Exploring the relationship between emotional intelligence and emotion regulation: Evidence from junior high school EFL teachers in China

Honggang Liu¹, Yufeng Li², Baochen Liu²,³,*

¹ School of Foreign Languages, Soochow University, Suzhou 215006, Jiangsu Province, China
² Jianyang Middle School of Sichuan Province, Chengdu 641499, Sichuan Province, China
³ School of Foreign Languages, Northeast Normal University, Changchun 130024, Jilin Province, China

*Corresponding author: Baochen Liu, liubc342@nenu.edu.cn

ABSTRACT: Teachers’ emotional intelligence (EI) and emotion regulation (ER), as protective factors against stressful situations, play active roles in promoting teachers’ well-being and sense of teaching self-efficacy. However, few studies have touched on the linkage between these two variables, which, to some extent, has hindered the in-depth exploration of their functions in teachers’ professional development. To address this gap, the current study examined the EI and ER of 474 junior high school English as foreign language (EFL) teachers in China via a questionnaire and semi-structured interviews. With the aid of SPSS 26.0, the data collected through the questionnaire were coded, computed, and analysed. Both descriptive and inferential statistics were used to report the levels of EFL teachers’ EI and ER and the correlation between them. The semi-structured interviews were recorded and transcribed, and the data were subsequently analysed. The results indicate a positive correlation between EFL teachers’ EI and ER and the correlation between them. The detailed statistics display that all dimensions of EI were positively and significantly correlated with all dimensions of ER. The results further explain the relationship between teachers’ EI and ER in an EFL context. Practical implications are put forward concerning the development of EI and ER competencies.

KEYWORDS: emotional intelligence; emotion regulation; EFL teachers; correlation analysis

1. Introduction

Teaching is considered one of the most emotionally demanding professions, which can affect mental health and well-being (Schonert-Reichl, 2017). Teachers’ socioemotional competence, such as emotional intelligence (EI) and emotion regulation (ER), is considered a protective factor against stressful situations, in addition to promoting well-being and a sense of self-efficacy in the classroom (Conroy et al., 2009), and it has been investigated in the foreign language teaching and learning context. Despite the need for ER for adaptation, individuals substantially differ in their capacity and propensity to apply regulatory mechanisms (Gross and John, 2003). EI appears to account for variability in individuals’ ability to regulate their emotions (Mikolaiczak et al., 2008), and different levels of EI have been associated with different patterns of ER (Peña-Sarrionandia et al., 2015).
Additionally, previous studies have shown that teachers’ EI (Hen and Sharabi-Nov, 2014) and ER strategies (Fried, 2011) can be acquired, improved, and maintained through interventions and workshops. Therefore, teacher training and professional development interventions should be designed to raise teachers’ awareness of monitoring and regulating emotions. Regarding the relationship between EI and ER, previous studies have mainly focused on English as a foreign language (EFL) student and have revealed that students’ EI could influence their ER ability (Gao and Yang, 2023; Thomas and Zolkoski, 2020; Villar et al., 2017). Presumably, EFL teachers’ EI would also benefit their ER. However, there has been scarce exploration of the relationship between EI and ER in the field of EFL teaching. Thus, investigating the correlation between EFL teachers’ EI and ER could fill this gap and enrich the findings in teaching psychology.

2. Literature review

2.1. Studies on EFL teachers’ emotional intelligence

EI has been researched since the end of the last century (Gkonou and Mercer, 2017; Goleman, 1995). It is defined as “the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (Goleman, 1998).

Generally, EI is regarded as a multidimensional construct (Bar-On, 2000; Mayer and Salovey, 1997). Goleman (1998) proposed a five-domain model of EI comprising self-awareness, self-regulation, motivation, empathy, and social skills. Self-awareness refers to the ability to know one’s internal states, preferences, resources, and intuitions. Self-regulation refers to the ability to manage one’s internal states, impulses, and resources. Motivation encompasses the emotional tendencies that guide or facilitate reaching goals. Empathy reflects one’s awareness of others’ feelings and concerns. Social skills are indicative of people’s adeptness at inducing desirable responses in others (Goleman, 1998). This model of EI was adopted as the research framework to understand EFL teachers’ EI because it comprehensively depicts the traits one should acquire to be called an emotionally intelligent person, and this model has also been applied in investigating EFL teachers’ EI (Gkonou and Mercer, 2017).

