

Correlation between Emotional Intelligence and English Learning Achievement Among Rural Junior High School Students from a Positive Psychology Perspective

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Abstract

This study investigated the current status of emotional intelligence of rural junior high school students and explored the correlation between their emotional intelligence and English learning achievement. The results showed that the participants' emotional intelligence was moderate to high. Boys were significantly higher than girls in the dimension of self-emotion managing, while girls were significantly higher than boys in the dimension of managing others' emotions. There was no significant difference between the students of different grades in terms of total emotional intelligence score and all the four dimensions of emotional intelligence. Total emotional intelligence score and all four dimensions of emotional intelligence were significantly and positively correlated with English learning achievement.

Keywords

Emotional intelligence; English learning achievement; correlation research; rural junior high school students.

1. Introduction

Second Language Acquisition (SLA) has traditionally been studied primarily from a cognitive perspective. However, since the 21st century, research in SLA has seen rapid advancements in the study of the dynamic interaction between cognitive and emotional processes[1]. Seligman[2] founded positive psychology (PP). Around 2012, positive psychology was introduced into the field of second language acquisition[3,4]. Since then, emotion research in second language acquisition has gradually developed, breaking the long-standing dominance of cognitive factors in the SLA field[5]. Research on positive psychology in second language acquisition has made breakthroughs in terms of topic diversity and theoretical frameworks. Other positive psychology traits beyond emotions have also garnered increasing attention from scholars, such as emotional intelligence[6,7].

Emotional intelligence refers to an individual's ability to recognise, perceive, evaluate, understand and regulate their own and others' emotions[8]. Mayer & Salovey[9] further proposed a model of emotional intelligence: emotional perception, emotional understanding, emotional management and emotional integration. Emotional intelligence is an important component of talent quality structure and has a significant impact on students' personality development and academic achievement.

Existing second language acquisition research has focused primarily on university students, with limited attention given to rural junior high school students. Rural junior high school students are in the critical period of adolescence, a time of rapid physical and mental development, and their learning emotions exhibit unique characteristics. Additionally, rural students face challenges such as insufficient family support and limited teaching resources[10]. The added challenge of foreign language learning during the junior high school stage further

highlights the group-specific nature of foreign language learning emotional intelligence among rural junior high school students, underscoring the necessity of this research.

This study aims to investigate the emotional intelligence of rural junior high school students from a positive psychology perspective, with the following significance: First, this study adopts the rapidly developing perspective of positive psychology. Second, this study provides a deeper understanding of how emotional intelligence manifests in different populations, thereby expanding the scope of research participants in emotional intelligence studies. Third, this study focuses on rural students, aligning with the government's strategy to 'accelerate the high-quality and balanced development of compulsory education, promote urban-rural integration, and optimise the allocation of educational resources in regions.'

2. Literature Review

2.1. Theoretical Research on Emotional Intelligence

Theoretical research on emotional intelligence includes the definition of emotional intelligence, models of emotional intelligence, and assessment of emotional intelligence.

In 1990, American psychologists J. D. Mayer and Peter Salovey first proposed the concept of emotional intelligence; in the following ten years, American psychologist Daniel Goleman and Israeli psychologist Reuven Bar-on continued to advance and deepen the theoretical research on emotional intelligence. Some of the more influential concepts of emotional intelligence are: J. D. Mayer Peter Salovey[11] defines emotional intelligence as "the ability to recognise the meaning of emotions and their relationships, the ability to use knowledge to reason and solve problems, and the ability to use utilizing emotion to facilitate cognitive activity." Goleman[12] believes that emotional intelligence consists of five competencies: the ability to recognise one's own emotions and those of others, the ability to motivate oneself, and the ability to manage one's own emotions and those of others in interpersonal relationships. Israeli psychologist Reuven Bar-on[13] defines emotional intelligence as the ability of individuals to mobilise their personality, emotions, and interpersonal relationships when dealing with stress or situational stimuli.

