# Payame-Noor University

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# *The Relationship between Emotional Intelligence and L₂ Reading Comprehension Test Methods*

Submitted in Partial Fulfillment of the Requirements for the Degree of

M.A. in English Language Teaching

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May, 2010

# *Abstract*

So many studies have been done on reading comprehension and emotional intelligence elsewhere, but this study sought to find out whether there was any relationship between emotional intelligence and $L_2$ reading comprehension test methods (Multiple-choice, True/False, and Open-ended). 80 students from English B.A. classes at Payame-Noor University of Shahryar received two sets of tests, including emotional intelligence (Bar-On Emotional Quotient Inventory in Persian) and reading comprehension (Longman and Barron's TOEFL test). Bar-On's EQ test contained 133 items; and reading comprehension included six passages: two of them were multiple-choice tests, two of them were true/false tests, and the last two were open-ended tests. To take care of the test size, each passage contained 5 questions.

When EQ and reading comprehension test methods were compared separately – using Pearson Product-Moment Correlation Coefficient – it was found that there was no significant relationship between EQ and three reading comprehension test methods except true/false method. Based on the findings, there was a significant relationship between emotional intelligence and true/false method. In addition, no relationship was found between EQ and total $L_2$ reading comprehension test methods. The results and limitations are fully discussed.


**Key words:** Emotional intelligence; reading comprehension; test methods; multiple-choice; true/false; open-ended.

## *Acknowledgements*

I would like to acknowledge the support of a number of people whose help has made this thesis possible:

I am especially grateful to my advisor, Dr. Iravani, for his assistance and encouragement during this course of study, and also my reader, Dr. Raee Sharif, for his valuable advice throughout the study.

I am extremely grateful to Dr. Ghonsouli who suggested the title to me and gave me some useful suggestions. My thanks are also due to Dr. Soleimani, Dr. Hemmati, Dr. Ghahraman, Dr. Hessami, and Mr. Hosseini who helped me in this study, and to my friends, Parnaz Kianiparsa and Elham Mousavi, for their suggestions.

Finally, I would like to thank my parents, who have patiently supported me throughout the study.

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## *Chapter 1*

### *Introduction*

The debate among many philosophers concerns whether Emotional Intelligence is more important than General Intelligence. Intelligence is a slippery term to define, and the researchers do not have the same opinion on its definitions. Intelligence, the ability to acquire and retain knowledge, has been one of the most controversial issues in language learning. Linguists and psychologists believe that intelligence is related to second language learning (Vaez,1995) and that smart learners are more successful in learning a second language; because of having a high level of intelligence. In this regard, Oller (1981) has suggested that intelligence is language-based. He adds "language may not be merely a vital link in the social side of intellectual development, it may be the very foundation of intelligence itself" (Oller, 1981). It has various definitions, for example, Binet (1905) defined intelligence as a unidimensional notion and Gardner (1983) defined it as a multiple notion and last of all Salovey and Mayer (1990) described intelligence as an emotional notion.

In 1994, Brown claimed that in the past years it was considered that "the greatest barrier to second language learning seemed to boil down to a matter of memory;" It was in the form that if a student could remember something S/he was encountered, he or she would be a successful language learner because intelligence was defined and measured in terms of logical-mathematical and linguistic abilities. In a rather different approach, Gardner (1983) proceeded a controversial theory of intelligence, Multiple Intelligences (MI), which questioned the horizontal approach to intelligence and took apart the traditional thoughts about monolithic general intelligence. In his MI theory, Gardner initially described seven intelligences consisting intrapersonal and interpersonal intelligences which, in part, paved the way for uncovering other intelligences like *emotional intelligence,* which is interchangeably known as *EI* or *EQ.*

In general, emotions takes place in response to a person's changing relationships. While a person's relationship belongs to a family, or to a memory changes, that person's emotions will also change. For instance, according to Bower (1981), a person with a happy childhood memory may recognize that the world is brighter and more cheerful. In this sense, because emotions follow relationships, they express meaning about relationships (Schwarz & Clore, 1983). According to Mayer and Salovey (1990), "emotions are internal events that coordinate many psychological subsystems including cognitions, physiological responses, and conscious awareness." In 1997, they stated that EI is "an ability to recognize the meanings of emotions and their relationships and to reason and solve problems on the basis of them." "Emotional Intelligence is the ability to understand your own emotions and those of people around you by having a self-awareness that enables you to recognize feelings and helps you manage your emotions" (Muchinsky, 2000). As Ciarrochi & Mayer (2007) state, "emotional intelligence is the intelligent use of emotions and developing the information included in emotion to make useful decisions." Recently, Bradberry and Greaves (2009) described emotional intelligence as "an ability, capacity, or skill to identify, assess, and manage the emotions of one's self, of others, and of groups."

