related to the working environment of EFL teachers, as they are required to manage complex interpersonal relationships, coordinate diverse interests, and adapt to different teaching contexts. Additionally, high levels of EI may positively impact educational quality, as teachers are better equipped to apply EI skills when addressing challenges and responding to student needs.

To further validate and enrich the findings derived from the quantitative analyses, this study incorporated qualitative data during both the data collection and analysis phases. By integrating Goleman's theoretical framework, this study aims to build a more comprehensive and nuanced theoretical perspective, combining theoretical viewpoints with practical experiences to offer deeper insights. For instance, when discussing job satisfaction, Teacher D mentioned their satisfaction with relationships with both students and colleagues.

I deeply enjoy my work, particularly because I am able to form friendships with my students. It brings me immense joy to see them make progress in their studies and have fun in the classroom. On one occasion, I helped a student who was struggling with EFL, and when I saw a significant improvement in their grades, I felt a great sense of pride. I also have very good relationships with my colleagues. We often discuss teaching experiences and support each other. Recently, we organized a sports event together, which allowed us to understand each other better and made my work even more enjoyable. Therefore, I thoroughly enjoy my job and feel a high level of satisfaction with it. (Teacher D)

As reflected in Teacher D's EI score (4.12) on the questionnaire, which is above the average level (4.03), the interview also highlights his high level of EI (Goleman, 1995). Firstly, his overall job satisfaction and the fulfillment he gains from his relationships with students indicate a high level of self-awareness, as he is able to clearly recognize his emotional states. Secondly, in the process of helping students overcome academic difficulties and developing study plans, Teacher D demonstrated excellent self-regulation skills. He was able to manage his emotions, maintain a positive and focused mindset, and motivate students to achieve significant progress. Teacher D also exhibited outstanding interpersonal connectivity: in his interactions with students, he was highly sensitive to their needs. Furthermore, his ability to collaboratively organize activities with colleagues indicates his effectiveness in establishing and maintaining cooperative relationships with peers. Lastly, his job satisfaction and the joy he derives from his work reflect his high level of motivation. Overall, these experiences contribute to Teacher D's elevated EI.

Consistent with the quantitative results, the interview data also reveal a connection between EFL teachers' EI and their emotional states. The interview data indicate that teachers with higher EI are generally able to clearly recognize and understand their own emotional states. This relationship is exemplified in the interview with Teacher A.

My class was progressing well initially, but suddenly their academic performance plummeted, almost to the bottom of the class, which caused me significant stress. To cope with this situation, I decided to become more involved in their learning process. I made sure to stay with the students during self-study periods, spending more time with them. This lasted for about three months. Although being in the classroom with them added pressure on me, I knew it was worth it, as it could alleviate the stress caused by their poor performance. I believe that by being with them, they could improve their academic outcomes, so I persisted. (Teacher A)

Teacher A demonstrates a high level of EI by clearly identifying the stress he experienced in response to the decline in his class's performance. He was able to sensitively perceive the emotional pressure and take proactive steps to address it, reflecting his strong self-awareness of emotions. Through positive emotional recognition, Teacher A showed a clear understanding of his emotions and managed to cope with the challenges in the class by dedicating more time and effort, thereby maintaining good emotional regulation. This awareness and management of emotions highlight Teacher A's high EI.

5 Implication

The identification of four key EI sub-dimensions—self-awareness, self-regulation, motivation, and interpersonal connectivity—suggests that EI is a multidimensional construct that plays

a significant role in teachers' professional effectiveness and well-being. Understanding the specific factors that contribute to EI can inform targeted professional development programs. For instance, teachers could benefit from workshops and training sessions that focus on enhancing particular EI sub-dimensions. Programs aimed at improving self-regulation and motivation could equip teachers with the skills to manage stress more effectively, stay motivated despite challenges, and maintain a positive classroom environment. Similarly, enhancing teachers' interpersonal connectivity would help them build stronger relationships with both students and colleagues, fostering a more supportive teaching atmosphere.

The results highlight that teachers with high levels of self-awareness and self-regulation tend to have more positive emotional experiences at work. Educational institutions could establish support systems aimed at enhancing these two sub-dimensions. For instance, providing teachers with opportunities for reflection and self-assessment could help them develop greater self-awareness regarding their emotional states and triggers. Additionally, offering stress-management resources and techniques could help teachers strengthen their emotional regulation skills, enabling them to cope better with the emotional demands of teaching.