2.2. Studies on EFL teachers’ emotion regulation

Teachers have various emotional experiences in the workplace, and they should learn to manage their emotions because how they regulate them influences their teaching and well-being (Heydarnejad et al., 2021). ER is a combination of various processes for controlling when and how people experience and express their emotions (Gross, 1998). In the teaching context, following Gross’s conceptualization, Yin and Lee (2012) defined teachers’ ER as the process by which teachers try to suppress and manage their emotions and expressions according to their beliefs regarding the teaching profession. Furthermore, according to a review of previous studies, teachers’ ER denotes their capability to succeed and endure emotive practices in the classroom (Wang and Ye, 2021).

Drawing from the process model of ER (Gross, 2001), Gross and John (2003) proposed a bifactorial structure of ER comprising cognitive reappraisal and expressive suppression. Cognitive reappraisal, as a form of cognitive change, refers to modifying one’s appraisal of a situation to alter its emotional impact. Expressive suppression is a form of response modulation that involves inhibiting ongoing emotion-expressive behaviour (Gross, 1998). John and Gross (2004) found that people who habitually use reappraisal as an ER strategy experience and express more positive and less negative emotions, while people who use mainly suppression experience and express less positive and more negative emotions. In this study, this two-dimensional structure by Gross and John (2003) was adopted to explore teachers’ ER,
which has been applied in several studies investigating EFL teachers’ ER (Fathi and Derakhshan, 2019; Greenier et al., 2021).

2.3. Studies on the relationship between teachers’ emotional intelligence and emotion regulation

Theoretically, EI and ER should be closely related, because EI involves the ability to reason about emotions and use emotions to enhance thinking (Peña-Sarrionandia et al., 2015). However, few studies have investigated the relationship between EI and ER in teaching. An exception is a recent study by Sha et al. (2022) exploring the relationship between 308 university teachers’ EI, ER, and subjective well-being. They found that teachers’ EI positively predicted cognitive reappraisal at a significant level and negatively predicted expressive suppression. In the context of EFL teaching, which is highly demanding and challenging (Chu and Liu, 2022; Liu and Chu, 2022), the relationship between EI and ER remains unexamined yet is beneficial to determine for better understanding teachers’ socioemotional competence. In fact, EFL teachers must foster their socioemotional competence to handle everyday emotional issues related to teaching. Thus, the present study aims to explore the relationship between EFL teachers’ EI and ER by addressing the following questions:

1. What are the levels of junior high school EFL teachers’ EI?
2. What are the levels of junior high school EFL teachers’ ER?
3. What is the relationship between junior high school EFL teachers’ EI and ER?

3. The study

3.1. Research participants

Language education is a highly demanding and challenging job (Liu and Chu, 2022; Liu and Li, 2023), and language teachers receive rare attention, particularly EFL teachers in middle schools. Therefore, we chose EFL teachers from different levels of public junior high schools and from diverse socioeconomic backgrounds, including 401 females and 73 males. Therefore, 474 junior high school EFL teachers in northeast China participated in this study. Six participants were involved in the semi-structured interviews. Initially, 22 participants showed interest in participating in follow-up interviews by responding to the last item of the questionnaire (“Please write down your telephone number/WeChat number/email if you can be interviewed about the topic of language teacher emotions”), but only six participants agreed and were ultimately interviewed.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>73</td>
<td>15.4</td>
</tr>
<tr>
<td>Female</td>
<td>401</td>
<td>84.6</td>
</tr>
<tr>
<td>Education background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College’s degree</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>369</td>
<td>77.8</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>101</td>
<td>21.3</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>3</td>
<td>0.6</td>
</tr>
<tr>
<td>Years of teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–10</td>
<td>38</td>
<td>8.0</td>
</tr>
<tr>
<td>11–20</td>
<td>227</td>
<td>47.9</td>
</tr>
<tr>
<td>21–30</td>
<td>172</td>
<td>36.3</td>
</tr>
<tr>
<td>&gt;31</td>
<td>37</td>
<td>7.8</td>
</tr>
</tbody>
</table>
3.2. Research instruments

