

## Research Article

# The Impact of Emotional Intelligence on Cognitive Strategy Uses of Saudi English Foreign Language Students' Vocabulary Knowledge

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It is becoming increasingly difficult to ignore the connection between emotional intelligence, strategy use, and vocabulary knowledge. However, very little attention has been paid to this subject, to the best of researchers' knowledge. To this end, intermediate students were considered through the Cambridge English: Key English Test (KET). After taking the test, 50 male students with a mean age of 16 whose grades equaled (between 45 and 69) were chosen for this research sample. Adopting a correlational design, the researchers gathered three types of scores: an emotional intelligence questionnaire, cognitive strategy use questionnaire, and a vocabulary knowledge test. The data were checked for linearity of the relationship and normality of the distribution. Finally, Pearson product-moment correlation was conducted to identify any possible correlation between the variables. The results showed a significant relationship between emotional intelligence and cognitive strategy use. The data analysis also indicated a relationship between emotional intelligence and vocabulary knowledge. Moreover, the data analysis showed that in comparison with cognitive strategy use, vocabulary knowledge has a higher correlation with emotional intelligence. The findings have some pedagogical implications for instructors of proficiency courses, writing textbook developers, EFL learners, and language teachers who can benefit from this research results.

## 1. Introduction

Intelligence is a group of cognitive abilities that permit us to become aware of the world around us and learn how to solve problems. Most people believe that successful learners are people with a high intelligence quotient (IQ). According to Bechter et al. [1], IQ can play a 20% role in predicting a learner's success, while the lasting 80% is connected to other factors that Bechter et al. [1] cite as essential factors such as emotional intelligence.

According to Brackett and Katulak [2] and Haag et al. [3], emotional intelligence (EI) refers to using emotions intelligently and drawing on the existing power or information in feeling to make efficient choices. An individual's EI is quantitatively measured through the EQ, which proposes that IQ, or usual intelligence, is too slight. Other parts of intelligence, including EI, demonstrate how effective an individual is [4, 5]. More recently, psychologists and applied linguists have paid attention to this kind of intelligence to understand better the correlation between EQ and English learning skills and strategies [6–10].

Some previous studies [11–13] have concentrated on the efficiency of public elements and psychological scopes of differences among learners. However, few studies have focused on the emotional aspects of language [14, 15]. To acquire a foreign language, an individual must agree to take the human activity and psychological dynamics in learning. One of the major elements that affect learning activity is intelligence [9, 14]. Nevertheless, Oxford [16] affirms that conventional measures of IQ explain 20% of an individual's achievement in life. Oxford [16] states that the role of strategy use should not be underestimated.

Previous studies in the world (e.g., [7, 17–19]) have indicated that learners have difficulty in understanding the meaning of some words in a given text to the effect that they fail altogether to comprehend the importance of the text itself. In response to this problem, this study focused on how to enhance the vocabulary knowledge of Saudi EFL learners. In line with the existing literature, the current research is trying to examine the connection between emotional intelligence, cognitive strategy use, and vocabulary knowledge. More specifically, this research attempts to see the connection between three psychological, cognitive, and linguistic variables.

Few studies have scrutinized the connection between emotional intelligence and cognitive strategies concerning students' vocabulary knowledge to the best of the researchers' knowledge. However, little research has been run on emotional intelligence and types of language learning policies; thus, examining the link between language learners' emotional intelligence, compensatory and affective strategy can be helpful in this regard. In this study, learning the language may imply examining the optimal relationship between the constituents of emotional intelligence which is the utilization of cognitive strategies and vocabulary knowledge. One of the language learning lessons of this research is to scrutinize the relationship between constituents.

*1.1. Research Questions.* The present study will reply to the following research questions:

RQ 1. Is there any significant relationship between emotional intelligence and cognitive strategy application among Saudi intermediate EFL learners?

RQ 2. Is there any significant relationship between emotional intelligence and vocabulary knowledge among Saudi intermediate EFL learners?

RQ 3. Is there any significant relationship between vocabulary knowledge and cognitive strategy use among Saudi intermediate EFL learners?

