

الجمهورية الجزائرية الديمقراطية الشعبية

République Algérienne Démocratique et Populaire

وزارة التعليم العالي و البحث العلمي

Ministère de l'Enseignement Supérieur et de la Recherche Scientifique

Mohamed Boudiaf University M'sila

Department of English



جامعة محمد بوضياف المسيلة

قسم اللغة الإنجليزية

**Enhancing EFL Learners' Reading Comprehension Using Multiple
Intelligences-Based Activities**

*The Case of 1st Year Students at Chikh Omar El-Mokhtar Secondary School, Ain-
El-hadjel*

*A dissertation submitted as a partial work for the requirements of an applied linguistics master
degree diploma.*

Supervised by:

Ms. Imane CHERIET

Achieved by:

Ms.Zouweyna LADGHEM CHIKOUCHE

Mrs.Nassiba GASMI

Academic Year: 2017/2018

Dedication

To the soul of our friend Yousef SENOUSSI

To my Father and my Mother for their patience, love, sacrifice.

The dearest persons to my heart. Thank you

To my eleven sister and brothers:

Chams Elhoda, Kawther, Charaf, Arwa, Morchida, Djomana, Ahmad Mondir, Afra, Aroub, Baraa Djaser, and Djaafar Iyad.

A very special dedication to my dear husband Belkacem KHARCHI
and all his family

To my sister kawther and her husband Mr. Tarek GANDOUZ

To all other members of my family

To my beloved friends Maima, Amani, Nour, Wafaa, Meriem, and
Amira

To all persons who have helped me to reach my goals and be a
successful person

Nassiba KHARCHI GASMI

Dedication

I dedicate this work to those who really deserve, the family which I belong to, those who have never hesitated to help and care about me.

For the warm heart that has always surrounded and protected my little hands until they grew up, for my deepest love 'Dad' **Nacer Eddine**, may he rest in peace.

To my mother, **Mrs. Naima ALI CHIKOUCHE**, my gift from Allah, my paradise, and my relief I dedicate this humble work. May Allah bestow you endless joy, I adore you.

To all my dear brothers and sisters who made this journey easy: **Belkacem, Mohamed, Lamia, Imane, Asma**, and my two sisters in law, **Selma** and **Fatima**, and my brother in law **Lakhdar**.

For the three little angles that Allah bestowed us with, **Tasnim, Nasro** and **Houssem** I love you so much, thank you for making me an aunt. I do not want to forget my cute little star who did not see light yet, may Allah bless you.

For my binome Guasmi Nassiba who has been a great partner and a lovely friend.

For my fiancé Mr. Charaf Eddine Zaidi...

Thank you all for being a part of my life. Thank you for feeling pride when I am present. And thank you for helping in making me the person I am today.

Zouweyna Ladghem Chikouche

Acknowledgments

Above all, through the guidance and help of Allah this work could be accomplished. Thanks to God who bequeathed us patience, knowledge, and assistance to write this humble dissertation.

We would like to express our sincere gratitude to our supervisor Ms. Imane CHERIET for the continuous support, her patience, motivation, and immense knowledge. We appreciate her guidance without which this work could not be possible. We could not have imagined having better supervisor and mentor for our dissertation.

We gratefully acknowledge First year students at Chikh Omar El-Mokhtar Secondary School at Ain El-Hdjel for their contributions and their aides to have this work accomplished.

Abstract

The Multiple Intelligences theory was developed by Howard Gardner in the early 1980s. It states that each person has several distinct intelligences correlating with specific parts of the brain. It explains how every person perceives the world through each of their intelligences. The present research was inspired by this theory; it is intitledThe Impact of the Multiple Intelligences Theory onReading Comprehension. The present study aims to investigate the effect of using the Multiple Intelligences-based activities on the Reading comprehension of EFL learners as well as to highlight the salient intelligences of the EFL learners in the sample chosen(twenty students). The researchhas started by identifying the learners' multiple intelligencesprofilesusing Howard Gardner Multiple Intelligences-test (HGMI-test) to know the learners dominant intelligence (s). All students have been asked to answer the TOEFL reading diagnostic test that served as a pre-test to evaluate their reading comprehension level. In addition, Students have been integrated in a training programme (treatment) in which they have been taught reading comprehension through the Multiple Intelligences-based activities. At the completion of the training programme, students have been again asked to answer the TOEFL reading practice testwhich served as a post-test in order to measure students' progress in reading comprehension. The analysis of the results showed that the salient types of intelligencewere: verbal/linguistic, spatial/visual,interpersonal and bodily-kinesthetic. The findings also indicated that the MI-based activities have a positive relationship with reading comprehension, and that MI theory has an effect on intermediate EFL learners' reading comprehension in a way that it increases their comprehension in reading. Finally further suggestions and pedagogical implications were presented.