3.2.1. EFL teachers’ emotional and social intelligence scale

The EFL Teachers’ Emotional and Social Intelligence Scale (EFL TESIS) was developed by Gkonou and Mercer (2017) and they based it on the five-dimension model of EI (Goleman, 1998). Self-regulation in EFL TESIS mainly measures how teachers deal with heavy pressure in their work (Q4), how they treat challenges with their colleagues (Q5), and how they regulate their thoughts and verbal behaviours at work (Q6). None of these behaviours are included in the ER definition of Gross and John (2003), which was applied in the research framework of the current study. Thus, we have the following five sub-scales in EFL TESIS—namely, self-awareness (Q01–Q03, \( \alpha = 0.78 \)), self-regulation (Q4–Q6, \( \alpha = 0.86 \)), motivation (Q07–Q09, \( \alpha = 0.80 \)), empathy (Q10–Q12, \( \alpha = 0.83 \)), and social skills (Q13–Q15, \( \alpha = 0.80 \)).

3.2.2. EFL teachers’ emotion regulation scale

The EFL Teachers’ Emotion Regulation Scale (EFL ERS) was designed on the basis of Gross and John (2003) and included two subscales: cognitive reappraisal (Q16–Q21, \( \alpha = 0.90 \)) and expressive suppression (Q22–Q25, \( \alpha = 0.86 \)). The two subscales adopted a 5-point Likert ranking system from 1 (strongly disagree) to 5 (strongly agree).

3.3. Semi-structured interview protocol

To understand more deeply the relationship between junior high school EFL teachers’ EI and ER in teaching situations and to further explain the quantitative findings, six participants were invited to share their thoughts in semi-structured interviews. We used Chinese in the interviews, and the questions were based on our research questions to investigate the levels of EFL teachers’ EI and ER as well as their relationship. Other relevant information is provided as appendices at the end of the paper. Each teacher was interviewed by telephone for about 20 min, and the interviews were recorded with the participants’ permission.

3.3.1. Research procedures

Before participants filled in the questionnaire, they have been told the research aims, how to complete the questionnaire, and that they could quit at any time if they did not want to continue. The questionnaire data were coded, computed, and analysed using SPSS 26.0. First, descriptive statistics were used to present the levels of junior high school EFL teachers’ EI and ER. Then a bivariate Pearson correlation analysis between EI and ER was conducted. After gathering the quantitative data, qualitative data were obtained from the six semi-structured interviews conducted via telephone. The research purpose was explained to all participants, and the confidentiality of their information was guaranteed before they signed consent forms to participate in the study. The participants could quit at any time if they felt uncomfortable.

4. Results and discussion

4.1. Levels of EFL teachers’ emotional intelligence

Table 2 displays the descriptive analysis of EFL teachers’ levels of EI. It shows that teachers have a higher global EI (\( M = 4.28; SD = 0.46 \)). Specifically, among the five dimensions of EI, the mean scores from high to low are as follows: (1) motivation (\( M = 4.34; SD = 0.53 \)), (2) social skills (\( M = 4.29; SD = 0.53 \)), (3) self-awareness (\( M = 4.28; SD = 0.53 \)), (4) self-regulation (\( M = 4.27; SD = 0.51 \)), and (5) empathy (\( M = 4.20; SD = 0.55 \)).
Table 2. Levels of junior high school EFL teachers’ emotional intelligence.

<table>
<thead>
<tr>
<th>Sub-dimensions of EI</th>
<th>Max</th>
<th>Min</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>5.00</td>
<td>2.00</td>
<td>4.34</td>
<td>0.53</td>
</tr>
<tr>
<td>Social skill</td>
<td>5.00</td>
<td>1.67</td>
<td>4.29</td>
<td>0.53</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>5.00</td>
<td>1.67</td>
<td>4.28</td>
<td>0.53</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>5.00</td>
<td>1.67</td>
<td>4.27</td>
<td>0.51</td>
</tr>
<tr>
<td>Empathy</td>
<td>5.00</td>
<td>1.67</td>
<td>4.20</td>
<td>0.55</td>
</tr>
<tr>
<td>Global EI</td>
<td>5.00</td>
<td>1.73</td>
<td>4.28</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Overall, the junior high school English teachers exhibit a high EI level, which means that they can reasonably perceive their emotional state and the emotional states of others in the working environment and use specific skills to adjust their emotions and those of others around them to cope with common adversity, such as setbacks, pressures, and challenges (Gkonou and Mercer, 2017; Rastegar and Memarour, 2009; Wong and Law, 2002). The EFL teachers’ high level of motivation shows that they are highly motivated and satisfied and have significant self-efficacy (Gkonou and Mercer, 2017). Motivation is among the most critical factors leading teachers to show different levels of emotional perception and adjustment, which may also be determined by the subjectivity of teachers’ teaching activities (Coombe et al., 2020; Dewaele et al., 2018; Kostić-Bobanović, 2020). The level of EFL teachers’ empathy indicates that they are good at understanding someone else’s feelings by putting themselves in their shoes (Ghanizadeh and Moafian, 2009; Saeidi and Kalantarypour, 2011). Moreover, if teachers can cooperate with colleagues effectively, get along well with students, and influence students’ thinking, their level of social skills will remain high (Gkonou and Mercer, 2017). In addition, the EFL teachers’ above-average level of self-awareness shows that they could be aware of the positive or negative emotions in their work and know their strengths and weaknesses, think about their feelings at work, and be alert to emotions interfering in their decision-making (Moafian and Ghanizadeh, 2009; Rastegar and Memarour, 2009). Finally, the high level of EFL teachers’ self-regulation suggests that they could do well in stress management in their work (Yao, 2003).