Mayer and Salovey[11] proposed an emotional intelligence model comprising emotional perception, emotional understanding, emotional management, and emotional integration. Goleman[14] proposed a model including self-awareness, self-management, social awareness, and social relationships. In 2000, the Bar-on emotional intelligence model was established.

Based on the theoretical model of emotional intelligence, scholars have conducted a series of quantitative studies and developed various scales to measure emotional intelligence. At present, the influential scales include: the self-stated scale "Bar-on Emotional Quotient inventory" (Bar-on Emotional Quotient inventory, abbreviated as EQ-i) compiled and published by Reuven Bar-on[13]; The Emotional Intelligence Inventory 360 (ECI360) compiled by American psychologist Daniel Goleman[15] and others; The Emotional Intelligence Scale (EIS) compiled by American psychologist Micola S. Schutte[16] and others, which is based on the emotional intelligence model proposed by Salovey & Mayer.

2.2. Empirical Research on Emotional Intelligence

In terms of empirical research on emotional intelligence, first of all, the demographic differences in emotional intelligence have been studied most extensively. In 2004, Zhang Jinfu and Xu Xiaoyan found that there were significant differences in the dimensions of emotional intelligence among college students in terms of gender, major, and grade level[17]. In 2017, Lu Jiamei et al. found that the emotional intelligence levels of contemporary graduate students in China were generally acceptable, but their ability to express their emotions was insufficient. Graduate students demonstrated lower ability to understand others' emotions compared to

undergraduate students, and doctoral students showed lower ability than master's students [18]. Secondly, scholars have taken emotional intelligence as a variable and explored its relationship with other variables. One of the topics that have received more attention is the study of the correlation between emotional intelligence and learning performance. Research findings on this topic exhibit certain differences, with some studies demonstrating a positive correlation between emotional intelligence and academic performance, while others find no significant relationship between the two.

2.3. Emotional Intelligence in SLA

In the field of second language acquisition, research on emotional intelligence began relatively late, with early studies focusing primarily on cognitive factors (such as language aptitude and learning strategies) and social factors (such as language environment and teaching methods) and their impact on language learning. However, with the rise of positive psychology and the affective turn in second language acquisition, emotional intelligence has begun to be incorporated into research on language learning.

Qin Xigen[19] investigated the correlation between emotional intelligence and English learning achievement among junior high school students. The results showed that the emotional intelligence of junior high school students was at a moderately high level; there were significant gender differences in emotional intelligence, with girls scoring significantly higher than boys. Li Chengchen[20] studied the correlation between Chinese students' emotional intelligence, classroom emotions, and English learning achievement from a positive psychology perspective. The results showed that three emotions—joy, anxiety, and boredom—played multiple parallel mediating roles between emotional intelligence and English learning achievement. Wei Xiaobao et al[21] investigated the relationship between emotional intelligence, language thinking patterns, and second language communication intention. The results showed that emotional intelligence has a direct predictive effect on second language communication intention and indirectly influences it through language thinking patterns and pleasantness; thus validating the hypothetical chain of “emotional intelligence → learning attitudes → learning emotions → motivational behavior.” Dewaele and Li[22] examined the effects of emotional intelligence (EI) on target language usage frequency and anxiety levels among multilingual learners. The study found that emotional intelligence was significantly positively correlated with learners' willingness to use the target language both in and out of the classroom, and negatively correlated with foreign language anxiety (FLA).

Overall, research on emotional intelligence in the field of second language acquisition is thriving, with most studies focusing on college students. Currently, there is a lack of research on emotional intelligence among rural junior high school students.

3. Research Design

3.1. Research Questions

This study aims to answer the following three questions:

- (1) What is the current status of emotional intelligence among rural junior high school students? What is the current status of rural junior high school students in terms of the four dimensions of emotional intelligence?
- (2) Are there differences in emotional intelligence among rural junior high school students of different genders and grades?
- (3) Is there a correlation between emotional intelligence as well as its four dimensions and English learning achievement among rural junior high school students?

