

In the Name of God



**Shahid Bahonar University of Kerman
Faculty of Letters and Humanities
English Language Department**

**The relationship among Multiple Intelligences of Iranian Pre-
university Students and Performance on Multiple choice and
Open-ended Reading Comprehension Tests**

Prepared by:

Mansoor Marzi

Supervisor: Dr. Shariati

Advisor: Dr. Sharifi Moghaddam

**A Thesis Submitted as a Partial Fulfilment of the Requirements
for the Degree of Master of Science in Teaching English as a
Foreign Language (M.Sc.)**

January ۲۰۱۲



**Shahid Bahonar University of Kerman
Faculty of Literature and Humanities
Foreign Languages Department**

Hereby, we recommend that this thesis submitted by *Mansoor Marzi* be accepted as a partial fulfillment of the requirements for the degree of Master of Science in Teaching English as a Foreign Language (M.Sc.).

Committee Members:

Supervisor: Dr. Shariati

Advisor: Dr. Sharifi Moghadam

Referee ١: Dr. Rastegar

Referee ٢: Dr. Langaroodi

Faculty Representative: Dr. Soltani Kofrani

Head of Department: Dr. Raisi

Dedicated to:

My parents, wife, and children

Acknowledgements

First and foremost, my deep thanks and gratitude are paid to Allah, the Almighty, who granted me knowledge and helped me during this journey. Then, I would like to express my appreciation to my supervisor, Dr. Shriati for his positive attitudes, encouragement, constant support and monitoring during the course of my research. In fact, his meticulous reading of the earlier drafts of my study was invaluable to me as I learned a lot. I really appreciate his support and tolerance during the period of the investigation.

I express my especial thanks to my advisor, Dr. Sharifi Moghadam for sharing her knowledge, ideas, and suggestions. My heartfelt appreciation also is to Professor Ravand to whom I am enormously indebted for his guidance and insightful comments on chapter four of my study. He helped me a lot, in spite of his tight schedules. Finally, I express my gratitude to all members of the dissertation committee, who graciously accepted the invitation to the committee .To all my students and colleagues who took part in this study.

Abstract

The current research tried to examine the impact of multiple intelligence (MI) and its components on multiple choice (MC) and open ended (OE) reading comprehension tests. Ninety six students of high school in grade four took part in this study. To collect data, participants completed multiple intelligence (MI) questionnaires along with a multiple choice (MC) and open ended (OE) forms of a reading comprehension tests. The effect of multiple intelligences on test takers' performance on the MC and OE tests was measured by using multivariate regression. The findings revealed that test takers' performance was affected significantly on the MC and OE forms of reading comprehension tests. It was also found that two of multiple intelligences, namely, interpersonal and kinesthetic affected MC and OE tests significantly. Another finding of the study was that the male participants outperformed females on MC and OE reading comprehension tests.

Key words: multiple choice, open ended, multiple intelligences, multivariate regression

TABLE OF CONTENTS

Dedications.....	IV
Acknowledgements.....	V
Abstract.....	VI
List of Tables.....	X
List of Figures.....	XI
List of Abbreviations.....	XII
Chapter One: Introduction.....	1
1,1. Overview	1
1,2. Background.....	1
1,3. Statement of the Problem	8
1,4. Objectives of the Study.....	9
1,5. Research questions and Hypothesis	10
1,6. Significance of the Study.....	11
1,7. Theoretical Framework of the Study	12
1,8. Definition of Selected Terms.....	19
Chapter Two: The Review of Literature.....	20
2,1. Overview.....	20

۲,۲. Multiple intelligence.....	۲۰
۲,۲,۱. A traditional view of intelligence.....	۲۱
۲,۲,۲. A brief history of intelligence.....	۲۱
۲,۲,۳. The implication of MIs in schools.....	۲۴
۲,۲,۳,۱. Multiple intelligences and learning.....	۲۵
۲,۲,۳,۲. Multiple intelligences and assessment.....	۲۵
۲,۲,۴. Researches on Multiple Intelligences.....	۲۶
۲,۲,۴,۱. Researches done abroad.....	۲۶
۲,۲,۴,۲. Researches in Iran.....	۳۶
۲,۳. Test method effect.....	۴۰
۲,۳,۱. The definition of test method.....	۴۲
۲,۳,۲. Testing approaches.....	۴۲
۲,۳,۲,۱. Discrete-Point.....	۴۲
۲,۳,۲,۲. Integrative.....	۴۳
۲,۳,۲,۳. Communicative.....	۴۳
۲,۳,۳. Formats for testing comprehension.....	۴۴
۲,۳,۳,۱. Multiple choice format.....	۴۵
۲,۳,۳,۲. Open ended format.....	۴۶
۲,۳,۴. Research on test method facet.....	۴۶
۲,۳,۴,۱. Researches done abroad.....	۴۷
۲,۳,۴,۲. Researches in Iran.....	۵۵
Chapter Three: Methodology.....	۵۷
۳,۱. Overview.....	۵۷
۳,۲. Participants.....	۵۷