*1.2. Research Hypotheses*

- (1) There is no significant relationship between emotional intelligence and cognitive strategy application among Saudi intermediate EFL learners
- (2) There is no significant relationship between emotional intelligence and vocabulary knowledge among Saudi intermediate EFL learners

- (3) There is no significant relationship between vocabulary knowledge and cognitive strategy use among Saudi intermediate EFL learners

## 2. Review of Literature

*2.1. Intelligence.* Human beings have characteristics that distinguish them from other creatures on the planet. Emotions—excitement and the ability to judge the behavior of themselves and others and make decisions based on these judgments—are just some of these God-given characteristics that it has made human responsibility heavier [20, 21]. Specialists in various sciences, especially psychologists, sought to create a comprehensive concept that includes all communication patterns and techniques for cultivating these patterns in all areas of human life to increase people's efficiency and ability [22, 23]. These efforts led to the invention of the concept of emotional intelligence. Emotions can be outlined directly and indirectly in all moments of people's lives [24, 25]. Especially, since 1980, there has been a significant leap forward, and excitement is an essential or an important factor in learning. Emotional intelligence is a new component that many researchers are interested in using in various fields [26–28]. Emotional intelligence theories provide a new perspective on predicting success factors in life, including academic achievement. Emotional intelligence reflects the emotional dimensions of personality and society, which is often focused on daily activities more important than the cognitive dimension [29]. The enormous variations that have occurred in the fields of intelligence and excitement have questioned traditional views and highlighted the adjacent and intertwined relationship between intelligence and enthusiasm.

*2.2. Intelligence as an Important Factor in Learning.* One of the critical elements that affect language learning is the level of intelligence of learners. Intelligence is an inborn capability of the individual that can be expanded and improved by factors such as practice and setting. Krén and Séllei [30] proposed that emotional intelligence comprises abilities such as the ability to inspire oneself and intervene in prevention to control desires and postponement satisfaction.

On the one hand, the learning process is instinctively related to learners' emotions that seem in certain circumstances, such as feeling happy when doing something successfully or feeling nervous before a principal interview. Students are assumed to cope with their emotions positively or negatively, and therefore, emotional strategies aid them to control their emotions [8, 13, 28, 29, 31, 32]. On the other hand, Rahimi et al. [33] emphasized that recompense strategies qualify learners to guess, construct new words, use synonyms, and circumvent.

*2.3. Emotional Intelligence.* The early origins of emotional intelligence can be followed back to Darwin's work on the significance of emotional illustration for existence. Several researchers have highlighted the importance of noncognitive aspects in the study of intelligence.

The first usage of the term “emotional intelligence” is often recognized in Payne’s doctoral dissertation, “Study of Emotions: The Development of Emotional Intelligence” [34]. However, before this, the word “emotional intelligence” had appeared in Leuner [35]. The notion of emotional intelligence was officially established through the increasing stress on research into the interface of emotions and thoughts in the ground of psychology in the 1990s [36]. Since 1990, Salovi and Meyer were prominent investigators in coining the term “emotional intelligence.” Given that cognitive ability seems to cooperate a relatively limited role in why some people are more effective than others, in researching his first book, Gelman learned of the work of Salvi and Meyer in the early 1990s and wrote the best-selling book. In *Emotional Intelligence* (1995), he presented the first “proof” of the importance of emotional and social factors.

*Emotional Intelligence*, which reveals a combination of cognitive and emotional processes, has encouraged some research into areas other than learning and learning a second language [3, 6, 9, 19].

Karim [37] also studied the effect of emotional intelligence on mental health and academic achievement in psychology in a sample of 220 students. Participants described that EI was adversely associated with stress and academic achievement. Recently, more attention has been paid to the impact of emotional intelligence on academic achievement. However, as Brackett and Katulak [2] argue, due to this idea, many studies have been run to investigate this idea in areas where English is spoken as a second or foreign language.

### 3. Method

**3.1. Context of the Study and Participants.** This study was run in a private language school in AL-KHARJ, Saudi Arabia. The investigation started in the summer of 2021. After taking a KET proficiency test, 50 intermediate participants aged 13–19 were chosen from a population of 150 students and were asked to participate in this project. Intermediate participants were students who scored 1 standard deviation above and below the mean.

Three participants were skipped during the process of intervention and data gathering because their English score on the musical intelligence questionnaire was half-filled. The participation in the study was not voluntarily in order not to damage the external validity of the survey through contaminated sampling because, as Dörnyei [38] (p. 100) refers to what he calls the “problem of self-selection,” volunteer participants may be more motivated or “eager beaver” in research, and this may damage the generalizability of the study.

**3.2. Instruments.** In this research, the following instruments were used: KET test which has Emotional intelligence questionnaire, Cognitive strategy use questionnaire, and Vocabulary knowledge test.