3.2. Research Participants

This study was conducted in a rural junior high school in a central province of China. The school is located in a township, and almost all students are permanent residents of the township. The researcher randomly selected two classes from each of the seventh, eighth, and ninth grades, totaling six classes as the sample. A total of 253 students participated in the study, and 234 valid questionnaires were returned. The demographic information of the participants is presented in Table 3-1.

Table 3-1. Demographic Information of Participants

Grade 7	92
Grade 8	69
Grade 9	73
Male	131
Female	103
Left-behind Students	42
Non-left-behind students	192

3.3. Research Method

Questionnaire is used as the research method. This study used the Chinese version of the Emotional Intelligence Scale (EIS) developed by American psychologist Schutte. The Chinese version was translated by Wang Caikang and has been proven to have good reliability and validity. The scale contains four dimensions: perception of emotion, self-emotion managing, managing others' emotions, and utilizing emotion, with a total of 33 test items. The scoring method is a 5-point scale, with 1 indicating "very disagree" and 5 indicating "very agree."

To explore the correlation between emotional intelligence and English grades, this study utilized students' mid-term exam scores. This exam is intended to assess students' English learning achievement.

3.4. Data Collection and Analysis

The questionnaire was distributed in paper format. With the cooperation of the class teacher, the researcher distributed the questionnaires to students during class. When distributing the questionnaires, the purpose and structure of the questionnaire were explained to the students. The questionnaire consists of instructions, 33 questions, and basic information. The researcher used the first item as an example to explain the answering method to the participants. All questionnaires were collected immediately after the students had completed them. A total of 253 questionnaires were distributed, and 234 valid questionnaires were collected.

The collected data were analyzed using SPSS 27.0. Descriptive statistics were employed to analyze the current status of emotional intelligence among rural junior high school students. An independent samples t-test was conducted to analyze gender differences in emotional intelligence among rural junior high school students. A one-way analysis of variance (ANOVA) was used to analyze gender differences in emotional intelligence among rural junior high school students. Pearson correlation analysis was employed to explore the correlation between emotional intelligence and English learning achievement among rural junior high school students.

4. Results and Discussion

4.1. Current Status of Participants' Emotional Intelligence

Table 4-1 below presents participants' maximum, minimum, mean, standard deviation and variance in the total emotional intelligence score and four dimensions of perception of emotion, self-emotion managing, managing others' emotions and utilizing emotion.

Table 4-1. Descriptive Statistics of Emotional Intelligence Scale

Descriptive Statistics (N=234)					
	Min.	Max.	Mean	SD	Variance
Total Emotional intelligence score	2.18	4.45	3.53	0.36	0.13
D1: Perception of Emotion	2.17	4.67	3.38	0.43	0.19
D2: Self-emotion Managing	2.13	4.63	3.55	0.48	0.23
D3: Managing Others' Emotions	2.00	4.67	3.66	0.51	0.27
D4: Utilizing Emotion	2.00	4.71	3.67	0.52	0.27

The Emotional Intelligence Scale range from 1 to 5, with $M = 3$ representing an average level. Higher scores indicate higher emotional intelligence. The total emotional intelligence scores of students in grades 7 to 9 were $M = 3.53$ ($M > 3$), indicating that their emotional intelligence was at an above-average level. Looking at the average scores for each dimension of emotional intelligence, emotional perception had the lowest average score (3.38), indicating that participants performed slightly lower in this dimension and that individual differences were relatively obvious. Emotional utilization had the highest average score (3.67) and the largest standard deviation (0.52), indicating that participants performed differently in this dimension. Self-emotion managing and managing others' emotions had similar average scores.

