



**UNIVERSITI PUTRA MALAYSIA**

**RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCES AND  
READING PROFICIENCY OF IRANIAN EFL STUDENTS**

**KARIM HAJHASHEMI**

**FBMK 2010 20**



**RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCES AND READING  
PROFICIENCY OF IRANIAN EFL STUDENTS**

**By**

**KARIM HAJHASHEMI**

**Thesis Submitted to the School of Graduate Studies, University Putra Malaysia, in  
Fulfilment of the Requirement for the Degree of Master of Arts**

**October 2010**



**to my inspiring father,**

**to my loving mother,**

**my supporting siblings, and**

**my cute and handsome nephews Ali & Pouya**



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Arts

**RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCES AND READING  
PROFICIENCY OF IRANIAN EFL STUDENTS**

By

**KARIM HAJHASHEMI**

**October 2010**

**Chairman: Associate Professor Wong Bee Eng, PhD**

**Faculty: Modern Languages and Communication**

The purpose of this study was to examine the relationship between multiple intelligences (MI) and reading proficiency of Iranian EFL pre-university students in Tehran, Iran and to see if gender plays a role in this regard. Specifically, the study attempted 1) to verify the intelligences identifiable among high/low achievers in reading, 2) to discover the differences in multiple intelligences of Iranian EFL students based on their reading proficiency and gender, 3) to determine the relationship between the multiple intelligences and reading proficiency of Iranian EFL students, 4) to identify the components of multiple intelligences which are correlated with the score of reading proficiency test of Iranian EFL students, and 5) to find the intelligence type that is the best predictor of learners' performance in reading proficiency test. In order to meet the objectives, four research questions were asked. A descriptive and ex post facto design



was employed to ascertain relationships among the naturally occurring variables. The participants for this study were 128 pre-university students (grade12, 18-19 years old) of both genders studying in Tehran in the academic year 2008-2009. The district was chosen randomly among 19 school districts of Tehran. The students were chosen randomly from two different segregated high schools in that region. Random sampling was used to create homogeneous groups without involving any potential biases or judgments. Three instruments were utilized in this study namely, 1) a demographic questionnaire; 2) the Persian version of McKenzie's MI Inventory; and 3) a standardized reading proficiency test which was selected from retrieved paper-based TOEFL® tests.

Analyzing the data using *t*-test, it was found that there was a statistically significant difference in the mean musical-rhythmic intelligence scores of the low achievers and the high achievers. This means that there were no significant differences between intelligence types of the students and their reading proficiency scores except for their musical-rhythmic intelligence which was positive and stronger among the low achievers. Based on this, it seems that the high achievers have a lower musical intelligence, which also means that better readers are less intelligent 'musically'. A statistically significant difference between the mean bodily-kinesthetic intelligence scores and the two genders was also revealed. In other words, no significant gender difference was found in the intelligence types of the students except their bodily-kinesthetic intelligence which was positive and stronger among the females. No significant difference was found between



the male and female Iranian EFL pre-university students in their reading proficiency scores.

Results obtained from the correlation analysis revealed no significant relationship between the two variables of MI and reading score. Based on Guilford's rule of the thumb, the relationship of MI and reading scores in the present study was found to be negligible. Furthermore, the results of the correlation analysis revealed that there was a low significant, negative relationship between musical-rhythmic intelligence and reading which suggests that when the reading score of a student increases, musical-rhythmic intelligence of the same student decreases and vice versa. This finding indicates that the low proficiency EFL learners' reading comprehension performance is related to the musical-rhythmic intelligence.

Overall, three categories of MI were found to be predictive of reading proficiency. Those significant predictor variables were musical-rhythmic, verbal-linguistic, and bodily-kinesthetic intelligences. The coefficient of determination  $R^2$  of the variables (musical-rhythmic, verbal-linguistic, and bodily-kinesthetic) showed that these variables contributed 13.5% of the variance in reading proficiency collectively.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sastera