**3.3. Key English Test.** The KET was managed for the applicants to have a homogeneous group and neutralize any effect of the proficiency level on participants’ performance. Before administering the test to the participants, it was piloted on a group of 20 high school learners who were comparable to the candidates of this research. The items were analyzed for discrimination and difficulty; the results were satisfactory. As Throsby et al. [31] suggested, since test items were dependent, the close sections, dictation, and reading sections were included in the test. Also, the reliability and stability of the test were preferred by doing a test retest at two-week intervals. Table 1 shows the Pearson test results related to KET reliability. The Pearson correlation coefficient was 0.77. Since the test was standardized, it did not need to be validated; however, TEFL (teaching English as foreign language) experts were asked to assess the content validity of the test. The experts included seven English language teachers. They confirmed that all items are valid for recognizing the ability of oral and written daily communication.

**3.4. Design of the Study.** The design of this study was correlational in which the three variables to be compared consisted of emotional intelligence scores, English vocabulary knowledge scores, and cognitive strategy use scores. The type of collected data for all variables was the interval. In a correlation scheme, the factors are measured without control and then analyzed to check for the possibility that the factors are related. Measurable devices are used to grade the quality and course of a relationship (i.e., relationship coefficients). In any case, when you control one of the factors, the rating of connections is the main cause and effect (i.e., the independent variable); you do not use any variables. For instance, in this study, the researchers could set out to find a cause and effect relationship between emotional intelligence and English vocabulary knowledge; however, it needed to be investigated extensively in long-term treatment.

**3.5. Procedure and Data Analysis.** After homogenizing the participants through the KET and piloting the tools for reliability, validity, and feasibility, as everything appeared all right, the academics began the main study, which included the following stages:

- (1) Participants took the emotional intelligence questionnaire, and the obtained scores were recorded.
- (2) They took the cognitive strategy use questionnaire, and the obtained data were recorded.
- (3) They take a vocabulary knowledge test, and their scores are recorded. (It needs to be added that each of these instruments was administered to the participants on a different day.)
- (4) The information obtained was entered in the SPSS 16 information file. The information record was evaluated externally for missing information or unusual sections.
- (5) The three sets of data were checked for the assumptions of Pearson product-moment correlation.

TABLE 1: Reliability of KET.

		KET 1	KET 2
KET 1	Pearson correlation	1	0.77**
	Sig. (two-tailed)		0.00
	N		57

The data were checked for linearity of the relationship and normality of the distribution.

- (6) Finally, Pearson product-moment correlation was run to identify any possible relationship between the variables.

**3.6. Instrument Piloting Results.** Before starting the main study, the KET was piloted on 20 participants to test the above hypotheses. The data obtained from the KET piloting helped the researchers be relatively sure that the hypothetical subjects sent in the same semester were at the same level and about the reliability and validity of the test. Since the items were dependent, the researchers checked the reliability through the test-retest procedure through the Pearson test. To calculate the reliability of the test, a Pearson's product-moment correlation using SPSS Statistics was carried out. It needs to be added that all four assumptions for conducting Pearson's product-moment correlation were met before it was used for checking reliability. Table 1 shows the Pearson test results related to KET reliability.

The reliability of the three other instruments (bar-on, cognitive strategy use, and vocabulary knowledge) was confirmed through Cronbach's alpha. The reliability results related to all the instruments are indicated in Table 2.

The reliability of the vocabulary knowledge test equaled (0.83), which is considered acceptable reliability. Moreover, the reliability of bar-on and strategy use questionnaires equaled 0.77 and 0.78, respectively, which are regarded as good reliability. Consequently, the result of the analysis of piloting the instruments was satisfactory.

Afterward, 60 students were selected randomly from a private language institute. The three scores related to the emotional intelligence questionnaire (bar-on), cognitive strategy use questionnaire, and vocabulary knowledge test were entered into SPSS software to establish the relationship between emotional intelligence, cognitive strategy use, and vocabulary knowledge. Subsequently, the collected data were analyzed through a series of computations and statistical routines elaborated expansively in this part.

**3.7. Normality of Distribution.** The hypotheses were scrutinized to test the first hypothesis through the parametric Pearson correlation method. First, the normality condition was verified through Table 3, in which the desired conditions for normal distribution were met (for all distributions, Skewness was in the range of  $\pm 1.96$ ).

