

Exploring the Predicting Role of Emotional Intelligence (EQ) in Reading Comprehension Proficiency among Iranian EFL Learners

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Abstract

The present study scrutinized the probable significant correlation between Iranian language learners' emotional intelligence (EQ) and reading proficiency. Moreover, the significant predicting role of the participants' EQ for their reading comprehension proficiency was investigated. To this end, 196 Iranian B.A. English language teaching students at Islamic Azad university of Neyshabur attended the study. They formed unequal proportion of gender. The study followed a quantitative descriptive design, in which the significant correlation between the variables and the significant predicting role of EQ were investigated. As the normality of data was proved through Kolmogrow-smirnow test, the parametric statistical analyses, including descriptive statistics, Pearson correlation coefficient, independent sample T-test, and linear regression analyses were employed. The data collection instruments were an ETS TOEFL reading comprehension test and Bar On's (1997) inventory of emotional quotient. The findings demonstrated significant positive correlation coefficients between the participants' reading proficiency and overall EQ as well as most of its subcategories. Three highest positive significant correlation coefficients were seen among the participants' reading proficiency level, happiness, problem-solving, and emotional self-awareness successively. The results of linear regression analysis also reflected that EQ significantly predicted the participants' reading proficiency. No significant differences were found between the genders concerning EQ. The findings laid emphasis on the influential importance of psychological non-linguistic factors in improving linguistic competence of language learners. Language teachers should be acutely conscious of the highly influential role of psychological paradigms in boosting language learning process of language learners.

Keywords: [emotional intelligence](#), [language proficiency](#), [non-linguistic factors](#), [reading proficiency](#)

1. Introduction

The term emotional intelligence (EQ), deriving from the essential focus on the mutual relation between emotion and thought in the early 1990, related to utilizing and existing emotional information intelligently to come to an appropriate decision (Ciarrochi & Mayer, 2007; Grewal & Salovey, 2005). EQ is concerned with the mental processes of recognizing, utilizing, understanding, and managing an individual's emotional status as well as others in order to regulate behavior to deal with incoming problems (Mayer & Salovey, 1997). In spite of a variety of conflicting components, EQ can simultaneously integrate a person's cognition and emotion to make a sound decision. It has been the main reason, having stimulated many *scholars* to investigate the substantial efficiency of emotional intelligence in various fields of education since 1990 (e.g., Elias, Arnold, & Hussey, 2003). Many scholars have also worked on the probable effectiveness of EQ in learning a second language (e.g., Brackett & Katulak, 2007).

The beginning studies on the probable significant relation between emotional intelligence and success in different fields revealed positively strong results (e.g., Elias, Bruene-Butler, Blum, & Schuyler, 1997; Goleman, 1995; Pasi, 1997). Nevertheless, some scholars are opposed with the early claims concerning their preliminary nature (e.g., Matthews, Roberts, & Zeidner, 2003; Zeidner, Roberts, & Matthews, 2002). Furthermore, the initial measuring instruments were under question concerning validity (Zeidner, Matthews, & Roberts, 2001). There exist many language learners, knowing ample lexical items as well as grammatical structures, yet unable to comprehend reading comprehension passages well, implying the fact that reading comprehension is dependent on both linguistic and non-linguistic abilities. In other words, reading comprehension is a social linguistic skill, which needs high level of linguistic, strategic, social, and emotional interaction with the texts. As a result, this study is a systematic effort made to account for the statistical contribution of emotional intelligence to the reading comprehension process, focusing on both genders as well reading proficiency levels. In addition, an attempt was made to explore the variances of the test takers' reading comprehension scores, caused by emotional intelligence, which has been rarely investigated in the related studies. Based on Bachman's (1990) model of the factors affecting test performance, communicative language ability of the learners, assessed through tests, is dependent on both linguistic and non-linguistic factors. F1 figure 1 shows the factors that affect test scores.

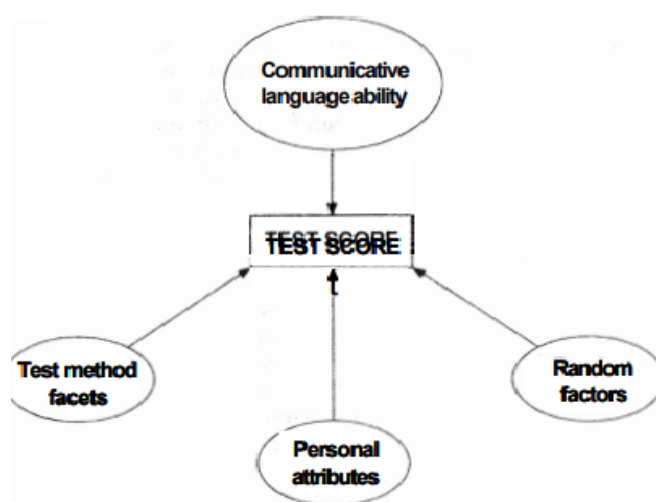


Figure 1. Factors that affect language test scores (Derived from Bachman, 1990)

As the figure shows, language ability is one of the factors that affect language learners' test scores. There exist some other systematic and unsystematic nonlinguistic factors, which exert considerable influence on test scores. Actually, identifying the true scores of language learners is not a highly probable task due to the intervention of a variety of nonlinguistic variables. In addition, direct assessment of communicative language ability is impossible due to its indirect mental entity. In the Bachman's (1990) model, attributes of individuals are considered as systematic factors, regularly affecting test performance. Among many attributes of individuals, emotional intelligence plays an important

role in language learning success. Thus, the present study is an empirical investigation of one aspect of the Bachman's model, namely emotional intelligence, as one of the important personal attributes, affecting test performance. In this study, the degree that the learners' EQ can account for their reading test scores variances is also explored, which has been rarely investigated by other researchers in this field.

