

# Reading Comprehension Performance Viewed in the Light of Bar-On's Emotional Intelligence Scales and Subscales

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**Abstract** – The emotional intelligence (EI) construct is a relatively new concept with little empirical research. This study examines the relationship between Iranian EFL learners' general EI, five scales and fifteen subscales of EI on one hand, and reading comprehension ability on the other hand. For this purpose, 268 students completed the Bar-On EQ inventory which included 133 items and took a reading comprehension test. Subsequent data analysis revealed that the relationship between four EI scales (interpersonal, stress management, adaptability, and general mood) and reading comprehension ability was significant. However, no significant relationship was found between intrapersonal scale and reading comprehension ability. Furthermore, significant correlations were found between EI subscales and reading comprehension ability except for independence and assertiveness. The implications of the study are then discussed.

**Keywords** – Bar-on EQ-i, EFL, Emotional Intelligence, Reading Comprehension.

## I. INTRODUCTION

Psychology in the 20th century has been dominated by the importance given to cognitive intelligence. It has become increasingly clear however, that IQ-scores are not always good predictors of academic or professional success [1]. The apparent inability of traditional measures of cognitive intelligence (e.g. IQ) to predict success in life, led to the development of the concept of emotional intelligence (EI), first labeled as such by Salovey and Mayer in 1990 [2]. The idea itself however was not new.

This study attempted to answer the following questions:

Research question 1: Is there a significant relationship between EI as general, its 5 scales and reading comprehension ability of Iranian EFL learners?

Research question 2: Is there a significant relationship between EI subscales and reading comprehension ability of Iranian EFL learners?

## II. REVIEW OF THE RELATED LITERATURE

### A. Emotional intelligence

Peter Salovey and John Mayer first coined the term "emotional intelligence" [2] and have since continued to conduct research on the significance of the construct. Their pure theory of EI integrates key ideas from the fields of intelligence and emotion. From intelligence theory comes the idea that intelligence involves the capacity to carry out abstract reasoning. From emotion research comes the

notion that emotions are signals that convey regular and discernible meanings about relationships and that a number of basic emotions are universal [3]. They propose that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. They then posit that this ability is seen to manifest itself in certain adaptive behaviors [3].

### B. Bar-On: A Mixed Model of EI

The director of the Institute of Applied Intelligences in Denmark, Reuven Bar-On developed one of the first measures of emotional intelligence that used the term "Emotion Quotient". Bar-On's model of emotional intelligence relates to the potential for performance and success, rather than performance or success itself, and is considered process-oriented rather than outcome-oriented [4]. It focuses on an array of emotional and social abilities, including the ability to be aware of, understand, and express oneself, the ability to be aware of, understand, and relate to others, the ability to deal with strong emotions, and the ability to adapt to change and solve problems of a social or personal nature [4]. In his model, Bar-On outlines 5 components of emotional intelligence: intrapersonal, interpersonal, adaptability, stress management, and general mood. Within these components are sub-components, all of which are outlined in Table I. Bar-On posits that EI develops over time and that it can be improved through training, programming, and therapy [4].

## III. METHODOLOGY

This study focuses on the relationship between EI, its 5 scales and 15 subscales, and reading comprehension ability of Iranian EFL learners. This section addresses the method adopted for conducting the present study. The participants of the study, instruments used for data collection, and the data collection procedures are followed by.

Table I: Bar-On's Model of Emotional Intelligence Components

EI scales	EI subscales
Intrapersonal	Self Regard Emotional Self-Awareness Assertiveness Independence Self-Actualization

Interpersonal	Empathy Social Responsibility Interpersonal Relationship
Adaptability	Reality Testing Flexibility Problem Solving
Stress Management	Stress Tolerance Impulse Control
General Mood Components	Optimism Happiness

### C. Participants

A community sample of 385 people participated in this study, comprised of 138 males and 247 females within the age ranges of 18 and 28 ( $M= 20.3$ ,  $SD=3.5$ ). The participants were university students at Sama Technical and Vocational Training College, Tehran branch in Iran, majoring in accounting (114), architecture (113), and software engineering (158). They were all taking General English course at the time of the research. These students were asked if they would volunteer to complete a questionnaire on EQ in a study on “Emotional Intelligence and Second Language Learning”. Out of 385 participants, 268 participants accepted to complete the Bar-On EQ-i which included 133 items (about 70%).