As Table 3 showed, the minimum and maximum scores for the vocabulary knowledge test were sequentially 12 and 38. The ratio of skewness statistic is 0.287, which is within the

extent of  $\pm 1.96$ , which suggests that the distribution did not appear a critical deviation from normality. For the bar-on questionnaire, the minimum and maximum scores were sequentially 1.84 and 4.21. The ratio of skewness statistic is 0.295, which is also within the extent of  $\pm 1.96$ , which suggests that the distribution did not show a critical deviation from the normality. And, finally, for the cognitive strategy use score, the minimum and maximum scores were sequentially 2.02 and 4.44; the ratio of skewness statistic is (-0.278), which fell within the normality range of  $\pm 1.96$ . Thus, the normality condition was seen.

The data were also checked graphically for normality of distribution. To decide the normal state graphically, we can utilize the yield of an ordinary Q-Q plot. The information focuses will be near the inclining line if the information is conveyed ordinarily. If the data points are clearly out of line, the data is usually not distributed. As we can see from the normal Q-Q plot in Figures 1-3, the data are normally distributed.

As can be visually observed, the data points are not far from the diagonal line. Figure 1 shows the normality of distributions. Bar-on questionnaire scores are also graphically illustrated in Figure 2 to ascertain normality.

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### 3.8. Linear Relation between Each Pair of Variables.

When we want to conduct a Pearson correlation, there needs to be a linear relationship between the three variables. While there are several ways to check whether a linear relationship exists between the two variables, the researchers adopted a scatter plot using SPSS Statistics and then visually inspected the scatter plots to check for linearity. The researchers visually examined the data through the following scatter plots to check the linearity of relations.

As Figure 4 outwardly outlines, the dabs cluster around a straight line extending from the foot cleared out to the beat right, inferring a positive relationship between the participants' lexicon information and emotional intelligence.

Figure 5 outwardly outlines that the arranged values shape a cigar shape extending from the foot cleared out to the beat right. Hence, the linearity of the relationship between the vocabulary knowledge test and the cognitive strategy used by the participants is also revealed. The linearity of the link between emotional intelligence and mental strategy use was also confirmed, observed in Figure 6.

## 4. Results

**4.1. Testing the Hypotheses.** The crucial importance of this study was to scrutinize the link between emotional intelligence, cognitive strategy use, and English vocabulary

TABLE 2: Internal consistency index for instruments of the study.

Instrument	Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
Vocabulary knowledge test	0.83	0.796	40
Bar-on	0.77	0.615	30
Strategy use	0.78	0.901	17

TABLE 3: Descriptive statistics of the three variables.

	N Statistic	Minimum Statistic	Maximum Statistic	Skewness	
				Statistic	Std. error
Vocabulary knowledge test	57	12	38	-1.568	0.287
Bar-on	57	1.84	4.21	0.530	0.295
Strategy use	57	2.02	4.44	-0.329	0.287
Valid N (listwise)	57				

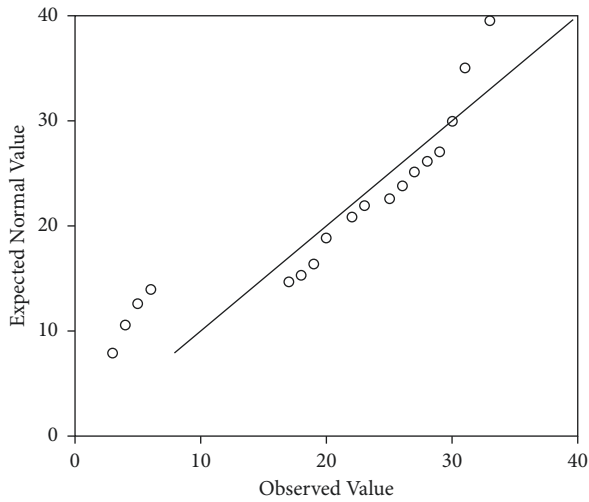


FIGURE 1: Graphic indicator of vocabulary knowledge test scores' normality.

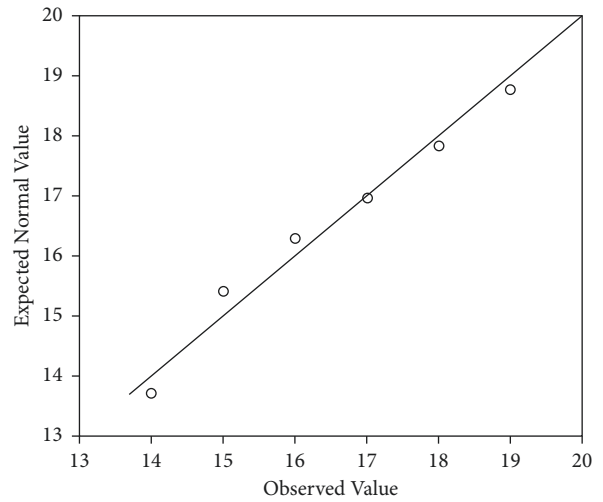


FIGURE 3: Graphic indicator of strategy use surveys' normality.