The factor of interpersonal connectivity emerged as a key element of EI, emphasizing the importance of social skills in teaching. Teachers who exhibit strong interpersonal connectivity are better able to connect with their students and foster a positive classroom climate. Therefore, professional development that focuses on improving teachers' communication, empathy, and conflict resolution skills could be crucial for enhancing teacher-student relationships and creating a more emotionally supportive classroom environment. Teachers with higher interpersonal connectivity are more likely to recognize and respond to students' emotional needs, contributing to higher student engagement and academic performance.

Motivation, as one of the key dimensions of EI, is linked to teachers' ability to persist in the face of challenges and remain committed to their students' success. The high levels of motivation demonstrated by teachers in this study suggest that EI can positively impact teachers' resilience and long-term professional dedication (Duan et al. 2023; Liu & Chu, 2022; Liu et al. 2024). Educational institutions could encourage and nurture teacher motivation by creating a positive work environment, offering opportunities for career advancement, and providing incentives that acknowledge teachers' efforts and achievements. Motivated teachers are more likely to remain engaged in their work and demonstrate exceptional commitment in their teaching practices.

This study provides an important step toward understanding the factor structure of EI in the teaching profession. However, future research could explore the relative importance of each EI sub-dimension and its direct impact on teaching outcomes. For example, longitudinal studies could examine how teachers' EI factors evolve over time and how these changes affect their teaching practices, student outcomes, and job satisfaction. Additionally, cross-cultural research could compare the factor structure of EI in different educational settings, helping to determine whether the same factors are as influential in various cultural contexts or whether the construct of EI needs to be adapted for different teaching environments.

Conflicts of interest

The authors declare that they have no conflict of interest.

References

- Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i)*. Technical manual. Multi-Health Systems, Inc.
- Cowie, N. (2011). Emotions that experienced English as a Foreign Language (EFL) teachers feel about their students, their colleagues and their work. *Teaching and Teacher Education*, 27(1), 235–242. <https://doi.org/10.1016/j.tate.2010.08.006>
- Day, C., & Gu, Q. (2009). Veteran teachers: commitment, resilience and quality retention. *Teachers and Teaching*, 15(4), 441–457. <https://doi.org/10.1080/13540600903057211>
- Duan, S., Chu, W., & Liu, H. (2023). "Seeking Resilience, Sustaining Development": A Self-Narrative Study of Early Career English Teacher Resilience from an Ecological Perspective. *Sustainability*, 15(16), 12386. <https://doi.org/10.3390/su151612386>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39.