4.2. Levels of EFL teachers’ emotion regulation

According to Table 3, the mean score of EFL teachers’ global ER is higher than the average ($M = 3.90; SD = 0.58$). Specifically, in terms of the two dimensions of ER, the mean scores from high to low are as follows: (1) reappraisal ($M = 4.16; SD = 0.55$) and (2) suppression ($M = 3.51; SD = 0.84$). Overall, junior high school EFL teachers are skilful at employing cognitive reappraisal and expressive suppression (Fathi and Derakhshan, 2019).

Table 3. Levels of junior high school EFL teachers’ emotion regulation.

<table>
<thead>
<tr>
<th>Sub-dimensions of ER</th>
<th>Max</th>
<th>Min</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive reappraisal</td>
<td>5.00</td>
<td>2.00</td>
<td>4.16</td>
<td>0.55</td>
</tr>
<tr>
<td>Expressive suppression</td>
<td>5.00</td>
<td>1.00</td>
<td>3.51</td>
<td>0.84</td>
</tr>
<tr>
<td>Global ER</td>
<td>5.00</td>
<td>1.80</td>
<td>3.90</td>
<td>0.58</td>
</tr>
</tbody>
</table>

EFL teachers’ high level of cognitive reappraisal shows that they are adept at using this strategy to regulate their emotions, such as increasing positive emotions or decreasing negative emotions (Gkonou...
and Mercer, 2017). Similar findings were reported in previous studies that found that foreign language teachers could use cognitive reappraisal skilfully to reduce negative emotions and increase positive emotions (Jiang et al., 2016). The above-average level of suppression of EFL teachers shows their ability to modulate responses by inhibiting ongoing emotion-expressive behaviour. Teachers’ ability to suppress their emotions is high if they are able to cope with unforeseen positive or negative emotions and suppress them well. This resonates with a previous finding that, in the face of unforeseen classroom situations, teachers could use expressive suppression well to reduce their negative emotional responses, such as tension and anger, to maintain order in the classroom (Chahkandi et al., 2016).

4.3. The relationship between EFL teachers’ emotional intelligence and emotion regulation

Generally, there is a significant and positive correlation between the junior high school EFL teachers’ global EI and global ER ($r = 0.615$, $p < 0.01$). This finding empirically echoes the theoretical assumption of a positive correlation between these two variables (Mikolajczak et al., 2007). Regarding the association between dimensions of ER and EI, there is a strong correlation between dimensions of EI and cognitive reappraisal, while there is a medium to small correlation between dimensions of EI and expressive suppression (Plonsky and Oswald, 2014). The following sections combine the quantitative and qualitative results concerning the associations between sub-dimensions of EI and ER. Consequently, this supports the statement of a positive correlation between EI and ER.

Table 4. The correlation between emotional intelligence and emotion regulation.

<table>
<thead>
<tr>
<th>Cognitive reappraisal</th>
<th>Expressive suppression</th>
<th>Global ER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>0.616**</td>
<td>0.334**</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>0.617**</td>
<td>0.356**</td>
</tr>
<tr>
<td>Motivation</td>
<td>0.595**</td>
<td>0.313**</td>
</tr>
<tr>
<td>Empathy</td>
<td>0.675**</td>
<td>0.426**</td>
</tr>
<tr>
<td>Social skills</td>
<td>0.678**</td>
<td>0.347**</td>
</tr>
<tr>
<td>Global EI</td>
<td>0.730**</td>
<td>0.408**</td>
</tr>
</tbody>
</table>

Note: ** $< 0.01$ (2-tailed).