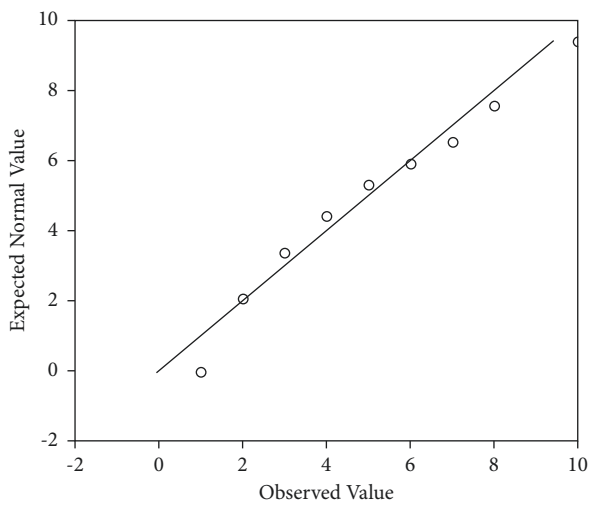


FIGURE 2: Graphic indicator of bar-on scores' normality.

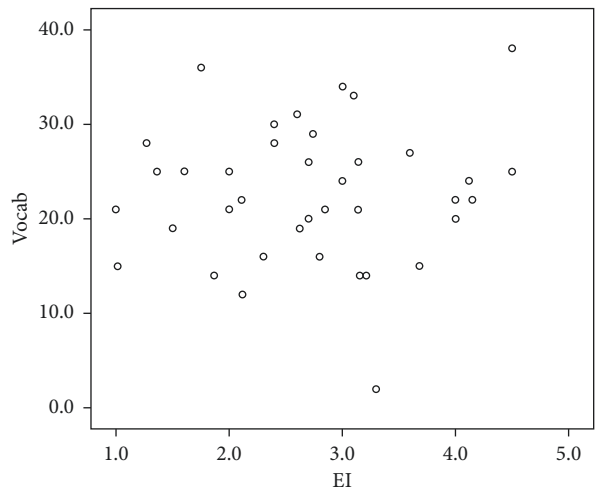


FIGURE 4: The relationship between vocabulary knowledge and emotional intelligence (bar-on).

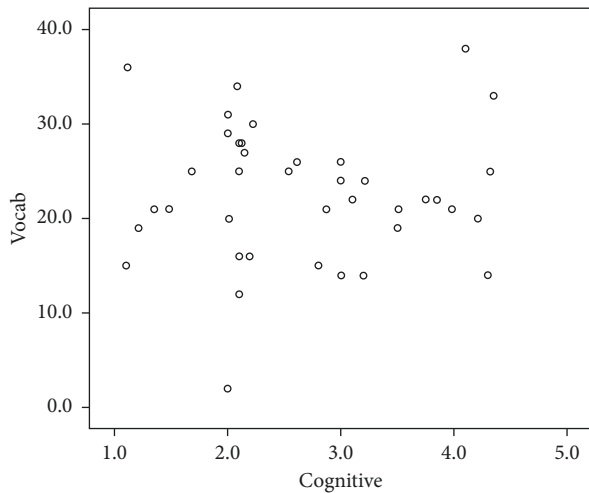


FIGURE 5: The relationship between vocabulary knowledge test and cognitive strategy use.

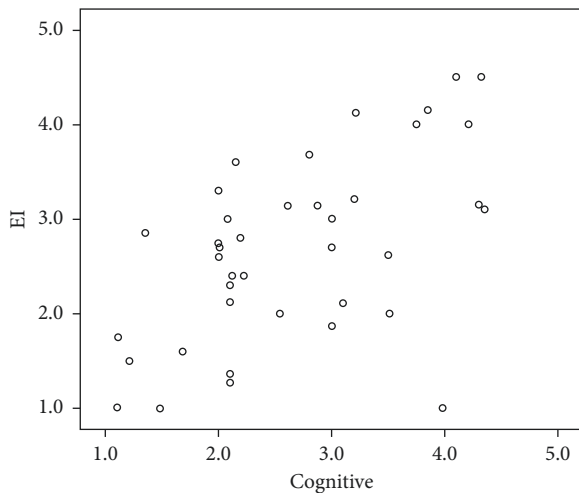


FIGURE 6: The relationship between emotional strategy use and cognitive strategy use.

knowledge of intermediate Saudi EFL learners. When the assumptions were met, the researchers conducted a correlational analysis to test the study's hypotheses.