Wayne Leon Payne was the first person who used the term *Emotional intelligence*. In 1985, Wayne wrote a doctoral dissertation under the title of, *A study of emotion: Developing emotional intelligence*. However, prior to Payne, Leuner (1966) used the term *emotional intelligence* in his work.

Certain scholars believe that EQ is not the opposite of IQ (e.g., Goleman). Some people use both of them a lot, some use both little. Most of the researchers are going to understand how these two complete each other, and for example, how a person's ability to control stress has an effect on the ability to focus and use intelligence. In relating to success, most of the researchers now have the same opinion that IQ is just around 20%; the rest

depends on everything from class to luck to the neural pathways that have increased in the brain more than millions of years.

We can evaluate emotional intelligence in the way that we ask a person to know how s/he solves emotional problems, like recognizing the emotion in a story, and after that assess the person's response against the accuracy criteria (Mayer & Geher, 1996). However, it is really essential to say that emotional intelligence is often measured in other ways: The Bar-On Emotional Quotient Inventory (EQ-i) is a self-report measurement of EI development as a measure of emotionally and socially intelligent behavior that provides an estimate of one's emotional and social intelligence (Bar-On, 2006). The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) is an ability-based test to measure the four branches of the EI model of Mayer and Salovey (2002). The Trait Emotional Intelligence Questionnaire (TEIQue) is an essential measurement of the systematic research program on trait emotional intelligence. An international systematic research programmer has underlined all TEIQue measures in order to mix the different non-traditional intelligences into typical models of personality and differential psychology (Petrides & Furnham, 2007). The Emotional Competence Inventory 2.0 (ECI) is a 360-degree measure designed to evaluate the social and emotional competencies of individuals in organizations (Goleman, 1998). Schutte et al. (1998) developed the Schutte Self Report Emotional Intelligence Test (SSEIT); it is a 33 item self-report measure of emotional intelligence. Wong et al. (2007) developed Wong's Emotional Intelligence Scale (WEIS) for Chinese respondent, which is a self-report emotional intelligence measure. In this paper, we intend to use a model to measure student's emotional intelligence.

On the other side, another variable which has the important key role is *reading comprehension*. Reading is the most important skill for EFL learners. In my idea, reading comprehension is the ability to give correct answers about questions relating to written language. Reading comprehension depends on reading ability, memory, attention, and

reasoning skills. Harris and Hodges (1995) claims that "reading comprehension is the intentional thinking during which meaning is constructed through interactions between text and reader."

Chastain (1988) states that "reading is a complementary skill in language learning." He adds that reading is one of the receptive skills of language. Reading is a process which concerns the activation of related knowledge and language skills to achieve an exchange of data from one person to another one (ibid). Because the reader does not produce a message like a speaker, sometimes it is called a passive skill, but it is not really like that; reading is an active skill. If learners want to accomplish it successfully, they should know the meaning of the words, see the pictures the words are painting, know the arguments, and work out if they are in agreement with them; if not, they only see the surface of the text, and they quickly forget it.

As readers engaged in reading, they are believed to use an active and interactive process (Anderson, 1999; Grabe & Stoller, 2002). Such a process implies that readers should have some background knowledge about the topic of the text. Anderson, for instance, defines reading as follows:

> Reading is an active, fluent process which involves the reader and the reading material in building meaning. Meaning does not reside on the printed page. Synergy occurs in reading, which combines the words on the printed page with the reader's background knowledge and experiences. (p. 1)

Reading as an interactive process requires numerous mental operations to be performed simultaneously or very closely in time. As Perfetti (1985) believes, while students read, they are prone to continue from processing the text in smaller units of language to bigger conceptual units. According to Berhnardt (1991), readers have a tendency to cope with micro-level text-driven features, like pattern and letter identification, and lexical access, as well as

macro-level reader-driven features, like activation of previous knowledge and monitoring comprehension.

