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The Relationship between Iranian EFL Learners' Emotional Intelligence and Metacognitive Reading Strategies Use

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Although emotional intelligence (EI) and metacognitive strategies have been addressed by different researchers across the globe, the relationship between EI and the use of metacognitive reading strategies by L2 learners needs further exploration. To fill this gap, at least partially, the present study investigated the relationship between emotional intelligence and the use of metacognitive reading strategies by EFL learners. Based on the convenience sampling method, 119 Iranian EFL learners across the age range of 18-27 were selected as the earlier subjects. These subjects were then homogenized through the administration of the PET reading test, which reduced the number of the participants to 102 intermediate EFL. The main instruments included Bar-On's (1997) Emotional Intelligence Questionnaire and Mokhtari and Sheorey's (2002) Survey of Reading Strategies Questionnaire (SORS) that measured metacognitive reading strategies use. The results revealed a moderate and positive correlation between a) emotional intelligence and the use of metacognitive reading strategies; b) *intrapersonal skills*, *interpersonal skills*, *adaptability*, and *general mood* and *global* metacognitive strategies; c) *intrapersonal skills*, *interpersonal skills*, and *general mood* and *problem-solving* metacognitive strategies; and d) *intrapersonal skills*, *interpersonal skills*, and *general mood* and *support* metacognitive strategies. Furthermore, multiple regression analysis results indicated that the EI scales of *general mood* and *interpersonal skills* significantly contributed to the prediction of the use of metacognitive reading strategies by EFL learners.

Keywords: emotional intelligence, metacognition, strategies, metacognitive reading strategies, EFL learners

Introduction

Learners vary in how successfully they can learn a second language. Almost everyone agrees that some learners learn a second language easily and others with difficulty. A variety of factors contribute to second language learning success such as attitude, motivation, personality type, social background, etc. It goes without saying that L2 learners' intelligence can play a crucial role in the successful learning of a second/foreign language.

Among the intelligences proposed by Gardner (1983), interpersonal and intrapersonal intelligences are concerned with the psychological aspects of the human mind. According to Matthews, Zeidner, and Roberts (2002, p. 118), interpersonal intelligence "more generally covers the individual's attempts to understand another person's behavior, motives, and/or emotions." Intrapersonal intelligence, on the other hand, helps individuals understand themselves, know who they are, and recognize how they can change themselves to become a more fulfilled person (Matthews et al., 2002).

Goleman (1998), a prominent figure in the field of psychology, defined emotional intelligence 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" (p. 317). He categorized emotional intelligence into four major components of self-awareness, self-management, social awareness, and relationship management. According to Bar-On (1997, p. 14), emotional intelligence is "an array of non-cognitive capabilities, competencies, and

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skills that influence one's ability to succeed in coping with environmental demands and pressures." Broadly speaking, emotional intelligence is concerned with the emotional, social, personal, and survival aspects of intelligence (Bar-On, 2007). The significance shared by the above-mentioned definitions has to do with the individual's reliance on their own ability to manage their feelings as well as others in their surroundings to achieve success in any activity. However, the definition offered by Bar-On (1997) seems more comprehensive and more suited to the learner's performance in an educational context. Thus, the latter definition was the framework used in this study.

As for the definitions of metacognition and metacognitive strategies, Flavell (1979) was the first scholar to introduce the term *metacognition* in 1979. He defined it as "one's knowledge concerning one's own cognitive processes and products or anything related to them" (cited in Myers, 2008, p.2). To put it in Flavell's own words, "metacognition is thinking about thinking" (Flavell, 1979, p. 906). Similarly, O'Malley and Chamot (1990, p.8) indicated that "metacognitive strategies involve thinking about the learning process, planning for learning, monitoring of comprehension or production while it is taking place, and self-evaluation after the learning activity has been completed." Mokhtari and Sheorey (2002) divided metacognitive reading strategies into three categories of *global, problem-solving*, and *support strategies*. *Global reading strategies* are carefully planned by learners to manage and monitor their reading. *Problem-solving strategies* are employed by readers to solve problems of understanding that may arise during the reading of a text. *Support strategies* are used to aid comprehension of the reading materials.