1.1 Statement of the Problem

Concerning the related review of literature, in several national and international studies, the significant effect of emotional intelligence on language learning has been investigated in different dimensions of language learning. However, the significant predicting role of emotional intelligence for reading proficiency level or reading ability of language learners has been rarely investigated. In addition, as emotional intelligence has been investigated through different inventories, the results of the studies are not closely harmonious. Therefore, the present research is a systematic effort to examine the probable significant relation between overall EQ along with its 14 subscales, based on Bar-on's (1997) model, and reading comprehension ability of Iranian university students, getting BA in English Language Teaching. In addition, deliberate attempts were made to investigate the degree that language learners' EQ can contribute to their reading comprehension ability or the extent the participants' EQ can predict reading comprehension ability. Further attempts were made to probe the probable significant gender differences in the degree of EQ. The findings can shed light on language-teaching programs to remove the potential learning blocks, related to the substantial effect of non-linguistic psychological factors.

1.2 Research Questions

To fulfill the aims of this research, the following research questions were presented:

1. Is there any significant relationship between Iranian EFL learners' emotional intelligence (EQ) as well as the subscales and reading comprehension?
2. Is Iranian EFL learners' emotional intelligence (EQ) a significant predictor of reading comprehension?
3. Is there any significant difference between Iranian EFL learners' emotional intelligence (EQ) and gender?

1.3 Research Hypotheses

Based on the above research questions, the hypotheses of this study were as follows:

1. There is not any significant relationship between Iranian EFL learners' emotional intelligence (EQ) as well as the subscales and reading comprehension.
2. Iranian EFL learners' emotional intelligence (EQ) is not a significant predictor of reading comprehension.
3. There is not any significant difference between Iranian EFL learners' emotional intelligence (EQ) and gender.

2. Review of Literature

2.1 Reading Comprehension

Reading comprehension is of fundamental importance in English language-teaching programs in Iran and regarded as a significant skill, lack of which debilitates academic achievements. It can be a remarkable skill for EFL students, who have a little chance to speak English in their daily lives (Endris, 2018; Moradi, 2022; Namaziandost, Razmi, Ahmad Tilwani, & Pourhosein Gilakjani, 2022; Razi, 2010). Rahimi et al. (2011) believed that reading skill is of crucial importance in input-poor EFL environments such as Iran concerning little contact with the English native speakers. Grabe (2010) declared that reading comprehension is a highly complex skill, comprising lower level and higher-level processing components. Lower-level processing is automatic, fast, unstoppable, and independent on the amount of processed information, which involves pop-out of the target items. In contrast, higher level processing is linked with the readers' abilities to interpret the reading texts with regard to their background knowledge. Concerning the relationship between language learners' EQ and cognitive functioning, it is probable to hypothesize that students with higher level of EQ are able to comprehend reading texts more efficiently (Abdolrezaei & Tavakoli, 2012).

2.2 Emotional Intelligence

There exist ample empirical studies, reporting the positive strong correlation between emotional intelligence and academic success, employing properly systematic method for measuring emotional intelligence along with academic scores (e.g., Elias, Bruene-Butler, Blum, & Schuyler, 1997; Ghasemi & Khany, 2019; Goleman, 1995; Matthews, Roberts, & Zeidner, 2003; Mayer & Cobb, 2000; Parker, Summerfeldt, Hogan, & Majeski, 2004; Pasi, 1997; Petrides, Frederickson, & Furnham, 2004; Zeidner, Roberts, & Matthews, 2002). Petrides, Frederickson, and Furnham (2004) scrutinized the relation among EQ, cognitive ability, and academic achievement British students at 11th high school Grade. The findings reflected that EQ had a mediating role, accounting for the relation between academic success and cognitive ability. Petrides et al. (2004) also reported a negative correlation between EQ and abnormal school behaviors along with officially unpermitted absences.

In a longitudinal study carried out by [Parker et al. \(2004\)](#), different EQ components were reported as the predicting elements of the participants' academic success. Through applying a model of emotional intelligence, [Bar-On \(1997, 2000\)](#) announced four interrelated capabilities. They are intrapersonal abilities including relevant abilities such as recognizing and labeling one's feelings, interpersonal abilities including relevant abilities such as determining emotions in other individuals or sympathy, adaptability including the capabilities such as matching one's emotional behaviors to varying situations; and finally, stress management including the abilities such as procrastinating or resisting control of a sudden impulse. The sample consisted of liberal arts freshman students in Ontario, filling out [Bar-On's \(2002\)](#) inventory of emotional quotient. The results demonstrated that the students who were academically more successful scored higher on particular aspects of EQ such as intrapersonal abilities, adaptability, and stress management. The participants getting higher EQ scores were more skillful at dealing with psychosocial elements for transition to the post-secondary environment than the participants getting lower EQ scores.

[Basharat and HabibNejad \(2009\)](#) explored the impact of EQ on Iranian university students' mental health as well as academic achievement. The results revealed a negative correlation coefficient between EQ and psychological stress. However, a positive index of correlation was found between their EQ and academic success.

[Pishghadam \(2007\)](#) explored the relation between EQ and general English score of 528 university students in Tehran, Iran. The findings manifested strong positive correlation coefficients among the participants' general English score, stress management, and intrapersonal skills. [Aghasafari \(2006\)](#) explored the relation between EQ and employment of language learning strategies of sophomore students in Iran. The findings indicated a positive relation between EQ and utilization of strategies.

[Fahim and Pishghadam \(2007\)](#) probed the relation among EQ, IQ, verbal intelligence, and the success of English learners in an Iranian setting. The findings manifested positive correlation coefficients between the participants' academic success and several subscales of EQ, particularly intrapersonal, stress management, and general mood competencies. No strong correlation was reported between the participants' success and IQ, but strong positive correlation was reported between verbal intelligence, as a sub-scale of IQ test, and academic success. [Pishghadam \(2009\)](#) explored the effect of emotional and verbal intelligences on the successful process of learning English in Iran. The findings manifested the major instrumental role of emotional intelligence in the process of learning particular productive skills.

In relating intelligence to learning a target language, [Brown \(1994, p.93\)](#) asserted that "the greatest barrier to second language learning seemed to boil down to a matter of memory." To put it simply, if language learners could remember something they faced, they would be successful learners as intelligence was conventionally assessed through linguistic as well as logical abilities. [Gardner \(1983\)](#) offered Multiple Intelligence theory, questioning the traditionally monolithic views about general intelligence. Regarding the theory, Gardner identified seven intelligence components, including intrapersonal and interpersonal intelligences, providing the right conditions for working on other intelligent dimensions such as emotional quotient.