Keywords:Howard Gardner, Multiple Intelligences, Reading Comprehension, EFLs, Linguistic, Spatial/visual, Bodily/kinaesthetic, interpersonal.

List of Abbreviations

EFL: English as a Foreign Language

HGMI-Test: Howard Gardner Multiple Intelligences Test

MI: Multiple Intelligences

SOCL: Students' Observation Check List

T-S interaction: Teacher-Student interaction

St: Student

PPT: Power Point

Std: Standard

TOEFL RCT: Test OF English as a Foreign Language Reading Comprehension Test

List of Figures

Figure 1: Multiple Intelligences Domains

Figure 1.1: The Analytic Domain

Figure 1.2: The Interactive Domain

Figure 1.3: The Introspective Domain

Figure 2: The process of analysing a picture

List of Tables

Table 1: Criteria for Identification of Intelligence

Table 2: Theories of Intelligence

Table 3: Gardner's Eight Intelligences

Table 4: Students' Salient Intelligences

Table 5: The Participants Pre-test Mean and Standard Deviation Scores

Table 6: The Participants Post-test Mean and Standard Deviation Scores

Table 7: T-test value

Table 8: Correlation Analysis between Salient Intelligences and the Post-test Mark

List of Graphs

Graph 1: Students' commentaries

Graph 2: The Participants' Salient Intelligences

Graph 3 : One Participant's Intelligence Profile

Graph 4.1: Participants' Classroom Participation at the Beginning of the Treatment

Graph 4.2: Participants' Classroom Participation in the Middle of the Treatment

Graph 4.3 : Participants' Classroom Participation at End of the Treatment

Graph 5: The Comparison of Participants Post-test Score with their Salient Intelligences

Table of Contents

Dedication	I
Acknowledgement	II
Abstract	III
List of Abbreviations	IV
List of Figures	V
List of Tables	VI
List of Graphs	VII
Table of Content	VIII

General Introduction

1. Background	2
2. Statement of the Problem.....	3
3. Research Questions.....	4
4. Research Hypotheses.....	4
5. Aim of the Study.....	4
6. Significance of the Study.....	5
7. Research Methodology.....	5
8. Structure of the Dissertation.....	6
9. Definitions of Key Variables	6

Chapter One: Theoretical Background

Introduction.....	9
1. Intelligence.	
1.1. Definitions of Intelligence.....	9
1.2. Characteristics of Intelligence.....	10
1.3 Individual Differences and Intelligence.....	11
1.4 Views about Intelligence.....	12
1.4.1 Environmentalist and Hereditarian Views.....	12

1.4.2 Turstone’s View.....	12
1.5 IQ test and Intelligence.....	13
1.6 Theories of Intelligence.....	13
1.7 Multiple Intelligences Theory.....	14
1.7.1 The Background of Multiple Intelligences.....	15
1.7.2 Types of Intelligences.....	16
1.7.3 MI Domains.....	17
1.7.3.1 The Analytical Domain.....	17
1.7.3.2 The Interactive Domain.....	18
1.7.3.3 The Introspective Domain.....	18
1.8 Criticism on MI theory.....	19
1.9 MI Theory and Education	20
2. Reading	
2.1 Definition of Reading.....	22
2.2 Types of Reading.....	22
2.2.1 Intensive and Extensive reading.....	22
2.2.2 Skimming.....	23
2.2.3 Scanning.....	23
2.2.4 Word by Word Reading	23
2.2.5 ReadingAloud.....	23
2.2.6 Silent reading.....	24
2.2.7 Top down and Bottom up Reading.....	24
2.2.8 Critical Reading.....	24
2.3 Reading Comprehension.....	24
2.4 Reading Comprehension skills.....	24
2.5 The Process of Reading.....	25
2.6 Difficulties in EFL Reading	25
2.7 Teaching Reading Comprehension.....	27
2.7.1 Pre-reading Stage.....	27
2.7.2 While-reading Stage.....	27
2.7.3 Post-reading Stage.....	27
3. MI Theory and Teaching Reading.....	28
3.1 Studies that Used MI in Reading.....	28
Conclusion.....	30