Though some studies to date have investigated EFL learners' emotional intelligence as well as their metacognitive strategies (Ateş, 2019; Ebrahimi, Khoshsima, Zare-Behtash & Heydarnejad, 2018; Hasanzadeh & Shahmohamadi, 2011; Hashemi & Ghanizadeh, 2011; Nelson & Low, 1999; Pishghadam, 2009; Ranjbar Mohammadi, Saeidi & Ahangari, 2020; Taheri & Hedayat Zade, 2018; Taheri, Sadighi, Bagheri & Bavali, 2019), the relationship between these two concepts still remains to be further probed. More specifically, in the Iranian EFL learning context, reading skill is of great significance since developing this skill has been one of the prime objectives of EFL learning in the Iranian L2 learning curriculum. Thus, the current study is an attempt to fill this gap, at least partially, by investigating the relationship between learners' emotional intelligence, on the one hand, and their use of metacognitive reading strategies, on the other. As for reading metacognitive strategies, the study focuses on *global, problem-solving*, and *support* metacognitive strategies in reading.

Above all, one motive behind launching this study lies in the objective of finding factors that may contribute to involving learners in the actual use of learning strategies. This is because knowing about the existence of such strategies is one thing and actually using them is something else. Thus, in this study, the researchers have sought to explore the relationship between EI and the use of metacognitive reading strategies. The results could lead to further experimental studies to investigate the effects of EI enhancement on strategies use by learners in educational settings in general and L2 learning environments in particular.

Background

Emotional Intelligence Revisited

Current psychology tends to distance itself from the view that intelligence is only composed of cognitive abilities. Thorndike (1920) was one of the first who challenged this view. He coined the term 'social intelligence' and viewed this concept as the ability to understand and manage people and act wisely in human relationships (cited in Goleman, 1998). Wechsler (1940) was another prominent figure who emphasized the affective side of intelligence in the early 1940s. He asserted that intelligence was comprised of both 'non-intellective' and 'intellective' elements. As early as 1943, Wechsler hypothesized that 'non-intellective' elements were crucial for predicting a person's ability to succeed in life (Cherniss & Adler, 2000). Yet, it was not until Gardner's conception of 'multiple intelligences' in 1983 that the emotional and affective elements gained importance. He originally postulated seven types of intelligence including interpersonal and intrapersonal intelligences, which, in part, paved the way for the development of EI studies.

Models of Emotional Intelligence

There is no single agreed upon definition of emotional intelligence. Substantial disagreements exist among researchers on exactly what terminology to use and how much of a person's behavior can be affected by EI. Currently, there are three main models of EI, which will be explained below.

The Ability Model of EI

Introduced by Salovey and Mayer (1990), this EI model claims that emotions are useful sources of information that contribute to social interactions and relationships. Another claim is that individuals differ in their ability to process emotional information and to relate that information to the overall cognitive process.

The Trait Model of EI

Suggested by Petrides and Furnham (2001), this model proposed that the Ability Model belonged to the domain of cognitive ability, whereas the Trait Model fits within the realm of personality. The trait-based model of EI concerns "a constellation of emotional self-perceptions located at the lower levels of personality hierarchies" (Petrides, Pita, & Kokkinaki, 2007, as cited in Cooper & Petrides, 2010, p. 449). Simply put, EI refers to individuals' perceptions of their own emotional abilities and is measured by individuals' self-report.

The Mixed Model of EI

The mixed model of emotional intelligence was popularized by Goleman (1995), who combined emotional intelligence qualities with other personality traits that are not related to emotion, intelligence, or emotional intelligence. In this model, researchers examined cognitive mental abilities as well as non-cognitive personality traits. Goleman's model outlines five main components of EI as follows:

1. Self-awareness: knowing one's emotions, goals, values, strengths, and weaknesses and using intuition to guide decisions
2. Self-regulation: controlling one's emotions and impulses and adapting to different circumstances
3. Social skill: managing relationships to move people in the desired direction
4. Empathy: considering others' feelings in decision-making
5. Motivation: being determined to achieve for the sake of achievement

The construct of emotional intelligence as operationally defined in this study via Bar-On's (1997) scale is in line with the mixed model of EI. The focus on this model of EI in the present study is due to the fact that it encompasses both cognitive and non-cognitive abilities, providing an elaborate framework of this construct.