2.3 Emotional Intelligence and Reading Comprehension

[Salovey and Mayer \(1990\)](#) emphasized the existence of EQ, radically different from the cognitive intelligent quotient. It was also explored by [Goleman \(1995\)](#). From that time on, serious considerations have been given to it in general, and its probable significant contribution to learning a target language, in particular. [Salovey and Mayer](#) considered EQ as one's capability to check the emotions and utilize the most appropriate reasoning powers to resolve the problems. Emotional intelligence can play the predicting role for one's academic as well as occupational performances ([AzimiTabar, Gorjian, & Pazhakh, 2012](#)). Many studies reflected the predictive role of emotional intelligence in teaching effectiveness ([Ghanizadeh & Moafian, 2010](#)), language learning process ([Brackett & Mayer, 2003](#)), and academic success ([Fallahzadeh, 2011](#)). In a study conducted by [Motallebzadeh \(2009\)](#), exploring the relation among emotional intelligence, reading comprehension, and structural linguistic abilities of 170 language learners in Iran, strong relationship was found among the indicated variables.

In their academic study, [Vahdat and Khavandgaran \(2013\)](#) found a meaningful relation between verbal intelligence and reading comprehension success of the participants. Furthermore, the results proved the strong predicting role of linguistic intelligence for the participants' reading comprehension ability. The participants comprised 30 male as well as 30 female undergraduate students in Shiraz with the ages ranging from 22 to 31. [Majidi, Dehkordi, Shirani, and Bidabadi \(2015\)](#) examined the relation between utilization of reading strategies and EQ. The results reflected that higher EQ group outperformed the lower group in employing meta-cognitive as well as cognitive strategies.

Nurhasnah (2014) conducted a research on the relation between EQ and reading comprehension of language learners in three classes at MTs Sawah Kampar. The results indicated a positive significant relation between reading comprehension level and EQ. In the study of Ghabanchi and Rastegar (2014), comparing the correlation coefficients of the participants' IQ and EQ with reading comprehension, the results indicated weaker correlation coefficient for EQ than IQ. In contrast, in another study conducted by Karaman (2015), no statistically significant relation was reported between undergraduate students' EQ and English test performance in Turkey. A similar study, conducted by Ronasari (2015), showed no significant relation between reading comprehension process and EQ.

Ates (2019) conducted a research on the effect of emotional intelligence on reading ability of the students leaning Turkish, as a foreign language as well as their anxiety level across both genders. The findings demonstrated that emotional intelligence level of the students increased their reading comprehension skills. Furthermore, emotional intelligence scores of the female students were higher than the male ones. As a result, emotional intelligence of the foreign language learning students can exert substantial effect on the reading comprehension skills as well as the reading anxiety. Froiland and Davison (2020) also reported the positive contribution of emotional intelligence for reading comprehension as well as listening comprehension of diverse adolescents in that emotional intelligence could account for 36% of the variance in reading comprehension and 54% of the variance in listening comprehension of the students.

In a study by Ouaja et al. (2020), aiming at discovering the impact of emotional intelligence on receptive English skills of IT students, the results revealed a significant positive correlation between the students' emotional intelligence and their receptive English skills; with the highest correlation between the reading skills and the students' interpersonal and stress management subscales of emotional intelligence. Ateş (2019) also analyzed whether the emotional intelligence of 138 Turkish students exerted significant influences on their reading comprehension skills as well as reading anxiety. The analysis of the data demonstrated that the level of emotional intelligence decreased reading anxiety levels. It was also concluded that general emotional intelligence level of the students increased their reading comprehension skills.

Tehranipour and Masoudzade (2023) found a remarkable relationship between the emotional intelligence components and ESP learners' reading comprehension skill in an Iranian academic context. Interpersonal skill was the most frequently type of emotional intelligence and adaptability was the least component of EQ, used by the Iranian ESP students. It is worthy to note that reading a foreign/second language appears to be difficult, challenging, and stressful for the students who have to read another language other than their mother tongue, and it may lead to making lots of mistakes and facing challenges. Taking the social interpersonal interactions, involved in this process can be helpful in enhancing the ESP students' language abilities in the sense that they will have more chances to interact and negotiate with others.

2.4 Emotional Intelligence and Gender

Kafetsios (2004) indicated a statistically significant difference between two genders with higher grades of the female participants in emotional intelligence. Some studies revealed higher emotional intelligence of males than females (e.g., Ahmad, Bangash, & Khan, 2009). In their study, Ali, Saleem, and Rahman (2021) reported a significant difference between the two genders in emotional intelligence. Ahmad, Bangash, and Khan (2009) also reported higher degree of EQ in the male participants, which is in accord with the findings of Rao and Komala (2017). The results of their studies also manifested higher emotional self-regulation in the male participants than the female ones. In a study conducted by Ouaja et al. (2020) in an academic Turkish context, it was clarified that general emotional intelligence scores of the female students were higher than the male ones.

Patel (2017) asserted that females have stronger emotional intelligence than males. In contrast, in the study conducted by Rao and Komala (2017), the male showed higher emotional intelligence than the female. The difference was non-significant. Some other studies showed that male had higher emotional intelligence than female (e.g., Ahmad, Bangash, & Khan, 2009). Ali et al. (2021) concluded that there was a significant gender difference concerning emotional intelligence. Naghavi and Redzuan (2011) have concluded that although female have shown greater emotional intelligence yet other studies have shown contradictory results, therefore more research was needed in this area.

3. Methodology

3.1 Design of the Study

A correlational design was utilized in this study, investigating the relationship between variables without the researcher's controlling or manipulating any of them (Bhandari, 2022). The variables of this study are Iranian EFL

learners' emotional intelligence, reading proficiency, and gender. The significant relationship between the learners' emotional intelligence and reading proficiency was explored through Pearson correlation coefficient. In addition, the regression analysis was utilized to predict the degree of change in one dependent variable, namely reading proficiency, associated with a change in the independent variable, namely emotional intelligence.

3.2 Participants

The target sample comprised 196 BA English Language Teaching students at Islamic Azad University of Neyshabur, Iran. Their age ranged from 19 to 26. Regarding the results of the administered ETS TOEFL test (2016), the participants were divided into three groups of language proficiency at high, intermediate, and low levels. The participants whose reading scores were below -1 standard deviation from the mean were regarded as low, the participants whose reading scores fell between ± 1 standard deviation from the mean were regarded as intermediate, and the participants whose reading scores were above +1 standard deviation from the mean were regarded as high proficiency levels. The participants formed the unequal proportion of 105 female and 91 male students.