CHAPTER 2 : Methodology Data Analysis and Pedagogical Implications

Introduction.....	32
1. Methodology and Procedures	
1.1. Research Design	32
1.2. Research Setting and Participants.....	33
1.2.1 Research Setting.....	33
1.2.2 Sample of the Study.....	33
1.3 Research Tools.....	34
1.3.1 HGMI-Test.....	34
1.3.2 TOEFL RCT Tests.....	34
1.3.3 MI-BASED Training Programme.....	34
1.3.3.1 Sample of an MI-based lesson plan.....	35
1.3.4 Participants' Commentaries.....	36
1.4 The Pilot Study.....	37
1.5 Statistical Tools.....	38
1.6 Procedures.....	39
2. Data Analysis and Discussion	
2.1 Data Analysis for Research Question One.....	40
2.2 Data Analysis for Research Question Two.....	42
2.2.1 The Participants Pre-test Achievements.....	42
2.2.2 The Participants Post-test Achievements.....	43
2.2.3 T-test for the Pre and Post tests scores.....	44
2.2.4 Pearson Correlation between the Intelligence Type and Reading Comprehension.....	45
2.3 Summary of the results.....	46
3. Pedagogical Implication	
3.1 Implications for Visual Learners.....	47
3.2 Implications for Bodily/Kinesthetic.....	48
3.3 Implications for Interpersonal Learners.....	48
3.4 Implications for Logical/ Mathematical Learners.....	49
3.5 Implications for Musical Learners.....	50
3.6 Implications for Intrapersonal Learners.....	50
3.7 Implications for Naturalist Learner.....	51

3.8 Implications for Verbal/ Linguistic Learners.....	51
3.9 Recommendations for further studies.....	52
Conclusion.....	52
Conclusion General	54
References	57
Appendices	
French Abstract	
Arabic Abstract	

GENERAL INTRODUCTION

1. Background	2
2. Statement of the Problem.....	3
3. Research Questions.....	4
4. Research Hypotheses.....	4
5. Aim of the Study.....	4
6. Significance of the Study.....	5
7. Research Methodology.....	5
8. Structure of the Dissertation.....	6
9. Definitions of Key Variables	6

1. Background

It is well known that mastering a language is all about mastering the four main skills. Reading is one of the most important skills to master because a good reader is a good writer; thus reading is a receptive skill that plays a great role for learners of English as a foreign language (EFL) to master the English language in its oral and written forms. One key to acquire the background knowledge, culture, literature, and civilization of a certain language is to read thoroughly. “The ability to read is seen as the most stable and durable of the second language skills” (Rivers, 1981. as cited Shereen, 01) ; therefore through reading, EFL learners pave the way to figure out the different structures of a language decoding information about the latter. Paula J. Clarke et al (2014, 01) claimed that as language is transformable; reading allows to understand what is written or exactly what is meant by the message because all of that plays a great role in the teaching-learning process. The importance of reading lies specifically in developing the language skills and exercising the person’s brain. Reading, as well, enhances the person’s concentration and encourages a thirst for knowledge developing imagination and creativity.

However, EFL learners face many difficulties with reading comprehension since they do not know what really to read, how to read, or even what are the benefits of reading. According to Woolley, G. (2011, 15) “reading comprehension is a flexible and on-going cognitive and constructive process” the process in which both teachers and students are involved when reading comprehension is within a classroom setting where teachers can diagnose the difficulties faced by their students while reading English texts. Students generally, according to Mourtaga (2008, p. 1), face many problems linked with the lack or the delusion of the reading process. Moreover, the number and rate of recurrence of challenging words in the target reading text, absence of motivation, and sentence complexity. Other problems have connection with the difference between the mother tongue language Arabic and the target language English concerning alphabets and sounds.

This “8-in-1 strategy” as named in (Lazear 1991, p. 17) is one of the most productive strategies that assures the participation of all students in the target material and offer operative teaching and learning (ibid). Multiple Intelligences (MI) theory provides eight different ways to teaching and learning where teachers, first, should be aware of their students’ strengths to use a variety of MI-based activities reflecting the target intelligences (Larsen-Freeman, 2000, p. 170). The results of this theory were assured by a number of

studies like the one of Gaines and Lehmann (2002) which concluded that students exhibited reasonable mastery in using reading skills which both allowed them achieve comprehension and be autonomous readers who ask questions while reading. Studies conducted by Reidel, Tomaszewski and Weaver (2003) and Buschick (2007) found that students could select the books and activities that appealed to their dominant intelligence at the end of an MI-based intervention.

2. Statement of the Problem

Being an EFL teacher who meets with students' reading-related answers continuously, the researcher considers that there exist a variety of complications facing students in their way attaining comprehension. According to Mourtaga (2008, p. 1), such complications can be classified firstly as teacher-related problems like those related to the misunderstanding of the reading process. Secondly, problems related to insufficient linguistic competence in general and use of English. Thirdly, problems related to the differences between Arabic and English and to the English spelling/sound system.

In an attempt to solve such problems, many theories are no more frequently used and new teaching methods were introduced. The MI theory greatly spots light on a new side of the learners which demonstrates that learners vary in their types of intelligences. This may in a way fill the gap that hinders both teachers and learners way towards reading comprehension achievement. Tomlinson (2001) subscribes to the view that "educationalists must provide the learners with ample opportunities to make sense of their own existing differences and potentials" (p, 17). Additionally, Cobb (2001), states that teachers are likely to present standardized activities to all students in the same way and at the same time, thus students' interests or needs are ignored. This is why teachers should find a more effective and appropriate way to teach reading by changing from their traditional way of translating and rote learning to an alternative approach. Thus, The problem of reading might be a result from teachers who do not use the appropriate approach to teach; they may not target the different intelligences gifted to their students, instead they may target only two: Linguistic and logical intelligences since most of the assessment is done in writing. Teachers usually use passive reading starting from translating words, and sentences, but integrating Multiple Intelligences-based activities gives the chance to other intelligences to shine catering for the learning styles and learning

preferences. This study aims to clarify the role of MI theory as an alternative instruction in reading comprehension to increase students' achievements.