### D. Measures and procedures

In June (2014), at the end of the academic year, participants completed the Bar-On EQ-i; [4]. The Bar-On EQ-i was originally designed in 1980 by Bar-On. It was a self-report scale, including 133 items, which measured five broad areas of skills or competencies and 15 factorial components. In view of the cultural differences and to avoid any misunderstanding regarding the content of the questionnaire for lower-level students, the translated version of this questionnaire [5] was employed. In this study, the reliability of the translated version estimated through Cronbach’s alpha was found to be acceptable ( $r= 0.86$ ).

To determine the role of EI in reading comprehension ability of Iranian EFL learners, a reading comprehension test was also administered to the participants ( $r=0.81$ ). This test was comprised of 28 questions and the time allotted was 40 minutes.

## IV. CONCLUSION

EQ questionnaires were first scored based on the guidelines provided by Bar-On [4], and then the total EQ scores and the scores of EQ’s five major subscales were computed. No data transformation was necessary. In order to answer the research questions, Kolmogorov-Smirnov Test, Multivariate Regression Analysis, Pearson Correlation Coefficient, Two Way Analysis of Variance (AVOVA), One-Way ANOVA, Levene’s test, Independent samples t-test, and linear graphs were used.

### A. Normality Test of Research Variables

The Kolmogorov-Smirnov Test (K-S test or KS test) was used to determine whether the research variables were

normally distributed. The Kolmogorov-Smirnov Test results showed that the participants’ scores in five EI scales, 15 EI subscales, total EI, and reading comprehension ability was normally distributed ( $p= 0.05$ ). Since p-value was more than 0.05 for the research variables, mean and standard deviation were used for the descriptive analysis of the data. Parametric tests were also used to test the research hypotheses. The results are shown in Table II.

Research Question 1: Is there a significant relationship between EI and its 5 scales and reading comprehension ability?

Pearson correlation coefficient was used to answer this question. It was found that:

1. There was a positive and significant relationship between EI and reading comprehension ability ( $p< 0.05$ ).
2. There was a positive relationship between five EI scales (intrapersonal, interpersonal, stress management, adaptability, and general mood) and reading comprehension ability.
3. Pearson correlation coefficient showed that the relationship between four EI scales (interpersonal, stress management, adaptability, and general mood) and reading comprehension ability was significant ( $p< 0.05$ ).
4. There was no significant relationship between one EI scale (intrapersonal) and reading comprehension ability ( $p> 0.05$ ).

Research Question 2: Is there a significant relationship between EI subscales and reading comprehension ability?

Pearson correlation coefficient was used to answer this question. The results are shown in Table III.

The results show that:

1. The relationship between EI subscales and reading comprehension ability was positive.
2. The relationship between independence and assertiveness, and reading comprehension ability was not significant ( $p>0.05$ ).
3. The relationship between the other EI subscales and reading comprehension ability was significant ( $p< 0.05$ ).

Table II: The Kolmogorov-Smirnov Test of Variables

Variables	Kolmogorov	P value
Reading comprehension	1.21	0.11
Self-Regard	1.00	0.27
Emotional Self-Awareness	1.27	0.08
Assertiveness	0.77	0.60
Independence	1.05	0.22
Self-actualization	1.10	0.18
Empathy	0.75	0.62
Social Responsibility	1.44	0.23
Interpersonal Relationship	0.88	0.42
Stress Tolerance	1.34	0.05
Impulse Control	0.75	0.62
Reality Testing	1.02	0.25
Flexibility	0.92	0.37
Problem Solving	0.74	0.64
Optimism	1.00	0.27
Happiness	1.11	0.17
Intrapersonal	0.67	0.76
Interpersonal	0.77	0.59
Stress Management	1.05	0.22

Adaptability	0.93	0.35
General Mood	0.77	0.59
Emotional intelligence	1.09	0.19

Table III: Pearson correlation Coefficient for the Relationship between EI Subscales and Reading Comprehension Ability

EI Subscales	Reading Comprehension	Sig.
Self-Regard	.151	.013
Emotional Self-Awareness	.193	.001
Assertiveness	.111	.070
Independence	.114	.061
Self-actualization	.151	.013
Empathy	.211	.000
Social Responsibility	.131	.032
Interpersonal Relationship	.209	.001
Stress Tolerance	.154	.011
Impulse Control	.228	.000
Reality Testing	.131	.031
Flexibility	.151	.014
Problem Solving	.143	.019
Optimism	.173	.004
Happiness	.084	.168

## V. DISCUSSION

### A. EI scales and reading comprehension ability

The relationship between four EI scales (interpersonal, stress management, adaptability, and general mood) and reading comprehension ability was found to be significant. However, no significant relationship was found between one EI scale (intrapersonal) and reading comprehension ability.