3.3 Instruments

One sample of ETS TOEFL Reading Comprehension Test (2016) and Bar-On's (1997) Emotional Quotient Inventory (EQ-I) were employed to investigate the purposes of the study.

3.3.1 Reading Comprehension Test

The reading test comprises 30 multiple-choice questions, following three passages. The reading sample test was derived from ETS TOEFL Reading Comprehension Test (2016) version. Each passage contains six paragraphs, followed by ten multiple-choice questions. The standard time for answering the reading test was 20 minutes. However, based on the feedback of the students in the pilot phase of the study, 30 minutes was dedicated to answer the questions. The reliability index of the test calculated through α -21 by the researcher was $\alpha = .92$. The first passage includes 645, the second 737, and the third one comprises 715 words. On the whole, the participants answered 30 multiple-choice reading comprehension tests.

3.3.2 Inventory of Emotional Quotient

Bar-On's (1997) Inventory of Emotional Quotient comprises 133 self-report items in a 1-to-5-point Likert scale, ranging from 1 = *Very seldom or not true of me* to 5 = *Very often or true of me* where the respondents were required to choose their own answer. The dedicated time for answering the questionnaire was considered 45 minutes concerning the participants' feedback in the pilot study. The inventory consists of 14 subscales, the reliability indexes of which based on De Weerd and Rossi (2015) are Emotional Self-awareness, $\alpha = .83$; Assertiveness, $\alpha = .76$; Self-Regard, $\alpha = .87$; Self-actualization, $\alpha = .67$; Independence, $\alpha = .76$; Empathy, $\alpha = .75$; Interpersonal Relationship, $\alpha = .80$; Social Responsibility, $\alpha = .72$; Problem Solving, $\alpha = .77$; Reality Testing, $\alpha = .66$; Flexibility, $\alpha = .71$; Stress Tolerance, $\alpha = .79$; Impulse Control, $\alpha = .78$; Happiness, $\alpha = .78$; and Optimism, $\alpha = .77$.

3.4 Data Collection

The data collection was conducted in the spring and autumn semesters in 2022. The participants were 196 junior and senior BA students of English Language Teaching at Islamic Azad University of Neyshabur-Iran. The data collection was done in two phases in person. In the first phase, the students were asked to respond the reading comprehension test in 30 minutes. The test comprised three passages; each was followed by ten multiple-choice questions. Prior to taking the test, the participants were totally informed on the necessary instructions for answering the test as well as the dedicated time to answer the questions. After the participants took the test, the papers were gathered. Then, in the second phase, the emotional intelligence questionnaire papers were distributed among the participants. In this phase, the students were required to fill out Bar-On's (1997) inventory of Emotional Quotient, consisting of 133 self-report items in about 45 minutes. Prior to answering the questionnaire items, the participants were fully briefed on the way that they had to fill out the questionnaire. The questionnaire comprised 14 subscales in a 1 to 5 Likert scale format. Concerning the statistical analysis, the reading test and the EQ questionnaire had good reliability indexes. After the participants' submission of the test and the questionnaire papers, the data were entered and analyzed by the 22th version of SPSS.

3.5 Data Analysis

Initially, to check normality of data, Kolmogorov-Smirnov test was conducted. Then, to examine the research questions, parametric statistical analysis including descriptive statistics, Pearson correlation coefficient, an independent sample T-test, and a linear regression analysis were employed in this study.

4. Results

In this part, first, One-Sample Kolmogorov-Smirnov Test was calculated for examining the normal distribution of the data to decide on the use of parametric or non-parametric statistical analyses. Then, the necessary descriptive and inferential statistics as well as correlation and regression analyses were done to examine the related questions and hypotheses. To confirm the normality of data, One-Sample Kolmogorov-Smirnov Test was done concerning confidence level ($\alpha = 0.95$). The findings are shown in Table 1.

Table 1. One-sample Kolmogorov-Smirnov test

		Reading Proficiency	Emotional Intelligence (EQ)
N		196	196
Normal Parameters ^a	Mean	70.2398	281.8265
	Std. Deviation	15.85442	65.28133
Most Extreme Differences	Absolute	.115	.102
	Positive	.106	.102
	Negative	-.115	-.084
Test Statistic		.115	.102
Asymp. Sig. (2-tailed)		.120	.313

Concerning the findings shown in Table 1, as p values are bigger than 0.05 ($p > 0.05$) for the variables in the study, the distribution of data is normal. Thus, parametric statistical analysis can be utilized. To investigate the first null hypothesis, the descriptive statistics was conducted, as shown in Table 2.

Table 2. Descriptive statistics for emotional intelligence (EQ)

	N	Mean	Mini mum	Maxi mum	Std. Deviation	Skewness
Emotional Intelligence	196	281.82	141	404	65.28	-0.433
Problem Solving	196	19.47	7	29	5.06	-0.483
Happiness	196	19.13	7	28	4.98	-0.427
Independence	196	17.88	7	30	4.85	-0.022
Stress Tolerance	196	17.83	10	28	4.48	0.133
Self-Actualization	196	18.87	8	29	5.31	-0.259
Emotional Self-Awareness	196	18.76	8	29	5.09	-0.242
Reality Testing	196	17.70	6	30	5.10	-0.247
Inter-Personal Relationship	196	19.22	7	30	5.81	-0.404
Optimism	196	18.77	8	30	5.27	0.341
Self-Regard	196	19.32	8	29	5.39	-0.289
Impulse Control	196	17.70	7	30	5.01	-0.010
Flexibility	196	18.48	7	29	4.53	-0.179
Social Responsibility	196	19.95	9	30	4.65	0.027
Empathy	196	20.46	11	30	4.09	0.032
Assertiveness	196	18.19	8	29	4.69	-0.148

Concerning the findings shown in Table 2, the mean score of EQ is ($M = 281.82$) and the standard deviation is ($Sd = 65.28$). The maximum and minimum scores are ($Max = 404$, $Min = 141$). Concerning the subcategories of EQ, the highest mean score was for Empathy ($M = 20.46$) while the lowest mean score was for Reality testing ($M = 17.70$). Figure 2 shows the means of different subcategories of EQ.