3. Research Questions

The study scrutinized the following main research questions:

- 1) What types of intelligences are the most dominant among first year EFL learners participants of the study?
- 2) Is there a statistically significant difference between the participants' reading comprehension test performance before and after applying the Multiple Intelligences-based activities?
- 3) Is there a statistically significant correlation between the participants' intelligence type and the performance in the reading comprehension test?

4. Research Hypotheses

Based on the aforementioned research questions, four hypotheses about the second and the third research questions will be tested. The hypotheses are:

- 1) **Hypothesis 1:** H_0 ; there is no statistically significant difference between the participants' reading comprehension test performance before and after applying the Multiple Intelligences-based activities.
- 2) **Hypothesis 2:** H_1 ; there is a statistically significant difference between the participants' reading comprehension test performance before and after applying the Multiple Intelligences-based activities.
- 4) **Hypothesis 3:** H_0 ; there is no statistically significant correlation between the participants' intelligence type and the performance in the reading comprehension test.
- 5) **Hypothesis 4:** H_1 ; there is a statistically significant correlation between the participants' intelligence type and the performance in the reading comprehension test.

5. Aim of the Study

This study was conducted with the purpose to investigate the impact of using MI-based activities on the reading comprehension of the sample EFL learners highlighting the dominant intelligences in the sample chosen and the significance of integrating activities based on Gardner's eight intelligences to improve the teaching methods for one sake which

is a sufficient outcome concerning students' performance in reading comprehension. Thus, helping EFL readers to step into the world of reading materials more interestingly.

6. Significance of the Study

By the end of this research, in which the effect of the MI-based activities on reading comprehension reveals, this study can raise the teacher's attention to the neglected types of intelligences and provide them with significant activities that may help their students in improving their reading skill. Moreover, it can delimit the various levels of student at the level of their intelligences types so that it can, in a way, facilitate the assessment and evaluation process for teachers, and, in another way, it comes to the aid of the parents to easily guide their children. Last and not least, the variety of these reading activities could help curriculum designers to add other new possible activities.

7. Research Methodology

For the purpose of testing the validity of the previously mentioned hypotheses, the researchers chose to follow a quasi-experimental method with one experimental group in which the level of the students will be measured before and after an MI-based treatment. One experimental group will be tested before (pre-test) and after (post-test) the treatment and eventually their pre-test and post-test outcomes will be compared to show the difference, if any using t-test. At the beginning, the Howard Gardner Multiple Intelligences-test (HGMI-test) will be used for highlighting the most dominant intelligences among the participants. Furthermore, a diagnostic TOEFL reading comprehension test (TOEFL RCT) will measure the students' reading comprehension level at the beginning of the experiment and serve as a pre-test for the study. After that the treatment will take place. The latter is composed of a set of MI-based activities of reading comprehension that will be introduced for the participants to measure their outcome and decide what effect MI has on the students' comprehension. Lastly, a practice TOEFL RCT will be administered to determine the participants' general progress, if any, and serve as a post-test. Participants' commentaries are also taken into consideration to accomplish the experiment.

The participants of the study are the first year students at Chikh Omar El-Mokhtar secondary school. A group of 30 students aged between 15 to 17 years old with intermediate level in English will form the sample of this study. They were chosen for their willingness and interest for reading comprehension in English language and their desire for

changing the traditional method of teaching such skill. Additionally, their performance in English proved to be suitable for the study tests and lessons.

8. Structure of the Dissertation

The present study is composed of two chapters. Primarily, the first chapter is devoted merely to the literature review. This chapter is divided into two sections; the former attempts to give the overall notion of intelligence, Intelligence Quotient test and the MI domains. While the latter handles with the skill of reading; types of reading, the reading comprehension skills, and the application of MI in education generally and in reading specifically. The second chapter is divided into three sections. The first is mainly devoted to the methodology of research describing the instruments and procedures of the experimental design and how MI-based activities will be applied on reading comprehension for the sample chosen. The second section presents statistically the results and discussion of the experiment as well as the summary of the results. While the third is devoted for the pedagogical implications and suggestions concerning the application of MI theory in the process of teaching reading comprehension in Algerian schools. It also includes recommendations for further studies.