3,3. Instrument.....	58
3,3,1. Test format effect.....	58
3,3,2. The students MI profiles.....	61
3,4. Data collection Procedures.....	63
3,5. Data analysis procedures.....	65
3,6. The formulation of the study.....	67
Chapter Four: Results.....	67
4.1. Overview.....	68
4,2. Checking normality.....	68
4,3. Addressing the research questions.....	70
4,3,1. RQ ¹ : Comparison of performance on MC and OE.....	71
4,3,2. RQ ² : Effects of multiple intelligences on MC and OE.....	72
4,3,3. RQ ³ : Male and female performance on MC and OE.....	74
Chapter Five: Discussion, Conclusion, Limitation, Implication....	76
5.1. Overview.....	76
5,2. Restatement of the problem.....	76
5,3. RH ¹	77
5,4. RH ²	79
5,5. R.H ³	81
5,6. Implications.....	82
5,7. Limitations.....	83
5,8. Suggestions for further research.....	83
References.....	85

Appendix A.....	96
Appendix B.....	99
Appendix C.....	104

Table	List of Tables	Page
Table ۳,۱.	The distribution of participants.....	۵۸
Table ۳,۲.	Readability statistics.....	۶۰
Table ۳,۳.	Examples of stem equivalent OE and MC.....	۶۱
Table ۳,۴.	Counterbalancing square.....	۶۵
Table ۴,۱.	Paired Sample T-test.....	۷۱
Table ۴,۲.	The Descriptive Statistics of MC and OE.....	۷۱
Table ۴,۳.	The Descriptive Statistics	۷۴
Table ۴,۴.	Independent Sample Test.....	۷۵
Table ۴,۵.	The Descriptive Statistics.....	۷۵
Table ۴,۶.	Independent Sample Test.....	۷۵

Figure	List of Figures	page
Figure 1, 1.	Three Factors which affect language ability.....	2
Figure 1, 2.	Components of multiple intelligence.....	12
Figure 1, 3.	Classification of test method facets.....	15
Figure. 3, 1.	Two common ways of distributing instruments.....	64
Figure 4, 1.	The initial modal of relationship among the variable.....	73

LIST OF ABBREVIATIONS

IQ.....	Intelligent Quotient
MI.....	Multiple Intelligences
ECL.....	Emotional Competence Inventory
MC.....	Multiple Choice
TOEFL.....	Test of English as a Foreign Language
TIMI.....	Teele Inventory of Multiple Intelligences
MIDAS.....	Multiple Intelligences Developmental Assessment Scales
CRE.....	Constructed Response Explanation
SPSS.....	Statistical Package for Social Sciences
CR.....	Constructed Response
ELD.....	English Language Development
IETS.....	International English Language Testing System
OE.....	Open-ended
ESL.....	English as a Foreign Language
EFL.....	English as a Second Language

Chapter one: Introduction

1.1 Overview

In this chapter, a background of the current study, statement of the problem, objectives of the study, significance of the study, theoretical background of the current investigation, research questions, limitations of the study, and definition of key terms are presented.

1.2. Background

The main purpose of language testing is to make deduction about the individuals' language ability but there are some error sources which interfere in this process and threaten the validity and fairness of our tests and are the cause of errors and bias. Many studies have discussed the issue of fairness in language testing for example, Brown (1996) defines fairness as "The degree to which a test treats every student the same or the degree to which it is impartial" (p.31).