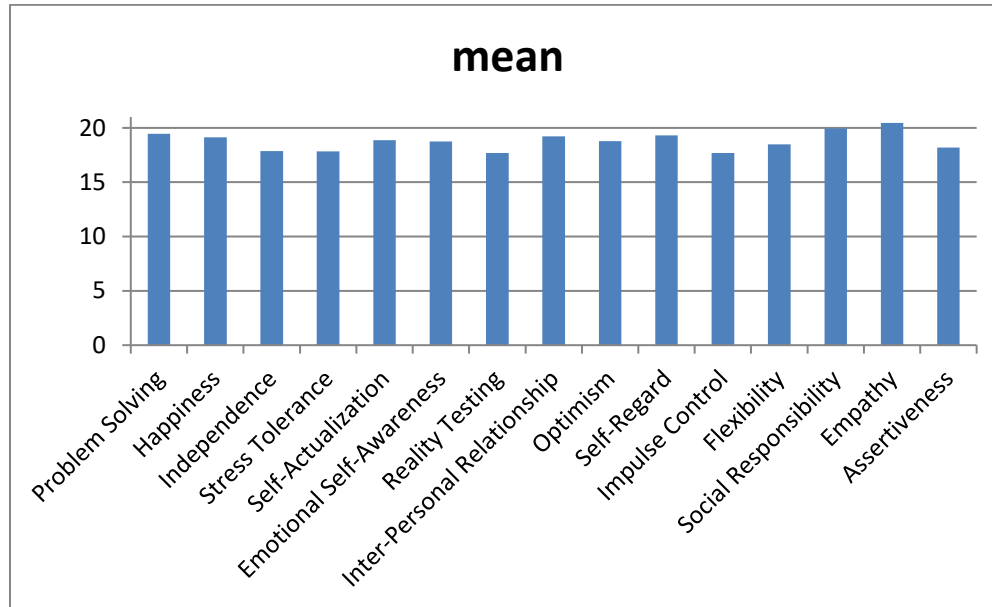


Figure 2. Means of different subcategories of emotional intelligence

To examine the significant relationship between reading comprehension and EQ, a Pearson's Correlation Coefficient was used. The findings are indicated in Table 3.

Table 3. Pearson's correlation coefficients between emotional intelligence (EQ) and reading comprehension

Emotional Intelligence	Pearson Correlation	Reading Proficiency
Emotional Intelligence (EQ)	Pearson Correlation	.883**
	Sig. (2-tailed)	.000
	N	196
Problem Solving	Pearson Correlation	.839**
	Sig. (2-tailed)	.000
	N	196
Happiness	Pearson Correlation	.846**
	Sig. (2-tailed)	.000
	N	196
Independence	Pearson Correlation	.800**
	Sig. (2-tailed)	.000
	N	196
Stress Tolerance	Pearson Correlation	.711**
	Sig. (2-tailed)	.000

	N	196
	Pearson Correlation	.794**
Self-Actualization	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.829**
Emotional Self-Awareness	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.818**
Reality Testing	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.804**
Inter-Personal Relationship	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.819**
Optimism	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.803**
Self-Regard	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.590**
Impulse Control	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.765**
Flexibility	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.688**
Social Responsibility	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.750**
Empathy	Sig. (2-tailed)	.000
	N	196
	Pearson Correlation	.731**
Assertiveness	Sig. (2-tailed)	.000
	N	196

** . Correlation is significant at the 0.01 level (2-tailed).

Concerning the findings shown in table, there existed significant correlation between the participants' EQ and reading proficiency ($r = 0.883$) at $p \leq 0.01$. There also existed significant correlation coefficients between the reading proficiency and different subcategories of EQ at $p \leq 0.01$. The highest significant correlation coefficient existed between reading proficiency and Happiness ($r = .846$) while the lowest significant correlation existed between reading proficiency and Impulse Control ($r = .590$) at $p \leq 0.01$. Consequently, the first null-hypothesis concerning the lack of significant relationship between these variables was strongly

rejected at $p \leq 0.01$. Figure 3 shows the relationship between reading proficiency and the learners' overall emotional intelligence.

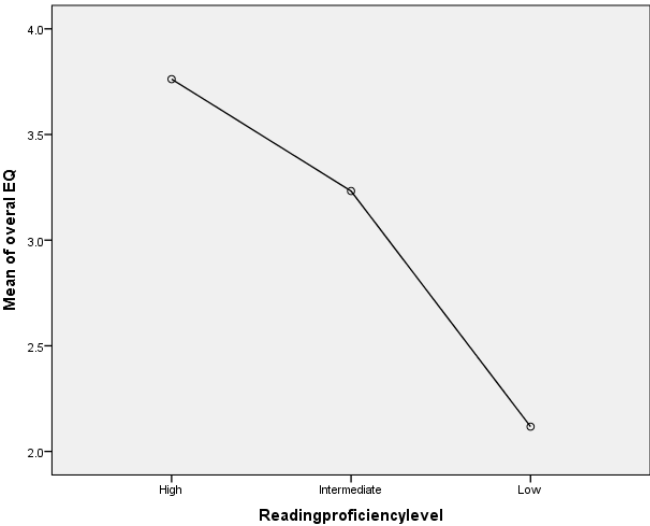


Figure 3. The relationship between emotional intelligence and reading proficiency

As the figure shows, there is a positive relationship between the learners' reading proficiency level and overall emotional intelligence. To offer a statistical model, indicating the relation between reading proficiency and EQ as well as the predicting power of EQ for reading proficiency of the participants, a linear regression analysis was used. The findings are indicated in Table 4.