Related Studies on EI, Metacognitive Strategies and L2 Learning

From a more general perspective of the topic under review, MacCann et al. (2020) and Perikova and Byzova (2019) explored the relationships between EI and academic performance and between EI and metacognitive awareness, respectively. Both studies found positive associations between EI and the respective variables (academic performance and metacognitive awareness). Several studies have been carried out to investigate the relationship between EI and language learning success (Clement, Dornyei, & Noels, 1994; Nelson & Low, 1999). Taheri et al. (2019) found a significant correlation between EI, language learning strategies, and learning styles. Ebrahimi et al. (2018) examined the influence of enhancing Emotional Intelligence on the writing skill of Iranian intermediate EFL learners. Their findings revealed a change both in the participants' EI and writing ability. Soodmand Afshar et al. (2016) found a positive correlation between L2 achievement and the variables of EI and strategy use. Strategy use and EI were also found to be strong predictors of L2 achievement. Taheri and Jadidi (2016) found that among the emotional intelligence components, *intrapersonal skill* had the highest relationship with components of learning strategies. Rahmani et al. (2013) also investigated the relationship between Iranian learners' EI and their affective and compensatory strategy use at the intermediate level. They found a significant relationship between EI and affective strategy use but they didn't observe a significant relationship between emotional intelligence and compensatory strategy use. In another study, Hasanzadeh and Shahmohamadi (2011) sought to find any possible relationship between emotional intelligence and foreign language learners' achievement in an Iranian context. The results indicated no relationship between total emotional intelligence and language achievement; however, some scales of emotional intelligence, i.e. *intrapersonal skills* and *general mood*, as well as some subscales of, i.e. *independence, self-assertion,* and *optimism*

were found to have a significant relationship with language achievement. Pishghadam (2009) investigated the role of emotional intelligence in second language learning. The participants consisted of 508 sophomores from four Iranian universities. He concluded that second language learning was strongly associated with several dimensions of emotional intelligence.

In a probe into the correlation between EFL students' emotional intelligence and their sense of self-efficacy beliefs, Hashemi and Ghanizadeh's (2011) findings revealed a significant relationship between EFL learners' emotional intelligence and their self-efficacy beliefs. Furthermore, the results of the regression analysis revealed that *self-actualization* and *stress tolerance* (among other components of emotional intelligence) were the positive predictors of the learners' *self-efficacy*.

Some studies have focused on EI/metacognitive strategies and their relationships with one of the four language skills in an L2 learning context. Ranjbar Mohammadi et al. (2020) found that from among the components of self-regulated learning (SRL), cognitive and metacognitive strategies were the dominant predictors of reading comprehension and problem solving, respectively. Ateş (2019) found a positive correlation between EI and Turkish EFL learners' reading comprehension skill as well as a negative correlation between EI and the learners' reading anxiety. Nemat Tabrizi and Esmaeili (2016) investigated the relationship between emotional intelligence and reading comprehension for impulsive and reflective Iranian EFL learners. They found a significant relationship between Iranian EFL learners' emotional intelligence and their reading comprehension. They also found that the Iranian impulsive EFL female students who possessed more degrees of emotional intelligence outperformed reflective students on reading comprehension. Majidi Dehkordi and Shirani Bidabadi's (2015) findings indicated that EI level was positively associated with reading strategy use.

Taheri and Hedayat Zade (2018) examined the contribution of metacognitive strategies to English as a Foreign Language (EFL) learners' listening comprehension performance and their metacognitive awareness. Their results revealed that the performance of the participants improved dramatically after the treatment sessions in which they were taught how to apply metacognitive strategies in their listening tasks. They also found that strategy training played a significant role in improving the metacognitive awareness of the participants. In another study on the correlation between emotional intelligence and Iranian EFL learners' use of listening metacognitive strategies, Alavinia and Mollahossein (2012) came up with a significant correlation between emotional intelligence and the use of listening metacognitive strategies. Furthermore, they found a significant relationship between the five subscales of emotional intelligence and the use of monitoring strategies on the one hand and a significant relationship between *interpersonal skills* and *evaluating strategies* on the other. Ebrahimi et al. (2018) conducted a study on the influence of EI on speaking skill. They found that both EQ and the speaking skill of the learners in the treatment group were developed in a significant way.

To help complete the picture of empirical studies above as well as to fill the gap mentioned earlier, this study was launched to investigate the correlation between EI and the use of metacognitive reading strategies. To achieve this purpose, the following main research question and the subsequent sub-questions were posed:

Q: Is there a significant relationship between Iranian EFL students' emotional intelligence and their use of metacognitive reading strategies?

Sub-Q1: Is there a significant relationship between Iranian EFL learners' emotional intelligence scales and their use of *global* strategies?

Sub-Q2: Is there a significant relationship between Iranian EFL learners' emotional intelligence scales and their use of *problem-solving* strategies?