The discussion of the above results is as follows: First, in terms of overall emotional intelligence, rural junior high school students' emotional intelligence is generally at a medium-high level. This result may be related to the rural environment, which emphasizes family mutual assistance, peer cooperation, and early independence in coping with life challenges. Despite relatively limited resources, rural students may have accumulated high emotional regulation abilities through frequent social interactions within their families and independent problem-solving, which supports their adaptation to complex environments.

Second, in terms of performance and differences in each dimension, the mean score for the D1 emotion perception dimension was the lowest, but the standard deviation was small, indicating that students' performance in this dimension was relatively consistent but slightly lower. Possible reasons include: emotional expression is relatively restrained in rural environments, and students have less exposure to diverse emotional expression scenarios (such as social activities in urban areas), which may limit the development of their emotion recognition abilities. In addition, school curricula lack systematic emotion recognition training, such as emotion management courses.

4.2. Gender Differences of Emotional Intelligence

A descriptive analysis was conducted on the gender ratio and various dimensions for participants. Gender was selected as the independent variable, and the total emotional intelligence score and the scores of emotional intelligence in the four dimensions were selected as the dependent variables. An independent samples t-test was used, and the results are shown in Table 4-2.

Table 4-2. Gender Differences of Emotional Intelligence

Independent samples t-test (Male=131 Female=103)						
Dimension	Gender	Mean	SD	F	Sig.	Sig (2-tailed)
Emotional Intelligence Total Score	Male	117.0382	11.81290	0.397	0.529	0.429
	Female	115.8058	11.81811			
D1: Perception of Emotion	Male	40.7634	5.22248	0.020	0.887	0.432
	Female	40.2233	5.20168			
D2: Self-emotion Managing	Male	29.0000	3.71276	0.069	0.794	0.004
	Female	27.5631	3.80832			
D3: Managing Others' Emotions	Male	21.5191	3.17769	0.712	0.400	0.020
	Female	22.4660	2.90306			
D4: Utilizing Emotion	Male	25.7557	3.60148	0.216	0.643	0.674
	Female	25.5534	3.71201			

The results of the independent sample t-test showed that there was no statistically significant difference between male and female students in the total EI emotional intelligence score, D1 perception of emotion dimension, and D4 utilizing emotion dimension ($p > 0.05$); while there was a significant difference in the D2 self-emotion managing dimension ($p = 0.004$) and D3 managing others' emotions dimension ($p = 0.020$). Boys scored significantly higher than girls in the self-emotion managing dimension, while girls scored significantly higher than boys in the managing others' emotions dimension.

The possible reason for this difference is that in rural environments, boys may be expected to be more "independent" and "emotionally reserved," prompting them to develop self-regulation skills at an earlier age. Women are often assigned more "caregiving" roles, and girls in rural families may take on more housework or care for younger siblings, thereby exercising their empathy skills and thus scoring significantly higher than boys on the dimension of managing others' emotions.

4.3. Grade Differences of Emotional Intelligence

Table 4-3 ANOVA Summary Table for Participants

Dimension	F-value	p-value	Effect Size (η^2)	Statistical Conclusion
Total Emotional intelligence score	1.673	0.190	0.014	No significant grade differences
D1: Perception of Emotion	1.630	0.198	0.014	No significant grade differences
D2: Self-emotion Managing	0.702	0.496	0.006	No significant grade differences
D3: Managing Others' Emotions	1.246	0.289	0.011	No significant grade differences
D4: Utilizing Emotion	0.432	0.650	0.004	No significant grade differences

Grade level was selected as the independent variable, the total score of emotional intelligence and the scores of emotional intelligence in each dimension were selected as the dependent

variables. A one-way analysis of variance (ANOVA) was conducted, and the results are presented in Table 4-3.

As can be seen from the table, there are no significant grade differences in the total emotional intelligence scores or in any of the four dimensions of emotional intelligence (all $p > 0.05$). This may be because the emotional intelligence of junior high school students has not yet differentiated significantly with age and is in a stable stage of development. In addition, the school used a uniform teaching model and emotional management guidance in its teaching, which weakened the differences between grades.