The studies on reading comprehension indicate that comprehension is the result of interaction between the reader and the text; therefore, there are three main factors which make comprehension possible: (1) the ability to use background knowledge concerning the content of the text; (2) the ability to recognize and utilize the rhetorical structure of the text; and (3) the ability to make use of the certain and efficient sets of reading strategies. "Reading comprehension is considered as a process whereby a message intended by the writer is recognized by the reader activating his background and cultural knowledge stored in his memory" (Bransford and Johnson, 1973).

To test students' comprehension of the text, we need to use some types of test methods. In this study, we will use three types of test methods: multiple-choice, true/false, and open-ended items. Multiple-choice questions are a common device for testing text comprehension that permits testers to control the amount of possible answers and the students' thought processes. An alternative to Multiple-choice is the short answer question in which instead of presenting students with four choices, they should answer the question that requires a brief response, in a few words like true or false. In Open-ended items, it is more difficult because the students should focus on details in passage and answer the question. In this study, we are going to use these three methods altogether to reduce guessing.

Different research has been carried out to investigate the influence of intelligence on learning in general and on learning second language in particular. According to *emotional intelligence*, despite the fact that the study on the relationship between emotional intelligence and language learning is not novel and it has been done by many researchers in different fields of study (e.g. Aghasafari, 2006; Pishghadam, 2007); little has been devoted to the study on the relationship between emotional intelligence and $L_2$ reading comprehension test methods. This study seeks to shed light on emotional intelligence, together with reading

comprehension test methods that are two important affective factors involved in the process of language learning.

## 1.1. Statement of the Problem

Thanks to the EFL learners' problems in reading comprehension and the teachers' problem in using the other test methods, I performed this study. As Grabe (1991) states , "Reading is the most important of all skills for most language learners in general and for EFL learners in particular; and reading comprehension tests try to determine the students' ability to get meaning from the printed material." Until now, no theory of reading has been proposed that is acceptable to all experts. Although the teachers try to make students ready before the test, students are not still familiar with the test and they can not understand the text very well. Moreover, they do not perform very well on the other reading comprehension test methods; for instance, open-ended items in which the students should complete the question or statement with their own words and ideas.

On the other side, the students and the teachers have many problems with EQ test. As it was mentioned before, EQ describes an ability or skill to recognize, assess, and manage the emotions of one's self, of others, and of groups. I wanted to see whether there was any relationship between the students' scores in reading comprehension and their emotional intelligence scores. There was a problem in that some of the students were not so honest to answer the EQ test. There is a lot of research on this topic, but little has been devoted on the relationship between EQ and reading comprehension test methods.

The purpose of this study is to investigate the relationship between emotional intelligence and $L_2$ reading comprehension test methods (Multiple-choice, True/False, and Open-ended items). We want to see which test method has better relationship with emotional intelligence; and when the student has higher EQ, in which test method he or she has a better score.

Research Questions

The following questions are the main purposes of this study:

- Is there any significant relationship between EI and multiple-choice items in reading comprehension?

- Is there any significant relationship between EI and true/false items in reading comprehension?

- Is there any significant relationship between EI and open-ended items in reading comprehension?

- Is there any significant relationship between EI and total $L_2$ reading comprehension test methods (M.C. + T/F + Open-ended items)?

Null Hypotheses

Based on the mentioned questions of the study, these null hypotheses are formulated as follows:

$Ho_1$: There is no significant relationship between EI and multiple-choice items in reading comprehension.

$Ho_2$: There is no significant relationship between EI and true/false items in reading comprehension.

$Ho_3$: There is no significant relationship between EI and open-ended items in reading comprehension.

$Ho_4$: There is no significant relationship between EI and total $L_2$ reading comprehension test methods (M.C. + T/F + Open-ended items).

## 1.2. Significance of the Study

Unfortunately, teachers, instructors, and practitioners in Iran only emphasize reading comprehension through vocabulary, and they only want to increase the students' knowledge of language, not of comprehension; moreover, most of the time the teachers prefer to take multiple-choice tests because they are easier and more general in Iran. Some investigations in

this field can clarify the concept of reading comprehension and its test methods such as multiple-choice, true/false, and open-ended items (like in this present study); although there are so many test methods, Persian students are always tested based on their knowledge of language and vocabulary. Having done this study, we wanted to help the teachers and practitioners to consider these methods in their approaches.