Sub-Q3: Is there a significant relationship between Iranian EFL learners' emotional intelligence scales and their use of *support* strategies?

Sub-Q4: Which of the scales of emotional intelligence best predict the use of metacognitive reading strategies?

Methodology

Participants

The present research was conducted at Jahad Daneshgahi Language Institute (JDLI), Urmia, Iran. A total of 102 EFL learners from six intact classes were selected as the study participants through the convenience sampling procedure. The participants consisted of 66 females and 36 males who were all at the intermediate level (attending terms Inter 1 and Inter 2). Furthermore, the learners' age ranged between 18 and 27. The participants were initially 119 learners who were reduced to 102 learners, through the administration of a homogeneity test, i.e. the PET reading test. These participants were selected from the above-mentioned institute because they were learning English in the institute as EFL learners in the real sense of the concept of English as a foreign language since in such institutes the language skills and components are focused in a holistic approach to teach/learn the target language; another reason was that these participants were conveniently available to the researchers.

Instrumentation

In order to collect the required data, the researchers used three instruments which consisted of an emotional intelligence questionnaire, a metacognitive reading strategies questionnaire, and a test of reading comprehension. A detailed explanation of each instrument is provided below. Both questionnaires were Persian translation versions as the respondents were non-native speakers of English and could face difficulty understanding the questionnaire items.

Emotional Intelligence Questionnaire

In order to evaluate the participants' emotional intelligence, the researchers employed Bar-On's EQ-i test. This test is a 133-item self-report questionnaire that was developed by Bar-On in 1997 to assess socially and emotionally intelligent behavior. Bar-On modified the original version of the test and reduced its size so that the modified version encompassed only 117 questions. Moreover, through later modifications, the questionnaire was reduced in size by eliminating the questions that were considered as ambiguous and irrelevant to Iranian culture by Samouei (2003). This revised version of the questionnaire that consists of 90 questions was employed to gather data in the present study. According to Samouei (2003), as cited by Vaezi and Fallah (2012), the test had sufficient internal consistency, test-retest reliability, and construct validity. Based on her findings, the reported Cronbach's alpha coefficient was 0.93 and the reliability index gained through the odd-even, split-half method was 0.88. In this study, the Cronbach alpha for the questionnaire was calculated at .84. The questionnaire employed a five-point Likert-scale format ranging from *strongly disagree* to *strongly agree*. The test includeed five composite scales and fifteen subscales of emotional intelligence as indicated in Table 1 below.

It is worth mentioning that the Cronbach alpha indexes for the subscales of this instrument were calculated and turned out to be .91 for *intrapersonal skills*, .88 for *interpersonal skills*,.93 for *stress management*, .87 for *adaptability*, and .88 for *general mood* in this study.

The Survey of Reading Strategies Questionnaire (SORS)

This questionnaire, which was developed by Mokhtari and Sheorey (2002), was based on the Metacognitive Awareness of Reading Strategies Inventory (MARSI). Mokhtari (1998-2000) designed the MARSI to measure the type and frequency of reading strategies used by native speakers of English. Mokhtari and Sheorey adapted MARSI by revising it so that it could be used with adult second or foreign language learners. Their revisions involved refining the wording of several items to make them easily comprehensible to ESL students, adding translation from one language into another and thinking in both the native and target languages, and removing two items dealing with summarizing information and discussing what one reads with others (see Mokhtari & Sheorey, 2002, p. 4). Mokhtari and Reichard (2002) reported that SORS was extensively field-tested with several students (native and non-native speaking) and was found to have well-established psychometric properties including validity and reliability (Alpha = .93).

As a further adaptation in the present research context, the Persian version of SORS was used for measuring the participants' perceived use of metacognitive reading strategies. The SORS is a 30-item questionnaire using

Table 1
Scales and Subscales of EI as Measured by Bar-On's Questionnaire

Scale of EI	Subscales of EI
Intrapersonal Skills	Self-Regard
	Emotional Self-Awareness
	Assertiveness
	Independence
	Self-Actualization
Interpersonal Skills	Empathy
	Social Responsibility
	Interpersonal Relationship
Stress Management	Stress Tolerance
	Impulse Control
Adaptability	Reality-Testing
	Flexibility
	Problem-solving
General Mood	Optimism
	Happiness

a 5-point Likert Scale ranging from 1= 'I never or almost never do this' to 5= 'I always or almost always do this' (Mokhtari & Sheorey 2002, p. 4). The items of the questionnaire were translated into Persian so that students could easily understand the questions. The Persian version of the questionnaire was developed through the process of translation and back translation: the questionnaire was translated to Persian; the questionnaire was then rendered back to English by an M.A. student majoring in EFL at the University of Zanjan, Iran, to distinguish any mismatch between the original version and translated one. The new questionnaire was piloted with 28 students at Jahad Daneshgahi Language Institute of Urmia, Iran, and the reliability index gained through Cranach's alpha was 0.82. Furthermore, the validity of the questionnaire was approved by two professors at the University of Zanjan, Iran.