- <https://doi.org/10.2307/3151312>
- Goleman, D. (1995). *Emotional Intelligence: Why it can Matter More Than IQ*. Bantam.
- Goleman, D. (1998). The emotional intelligence of leaders. *Leader to Leader*, 1998(10), 20–26. Portico.
<https://doi.org/10.1002/ltl.40619981008>
- Gregerson, T., MacIntyre, P. D., Hein Finegan, K., Read Talbot, K., & Claman, S. L. (2014). Examining emotional intelligence within the context of positive psychology interventions. *Studies in Second Language Learning and Teaching*, 4(2), 327–353.
<https://doi.org/10.14746/ssl.2014.4.2.8>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th ed.). Cengage Learning.
- Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education*, 14(8), 835–854.
[https://doi.org/10.1016/s0742-051x\(98\)00025-0](https://doi.org/10.1016/s0742-051x(98)00025-0)
- Jennings, P. A., & Greenberg, M. T. (2009). The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes. *Review of Educational Research*, 79(1), 491–525.
<https://doi.org/10.3102/0034654308325693>
- Keller, M. M., Chang, M.-L., Becker, E. S., Goetz, T., & Frenzel, A. C. (2014). Teachers' emotional experiences and exhaustion as predictors of emotional labor in the classroom: an experience sampling study. *Frontiers in Psychology*, 5.
<https://doi.org/10.3389/fpsyg.2014.01442>
- Kline, R. B. (2016). *Principles and Practice of Structural Equation Modeling* (4th ed.). Guilford Press.
- Liu, H., Chen, B., Li, X., & Zhou, X. (2024). Exploring the Predictive Role of Self-Efficacy in Engagement Among EFL Teachers in Online Teaching: The Mediation of Buoyancy. *The Asia-Pacific Education Researcher*, 33(4), 879–888.
<https://doi.org/10.1007/s40299-024-00820-x>
- Liu, H., & Chu, W. (2022). Exploring EFL teacher resilience in the Chinese context. *System*, 105, 102752.
<https://doi.org/10.1016/j.system.2022.102752>
- Liu, H., & Chu, W. (2023). Uncovering English as a foreign language teacher resilience: a structural equation modeling approach. *Applied Linguistics Review*, 15(6), 2755–2774.
<https://doi.org/10.1515/applirev-2022-0172>
- Liu, H., Chu, W., Duan, S., & Li, X. (2024). Measuring language teacher resilience: Scale development and validation. *International Journal of Applied Linguistics*, 34(4), 1283–1299. Portico.
<https://doi.org/10.1111/ijal.12562>
- Liu, H., Li, Y., & Liu, B. (2024). Exploring the relationship between emotional intelligence and emotion regulation: Evidence from junior high school EFL teachers in China. *Forum for Linguistic Studies*, 5(2).
<https://doi.org/10.59400/fls.v5i2.1641>
- Liu, H., Liu, B., & Zhou, X. (2024). Exploring the Mediating Role of EFL Teachers' Emotion Regulation in the Relationship Between Emotional Intelligence and Resilience. *International Journal of Applied Linguistics*. Portico.
<https://doi.org/10.1111/ijal.12672>
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-34). Basic Books.
- Mercer, S., & Gkonou, C. (2017). *Understanding emotional and social intelligence among English language teachers*. British Council.
- Moafian, F., & Ghanizadeh, A. (2009). The relationship between Iranian EFL teachers' emotional intelligence and their self-efficacy in Language Institutes. *System*, 37(4), 708–718.
<https://doi.org/10.1016/j.system.2009.09.014>
- Peña-Sarrionandia, A., Mikolajczak, M., & Gross, J. J. (2015). Integrating emotion regulation and emotional intelligence traditions: a meta-analysis. *Frontiers in Psychology*, 6.
<https://doi.org/10.3389/fpsyg.2015.00160>
- Petrides, K. V., & Furnham, A. (2006). The Role of Trait Emotional Intelligence in a Gender-Specific Model of Organizational Variables I. *Journal of Applied Social Psychology*, 36(2), 552–569. Portico.
<https://doi.org/10.1111/j.0021-9029.2006.00019.x>
- Plonsky, L., & Gonulal, T. (2015). Methodological Synthesis in Quantitative L2 Research: A Review of Reviews and a Case Study of Exploratory Factor Analysis. *Language Learning*, 65(S1), 9–36. Portico.
<https://doi.org/10.1111/lang.12111>
- Powell, W., & Kusuma-Powell, O. (2010). *Becoming an Emotionally Intelligent Teacher*.
<https://doi.org/10.4135/9781452275307>
- Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211.
<https://doi.org/10.2190/dugg-p24e-52wk-6cdg>
- Schonert-Reichl, K. A. (2017). Social and Emotional Learning and Teachers. *The Future of Children*, 27(1), 137–155.
<https://doi.org/10.1353/foc.2017.0007>
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25(2), 167–177.
[https://doi.org/10.1016/s0191-8869\(98\)00001-4](https://doi.org/10.1016/s0191-8869(98)00001-4)

- Sha, J., Tang, T., Shu, H., He, K., & Shen, S. (2022). Emotional Intelligence, Emotional Regulation Strategies, and Subjective Well-Being Among University Teachers: A Moderated Mediation Analysis. *Frontiers in Psychology*, 12.
<https://doi.org/10.3389/fpsyg.2021.811260>
- Song, C. (2022). Applying Empathy Theory in Online Chinese Language Education: Examples from a Chinese University. *Teaching the Chinese Language Remotely*, 253–267.
https://doi.org/10.1007/978-3-030-87055-3_11
- Yu, K., & Jiang, Z. (2017). Social and Emotional Learning in China: Theory, Research, and Practice. *Social and Emotional Learning in Australia and the Asia-Pacific*, 205–217.
https://doi.org/10.1007/978-981-10-3394-0_11