4.3.1. The correlation between social skills and dimensions of emotion regulation

Social skills are positively correlated with ER ($r = 0.550$, $p < 0.01$). Teachers with superior social skills can use appropriate strategies to regulate emotions because they have a strong willingness to take part in social interactions and handle interpersonal relationships. This connection can be illustrated in the interviews.

Extract 1

Researcher: How can you attract students to keep their attention and maintain a high degree of enthusiasm in class?

Teacher C: Being humorous. I think students will listen to you if they like you. Therefore, I pay great attention to the personal relationship with students. If you have an excellent personal relationship with students, you can make them feel that you are treating them with love and kindness.

Teacher C had strong social skills that were embodied in a willingness to get involved with students. Having superior social skills enabled Teacher C to employ cognitive reappraisal and expressive suppression strategies to regulate her negative emotions (see Extract 2). This finding echoes Karim and Weisz’s (2011) finding of a high correlation between social skills and ER.
4.3.2. The correlation between empathy and dimensions of emotion regulation

Empathy has a significant and positive correlation with ER ($r = 0.603$, $p < 0.01$), which means that teachers with a high level of empathy are likely to regulate their emotions effectively. Teachers with a high level of empathy can share others’ feelings by putting themselves in their shoes and correctly adopting different ER strategies to ensure the smooth completion of their work. This result may be because teachers with a high level of empathy can detect their own and others’ emotions quickly and, in turn, regulate their emotions appropriately. Follow-up interviews provided more details regarding this.

Extract 2

Researcher: How do you handle conflicts with students who are not doing well in class?

Teacher C: It is not surprising that such a big child is naughty. If his naughty behaviour is not intentional, just remind him. His attitude is crucial. If he is intentional, he must be dealt with seriously. What young teachers should remember is to be patient, especially when you are not calm. You need to calm down and give yourself some time. It is irrational to be so serious, especially in class. Just sit down first, think about this matter again, and then deal with it after class.

Teacher C understands students’ naughty behaviour and believes it is common among junior high school students. “His attitude is crucial. If he/she is naughty on purpose, he/she must be treated very seriously”, reflects Teacher C’s empathy by being in her student’s shoes. Her empathy is correlated with her use of ER strategies. For instance, Teacher C could both suppress her negative feelings and reappraise the situation: “You sit down first, think about this matter again, and then deal with it after class.” Thus, Teacher C chooses cognitive reappraisal and expressive suppression strategies with an understanding of the student’s behaviour. From this view, it can be seen that Teacher C’s empathy and ER are correlated. This result is consistent with Brotheridge (2006), who found that the level of empathy positively impacts the ER level.

4.3.3. The correlation between self-regulation and dimensions of emotion regulation

EFL teachers’ self-regulation is positively correlated with ER ($r = 0.528$, $p < 0.01$), meaning that teachers who can deal with stress at work or problems with colleagues are likely to effectively regulate their emotions. This also appeared in the interview.

Extract 3

Researcher: It is not easy to communicate with students. How do you usually deal with naughty students in English class?

Teacher D: I had a relatively open mind, but later, when I came into contact with children in junior high school, they were naughty in your class, and this sometimes made me stressed and angry. But it is also good because, when learning English, they need to talk actively and practise their pronunciation. So, I made some self-adjustment slowly in class and gave these naughty boys more opportunities to speak up in class.

Teacher D reanalyses the situation and finds solutions to this problem at work, thereby relieving her anger. She also makes some self-adjustment to deal with students’ naughty behaviour. This suggests that Teacher D uses a cognitive reappraisal strategy and consequently showcases her EI trait of self-regulation, demonstrating that self-regulation and ER are associated. This finding resonates with Austin et al. (2008), who found a high correlation between self-regulation and ER.
4.3.4. The correlation between self-awareness and dimensions of emotion regulation

EFL teachers' self-awareness is positively correlated with ER ($r = 0.512, p < 0.01$). Teachers with a high level of self-awareness can reflect positively to correctly view their own advantages and disadvantages, actively express their emotions, accept others' evaluations, and correctly view failures. The above behaviours could also reflect teachers' high level of ER, and this may be because the premise behind teachers' effective ER is a high level of self-awareness.