According to Mokhtari and Sheorey (2002, p. 4), SORS measures three categories:

- Global Reading Strategies (GLOB) refers to "intentional, carefully planned techniques by which learners monitor or manage their reading".
- Problem-solving Strategies (PROB) includes "actions and procedures that the readers use while working directly with the text. These are localized and focused techniques used when problems develop in understanding textual information".
- Support Reading Strategies (SUP) involves "basic support mechanisms intended to aid the reader in comprehending the text".

It is worth mentioning that the Cronbach alpha indexes for the subscales of this instrument were calculated and turned out to be .88 for *global reading strategies*, .83 for *problem-solving strategies*, and .78 for *support reading strategies* in the present study.

Reading Comprehension Test
A reading test had to be administered to evaluate the participants' reading comprehension. Since the participants were intermediate-level EFL learners, the reading part of the Preliminary English Test (PET) (Cambridge Objective PET, 2010) was employed for this purpose. The main reason for evaluating reading comprehension was to homogenize the participants in terms of their reading comprehension so as to reduce the effect of proficiency when using reading metacognitive strategies.

The PET is an intermediate-level standardized exam developed by Cambridge ESOL. The Reading part of the test is comprised of 35 questions and arranged in five parts. In part 1, the participants read five short texts (signs, notes, emails, etc.) and chose the best answer among the choices (A, B, or C). In part 2 of the test, they encountered five descriptions of people, followed by eight short passages in which they were supposed to match each person to one of the texts. Part 3 consisted of a longer, factual text that was preceded by ten single-sentence statements. The participants had to decide whether each statement is correct or incorrect. Part 4 of the test included a text that was followed by five multiple choice questions in which students chose the best answer (A, B, C, or D). In part 5, there was a cloze-test with ten numbered spaces. Four possible answers were provided for each numbered space and students had to choose the right one. The Cronbach alpha for this test was calculated at .80 in the present research context.

Procedures

The study was carried out during regular class time in six classes at the Jahad Daneshgahi Language Institute of Urmia, Iran. The process of conducting the research was almost the same in all of the classes. Prior to the administration of the tests, permission was obtained from the learners' instructors. The students were assured that the results would be handled in a confidential manner. The students, then, were provided with a brief explanation of the concepts of emotional intelligence and metacognitive strategies. They were also informed about what they were required to do in the study. Furthermore, to encourage learners to take the test and answer the items, the researchers assured them that the scores of the reading comprehension, emotional intelligence, and metacognitive strategies would be announced based on the number assigned to each student (as written on the exam paper). The results were announced a week after the administration of the tests.

The three instruments were all administered to the participants in a single session. First, the reading section of the PET was administered to the learners. Forty-five minutes were allocated for answering this test. Next, the questionnaire of metacognitive strategies (SORS) was distributed among the students. It took about 15 minutes to fill out the questionnaire. At this time, a short break was given to the learners to rest. Finally, the emotional intelligence questionnaire was given, which took the participants 20 minutes to complete. The reading comprehension test and two questionnaires were scored and the scores on the reading comprehension test were used to homogenize the subjects. This was accomplished by omitting the outliers, and only those whose scores were one standard deviation above and below the mean were used in later analysis of the data.

Data Analysis

After the administration of the reading test and the questionnaires, three sets of data were gathered i.e. reading comprehension scores, metacognitive reading strategies and its components scores, and emotional intelligence and its scales and subscales. It should be mentioned that since the present study was concerned with EI and its scales, the scores of the subscales were not used. Based on the aforementioned research questions and null hypotheses, the following data analysis procedures were carried out using SPSS 19:

1. Pearson Product Moment Correlation Coefficient was utilized to find any probable relationship between total emotional intelligence scores and total scores of using metacognitive reading strategies.
2. Pearson Product Moment Correlation Coefficient was used to explore the potential relationship between the five scales of EI and the use of *global, problem-solving,* and *support* metacognitive strategies in reading.
3. Multiple regression analyses were used to find whether scales of emotional intelligence could predict the use of metacognitive reading strategies.