**HUBUNGAN ANTARA KECERDASAN BERGANDA (*MULTIPLE INTELLIGENCES*) DAN KECEKAPAN MEMBACA DI KALANGAN PELAJAR EFL IRAN**

Oleh

**KARIM HAJHASHEMI**

**Oktober 2010**

**Pengerusi: Prof. Madya Wong Bee Eng, PhD**

**Fakulti: Bahasa Moden dan Komunikasi**

Tujuan kajian ini adalah untuk mempelajari hubungan antara *multiple intelligences* (MI) dan kemahiran membaca dikalangan mahasiswa pra-universiti EFL di Teheran, Iran serta mengetahui hubungkait faktor jantina dalam kajian ini. Secara khususnya, kajian ini cuba 1) mengesahkan kecerdasan yang boleh dikenalpasti antara pelajar yang cemerlang dengan pelajar yang lemah 2) membezakan kecerdasan penggandaan di kalangan pelajar EFL Iran berdasarkan kecekapan membaca dan jantina, 3) menentukan hubungan antara kecerdasan majmuk dengan keupayaan membaca pelajar EFL Iran, 4) mengenalpasti komponen kecerdasan majmuk yang berkorelasi dengan skor pembacaan ujian kemahiran daripada pelajar EFL Iran, dan 5) mencari faktor MI sebagai prediktor terbaik untuk prestasi pelajar dalam ujian kemahiran membaca. Empat soalan kajian telah dikemukakan



untuk mencapai objektif kajian ini. Satu rekabentuk yang deskriptif dan “ex post facto” telah dibentuk untuk memastikan hubungan di antara pembolehubah yang terhasil secara sendirinya. Peserta untuk kajian ini terdiri daripada 128 pelajar pra-universiti (gred 12, 18-19 tahun) dari kedua-dua jantina yang menuntut di Teheran pada tahun akademik 2008-2009. Daerah untuk melaksanakan kajian ini dipilih secara rawak di antara 19 jenis daerah persekolahan di Teheran. Pelajar-pelajar juga dipilih secara rawak dari dua sekolah menengah yang berasingan yang berada didalam daerah yang terpilih. Persampelan rawak digunakan bagi memperolehi kumpulan-kumpulan yang homogeny serta tanpa sebarang prasangka atau penilaian. Tiga jenis instrument telah digunakan dalam kajian ini iaitu 1) soal-selidik demografi, 2) “McKenzie’s MI Inventory” versi Parsi, dan 3) satu ujian kecekapan kemahiran membaca yang dipilih daripada kertas ujian TOEFL® yang telah dipiawaikan. Semasa penganalisan data, perbezaan statistik yang signifikan telah dijumpai dalam skor min pelajar yang berprestasi rendah dan tinggi. Berdasarkan maklumat ini, penuntut yang berprestasi tinggi nampaknya memiliki kecerdasan muzikal yang lebih rendah, hal ini turut bermakna bahawa pembaca yang lebih baik juga kurang cerdas secara muzikal. Satu perbezaan statistik yang signifikan antara skor rata Perisikan Kinestetik dengan kedua-dua jantina itu juga diperlihatkan. Tidak ada hubungan yang signifikan dijumpai antara kedua-dua pembolehubah MI dengan skor membaca. Seterusnya, keputusan regresi ‘stepwise’ menunjukkan bahawa terdapatnya signifikansi yang rendah, hubungan negatif antara kecerdasan muzik dan membaca yang menunjukkan bahawa ketika skor pembacaan meningkat, kecerdasan muzikal pelajar yang sama menyusut dan sebaliknya. Penemuan ini menunjukkan bahawa





prestasi kemahiran membaca pemahaman di kalangan penuntut EFL yang berprestasi rendah adalah berkaitan dengan kecerdasan muzikal. Selain itu, 3 kategori MI tersah berkaitan dengan kemahiran membaca. Prediktor pemboleh ubah yang signifikan itu ialah “muzikal”, “lisan” dan “kecerdasan kinestetik”. Koefisien determinasi  $R^2$  daripada pemboleh ubah (muzikal, lisan, dan kinestetik) menunjukkan bahawa pemboleh ubah-pemboleh ubah ini menyumbang 13.5% daripada varians dalam kemahiran membaca.



## ACKNOWLEDGEMENTS

My first and foremost debt of gratitude is to Allah, the most compassionate, the merciful. There is just too much of His blessing in this life to count. I thank Him for giving me the strength, inspiration and perseverance to complete this thesis. I extend my gratitude to those who have contributed directly and indirectly to the completion of this thesis. The completion of this would not have materialized without their contributions and unfailing support.