Table 4. Regression analysis model for emotional intelligence (EQ) and reading comprehension

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.883 ^a	.779	.778	7.47129

a. Predictors: (Constant), Emotional Intelligence

The regression model between the variables indicate a strong relationship between language learners' emotional intelligence (EQ) and reading proficiency ($r = .888$). The Coefficient of Determination or *R Square* = .779, indicating that about 78 percent of the variances in reading comprehension scores is due to emotional intelligence of the test takers. The results also confirmed that emotional intelligence, as the independent variable, is a strong predictor of the dependent variable or reading proficiency since 77.8 % of the variance in the participants' reading proficiency can be explained by EQ concerning adjusted *R Square* (*R Square* = .778) . In other words, 77% of the variation in reading proficiency is related to the participants' EQ. Therefore, EQ has the strong predicting power for reading proficiency of the participants. Figure 4 shows the data clustering near the line, pointing out the close alignment with the normal distribution, which supports the utilization of linear regression model to explore the predictive role of emotional intelligence for reading proficiency of the language learners.

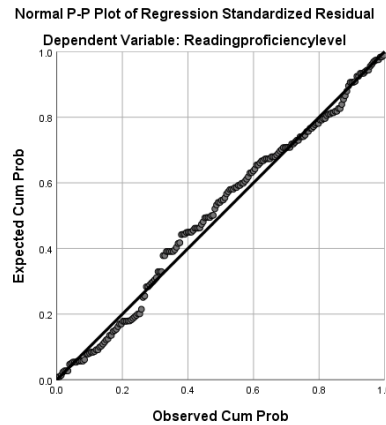


Figure 4. Normal P-P plot of regression standardized residual

Figure 4 shows the positive linear correlation between the independent (EQ) and dependent (reading proficiency) variables. Table 5 shows the ANOVA to confirm the significant relationship between EQ, as the independent variable, and reading proficiency, as the dependent one.

Table 5. ANOVA for emotional intelligence (EQ) as the significant predictor of reading proficiency

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38186.607	1	38186.607	684.100	.000 ^b
	Residual	10829.123	194	55.820		
	Total	49015.730	195			

Dependent Variable: Reading Comprehension

Since $F(684.100, 194)$ is significant at ($p = .000$), significant relationship existed between reading proficiency and EQ of the participants. Hence, EQ is a significant predictor of reading proficiency, rejecting the second corresponding null hypothesis. Table 6 demonstrates the correlation coefficient between the participants' EQ and reading comprehension.

Table 6. Coefficients between emotional intelligence (EQ) and reading comprehension

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.827	2.371		4.145	.000
	Emotional Intelligence (EQ)	.214	.008	.883	26.155	.000

a. Dependent Variable: Reading Proficiency

$$\text{Reading Comprehension Proficiency} = 9.82 + 0.21 (\text{Emotional Intelligence (EQ)})$$

The findings shown in Table 6 indicate a significant relationship between EQ and reading comprehension proficiency since standardized coefficient between the variables is ($r = .883$) at $p \leq 0.05$ ($p = .000$). The t value ($t = 26.155$) is significant at $p \leq 0.05$ ($p = .000$). The last concern of the research is exploring the probable significant difference between two genders in terms of emotional intelligence. Descriptive statistics as well as an independent sample T-test were employed. The findings are presented in Tables 7 and 8.

Table 7. Descriptive statistics for male and female's emotional intelligence (EQ)

	gender	N	Mean	Std. Deviation	Std. Error Mean
Overall EQ	Female	105	3.14	.698	.068
	Male	91	3.12	.759	.080
Problem Solving	Female	105	3.2540	.81718	.07975
	Male	91	3.2381	.87705	.09194
Happiness	Female	105	3.2111	.81789	.07982
	Male	91	3.1630	.85019	.08912
Stress Tolerance	Female	105	2.8571	.67361	.06574
	Male	91	3.0879	.76390	.08008
Self-Actualization	Female	105	3.1873	.88936	.08679
	Male	91	3.0989	.88470	.09274
Emotional Self-Awareness	Female	105	3.1365	.84945	.08290
	Male	91	3.1172	.85292	.08941
Reality Testing	Female	105	2.9825	.83683	.08167
	Male	91	2.9139	.86829	.09102
Inter-Personal Relationship	Female	105	3.2825	1.00323	.09791
	Male	91	3.1154	.92753	.09723
Optimism	Female	105	3.1333	.85903	.08383
	Male	91	3.1245	.90765	.09515
Self-Regard	Female	105	3.2778	.91365	.08916
	Male	91	3.1538	.88270	.09253
Impulse Control	Female	105	2.9175	.84071	.08205
	Male	91	2.9908	.83161	.08718
Flexibility	Female	105	3.0222	.71352	.06963
	Male	91	3.1502	.79971	.08383
Social Responsibility	Female	105	3.4349	.82738	.08074
	Male	91	3.1996	.69443	.07280
Empathy	Female	105	3.5222	.71203	.06949
	Male	91	3.2839	.62682	.06571
Assertiveness	Female	105	2.9968	.75355	.07354
	Male	91	3.0733	.81620	.08556

The findings in Table 7 show that the female participants had higher mean scores for overall EQ as well the subcategories of problem solving, happiness, self-actualization, emotional self-awareness, reality testing, interpersonal relationship, optimism, social responsibility, and self-regard than the male ones. In comparison,

the male participants had the higher mean scores for impulse control, flexibility, stress tolerance, assertiveness, than the female ones. To probe whether the differences between the female and male means were significant, an independent sample T-test was run; the findings of which are shown in Table 8.

Table 8. Independent Sample T- test for the difference between males and females' emotional intelligence (EQ)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differenc e	Std. Error Differenc e	95% Confidence Interval of the Difference	
Overall EQ	Equal variances assumed	.722	.397	.280	194	.780	.029	.104	-.176	.234
	Equal variances not assumed			.278	184.490	.781	.029	.105	-.177	.236
Problem Solving	Equal variances assumed	.268	.605	.131	194	.896	.01587	.12109	-.22295	.25470
	Equal variances not assumed			.130	185.502	.896	.01587	.12171	-.22424	.25598
Happiness	Equal variances assumed	.086	.769	.403	194	.687	.04811	.11931	-.18720	.28342
	Equal variances not assumed			.402	187.748	.688	.04811	.11964	-.18791	.28412
Stress Tolerance	Equal variances assumed	3.739	.055	-2.247	194	.026	-.23077	.10268	-.43328	-.02826
	Equal variances not assumed			-2.227	181.029	.027	-.23077	.10361	-.43520	-.02634
Self- Actualizati on	Equal variances assumed	.012	.914	.696	194	.487	.08840	.12707	-.16221	.33901
	Equal variances not assumed			.696	190.337	.487	.08840	.12702	-.16215	.33895
Emotional Self- Awareness	Equal variances assumed	.161	.689	.158	194	.874	.01929	.12189	-.22111	.25969
	Equal variances not assumed			.158	189.840	.874	.01929	.12193	-.22121	.25980
Reality Testing	Equal variances assumed	.273	.602	.563	194	.574	.06862	.12196	-.17193	.30917
	Equal variances not assumed			.561	187.868	.575	.06862	.12229	-.17261	.30985
Inter- Personal Relationsh ip	Equal variances assumed	1.419	.235	1.205	194	.230	.16716	.13876	-.10652	.44083
	Equal variances not assumed			1.211	193.173	.227	.16716	.13798	-.10499	.43930