Data Analysis Results

Results for the Main Research Question

The main research question of the present study sought to explore the relationship between EFL learners' emotional intelligence and their use of metacognitive reading strategies. It was hypothesized that no significant relationship exists between learners' EI and their use of metacognitive reading strategies. In order to explore this relationship, the Pearson product-moment correlation coefficient was utilized. The results are presented in Table 2 below.

Table 2
Emotional Intelligence and Metacognitive Reading Strategies

Correlations			
		Total Emotional Intelligence	**Total Metacognitive Reading Strategies**
Total Emotional Intelligence	Pearson Correlation	1	.472**
	Sig. (2-tailed)		.000
	N	102	102
Total Metacognitive Reading Strategies	Pearson Correlation	.472**	1
	Sig. (2-tailed)	.000	
	N	102	102

As is evident from the table, based on Cohen's (1988) ratings of r-values, a moderate and positive correlation was found between the participants' emotional intelligence and their use of metacognitive reading strategies (r = .472, n = 102, p< .0005). Therefore, the null hypothesis for the main research question was rejected.

Results for the First Sub-question

The first sub-question aimed at finding a relationship between Iranian EFL learners' emotional intelligence scales and their use of 'global' metacognitive reading strategies. To this end, another Pearson product-moment correlation analysis was conducted. Significantly positive and moderate correlations (see Cohen, 1988 above) were found between the participants' EI scales of *intrapersonal skills* (r = .426, n = 102, p< .0005), *interpersonal skills* (r = .454, n = 102, p< .0005), *adaptability* (r = .298, n = 102, p< .002), and *general mood* (r = .415, n = 102, p< .0005) and their use of *global* metacognitive strategies in reading. However, no significant correlation was found between their *stress management* and *global* metacognitive strategies in reading. Thus, the respective null hypothesis was rejected regarding all the scales of EI except for the Stress Management scale.

Results for the Second Sub-question

The second sub-question was meant to explore any relationship between Iranian EFL learners' emotional intelligence scales and their use of 'problem-solving' metacognitive reading strategies. For this purpose, the researchers conducted another Pearson product-moment correlation analysis. Small, moderate, and high positive correlations (see Cohen, 1988 above) existed between the participants' EI scales of *intrapersonal skills* (r = .285, n = 102, p< .004), *interpersonal skills* (r = .474, n = 102, p< .0005), and *general mood* (r = .510, n = 102, p< .0005) and their *problem-solving* metacognitive strategies in reading. However, no significant correlation was found between their *stress management* and *adaptability* and their *problem-solving* metacognitive strategies in reading. Thus, the respective null hypothesis was rejected for the three EI scales of *intrapersonal skills*, *interpersonal skills*, and *general mood*, but not for the scales of *stress management* and *adaptability*.

Results for the Third Sub-question

In the third sub-question, the researchers sought to explore any relationship between Iranian EFL learners' emotional intelligence scales and their use of *support* metacognitive reading strategies. A Pearson Product-moment Correlation analysis resulted in moderate and positive correlations (see Cohen, 1988 above) between the participants' EI scales of *intrapersonal skills* (r = .317, n = 102, p< .001) , *interpersonal skills* (r = .336, n = 102, p< .001) , and *general mood* (r = .460, n = 102, p< .0005) and their use of *support* metacognitive strategies in reading. However, no significant correlation was found between their *stress management* and *adaptability* and their *support* metacognitive strategies in reading. Therefore, the respective null hypothesis was rejected for the three EI scales of *ıntrapersonal skills, ınterpersonal skills,* and *general mood,* but not for the scales of *stress management and adaptability*.

Results for the Fourth Sub-question

The fourth sub-question sought to explore the best predictor of EFL learners' use of metacognitive reading strategies. In other words, it tried to determine whether scales of emotional intelligence could predict the use of metacognitive reading strategies. For this purpose, multiple regression analyses were used to answer the question.

The Pearson correlations showed that the dependent variable of metacognitive reading strategies use correlated with the participants' *intrapersonal skills, interpersonal skills, adaptability,* and their *general mood* ($p<0.05$). However, the correlation between their metacognitive reading strategies and *stress management* did not reach a significant level. Table 3 shows the multiple correlation coefficients (R).