On the other hand, during the last two decades, more attention has been paid to the scientific field of emotional intelligence and reading comprehension separately, and many studies have been done in this regard; however, little attention has been paid to the term *emotional intelligence*. Most of the people know intelligence (IQ), but they are not familiar with emotional intelligence (EQ).

This study is totally new in Iran and as far as I investigated no one has done exclusive research on this topic. Some Persian practitioners only emphasize on the meaning of EQ and some pilot studies have been done in this field, but because the students were a few, the results revealed no relationship; thus, investigating the relationship between EQ and reading comprehension test methods will be useful for English teachers to know about their students' emotional intelligence and relate it to their reading comprehension scores according to three types of test methods (M.C., T/F, Open-ended items). The aim is to see which test method does better in regard to emotional intelligence.

## 1.3. Definition of the Key Terms

**Intelligence (IQ):** The global capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment (Wechsler, 1958).

**Emotional intelligence (EQ):** A term that describes the ability, capacity, skill or a self-perceived ability, to identify, assess, and manage the emotions of one's self, of others, and of groups (Bradberry & Greaves, 2009).

**Comprehension:** Understanding what is being communicated (Stone, 2000).

**Reading:** An *interactive* process between a reader and a text which leads to automaticity or reading fluency (Alyousef, 2005).

**Reading comprehension:** The intentional thinking during which meaning is constructed through interactions between text and reader (Harris and Hodges, 1995).

**Test method:** A definitive procedure for the identification, measurement, and evaluation of a material, product, or system that produces a test result (American Society for Testing and Materials).

## 1.4. Delimitations

The following delineates the framework of our study:

First, the study will be devoted to the investigation of the relationship between emotional intelligence and $L_2$ reading comprehension excluding any other skills or components of language learning.

Second, the data will be gathered from $L_2$ learners at Payame-Noor University who have passed all reading comprehension courses before.

Third, the subjects will be among B.A. students at Payame-Noor University of Shahryar.

Fourth, the tests are supposed to be taken in class, but because emotional intelligence test is a self-report scale, including 133 items and it is so long and time-consuming, it will be given to the subjects to do at home.

Fifth, the reading comprehension tests used in this study were selected just from section 3 of TOEFL reading comprehension tests.

## 1.5. Limitations

First, a potential limitation relates to the nature of this self-report instrument. The problem with the self-report scale, as Ciarrochi, Chan, & Caputi (2001) state, is that it measures perception and some learners do not have an accurate understanding of their own competence or construct. Reliability of data obtained through this self-report instrument

depends on the truthfulness of the respondents in filling out the questionnaire. Therefore, it might have been better to complement the results by other more performance-based measures to increase the construct validity of the study.

Second, the subjects' names were the problem which we had in this study. Although the subjects were asked to write their names on their answer sheets, some of them did not do that and some of them forgot it. It was essential to have the subjects' names in order to tabulate their averages in passages and in EQ test and finally compare them. So, it wasted our time to find their answer sheets. However, in the other sessions, those subjects distinguished their answer sheets by their handwritings.

## 1.6. Thesis Outline

This study is divided into five chapters: (1) Introduction, (2) Review of the related literature, (3) description of the participants', instrumentations, procedure, and data analysis of the study, (4) the broad statistical survey of the relationships between emotional intelligence and reading comprehension test methods with some tables and figures, and (5) a concluding summary of this paper's findings, with a discussion of the limitations of this study and some suggestions for possible future studies.

# *Chapter 2*

## *Review of the Related Literature*

We have two main purposes for this chapter: the literature review on the area of Emotional Intelligence and Reading Comprehension which constitute the focus of the present study, and the establishment of our framework for the upcoming study in Chapter 4.

## 2.1. Emotional Intelligence

Emotional intelligence can be returned to Darwin's early work on the significance of emotional expression for alteration and survival. In 1900s, although traditional definitions of intelligence put emphasis on cognitive aspects, for instance problem-solving and memory, some researchers in the intelligence area of interest had started to identify the significance of non-cognitive aspects. For instance, by using social intelligence, Thorndike (1920) explained the skill of understanding and managing other people.