Optimism	Equal variances assumed	.562	.455	.070	194	.945	.00879	.12631	-.24033	.25791
	Equal variances not assumed			.069	186.637	.945	.00879	.12681	-.24137	.25896
Self-Regard	Equal variances assumed	.254	.615	.962	194	.337	.12393	.12882	-.13013	.37800
	Equal variances not assumed			.964	191.701	.336	.12393	.12850	-.12952	.37739
Impulse Control	Equal variances assumed	.050	.823	-.613	194	.541	-.07338	.11981	-.30967	.16291
	Equal variances not assumed			-.613	190.623	.541	-.07338	.11971	-.30951	.16275
Flexibility	Equal variances assumed	.638	.425	-1.184	194	.238	-.12796	.10810	-.34115	.08523
	Equal variances not assumed			-1.174	182.040	.242	-.12796	.10898	-.34299	.08707
Social Responsibility	Equal variances assumed	5.346	.022	2.137	194	.034	.23529	.11008	.01819	.45239
	Equal variances not assumed			2.164	193.812	.032	.23529	.10871	.02087	.44970
Empathy	Equal variances assumed	1.867	.173	2.470	194	.014	.23834	.09651	.04800	.42868
	Equal variances not assumed			2.492	193.948	.014	.23834	.09563	.04972	.42696
Assertiveness	Equal variances assumed	.671	.414	-.681	194	.496	-.07643	.11218	-.29768	.14481
	Equal variances not assumed			-.677	184.808	.499	-.07643	.11282	-.29902	.14615

The results show no significant gender difference in overall EQ as well as most of the subscales. However, significant gender difference was shown in social responsibility ($p = .022$), in which the females more significantly outperformed than the males. Therefore, the third null hypothesis concerning the lack of any significant difference between the males and females is strongly rejected.

5. Discussion

This research was an attempt to scrutinize the significant relationship between EQ and reading proficiency level in an Iranian academic context of language learning. Moreover, the study was an attempt to work on the significant predictive role of EQ for reading proficiency level, which was done through linear regression analysis. The significant predictive role of EQ for reading proficiency level as well as the degree of variances of reading scores concerning EQ was explored in this study, which seems something of novelty. Finally, the significant difference across genders in EQ degree was investigated.

Concerning the first research question, the findings revealed significant positive relation between the participants' reading comprehension proficiency level and overall EQ as well as all EQ subscales. The highest significant correlation coefficients were found among the students' reading ability and the subscales of happiness ($r = .846$), problem solving ($r = .839$), emotional self-awareness ($r = .829$), reality testing ($r = .818$), and optimism ($r = .819$). The significant relationship between overall EQ as well as the related subscales are consistent with the findings of the previous studies (e.g., Ates, 2019; Motallebzadeh, 2009; Nurhasnah, 2014; Tabrizi & Esmaeili, 2016). The findings of the research have been also justified in an Iranian EFL context by Zarafshan and Ardeshtiri (2012), reporting positive correlation between emotional intelligence and English language proficiency due to more frequent use of language learning strategies by the learners with higher index of emotional intelligence. In their study, the learners with higher

index of emotional intelligence applied metacognitive, affective, and social learning strategies more frequently than the learners with lower emotional intelligence.

The findings of the study are also consistent with the recent findings of [Tehranipour and Masoudzade \(2023\)](#) in an Iranian ESP context, proving the significant positive relationship between the language learners' overall EQ and reading skills. In their study, interpersonal skill was the most frequent while adaptability was the least frequent EQ components, employed by the students concerning the differences between ESP and EFL settings. The findings of this research are also in line with the findings of [Abdolrezapour and Tavakoli \(2012\)](#) as well as [Froiland and Davison's \(2020\)](#) studies, reporting positive relationship between EQ and language learners' reading test performance. However, the results of this study were not supported by [Khalili's study \(2013\)](#), exploring the effect of EQ on language learning. The findings of the research are different from [Karaman \(2012\)](#) as well as [Ronasari \(2015\)](#), confirming lack of significant relation between EQ and reading comprehension, which can be due to the participants and settings. However, in both studies, positive correlation coefficients were reported between the participants' reading comprehension and EQ, confirming the results of the present research. Some other previous research findings (e.g., [Karaman, 2012](#); [Zarafshan & Ardeshiri, 2012](#)) have not confirmed a significant correlation between EQ level and language learning.

Concerning the second research question, the findings of this study confirmed the significant predicting contribution of emotional intelligence to the learners' reading proficiency, which has been rarely explored in the previous studies. In terms of contribution of emotional intelligence to general language proficiency, the findings of the study are to some extent consistent with [Pishghadam \(2009\)](#), examining the role of emotional intelligence in general language proficiency concerning four language skills of reading, speaking, listening, and writing. In his study, [Pishghadam](#) indicated that a higher level of EQ was a significant predictor of a higher level of general language proficiency. However, the significant predicting role of EQ for EFL learners' reading proficiency level, which was one of the main concerns of this study, has been rarely investigated by other researchers, adding the novelty of the present research. In addition, the findings of this study indicated the degree that the Iranian EFL learners' reading score variances, can be explained by their EQ, which has been scarcely investigated by other researchers. The effect of EQ on test scores is consistent with the theoretical model of [Bachman \(1990\)](#), showing the factors affecting test performance. Personal attribute is among the four factors affecting test performance, which entails many psychological elements such as EQ, discussed in this study. Thus, the findings are in accord with the theoretical model of [Bachman \(1990\)](#), showing the effect of the test takers' personal attributes as well as communicative language ability on their reading comprehension test performance. To put it simply, reading comprehension ability of the participants was closely related to both linguistic ability as well as EQ, which is one aspect of their personal attributes, systematically explored in this study.