9. Definitions of Key Variables:

For this study the main variables are defined operationally:

Intelligence: Gardner (1999, pp. 33-34) defined intelligence as “a bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture”. As a result, the concept of intelligence can be identified as: firstly, the ability to solve problems since problem solving is one of the real daily life confrontations. Secondly, the ability to create new solutions for expected problems. And thirdly, as the ability to produce something that is sound and beneficial and has its valuable effect on a culture.

Reading: Millrood’s (2001:117) defined it as “... a visual and cognitive process to extract meaning from writing by understanding the written text, processing information, and relating it to existing experience”.

Comprehension: Bielby (1999, p. 146) and Lenz (2005 p. 1 of 5) stated that comprehension is the ability to construct meaning from a text through decoding the writers’ words in order to expand and modify one’s understanding and knowledge.

CHAPTER 1

THEORETICAL BACKGROUND

Introduction.....	9
1. Intelligence	
1.1. Definitions of Intelligence.....	9
1.2. Characteristics of Intelligence.....	10
1.3 Individual Differences and Intelligence.....	11
1.4 Views about Intelligence.....	12
1.4.1 Environmentalist and Hereditarian Views.....	12
1.4.2 Turstone’s View.....	12
1.5 IQ test and Intelligence.....	13
1.6 Theories of Intelligence.....	13
1.7 Multiple Intelligences Theory.....	14
1.7.1 The Background of Multiple Intelligences.....	15
1.7.2 Types of Intelligences.....	16
1.7.3 MI Domains.....	17
1.7.3.1 The Analytical Domain.....	17
1.7.3.2 The Interactive Domain.....	18
1.7.3.3 The Introspective Domain.....	18
1.8 Criticism on MI theory.....	19
1.9 MI Theory and Education	20
2. Reading	
2.1 Definition of Reading.....	22
2.2 Types of Reading.....	22
2.2.1 Intensive and Extensive Reading.....	22
2.2.2 Skimming.....	23
2.2.3 Scanning.....	23
2.2.4 Word by Word Reading	23

2.2.5 Reading Aloud.....	23
2.2.6 Silent Reading.....	24
2.2.7 Top down and Bottom up Reading.....	24
2.2.8 Critical Reading.....	24
2.3 Reading Comprehension.....	24
2.4 Reading Comprehension Skills.....	24
2.5 The Process of Reading.....	25
2.6 Difficulties in EFL Reading.....	25
2.7 Teaching Reading Comprehension.....	27
2.7.1 Pre-reading Stage.....	27
2.7.2 While-reading Stage.....	27
2.7.3 Post-reading Stage.....	27
3. MI Theory and Teaching Reading.....	28
3.1 Studies that Used MI in Reading.....	28
Conclusion.....	30

Introduction

The present study expands on how Multiple Intelligences-based activities can be an enhanced teaching method to teach reading comprehension strategies. Therefore, this chapter provides a detailed review of the literature on both variables. Hence, there are two main sections. The first section provides information about intelligence, Multiple Intelligences, types of intelligence, and their domains. On the other hand, the second part attempts to grab attention to the reading comprehension, the different types of reading and the difficulties faced with reading comprehension. Moreover, it illustrates MI theory and its application in education, in addition to some of the previous studies on MI theory that paves the way for present and future studies on this theory, in a way that it exposes all the previously known findings besides to the problems that are to be solved.

1. Intelligence

Human Intelligence has always been a mystery that was attached to power and survival. Through intelligence, humans can possess the cognitive abilities that help them learn reason, plan, solve problems, make decisions, and form concepts. Intelligence enables humans to experience and think, recognize patterns and relationships in order to understand the world around them. It has been the concern of research for decades as it is the concern of the present study. The first section tackles all what is related to intelligence in general including definitions, views and theories. Yet, the major focus of this section is on Gardner's MI theory and its educational implications, including research on its effects on teaching language skills.

1.1 Definitions of Intelligence

The concept of intelligence has always been the cradle of mystery and fascination for human kind. Although it is still swinging between theoretical and applied concerns, the concept of intelligence has remained central to the field of psychology (Gardner & Hatch 1989). In its normal sense, intelligence is "the ability to understand, learn, and think" (Oxford, 2012, 394). It is agreed in M. Encarta (2009) that intelligence is a mental ability that can be measured in different ways and that is associated to many other mental processes i.e. every human has a degree of intelligence that can be measured by different tests. It is "The global capacity to act purposefully, to think rationally, and to deal

effectively with the environment" which means that intelligence is not a one entity but a combination of several entities.”(Wechsler 1998,as cited in, Göğebakan 2003.p, 2).

Gardner (1983) defines "intelligence as the ability to solve problems or to create fashion products that are valued within one or more cultural settings"(p.81). He further explains this concept as it is a biological and psychological potential; that potential is capable of being realized to a greater or lesser extent as a consequence of the experiential, cultural, and motivational factors that affect a person, Gardner (1995).