The aim of language testing is to measure impartially test takers' language ability. Sometimes test takers' performance will be affected

by other factors rather than language ability, as a result of this test bias which is the aftermath of lacking test fairness will be appeared (Wagner, 2006). Construct validity is the result of test fairness, as Bachman and Palmer (1996) defined construct validity as “The extent to which we can interpret a given test score as an indicator of the abilities, or constructs, we want to measure” (p.21). Therefore, a test that is not valid cannot be considered as a fair test. Bachman (1990) introduced a diagram which is called path diagram. In this diagram he talked about three factors which affect individual’s language ability. These factors can be depicted as follows:

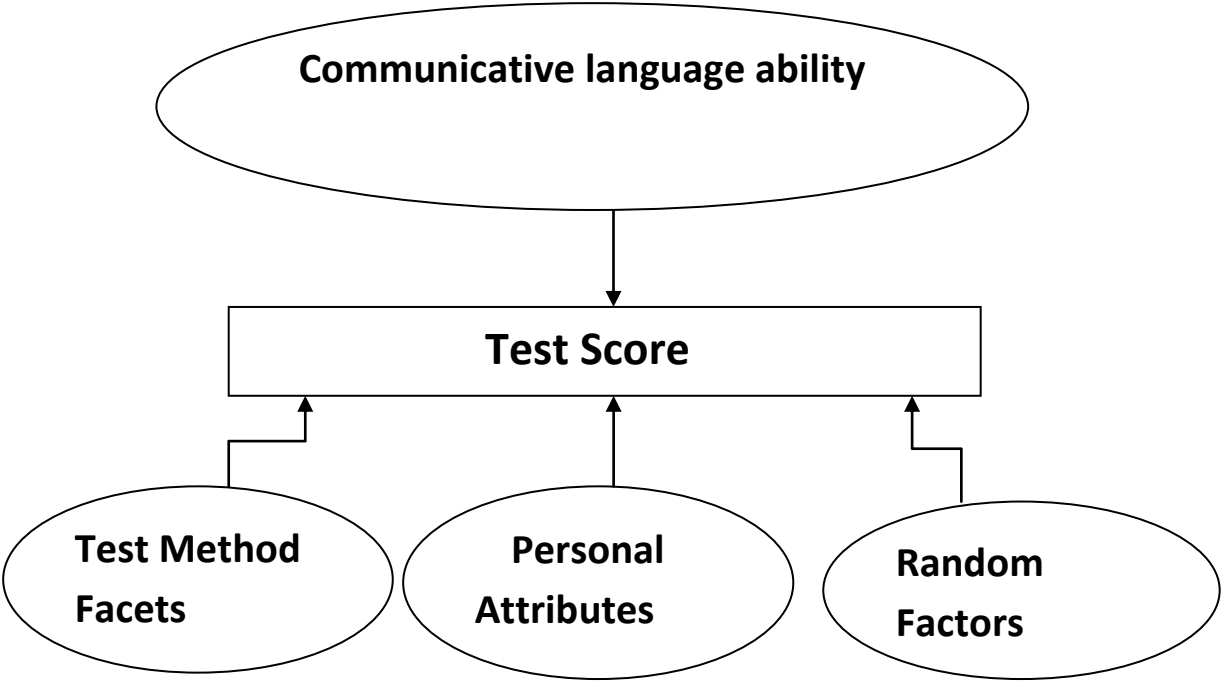


Figure 1.1. Three factors which affect individual’s language ability

As you can see test score is an observed variable in this model which is influenced by three factors which are called latent variables. The result of these factors is that whenever learners take a test, they will have different performance. For example, some students do well on multiple choice tests but perform poorly on composition tests (test method effect) or some students because of their prior knowledge do better on tests (individual attributes effect) and some students because of staying up too late the night before the test may not be able to use the highest level of their ability (random factor effect). Therefore, the major concern of the test designers is to minimize the effects of test method, personal attributes that are not part of language ability and random factors on test performance. In order to contribute to the improvement of test construct validity, the current study focused on two latent factors of Bachman's diagram: ١) personal attributes, and ٢) test method facets.

Regarding test method, Bachman's framework of test method facets was used. This framework divided the facets of test methods into five categories: ١) testing environment, ٢) test rubrics, ٣) the nature of input, ٤) the nature of the expected response, and ٥) the interaction between input and response. This study focused on the nature of the

expected response which can be classified into three types: ١) selected response, ٢) limited production response, and ٣) extended production response. In Brown and Hudson's (١٩٩٨) classification, the nature of the expected response is divided into three categories: ١) selected-response, ٢) constructed-response, and ٣) personal response.