**4.2. Descriptive Statistics.** Before reporting the inferential statistics about the significance of associations between the three variables, descriptive statistics are presented to provide a clear picture of the participants' score patterns across the three sets of scores.

As Table 4 showed, the minimum and maximum vocabulary knowledge test scores were sequentially 12 and 38. The minimum and top scores for the bar-on questionnaire were sequentially 1.84 and 4.21. And, finally, for the cognitive strategy use score, the minimum and maximum scores were sequentially 2.02 and 4.44; the ratio of skewness statistic is  $-0.278$ , which fell within the normality range of  $\pm 1.96$ . Thus, the normality condition was seen.

TABLE 4: Descriptive statistics of the three variables.

	N	Minimum	Maximum	Mean	Std. deviation
EI	57	1.0	4.5	2.635	0.9103
Cognitive	57	2.02	4.44	2.7658	0.76302
Vocabulary	57	12.0	38.0	22.684	6.2168
Valid N (listwise)	57				

**4.3. Testing the First Hypothesis.** The first hypothesis assumed no significant relationship between emotional intelligence and cognitive strategy use among Saudi intermediate EFL learners. A Pearson product-moment correlation was run to determine the relationship between emotional intelligence and cognitive strategy use. The data showed no violation of normality, linearity, or homoscedasticity. There was a strong, positive correlation between emotional intelligence and cognitive strategy use scores, which was statistically significant ( $r = 0.393$ ,  $n = 70$ ,  $p < 0.0001$ ; Table 5).

**4.4. Testing the Second Hypothesis.** The second hypothesis stated no significant relationship between emotional intelligence and vocabulary knowledge among Saudi intermediate EFL learners. A correlational analysis was conducted between emotional intelligence and vocabulary knowledge to test the second hypothesis. The following table shows the result:

As Table 6 appeared, the relationship between emotional intelligence and vocabulary knowledge of the learners moreover turned out to be positive and critical ( $r = 0.504$ ,  $p = 0.00 < 0.01$ ), which leads to the dismissal of the second null hypothesis. The quality of the relationship turned out to be as little as  $0.25 (0.50^2)$ , which limits the generalizability of the finding.

**4.5. Testing the Third Hypothesis.** The third hypothesis stated no significant relationship between vocabulary knowledge and cognitive strategy use among Saudi intermediate EFL learners. A correlational analysis was conducted between vocabulary knowledge and cognitive strategy used to test the third hypothesis. Table 7 shows the result.

As Table 7 appeared, the relationship between vocabulary knowledge and cognitive strategy procedure utilization of the members too turned out to be positive and critical ( $r = 0.66$ ,  $p = 0.00 < 0.01$ ), which leads to the dismissal of the third null hypothesis. The quality of the relationship moreover turned out to rise to  $0.43 (0.66^2)$ , which appears an acknowledged level of shared fluctuation between the two factors.

## 5. Discussion

Concurring to the mentioned outcomes, it is presently conceivable to consider the inquiry about questions agreeing to the experimental prove and compare or compare the

TABLE 5: The relationship between emotional intelligence and cognitive strategy use scores.

	Correlations	Cognitive	EI
Cognitive	Pearson correlation	1	0.393**
	Sig. (two-tailed)		0.001
	<i>N</i>	57	57

\*\*Correlation is significant at the 0.01 level (two-tailed). Therefore, the first null hypothesis was rejected, predicting no relationship between emotional intelligence and cognitive strategy use scores of intermediate-level students.

TABLE 6: The relationship between emotional intelligence and vocabulary knowledge of English.

	Correlations	Emotional int	Vocabulary
Emotional int	Pearson correlation	1	0.504**
	Sig. (two-tailed)		0.000
	<i>N</i>	57	57

\*\*Correlation is significant at the 0.01 level (two-tailed).

TABLE 7: The relationship between vocabulary knowledge and cognitive strategy use.