Wechsler (1940) described the effect of non-intellective factors on intelligent behavior and argued that other models of intelligence would not be comprehensive until these factors are completely described. Many years later in 1983, Gardner's book, *Frames of Mind*: *the Theory of Multiple Intelligence*, introduced the idea of multiple intelligences which consist of both interpersonal intelligence (the capacity to understand the intentions, motivations and desires of other people) and intrapersonal intelligence (the capacity to understand oneself, to appreciate one's feelings, fears and motivations). In his view, traditional types of intelligence, like IQ, can not completely explain cognitive ability. Although there were so different names given to this concept, there was a general idea that traditional definitions of intelligence are without the ability to clarify performance outcomes completely.

In 1985, Payne wrote a doctoral dissertation under the title of *A study of emotion: Developing emotional intelligence* and it became the first academic use of the term *emotional intelligence*. However, prior to this, the term *emotional intelligence* had appeared in Leuner

(1966). Bar-On (1988) has placed EI in the framework of personality theory, specially a model of well-being. In his Doctoral dissertation he used the term *emotional quotient*, long time before it became very popular as a name for emotional intelligence. Bar-On (2000) defined EI in terms of "an array of emotional and social knowledge and abilities that influence our overall ability to effectively deal with environmental demands." This array includes: (1) the ability to be aware of, to understand, and to express oneself; (2) the ability to be aware of, to understand, and to relate to others; (3) the ability to deal with strong emotions and control one's impulses; and (4) the ability to adapt to change and to solve problems of a personal or a social nature. The five main domains in his model are intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood (Bar-On, 1997).

Then in 1990, two American university professors, John Mayer and Peter Salovey published their research work in two academic journal articles. Mayer (university of New Hampshire) and Salovey (university of Yale) tried to develop a way to exactly measure the difference between people's ability in the emotions area. Their findings confirmed that some people were better than others at issues like identifying their own feelings, identifying the feeling of others, and solving problems related to emotional issues. Mayer and Salovey have tried to develop two tests since 1990 to measure what they are calling 'emotional intelligence'. They did most of their writings in the academic area; therefore, their names and their actual research results are not known broadly. In the early 1990s, Goleman, a New York writer and consultant, had been writing articles first for the magazine *Popular Psychology* and later for the New York Times newspaper about emotional intelligence as his interest. In 1992, he discovered the 1990 article by Mayer and Salovey, so he asked them to use the term *emotional intelligence* in his book because at that time he was doing research for his book about emotions and emotional literacy. Then, three years later in 1995, Daniel Goleman's book came out under the title of *Emotional Intelligence: Why it can matter more than IQ.* He became widely known for his book. The book made it to the cover of Time Magazine in the

United States of America and it was the first manifestation in media. Then, he had several interviews in television. In his book, Goleman has gathered a lot of interesting information on human brain, emotions, and behavior. Immediately, it became the best seller around the world (Insead, 1999).

Intelligence is a slippery term to define, and the researchers do not have the same opinion on its definitions. There are many different definitions for intelligence; for example, Binet (1905) defined intelligence as a unidimensional concept and Gardner (1983) defined it as a multiple concept and last of all Salovey and Mayer (1990) described intelligence as an emotional notion (cited in Fahim & Pishghadam, 2007).

Many researchers have become disappointed on a traditional, 'narrow' conceptualization of intelligence, which puts emphasis on performance and verbal IQ and other more academic abilities (Mayer & Salovey, 1997). Researchers lately have developed the idea that our conception of intelligence should be expanded to include emotional intelligence as "the ability to perceive, understand, and manage one's emotions" (Salovey & Mayer, 1990).

By 1997 and 1999, Mayer and Salovey, together with Caruso, expanded this ability-based definition and defined emotional intelligence as:

An ability to recognize the meaning of emotions and their relationships and to reason and problem-solve on the basis of them and the capacity to perceive emotions assimilate emotion-related feeling, and understand the information of the emotions and manage them. (p. 267)

Researchers have several arguments about the definition of emotional intelligence which reflects on both operationalization and terminology. One of the definitions was made by Salovey and Mayer (1990). They defined emotional intelligence as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thoughts and actions."