Table 3
Multiple Correlation Coefficients

Model Summary [b]					
Model		**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	1	.600[a]	.360	.327	.45317

a. Predictors: (Constant), General Mood, Stress Management, Interpersonal Skills, Adaptability, Intrapersonal Skills
b. Dependent Variable: Total Metacognitive Reading Strategies

As seen in the table above, the value given under the heading Adjusted R Square (.327) indicates the amount of the variance in the dependent variable (metacognitive reading strategies use) explained by the model including the variables of emotional intelligence scales. Stated in percentage terms, 32 percent of the variance in the use of metacognitive reading strategies is explained by the model, which is quite a remarkable share. Regression analysis revealed significant predictions ($p < 0.05$). (see Table 4)

Table 4
ANOVA Results for the Fourth Sub-question

ANOVA[b]						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	11.098	5	2.220	10.808	.000[a]
	Residual	19.715	96	.205		
	Total	30.812	101			

a. Predictors: (Constant), General Mood, Stress Management, Interpersonal Skills, Adaptability, Intrapersonal Skills
b. Dependent Variable: Total Metacognitive Reading Strategies

As revealed in the table above, the independent variables of *intrapersonal skills, interpersonal skills, stress management, adaptability,* and *general mood* improve the accuracy of the prediction of the participants' metacognitive reading strategies significantly. The following table shows the contribution of the independent variables to the model.

Table 5
Results for *Independent Variable Contributions*

Model		Coefficients[a] Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	1.197	.398		3.009	.003
	Intrapersonal Skills	.005	.005	.122	.884	.379
	Interpersonal Skills	.012	.005	.232	2.237	.028
	Stress Management	-.012	.007	-.179	-1.711	.090
	Adaptability	.004	.008	.055	.456	.649
	General Mood	.027	.009	.361	3.054	.003

a. Dependent Variable: Total Metacognitive Reading Strategies use
(Table 5 continued)

Among all the independent variables, *general mood* made the strongest unique contribution to the dependent variable (Beta = .36), and the smallest contribution went to *adaptability* variable (Beta = .055). In addition, only *general mood* ($p = .003$) and *interpersonal skills* ($p = .028$) made significant unique contributions to the prediction of the dependent variable.

Discussion

The results indicated a moderate and positive relationship between the participants' emotional intelligence and their use of metacognitive reading strategies. The theoretical implication of this overall finding can be the notion that emotional intelligence across its three models mentioned earlier is notably linked to learners' emotional and cognitive capacity to deploy the respective strategies (metacognitive reading strategies in this research context) in order to enhance their learning rate. Thus, importance should be attached to empowering learners' EI capabilities to apply effective learning strategies for optimal acquisition of the target language. Moreover, regarding the components of EI,*ınterpersonal skills, ıntrapersonal skills,* and *general mood'* were found to be correlated with three components of metacognitive reading strategies (*global, problem-solving, support*), with the correlation rates varying between small, moderate, and high. *adaptability* had an almost moderate correlation with *global* strategies; however, no significant correlation was found between *stress management* and the components of metacognitive reading strategies (*global, problem-solving, support*). The latter finding was contrary to the researchers' expectations. This might be due to the fact that in some reading contexts such as extensive reading or classroom free-reading activities, the readers are not under much stress. However, for other reading contexts, this may not hold true. Thus, it could be argued that the respondents in the present study might not have been under much stress in their own reading context. Nevertheless, the finding still requires further study before it can be regarded as a conclusive research finding in this regard.

To highlight the high correlation rate (based on Cohen's ratings reported earlier) in the above-mentioned relationships, it may be that the high correlation between the *general mood* component of EL (happiness and optimism) and *problem-solving* strategies might imply that higher level of happiness and optimism among the learners may increase the rate of their use of these strategies which are, by definition, employed by readers to solve problems of understanding that may arise during the reading of a text. Likewise, varying degrees of moderate correlation rates between the components of EI and the three components of metacognitive reading strategies can imply that the *intrapersonal*, *interpersonal*, and *general mood* components of EI can be said to have a notable role in developing the use of metacognitive reading strategies by L2 learners. Since these implications come out of this correlation study only, further studies are, therefore, suggested to be launched to put these findings under further investigation via studies using mixed-method designs so that they can be more readily generalized to the target populations and yield more tangible and pedagogically useful implications in L2 learning contexts.