	Correlations	Cognitive	Vocabulary
Cognitive	Pearson correlation	1	0.66**
	Sig. (two-tailed)		0.00
	<i>N</i>	57	57

\*\*Correlation is significant at the 0.01 level (two-tailed).

present study with comparative cases at this arrange to form the outcomes to be more meaningful.

In comparison with previous results of this hypothesis (is there any significant relationship between emotional intelligence and cognitive strategy application among Saudi intermediate EFL learners?), it can be said that it is consistent with the results of this research [6–8, 10].

The data analysis related to the first research question revealed the significant link between emotional intelligence and cognitive strategy use among Saudi intermediate EFL learners. This finding could be considered in line with Majidi and Shirani [39], who aimed to investigate the relationship between Iranian EFL learners' reading strategy use and emotional intelligence. The instrument used in their study was similar to the present study; however, they modified the original questionnaire to measure reading comprehension and cognitive strategy use. They found that the degree of usage of metacognitive and cognitive strategies by the high EI group was higher than that of the low EI group.

Other researchers also confirmed the relationship between emotional intelligence and cognitive strategy. Zafari and Biria [32] investigated the relationship between emotional intelligence and language learning procedures use among Iranian English learners. They conducted the study on 100 Iranian EFL students with an average age of 24.4. They gave emotional quotient inventory (EQ-i) [40] and SILL [16] questionnaires to be filled by participants. Their finding suggested that emotional intelligence is significantly connected with language learning strategies at (<0.001) level. The present study's findings confirm that Aghasafari [11]

studied the relations between Iranian EFL learners' emotional intelligence and their overall learning strategy. She reported a positive and robust relationship between learners' EQ level and language strategy use.

There is a link between cognitive strategy use and emotional intelligence regarding the first research question. This finding suggests that EI-raising activities can be performed in a classroom context to raise students' mental strategies in language classrooms. This claim is made because, as [5] claims, EI can be developed through practice.

In comparison with previous results of this hypothesis (is there any significant relationship between emotional intelligence and vocabulary knowledge among Saudi intermediate EFL learners?), it can be said that it is consistent with the results of this research [3, 9, 19].

Analysis of data related to the second study showed a significant connection between emotional intelligence and vocabulary knowledge among intermediate EFL Saudi language learners. This finding has been developed in parallel with Razmjoo et al. [41] to look at the relationship between artificial intelligence, vocabulary learning knowledge, and vocabulary learning procedures among Iranian EFL learners. Candidates in this study were 100 graduate students who were English language teachers at Shiraz Azad University between 2006 and 2007.

Analysis of the findings data (descriptive and inferential) showed a relationship between artificial intelligence and vocabulary learning knowledge. It was also found that verbal-linguistic intelligence and naturalists significantly predict vocabulary learning knowledge among various intelligence fields. However, this finding contradicts Akbarzadeh [17], who studied the relationship between emotional intelligence and vocabulary learning among Iranian pre-university EFL students. They developed a 40-item vocabulary development test and a 90-item artificial intelligence survey similar to the present study. They reported that emotional intelligence was not related to vocabulary knowledge. This discrepancy can be explained by gender differences because, as Akbarzadeh [17] claims, male and female students differ significantly in the performance of some components of EI. Because the participants in this study were all males, no cross-gender claims could be made about the relationship between emotional intelligence and vocabulary knowledge.

However, implicitly, the findings of this study are against Razmjoo [41], who studied the relationship between artificial intelligence and language skills of Iranian EFL PhD candidates to look at whether emotional intelligence predicts language skills. The outcomes appeared no significant relationship between language ability and the combination of intelligence in general and types of intelligence in particular.

Not all previous studies contradict the findings of the second study. Some previous studies have reported a correlation between emotional intelligence and language performance in general—without vocabulary knowledge. For example, Pishgadam [42] was set up to find the effect of emotional and verbal intelligence on foreign language learning. He conducted inquiries with 576 EFL learners. The results appeared that listening, reading, speaking, writing,

and GPA are emphatically related to two measurements of emotional intelligence: stress management and interpersonal competencies.

In comparison with previous results of this hypothesis (is there any significant relationship between vocabulary knowledge and cognitive strategy use among Saudi intermediate EFL learners?), it can be said that it is consistent with the results of this research [13, 28, 29, 31, 32].