According to Gottfredson (1997), a group of fifty-two experts, in 1994, working in the study of intelligence and related fields endorsed the following definition of intelligence:

“Intelligence is very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather it reflects a broader and deeper capacity for comprehending our surrounding ‘catching on’ making sense’ of things, or ‘figuring out what to do. “(p 13)

Intelligence was tested on the basis of humans’ mental function or performances or some other learning skills; Gardner claims in his book *Frames of mind* (1983) that the IO test measures mainly linguistic and logical/mathematical intelligences (as cited in Tsuda, p1).

1.2 Characteristics of Intelligence

According to (Davis, Christodoulou, Seider& Gardner, nd., p5), “Throughout the development process of MI theory and its broader characterization of intelligence, Gardner placed the great focus on the research findings from evolutionary biology, neuroscience, anthropology, psychometrics and psychological studies of prodigies and savants. According to several relevant researches across these fields, Gardner established variant criteria for identification of a unique intelligence”. Table 1 displays the criteria needed to identify intelligence.

Table 1: Criteria for Identification of an Intelligence

Criteria for Identification of an Intelligence
<ul style="list-style-type: none"> It should be seen in relative isolation in prodigies, autistic savants, stroke victims or other exceptional populations. In other words, certain individuals should demonstrate particularly high or low levels of a particular capacity in contrast to other capacities.
<ul style="list-style-type: none"> It should have a distinct neural representation—that is, its neural structure and functioning should be distinguishable from that of other major human faculties
<ul style="list-style-type: none"> It should have a distinct developmental trajectory. That is, different intelligences should develop at different rates and along paths which are distinctive.
<ul style="list-style-type: none"> It should have some basis in evolutionary biology. In other words, intelligence ought to have a previous instantiation in primate or other species and putative survival value.
<ul style="list-style-type: none"> It should be susceptible to capture in symbol systems, of the sort used in formal or informal education.
<ul style="list-style-type: none"> It should be supported by evidence from psychometric tests of intelligence.
<ul style="list-style-type: none"> It should be distinguishable from other intelligences through experimental
<ul style="list-style-type: none"> It should demonstrate a core, information-processing system. That is, there should be identifiable mental processes that handle information related to each intelligence.

(Davis, Christodoulou, Seider & Gardner, nd., p5)

Table 1 displays the variety of characteristics according to which intelligence could be identified as a unique one. Gardner concluded that a person who possesses certain intelligence should display high capacity having some basis in evolutionary biology with different neural representation for each. Moreover, each intelligence should develop at different rates expecting to be captured in symbol systems, tested and distinguished by experimental designs from other types of intelligence and found to have special mental processes.

1.3 Individual Differences and Intelligence

The changes that human beings go through take different ways from one individual to another. Yet, two types of changing can be shed light on, the physical and the cognitive. As cited in Dorney (2008,04), Michael Eysenck stated that human beings differ in many ways. The idea which said that there is a strong association between intelligence and cognitive complexity is insured by Bekoff, and Pierce (2009:79), for example, the former

is related to imagination, causal reasoning, prospection, and memory. The idea that memory pattern is experiences, emotions, sensation, thoughts, beliefs, and desires; however the mental world is associated with states, events, processes, occurrences, phenomena, abilities and properties was noted by Strawson (2010:145-6).

1.4 Views about Intelligence

Kail and Pellegrino (1985) provided a twofold definition for views of intelligence: actions, and mental processes. Regarding actions, this includes the human ability to perform a certain task like writing, discovering, designing, and others. While the mental helps these tasks to happen. Hence, either each intelligent behaviour is produced by a specific mental process, or there is one single mental ability that produces all intelligent behaviours (as cited in Haboush, 2010,p.43).

1.4.1 Environmentalist and Hereditarian Views

A first view concerning intelligence is the Environmentalist one. Leon Kamin(n,d), believed that “the reason behind the differences in IQ scores is the social, cultural or environmental influences”(as cited in Browne-Miller, 1994,p.4). Therefore, the children’s mental abilities and performance are developed when the surrounding environment is. In other words; as stated by Borish (2004) ,“the rich are more intelligent than the poor and the white are more intelligent than other races for they are surrounded with the needed verbal skills required in an IQ test” (as cited in Haboush 2010,p.43).

However, hereditarians, like Arthur Jensen assume that intelligence is something “... genetic, inherited, and fixed at birth, and heredity is the principle factor that determines intelligence, not the environmental or social factor”(as cited in Brown-Miller 1994,p.4)..Gardner (1999) wrote that Galton states that “intelligence ran in families”, and so he looked for intelligence in the descendants of those who occupied leading positions in British society (p.2)

1.4.2 Turstone’s View

Baum, Viens, and Slatin (2005), mentioned that Turstone (1938) ,proposed a view about intelligence in which seven factors or primary mental abilities were introduced: "verbal comprehension, word fluency, number facility, spatial visualization, associative memory, perceptual speed, and inductive reasoning” (as cited in Haboush,2010,p.44).