I owe special thanks and appreciation to my supervisor, mentor, and the coordinator of the Department, Associate Professor Dr. Wong Bee Eng for her awe-inspiring contributions, insightful input, intellectual support, comments and cheerful disposition which made this research possible. Without her help, encouragement, and patience, this research would still be in the evolutionary stage. Thank you Dr. Wong.

I would also like to express my special gratitude and appreciation to my committee member, Associate Professor Dr. Shameem Rafik Gala for her professional guidance, constructive ideas and suggestions in the preparation and completion of this thesis. Thank you Dr. Shameem.



My eternal gratitude goes to Gary A. Payne, Lorraine Carmosino and the Educational Testing Service for helping me by supplying reading materials and granting me the permission to use them.

My deep appreciation also goes to my dearest friends Seyed Hossein Sadat Hashemi, Omid Zaker, Dr. Malayeri, Dr. Bijandi and Dr. Akef for sharing their ideas and thoughts with me and obviously, without whom, I would never have come this far.

My deepest gratitude also goes to my father, my mother, my siblings, and my handsome nephews, Ali and Pouya, for their unconditional love, prayers, endless support and encouragement. My thanks to them who believed in me, expressed their patience and provided me with moral support.

Finally, I am endlessly thankful to my brother, Majid, who is also my best friend. He supported and encouraged me through these years of my study and research. My degree and this thesis would not have been accomplished without him. Thank you Majid.



I certify that a Thesis Examination Committee has met on (October 2010) to conduct the final examination of Karim Hajhashemi on his thesis entitled “Relationship between Multiple Intelligences and Reading Proficiency of Iranian EFL Students” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Arts.

Members of the Thesis Examination Committee were as follows:

**Mohd Faiz Sathi. Bin Abdullah, PhD**

Associate Professor  
Faculty of Modern Languages and Communication  
Universiti Putra Malaysia  
(Chairman)

**Washima Che Dan, PhD**

Associate Professor  
Faculty of Modern Languages and Communication  
Universiti Putra Malaysia  
(Internal Examiner)

**Shamala Paramasivam, PhD**

Lecturer  
Faculty of Modern Languages and Communication  
Universiti Putra Malaysia  
(Internal Examiner)

**Pramela Krish N. Krishnasamy, PhD**

Associate Professor  
Universiti Kebangsaan Malaysia  
(External Examiner)

---

**BUJANG KIM HUAT, PhD**

Professor and Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 23 December 2010



This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Arts. The members of the Supervisory Committee were as follows:

**Wong Bee Eng, PhD**

Associate Professor  
Modern Languages and Communication  
University Putra Malaysia  
(Chairman)

**Shameem Rafik Gala, PhD**

Associate Professor  
Modern Languages and Communication  
University Putra Malaysia  
(Member)

---

**HASANAH MOHD GHAZALI, PhD**

Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date:



## **DECLARATION**

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institutions.

---

**KARIM HAJHASHEMI**

Date: 19 October 2010



## TABLE OF CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	iii
<b>ABSTRAK</b>	vi
<b>ACKNOWLEDGEMENTS</b>	ix
<b>APPROVAL</b>	xi
<b>DECLARATION</b>	xiii
<b>LIST OF TABLES</b>	xvii
<b>LIST OF FIGURES</b>	xix
<b>LIST OF APPENDICES</b>	xx
<b>LIST OF ABBREVIATIONS</b>	xxi
<b>CHAPTER</b>	
<b>1 INTRODUCTION</b>	<b>1</b>
1.1 Background to the Study	1
1.2 The Education System of Iran	5
1.3 Statement of the Problem	9
1.4 Purpose of the Study	14
1.5 Objectives of the Study	14
1.6 Research Questions	15
1.7 Theoretical Perspective of the Study	15
1.8 Significance of the Study	17
1.9 Definition of Key Terms	19
1.9.1 MI Inventory	19
1.9.2 Multiple Intelligences	20
1.9.3 Reading Proficiency	20
1.9.4 High and Low achievers	20
1.10 Organization of the Thesis	21
<b>2 LITERATURE REVIEW</b>	<b>22</b>
2.1 The Relationship between Reading and Multiple Intelligences	22
2.2 Theory of Multiple Intelligences	25
2.2.1 Verbal-linguistic intelligence	28