Extract 4

Researcher: What would you suggest to novice teachers handling conflicts with students and dealing with negative emotions?

Teacher C: You need to keep learning. New teachers should be more careful and learn from experienced teachers. One of the teachers who assigned classes to me had special experience as a head teacher, so I always stayed in his classes during recess, hoping to see how he communicated with his students during recess.

Teacher C is aware of the advantage of continuing to learn from others to improve her teaching. She also mentioned her experience of learning from other excellent teachers during the early stage of her employment. Teacher C’s self-awareness of the advantage of learning from experienced teachers also led to her learning to deal with teacher-student conflicts. Therefore, when encountering conflicts with students, Teacher C employs cognitive reappraisal and expressive suppression strategies to regulate emotions (see Extract 2). This finding resonates with Karim and Weisz (2011), who showed that self-awareness was correlated with ER.

4.3.5. The correlation between motivation and dimensions of emotion regulation

EFL teachers' motivation is positively correlated with ER ($r = 0.489, p < 0.01$). Motivation refers to being highly motivated, satisfied, and having self-efficacy at work. With a high level of motivation, teachers could perform well in their ER, which could be observed in the interview.

Extract 5

Researcher: Are you satisfied with your job?

Teacher A: I think I am very satisfied with it. For example, there is definitely no problem in supporting life with my income, and the pressure is actually within my control. I think my professional happiness is quite high.

Researcher: What would you suggest to novice teachers when they deal with conflicts with students and when they deal with negative emotions?

Teacher A: You do not have to show your negative emotions every time. Instead, you can deal with them with a smile. You don't have to yell at students. Students like teachers who walk into the classroom with a smile. They said they liked my class and thought I was optimistic because I was very happy every time I came into the classroom, which made students very happy.

Teacher A's motivation is reflected in her satisfaction with the job. She perceives her professional happiness as relatively high. Thus, when encountering negative emotional situations, she can curb her negative emotions and present her students with a smile. Specifically, when a conflict arises with students, Teacher A bears in mind that “students like teachers who walk into the classroom with a smile”. Therefore, Teacher A links her professional happiness, stemming from her high motivation, to her ER. This result is in line with the finding of Austin et al. (2008) that motivation positively influenced the ER level.
5. Conclusions and implications

The present study investigated the relationship between Chinese junior high school EFL teachers’ EI and ER. The findings reveal a positive correlation between teachers’ EI and ER in general and a similar tendency among dimensions of EI and ER. Inspired by the findings, we propose the following implications for enhancing teachers’ EI and ER, which may be beneficial for improving English teaching quality.

Teachers are agentic in nature. They have great potential to enhance their EI and ER in different ways. Teachers are encouraged to participate in discussions about how to teach English in their regular teaching meetings and to undertake class observations of expert teachers to learn how they regulate negative emotions. They could also write reflective journals about how they deal with negative emotions and address the problems in teaching. Doing these activities can enable teachers to enhance both their EI and ER. School administrators are suggested to make the best use of in-service training programs where socio-emotional knowledge is input as an important module. The hope is that teachers will consequently improve their EI (e.g., self-regulation) and enrich their ER ability. Due to the correlation between EI and ER, the improvement of EI may lead to the enhancement of ER. Therefore, incorporating activities that are designed for practising EI and ER would benefit more than a single type of activity.

Though we strived in the current research to unfold the complex relationship between EI and ER, there were some limitations. On the one hand, this study was cross-sectional, making it unlikely to highlight the dynamic nature of EI and ER. Therefore, a diachronic research paradigm could be applied to further examine the correlation between EI and ER in the future. On the other hand, the participants came from various schools of different levels in China, with an uneven gender ratio, 401 females and 73 males. Future studies should employ a large sample with an even gender ratio. Besides, since self-report measures rely on individuals’ evaluations and are subject to bias, it is likely that we did not collect accurate estimates of EI and ER. Future studies could overcome this potential limitation by using maximum-performance tests.

Author contributions

Conceptualization, HL and YL; methodology, HL, YL and BL; software, HL; validation, HL, YL and BL; formal analysis, HL; investigation, YL; resources, BL; data curation, BL; writing—original draft preparation, HL, YL and BL; writing—review and editing, HL; visualization, YL; supervision, BL; project administration, HL; funding acquisition, HL. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest.

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