1.5 IQ Test and Intelligence

Christison (1998) asserted that the commonly embraced definition of intelligence is whatever scores people obtain in an Intelligent Quotient (IQ) test (p.2). Based on this view, the smartest person is the one who achieves the highest score in such a test (as cited in Haboush, 2010, p.43). Some psychologists have tried to both provide a definition to human intellectual capabilities and find a way to measure them. A pioneering psychologist was Francis Galton who argues the idea of inheritance concerning intelligence, and developed formal IO test to measure it in the late nineteenth century (Gardner, 1999).

In 1906, as mentioned by Armstrong (2009), the French psychologist Alfred Binet developed the most well-known IO test in the world. Binet attempted to test French children in a way to predict their academic potential and find out those children with learning disabilities. As such, those children could be helped in order to succeed in school (as cited in Botelho, 2003, p24); i.e. to study which children would fail and which would succeed. Such an IQ test was criticised by modern psychologists as it measured a narrow range of verbal/linguistic and logical/mathematical abilities, (Christison and Kennedy, 2001,p.1-8).

The IQ test; however, measures only the linguistic and logical-mathematical intelligences and neglects that other intelligences must be measured too (Checkly, 1997:12); we can notice that when dealing with intelligence, it is not fair to not include other elements like social and emotional factors.

1.6 Theories of Intelligence

There are many theories proposed by number of researchers that deals with the notion of intelligence and all its properties. All theories are different in their vision towards intelligence. Table 2 bellow summarizes them all.

Table 2: Theories of Intelligence

Theory	Researcher	Date	Description
General intelligence	Charles Spearman	1904	Intelligence is one general mental capability represented as g. The "g" factor underlies performance on all intellectual tasks.
Primary mental abilities	Louis L. Thurstone	1938	Intelligence consists of seven independent primary abilities: (1) verbal comprehension, (2) verbal fluency, (3) number or arithmetic ability, (4) memory, (5) perceptual speed, (6) inductive reasoning, and (7) spatial visualization.
Fluid intelligence and crystallized intelligence	Raymond B. Cattell and John Horn	1966	Intelligence consists of two broad abilities. (1) Fluid intelligence is one's biologically based capacity for reasoning and memory. (2) Crystallized intelligence is the knowledge and skills acquired through experience and learning.
Triarchic theory of intelligence	Robert Sternberg	1985	Intelligence consists of three major parts. (1) Analytic intelligence is skill in reasoning and in processing information. (2) Creative intelligence is skill in using past experiences to achieve insight and deal with new situations. (3) Practical intelligence is skill in everyday living and in adapting to life demands.
In the late 1990s, Gardner amended his theory to include an eighth intelligence: naturalist intelligence, or skill in recognizing and classifying plants, animals, and minerals.			

1.7 Multiple Intelligences Theory

The onset of MI theory was by Howard Gardner, Ph.D., Professor of Education at Harvard University in 1983 as a result of his work in psychology and later in human cognition and human potential. First introduced through his book *Frames of Mind*, the MI theory hosted his belief about intelligence. Gardner (2006), "I believe that human cognitive competence is better described in terms of a set of abilities, talents, or mental skills, which I call intelligences", (p.6). It posits that individuals possess eight or more relatively autonomous intelligences. Hence, the basis of his theory is a pluralistic view of the mind, where he explained the idea that the mind is made up of numerous

intelligences, Gardner(2006).His theory acknowledges the different ways people think and behave, along with the ways that explain how everyone has distinct levels of strengths and weaknesses in each area of intelligence. He explains further that “Individuals draw on these intelligences, individually and corporately, to create products and solve problems that are relevant to the societies in which they live”(Gardner, 1983, 1993, 1999, 2006b,2006c).

1.7.1 The Background of Multiple Intelligences

The research that resulted in the MI theory was the Project Zero Program conducted at Harvard University. It studied the cases with various mental abilities: normal individuals, gifted individuals, idiot savants, mentally disabled, and brain-damaged (Gardner, 1983). The aim of the study was to determine the mechanism of the mind, to question the existence of a single intelligence and to investigate the possibility of several specialised intelligences, (Gardner, 1983). Gardner documented the existence of seven different intelligences: spatial/visual, verbal-linguistic, logical-mathematical, bodily-kinaesthetic, musical/ rhythmic, intrapersonal, and interpersonal; each has a relation with a particular part of the brain (Gardner, 1983).Until the 1990s; Gardner discovered an eighth intelligence, the naturalistic intelligence (Gardner, 2003). Moreover, he aims to add a ninth one, the existential intelligence after more data has been collected and analysed (Gardner, 2009).