2.2.2	Logical-mathematical intelligence	30
2.2.3	Visual- spatial intelligence	31
2.2.4	Musical-rhythmic intelligence	32
2.2.5	Bodily-kinesthetic intelligence	33
2.2.6	Interpersonal intelligence	34
2.2.7	Intrapersonal intelligence	36
2.2.8	Naturalist intelligence	37
2.2.9	Existential intelligence	38
2.3	The Reading Process	39
2.3.1	Schema theory and Reading	43
2.3.2	Types of schema	45
2.3.3	Different theoretical models of reading	50
2.4	Studies on Multiple Intelligences in different countries	53
2.5	Studies on MI in Iran	64
2.6	Summary of the Chapter	75
3	<b>METHODOLOGY</b>	76
3.1	Design of the Study	76
3.2	Research Questions	77
3.3	Participants	78
3.4	Instruments	80
3.4.1	Demographic Questionnaire	80
3.4.2	Multiple Intelligences Inventory	80
3.4.3	Reading Proficiency Test	83
3.5	Data Collection Procedure	84
3.6	Data Analysis	85
4	<b>RESULTS AND DISCUSSION</b>	87
4.1	Demographic Background	87
4.2	MI Inventory	90
4.3	Reading proficiency test	91
4.4	Exploratory Data Analysis (EDA)	93
4.4.1	Normality Test	94
4.4.2	Test of Homogeneity of Variance	96





4.5	Findings by Research Questions	98
4.5.1	Research Question No. 1	98
4.5.2	Research Question No. 2	103
4.5.3	Research Question No. 3	106
4.5.4	Research Question No. 4	110
4.6	Summary of the Chapter	113
5	<b>CONCLUSIONS AND IMPLICATIONS</b>	115
5.1	Introduction	115
5.2	Summary of the Study	115
5.3	Limitations of the Study	118
5.4	Implications of the Study	119
5.5	Suggestions for Further Studies	122
	<b>REFERENCES</b>	125
	<b>APPENDICES</b>	136
	<b>BIODATA OF STUDENT</b>	173
	<b>LIST OF PUBLICATIONS</b>	174



## LIST OF TABLES

<b>Table</b>	<b>Page</b>
1-1: Formal pre-college educational system of the Islamic Republic of Iran (extracted from UNESCO)	7
3-1: Cronbach alpha for subscales of the translated version	82
3-2: Guidelines provided by George and Mallery (2003)	83
4-1: Frequency and Percentage of Respondents' Gender	88
4-2: Frequency and Percentage of Respondents' Age	88
4-3: Frequency and Percentage of Respondents' Branches of Study	89
4-4: Exposure to English Learning	89
4-5: Descriptive Statistics of the MI profiles of the individuals	90
4-6: Descriptive statistics of TOEFL® Reading test	91
4-7: Test of Normality for TOEFL® Reading test	94
4-8: Skewness and Kurtosis Values for Independent Variables	95
4-9: Levene's Test of Homogeneity for MI and Gender	96
4-10: Levene's Test of Homogeneity for MI and low/high readers	97
4-11: Performance of Iranian EFL students in Different Proficiency Tests	100
4-12: Independent Samples <i>t</i> -test for MI of the Two Proficiency Groups	101
4-13: Guidelines provided by Cohen (1988)	102
4-14: Independent Samples <i>t</i> -test for MI of the two genders	103
4-15: Independent Samples <i>t</i> -test for Reading proficiency scores of the two genders	105
4-16: Pearson Product-Moment Correlation between MI profiles of the Students and their Reading scores	107



4-17: Pearson Product-Moment Correlation between MI categories and Reading scores ( $N= 128$ )	108
4-18: Stepwise multiple regression for MI and Reading Scores of the Respondents	110



## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
1-1: The Educational System of the Islamic Republic of Iran (extracted from UNESCO, ISCED 97)	8
1-2: Conceptual Framework for the Study	17
3-1: Research Framework	86
4-1: Respondents' TOEFL® Reading scores	92