Selected-response includes true false, matching, and multiple choice items. In these types of tests, students will be provided with language material and they are expected to choose the best answer from the available options. But in constructed-response questions which include fill-in, short-answer, and performance assessment students are expected to produce language. Finally, in personal-response questions like portfolio, conference, and peer-assessment students produce language and communicate what they want to convey.

The present study firstly, explored the effect of two test formats, namely, multiple choice (MC) and open ended (OE) questions on test takers' performance in reading comprehension. Secondly, the relationship between assessment results and intelligence was explored to know about the effect of personal attributes on test performance in reading comprehension.

Regarding intelligence, Gardner's (1990) theory of multiple intelligences was utilized. Gardner (1983) concluded that intelligence is a multi-dimensional trait and we cannot consider it as a single quality that is measured just by an IQ test. According to Gardner (1999) a person may be good at learning a foreign language, but weak in learning a new song or vice versa. Furthermore, if a person is weak in learning a foreign language it doesn't predict his/her success or failure with other cognitive tasks.

Gardner (1999) replaced the traditional notion of intelligence by multiple intelligences theory and introduced different domains of intelligence including, linguistic intelligence, logical/mathematical intelligence, spatial intelligence, musical intelligence, intrapersonal intelligence, interpersonal intelligence, naturalistic intelligence, bodily-kinesthetic intelligence, and existential intelligence. At first, he introduced seven intelligences in his 1983 book 'Frames of Mind' and then he introduced the eighth and ninth intelligences, namely, naturalistic and existential intelligences.

Although the multiple intelligence (MI) theory has been criticized by several scholars (Plucker, Callahan, & Tomchin, 1996), it can help teachers in creating class activities, teaching methods, and

curricula that satisfy the individual needs of many students. It can provide teachers with some practical approaches to recognize the different potentials of every student and enable them to be successful in every aspect of learning (Serin, Yavuz & Muhammedzade, ۲۰۰۹). As a teacher what we know and what we do in our class should have significant influence on the thoughts, achievements, and behaviors of our students. Thus, the “teachers must help students use their intelligences to learn whatever it is they want to learn, as well as what the combination of teachers and society believe they have to learn” (Finvoc, ۲۰۰۳; as cited in Brunton, et al., ۲۰۰۶, P.۱۴۶). In addition to learning and teaching, testing will be affected by the diversity of intelligences as well (Hashemi ۲۰۰۷). She reiterated that if teachers intend to use MI theory in teaching and testing it requires that they change their way of teaching and assessment techniques (Hashemi, ۲۰۰۷).

Because of the important role of MI in teaching, testing, and learning of language skills specially reading which is the focus of high school books in Iran (Golsorkhi, ۲۰۰۸; Hosseini, ۲۰۰۷; Jahangard, ۲۰۰۷; Kamyab, ۲۰۰۸; Rahimi, Riazi, & Saif, ۲۰۰۸) this study also intended to investigate the effects of multiple intelligences on test

performance in reading comprehension to provide EFL teachers with insights into how learners actually learn in a classroom setting. Without any questions, reading skill plays an important role in future life of the students and it is more necessary than any other skill (Gisler & Eberts, ۲۰۰۹, p.۱). It is one of the skills that affect other areas of students' life and school is considered to be the best place to teach such a skill. Armstrong (۲۰۰۳, p.۷) said that “writing and reading are not simply linguistic acts; they involve all of the intelligences”. To achieve effective learning all of the intelligences and many areas of the brain should be activated.

As a result of MI theory some researchers like (Armstrong, ۲۰۰۳; Fahim, ۲۰۱۰; Hajhashemi, ۲۰۱۲; Hashemi, ۲۰۰۷; Modirkhameneh, ۲۰۱۲; Shearer, ۲۰۰۶) tried to investigate the relationship among multiple intelligences and reading performance and the results showed that there is a positive relationship among them. EFL learners employed more linguistic, logical, spatial, kinesthetic and existential intelligences in reading comprehension. None of the above studies have explored the effects of MIs on test performance in reading comprehension, but the present study tried to examine the relationship among MI and reading test performance among Iranian students.