4.4. Correlation between Emotional Intelligence and English Learning Achievement

Pearson correlation analysis was conducted between participants' mid-term English exam score and total emotional intelligence scores as well as scores in four dimensions: emotional intelligence, emotion perception, self-emotion managing, managing others' emotions, and utilizing emotion. The results are shown in Table 4-4.

Table 4-4. Correlations of English Learning Achievement and EI

		D1: Perception of Emotion	D2: Managing Emotions	D3: Managing Others' Emotions	D4: Utilizing Emotion	Total EI Score
English score	Pearson	.197**	.155*	.177**	.216**	.250**
	sig	.003	.018	.007	.001	.000
** . Correlation is significant at the 0.01 level						
* . Correlation is significant at the 0.05 level						

The results show that there is a significant positive correlation between emotional intelligence total scores and English learning achievement ($p < 0.001$), indicating that students with higher overall emotional intelligence have better English learning achievement. In terms of each dimension, D4, utilizing emotion, has the strongest correlation with English learning achievement ($p < 0.001$); D1, perception of emotion, is second ($p = 0.003$); D3 managing others' emotions ($p = 0.007$) and D2 self-emotion managing ($p = 0.018$) were weakly but still significantly correlated.

Discussion of the results: Rural students often face limited educational resources and financial pressure from their families. Students with high emotional intelligence scores are better at transforming emotional stress into motivation to learn, such as maintaining focus on learning through positive emotion regulation, thereby achieving better English learning achievement. Among the dimensions of emotional intelligence, the dimension of utilizing emotion (D4) played a core role. Rural students need to find learning opportunities within limited resources, and students with strong emotional utilization skills are better at transforming positive emotions into sustained motivation to learn or quickly adjusting their strategies in the face of setbacks. Therefore, this dimension is most strongly correlated with English learning achievement.

5. Conclusion

The main findings of this study are as follows: (1) The emotional intelligence of the rural junior high school students in this study was at a medium-high level. The four dimensions of emotional intelligence did not develop evenly, but rather in the order of utilizing emotion > managing others' emotions > self-emotion managing > perception of emotion. (2) In terms of gender, boys scored significantly higher than girls in the self-emotion managing dimension, while girls

scored significantly higher than boys in the managing others' emotions dimension. (3) In terms of grade level, there were no significant differences in emotional intelligence total scores or any of the four dimensions among students in grades 7, 8, and 9. (4) Emotional intelligence total scores and all four dimensions were significantly positively correlated with English academic performance.

Although this study has drawn some conclusions, it still has limitations. First, in terms of emotional intelligence measurement, the Emotional Intelligence Scale (EIS) has good reliability and is convenient and easy to administer. However, as a self-report measurement method, it has certain limitations. Second, this study has group limitations. The research was conducted on rural junior high school students in a specific region, with a relatively homogeneous cultural background and educational resources, and the results may not be generalizable to urban students or other grade levels (e.g., high school students). The gender and grade imbalance in the sample may lead to potential bias. Third, the study did not control for potential confounding variables. Variables such as family economic status, parents' educational attainment, and teacher-student relationships were not included, and these factors may simultaneously affect emotional intelligence and learning achievement.

Recommendations for future research: (1) Multiple information evaluation channels can be used, and a combination of peer evaluation and self-reporting can be appropriately adopted to conduct further research on emotional intelligence. (2) Expand sample diversity by including students from rural areas with different economic levels, urban students, and multiple educational levels (e.g., elementary school, high school) to test the generalizability of the conclusions. (3) Design and develop emotional intelligence cultivation programs suitable for rural junior high schools and conduct experimental intervention studies to test the actual effectiveness of emotional intelligence cultivation programs on the academic performance of rural students.

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