The significant predicting role of emotional intelligence, explored in this study, is important for both language teachers and learners to achieve success. In other words, if language teachers are informed on the significance of language learners' emotional intelligence elements in the process of language learning, they can provide effective leadership and provide them with ample opportunity to develop language ability. Thus, development of emotional intelligence is of vital importance for language teachers to provide language learners with emotional empathy and support, leading to success in language learning process ([Khani & Ghasemi, 2019](#)). The findings can reflect the simultaneous effect of linguistic as well as non-linguistic paradigms on reading comprehension ability of Iranian EFL learners. Thus, language ability in general, and reading comprehension in particular, is heavily dependent on both linguistic and non-linguistic psychological factors, namely emotional intelligence, explored in the present research.

Concerning the third research question, the findings also showed significant gender differences in one subscale of social responsibility, in which the females had higher mean score than the males. No significant difference was reported between the students' gender and overall EQ as well as the other subcategories. The female participants got higher mean scores in overall EQ as well as the subcategories of problem solving, happiness, self-actualization, emotional self-awareness, reality testing, interpersonal relationship, optimism, social responsibility, and self-regard than the male ones. In contrast, the males got higher mean scores in the subcategories of impulse control, flexibility, stress tolerance, assertiveness, than the females. Thus, the findings of this research are in line with [Asadollahfam, Salimi, and Pashazadeh \(2012\)](#) as well as [Mohammadi and Izadpanah \(2018\)](#), reporting the lack of any significant gender differences in EQ. This is also in line with the findings of [Rahimi et al. \(2011\)](#), indicating no significant reading comprehension difference between the male and female students with various degrees of EQ. The findings showed higher degree of EQ for the female participants, which are consistent with the findings of the previous studies (e.g., [Kafetsios, 2004](#); [Patel, 2017](#)), which can be due to their higher emotional sensitivity, awareness, empathy, and inter/intra personal relationship. In contrast, the findings did not show higher emotional EQ for males, which is in

contrast with the findings of the previous researchers (e.g., [Ahmad et al., 2009](#); [Rao & Komala, 2017](#)), who indicated that the males had higher emotional self-regulation than the females.

6. Conclusion

The study explored the significant relation between EFL learners' EQ and reading proficiency concerning gender differences in an Iranian academic setting. It also explored the contributing predictive role of the participants' EQ for their reading comprehension ability. The parametric statistical analyses were conducted, and the results confirmed the high significant relationship between the participants' overall EQ along with 14 subcategories with reading comprehension proficiency. Also, the significant predictive role of emotional intelligence was proved, showing the great contribution of EQ to the reading proficiency of learners. The findings placed great emphasis on the importance of social and emotional entities of language learners, which should not be taken for granted in any language-teaching programs. Language learners with high degree of EQ have good interpersonal, intrapersonal, and social interactive behaviors, fostering their problem solving, self-actualization, emotional awareness, and happiness to accomplish reading comprehension tasks effectively. Through high degree of EQ, language learners' anxiety is substantially decreased, leading to great degree of stress tolerance and flexibility in language learning process. Thus, language learners can apply reading strategies appropriately, making them independent reader. Language teachers should integrate EQ exercises in language teaching programs, which facilitate language learning process of the students.

Through encouraging the students to take part in social group work activities, in which they can interact with other peers and receive peer feedback, social communicative abilities of language learners are considerably improved, leading to satisfactory language-learning process. In addition, through using effective techniques to decrease the level of language learning anxiety of language learners, language teachers can improve the learners' EQ, leading to greater stress tolerance, self-regard, and optimism in language learning process. The findings can imply the positive relation between language learners' EQ and self-confidence or self-efficacy in language learning process. Certainly, the learners with high emotional intelligence are highly self-confident, which lead them to apply the most appropriate reading strategies for effective reading comprehension process. Most frequent use of reading strategies by more proficient learners has been systematically investigated and confirmed by other researchers (e.g., [Ghafournia, 2014](#); [Ghafournia & Afghary, 2013](#)). In addition, language learners with high degree of EQ are highly motivated to get involved in cooperative language learning activities and social interactive tasks, leading to success in language learning process ([Ghafournia & Farhadian, 2018](#)). Further studies are needed to give useful insights into the probable significant effect of EQ on the process of language learning, in general and reading comprehension, in particular.

6.1 Pedagogical Implications

The findings of the study have some implications for language teachers and syllabus designers. As the findings showed, significant positive relationship was found between language learners' emotional intelligence and language ability, implying that language learning is the complex process of interaction between linguistic and psychological competences in general and emotional competence in particular. Thus, particular learning activities and exercises, enhancing emotional intelligence should be inserted in language teaching curricula and language pedagogy programs. Certain language learning/teaching activities, which enhance language learners' creativity, mindfulness, happiness, self-confidence, problem solving, and motivation, can improve language learners' emotional intelligence to a great extent, leading to effective language learning. In addition, providing relaxing language learning environments, in which language learners can relieve their stress, can enhance their emotional intelligence paradigms, leading to efficient language learning process. When language learners can overcome their great fear and anxiety of second language learning, affective filters are considerably reduced, leading to great success in language learning process.

Particular language learning activities, which require learners to take social responsibilities for dealing with learning challenges, can increase emotional intelligence, resulting in profound language understanding. The findings of the study indicate that female language learners had higher social responsibility than the male ones, leading to more success in language learning. The findings imply that female learners have better social interactive skills, enabling them to improve both interpersonal and intrapersonal relationships, which facilitate language learning process. Thus, language teachers should engage the students in group work activities, in which they receive mutual support, admiration, and cooperation, enhancing emotional intelligence. Language teachers should be also very careful to give corrective feedback in the way that does not disturb the students' self-confidence to improve their emotional intelligence. Concerning the mentioned points, it is necessary to provide language teachers with appropriate training programs and effective workshops to be well informed on the effect of non-linguistic psychological factors on language-learning process. In other words, language teachers should not only be well equipped with linguistic knowledge, but also should be well aware of psychological paradigms, affecting language learning process.

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