Concerning the main research question, the results showed a moderate and positive correlation between the participants' emotional intelligence and their use of metacognitive reading strategies. This finding is in line with other similar findings in the literature (Aghasafari, 2006; Alavinia & Mollahossein, 2012; Hasanzadeh & Shahmohamadi, 2011; Majidi Dehkordi & Shirani Bidabadi, 2015; Rahmani et al., 2013; Soodmand Afshar et al., 2016; Taheri & Jadidi, 2016). Similarly, these research findings also confirmed positive relationships between EI and different aspects of L2 learning as well as the use of some learning strategies (see the details under Related Studies above).

The findings are also compatible with those of Alavinia and Mollahossein (2012), who found relationships between *interpersonal skills* and the three components of listening metacognitive strategies. However, they contradict their findings in that they found a significant relationship between *intrapersonal skills, stress management,* and *the monitoring* listening strategy. Furthermore, their results revealed a relationship between the two skills of *adaptability* and *general mood* and *the planning* and *monitoring* listening strategies. These contradictions indicate that there is a need for further research into the relationship between EI scales and strategies.

As the findings of the study revealed, all EI scales predicted the use of metacognitive reading strategies. The strongest predictors of using metacognitive strategies were *general mood* and *interpersonal skills*, respectively; and the weakest predictor was *adaptability*. This finding is in line with Alavinia and Mollahossein (2012) in that in both studies the *ınterpersonal skills* scale was found to be the strongest predictor of using metacognitive strategies. Nevertheless, it contradicts their findings that *adaptability* was a strong predictor of using metacognitive strategies. This difference might be the result of the different contexts in which the studies were conducted.

It is worth mentioning that among the three categories of the metacognitive reading strategies, the most frequently used strategies belonged to the *problem-solving reading strategies* with an overall mean of 3.78. These strategies to which eight items out of 30 on the 5-point Likert scale were dedicated to actions and procedures such as slow and careful reading, adjusting reading speed, picturing or visualizing information, re-reading, guessing the meaning of unknown words or phrases, etc. The next most frequently used strategies belonged to the *global reading strategies* (M = 3.52) which comprised 13 items out of 30 on the scale. These strategies included carefully planned techniques such as goal-setting, using background and world knowledge, taking an overall view of the text, deciding what to read or not to read closely, using the tables and figures in the text, using context clues, using typographical features like boldface and italics, critical evaluation, etc. Finally, the least frequently used strategies belonged to the *support reading strategies* (M = 3.39) which consisted of nine items out of 30 on the scale. These strategies included basic support mechanisms such as note-taking, reading aloud, underlining or circling information, using reference materials (e.g., a dictionary), paraphrasing ideas, finding relationships among ideas, translating into the native language, thinking about information in both English and the native language, etc.

Conclusion

The findings of this study revealed a positive relationship between learners' emotional intelligence and their use of metacognitive reading strategies. Furthermore, *general mood* and *interpersonal* strategies, among other scales of EI, made significant contributions to the prediction of metacognitive reading strategies use.

One limitation of this study is that the data was drawn from learners at a single language institute in Urmia, Iran. Thus, the majority of the learners were native speakers of Azeri. Learners from various parts of Iran may have different cultural backgrounds; consequently, they may enjoy different levels of EI and might use metacognitive strategies differently. Furthermore, the participants were at the intermediate level of their learning English. Hence, one should be cautious in generalizing the findings of this study. Additionally, the number of participants was limited to 102 EFL learners after the homogenization process. With more participants, more reliable and generalizable results can be obtained. Finally, since the participants did not receive any training regarding the use of metacognitive reading strategies, the relationship between EI and using metacognitive strategies, might have been affected.

The present study may offer some implications for EFL teachers, learners, teacher trainers, materials developers, and curriculum designers. EFL teachers can classify learners into separate groups regarding their emotional intelligence and teach them metacognitive strategies according to their EI type. Together with teacher mentoring programs on learner EI and metacognitive reading strategies (see Yaumi, Sirate, & Pakat, 2018), this can help learners improve their emotional intelligence and, hence, use more strategies while reading. EFL teachers can also instruct learners to be more social in the classroom and maintain an optimistic outlook toward reading tasks. Creating an atmosphere in which learners have social relationships with each other can enhance their interpersonal skills.

Language teacher trainers can instruct EFL teachers to take learners' emotional intelligence into account. They can also help them adopt appropriate teaching methods that are in line with learners' EI levels in order to enhance the effective use of metacognitive strategies. Furthermore, they can instruct them to use better mothods for enhancing learners' emotional intelligence. Materials developers and curriculum designers should pay heed to the role of emotional intelligence and include programs to enhance learners' EI in their syllabuses.

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