The data analysis related to the third research question revealed the significant relationship between vocabulary knowledge and cognitive strategy use among Saudi intermediate EFL learners. Many previous studies confirm this finding. Dugué et al. [43] studied the relationships between vocabulary learning strategies and vocabulary size among adult Spanish foreign language learners. They conducted the study on 475 college students. The findings suggested a significant relationship between certain types of learning strategies and vocabulary size among EFL learners. However, there were two differences between the present study and their study: (1) their study participants were at an advanced level and (2) the age of the participants in their study was significantly higher than in the present study.

The present study's findings are also in line with Teng [44], who examined the relationship between learning strategy utilization and vocabulary knowledge among 145 low proficiency EFL learners. After analyzing the data, he propounded that participants' scores in strategy use were related significantly and positively to breadth and depth of vocabulary knowledge.

Most language instructors believe that cognitive strategies are not directly applied and instructed in language classrooms [44]. The present research findings suggested empirical evidence for the association between cognitive strategies and vocabulary knowledge. This finding is practically significant because it requires teachers to teach cognitive strategies to enhance students' vocabulary knowledge.

The data analysis related to the third research question showed that emotional intelligence and cognitive strategy use correlated with English vocabulary knowledge. Many researchers [10, 45, 46] have highlighted the role of vocabulary knowledge as a significant predictor of language proficiency. The present study's findings revealed a high positive correlation between emotional intelligence/cognitive strategy use and vocabulary knowledge. Then, it can be implied that emotional intelligence and cognitive strategy use are predictors of language learning. Interestingly, this point is reported by previous studies (e.g., Zaimoğlu & Sahinkarakas).

Considering the significant correlation between cognitive strategy use, emotional intelligence, and English vocabulary knowledge, one point requires to be added here: based on the findings of this study, there is a relationship between these three variables among intermediate EFL learners who are between 13 and 19. The focus on participants, context (EFL), proficiency, and age lies in the fact that these factors might interact with the degree to which cognitive strategy use and emotional intelligence correlate with English vocabulary knowledge. For example, advanced

participants might be different from elementary and intermediate participants in terms of their emotional intelligence or use of cognitive strategies.

Research confirms that the second hypothesis of the research by Abdoraksmonova and Neuraliva [6] and Tao et al. [29] is consistent. These people examine how cognitive education, life skills training, and educational positive thinking skills motivate progress. The results indicated that cognitive training has had a significant effect on increasing motivation scores. Also, life skills training effectively promotes the motivation of progress and self-esteem and adaptation of students.

## 6. Conclusion

This study investigated the relationship between EI, cognitive strategy use, and English vocabulary knowledge. The analysis of the data revealed that there is a significant relationship between all three variables of the study. However, the degree of the correlation was different for each pair of variables. The strongest relationship was between cognitive strategy use and English vocabulary knowledge ( $r=0.66$ ). The second highest correlation was between emotional intelligence and English vocabulary knowledge ( $r=0.504$ ). Finally, the lowest relationship was between emotional intelligence and cognitive strategy use. These findings may suggest that while there is a stronger relationship between cognitive/affective and linguistic variables, the relationship between cognitive variables and affective variables is not very strong. There were many parallel findings from previous studies. However, inconsistency between this study and previous studies was also observed. These inconsistencies could have been due to differences in the context of the studies, different characteristics of the participants, and different ways. The results from this study add to the body of literature related to the use of cognitive strategies, emotional strategies, and vocabulary knowledge.

### 6.1. Implications, Limitations, and Suggestions

- (1) Emotional intelligence is not fixed, but it is modifiable and can be developed. Then, language teachers, policymakers, and parents can work on EFL learners' emotional intelligence to enhance their linguistic knowledge.
- (2) The strong relationship between cognitive strategy use implies that cognitive strategies need to be emphasized in language classes to enhance language learners' knowledge of vocabularies.
- (3) Since vocabulary acquisition is itself well to the concept of autonomous learning, it is most suggested to those learning English to draw on cognitive strategies.

Although this research was carefully prepared, the researchers were still aware of its limitations and shortcomings. Based on the researchers' investigation, this study faces the following limitations. The number of participants is the



limitation of this study. Then the generalizations needed to be taken with caution.

This study was correlational in nature; then, future researchers are suggested to experimentally investigate the effects of enhancing emotional intelligence/using cognitive strategies on English vocabulary knowledge/writing skills. Emotional intelligence can be improved like any skill in life. Moreover, future studies can investigate the interaction between emotional intelligence and cognitive strategy use in terms of their effect on vocabulary knowledge.

## Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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