This is in line with Ghabanchi and Rastegar [6] who also found out that reading comprehension proficiency was relatively associated with several dimensions of EI (intrapersonal, interpersonal, and stress management). It is no wonder, though, that these subscales have a correlation with comprehension proficiency because learning a language is a communicative task in nature, and the ability to communicate and learn a language, knowing emotions, and being able to control them plays a significant role.

### B. EI subscales and reading comprehension ability

The relationship between EI subscales and reading comprehension ability was significant and positive except for independence and assertiveness which found to be not significant. This is in line with Motallebzadeh [7] who sought to determine whether EI, as an interpersonal skill and innate potential, had any relationship with reading comprehension ability of language learners. Results revealed that except for social responsibility and empathy as interpersonal categories, there was a strong relationship

between Emotional Intelligence and EFL learners' reading comprehension ability.

As the findings of this study reveal, Iranian EFL learners' EI is positively correlated with their scores on reading comprehension abilities. This supports Rouhani's claim that cognitive-affective nature of reading comprehension is related to learners' EI [8]. This is also consistent with previous theoretical and empirical studies (which empirically support the positive relationship between EI and academic success, on the one hand, and second language performance, on the other [9]-[10]-[11]).

A corollary of these findings may be the recognition that multitudes of potentially interacting factors co-determine the processes of foreign/second language reading comprehension. This, in turn, supports the notion of reading as an interactive and sociocognitive process, which involves a text, a reader, and a social context [12], where, according to the results of the present study, the emotional status of the reader assumes particular importance.

## VI. PEDAGOGICAL IMPLICATIONS

The findings of the present study suggest several implications for English language teaching profession. The study's findings suggest that the educators should be aware of the impact intelligence has on foreign language learning. Student intelligence needs to be developed in order to facilitate reading comprehension. Teachers can improve students' intelligence by using the ideas that "intelligence can be improved by training on working memory and using some executive functions" [13] (p. 267).

Furthermore, curriculum developers, intervention specialists, and educators need to be cognizant of the impact one's intelligence has on reading comprehension and foreign language learning. It is hoped this research will provide useful insights into foreign language learning by showing that foreign language learning is an extremely complex phenomenon that can be affected by many factors such as the intelligence studied in this research. To know students better by understanding their intelligence quotient will be helpful in providing appropriate assistance to students learning a foreign language [6]. Findings of this study would be useful in educational setting as reading comprehension proficiency strongly associates with the EI of EFL learners. Thus, there is need to apply the principles of intelligence in the field of education, and especially in foreign language learning. No doubt, a foreign language instructor cannot be expected to act in the capacity of a psychologist, yet language teaching is a matter of dealing with individual differences. Paying attention to intelligence differences is increasingly necessary in designing teaching materials. To improve emotional intelligence skills, Carr [14] in his book mentioned that "Empirical findings from the field of cognitive behavior therapy suggest that training in the skills for self-monitoring, self-regulation, communication, and problem solving might usefully be included in programs to enhance emotional intelligence" (p. 173). Because three of the EI subscales have a significant correlation with reading comprehension, it is recommended that more attention be paid to this type of intelligence.

## VII. SUGGESTIONS FOR FURTHER RESEARCH

Notwithstanding, two caveats are in order: first, although the implementation of the EI approach in an EFL classroom may prove motivational and useful for students, teachers may encounter difficulties in terminating the formal syllabus in due time. Thus, the dilemma is that the more teachers adhere to EI approach principles in the classroom, the more they get away from the specified objectives of the lesson. Second, the implementation of such procedures that foster higher EI in EFL learners requires trained teachers and novice teachers may simply fail to achieve positive outcomes if they attempt to do so. Teacher training programs, therefore, are needed to help novice teachers implement an EI approach in EFL contexts successfully.

Other studies are suggested to do focusing on the other skills of English learning including listening, speaking, and writing. The results may be different for a different group of participants regarding their proficiency and major. In this study, EI was measured through Bar-On's EQ-i. Other questionnaires of EI may yield different results.

On the whole, If we believe that emotional intelligence can be increased, trained, and schooled, and if we assume that it may be possible to educate those who are low in emotional competencies to improve their abilities to better recognize their feelings, express them, and regulate them, language policy makers are expected to include programs to raise the emotional competencies of their learners. Besides, in order to have more efficient and effective language instruction, language teachers need to use instructional techniques that raise EFL learners' EI.

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