## LIST OF APPENDICES

<b>Appendix</b>	<b>Page</b>
A: Demographic Questionnaire	136
B: McKenzie's MI Inventory (English Version)	137
C: McKenzie's MI Inventory (Persian Version)	145
D: Biodata of the Experts in TESL	155
E: Biodata of the Experts in Psychology	156
F: Test of English as a Foreign Language (TOEFL)	157
G: Copyright agreement	166
H: Letter of Consent	168
I: Standardized residual plots	169



## **LIST OF ABBREVIATIONS**

B.A.	Bachelor of Arts
EFL	English as a foreign Language
ESL	English as a second Language
g factor	General intelligence
IELTS	International English Language Testing System
IQ	Intelligence Quotient
ISCED 97	International Standard Classification of Education version 97
ITBS	Iowa Tests of Basic Skills
L1	First language or mother tongue
L2	Second language
LEP	Limited English proficiency
M.A.	Master of Arts
MI	Multiple Intelligences
MIDAS	Multiple Intelligences Developmental Assessment Scale
MIPQ III	Multiple Intelligence Profiling Questionnaire III
MIT	Multiple Intelligences in Teaching
PhD	Doctor of philosophy
PSI	Problem Solving Inventory
RAT	Reading Ability Test
REQ	Reading Efficiency Questionnaire
SAT	Scholastic Aptitude Test
SILL	Strategy Inventory for Language Learning
SOCAUTS	Sociotropy-Autonomy Scale
SPSS	Statistical Package for the Social Sciences
TAKS	Texas Assessment of Knowledge and Skills



TCAP	Tennessee Comprehensive Assessment Program
TEFL	Teaching English as a Foreign Language
TIMSS 2003	Trends in Mathematics and Science Study 2003
TOEFL	Test of English as a Foreign Language
UNESCO	United Nations Educational, Scientific and Cultural Organization



# **CHAPTER 1**

## **INTRODUCTION**

This chapter presents the background to the study, the education system of Iran, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, and definition of key terms. The conceptual framework is also discussed in this chapter.

### **1.1 Background to the Study**

Preparing students to deal with the outside world is the main responsibility of educational institutions; therefore, schools are usually inclined to assess students by using the same criteria that society does. A culture which puts maximal value on the verbal-linguistic and logical-mathematical intelligences will result in a focus on these abilities in schools. Armstrong (2003, p. 4) states that our culture is dominated by verbal-linguistic intelligence and most educators would agree that the verbal-linguistic intelligence dominates the teaching-learning environment in our classrooms. Such a limited view of intelligence has alienated numerous students (Armstrong, 2003; Levine, 2003; Ruggieri, 2002), and society cannot afford to continue with this line of thought (Cetron & Cetron, 2004; Eisner, 2004). Pearson and Stephens (2004, p. 39) acknowledge that the information taught and tested in schools has been based on one type of knowledge, while slighting, and even ignoring “other kinds of knowing”. They





also remind readers that we “have contrived a way of ‘doing school’ that bears little resemblance to the real learning and teaching that motivated human societies to create schools in the first place” (p. 39). Eisner (2004) claims that,

the primary aim of education is not to enable students to do well in school, but to help them do well in the lives they lead outside of school. We ought to focus on what students do when they can choose their own activities. (p. 10)

The failure of a single general intelligence (g factor) to explain human performance has led many psychologists and educators to believe that individuals, with their specific strengths and weaknesses, can be conceptualized as having multiple abilities (Chan, 2006; Karolyi, Ramos-Ford & Gardner, 2003; Sternberg, 1997, 2000, 2005).

In the past there was a firm belief in the unitary general intelligence ‘g’ or general factor (Spearman, 1904; cited in Williams, Zimmerman, Zumbo & Ross, 2003). This g factor was understood to be fixed at birth. The scales used to measure general intelligence included memory, language skills, reasoning, digit span (the ability of a child to recall a sequence of numbers just spoken), and psychological judgment. Later (after World War II), attempts were made to revise and improve the scales used in measuring general intelligence. Yet this general intelligence which was operationally defined as the ability to answer questions on an IQ test left some questions unanswered especially in school settings. For instance it could not explain the phenomenon of children who scored low