Throughout the Project Zero, Gardner concluded, starting from case studies of individuals who had certain types of brain damage, that while one area of the brain was not functioning normally, another area was not damaged i.e. even though a person may not have any of one particular intelligence, they may have another intelligence which is still functioning in another part of the brain (Gardner, 2005).Thus, Gardner believed the Piagetian (Piaget, 1970) view of intellect was faulty. More specifically, Gardner (1999) stated:

“In most cases, however, strengths are distributed in a skewed fashion. For instance, a person may be skilled in acquiring foreign languages, yet be unable to find her way around an unfamiliar environment or learn a new song or figure out who occupies a position of power in a crowd of strangers. Likewise, weakness in learning foreign languages does not predict either success or failure with most other cognitive tasks.” (p.31)

People possess different intelligences and strengths but they may be neglected or unappreciated by the surrounding environment. Freeman (2000), states that although everyone possesses these intelligences, they are not equally developed (p.170).

1.7.2 Types of Intelligences

In 1983, Gardner grouped the human intelligences into only seven intelligences, then in 1997 he added an eighth one (Carolyn 2001). In the next two years, Gardner discussed the possibility of adding a ninth intelligence (Armstrong 2000) as follows:

The following table summarizes all types of intelligences and their description.

Table 3: Gardner's Eight Intelligences

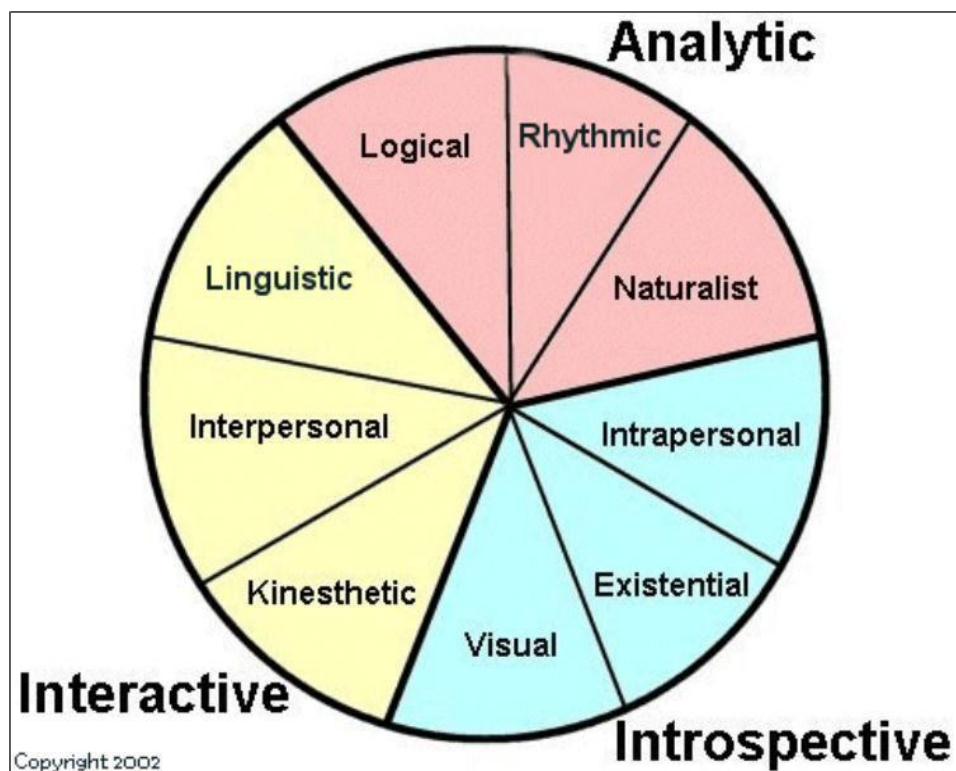
Intelligences	Description
Verbal/Linguistic	An ability to analyse information and create products involving oral and written language such as speeches, books, and memos.
Logical/Mathematical	An ability to develop equations and proofs, make calculations, and solve abstract problems.
Spatial/ Visual	An ability to recognize and manipulate large-scale and fine-grained spatial images.
Musical	An ability to produce, remember, and make meaning of different patterns of sound.
Naturalist	An ability to identify and distinguish among different types of plants, animals, and weather formations that are found in the natural world.
Bodily-Kinaesthetic	An ability to use one's own body to create products or solve problems.
Interpersonal	An ability to recognize and understand other people's mood desires, motivations, and intentions
Intrapersonal	An ability to recognize and understand his or her own moods, desires, motivations, and intentions

(Davis, Christodoulou, Seider & Gardner, nd., p.6)

1.7.3 MI Domains

According to McKenzie (2002), “Multiple intelligences consist of three domains: the analytical, introspective and interactive domains. The three are organizers for understanding the relationship of the intelligences and how the intelligences work with one another. Teachers can plan lessons and units which effectively address all of the intelligences in the classroom” (as cited in Razmjoo, 2008, p.156). The following figures illustrate the different domains of intelligences (See **Figure1.1**, **Figure1.2**, **Figure1.3**).

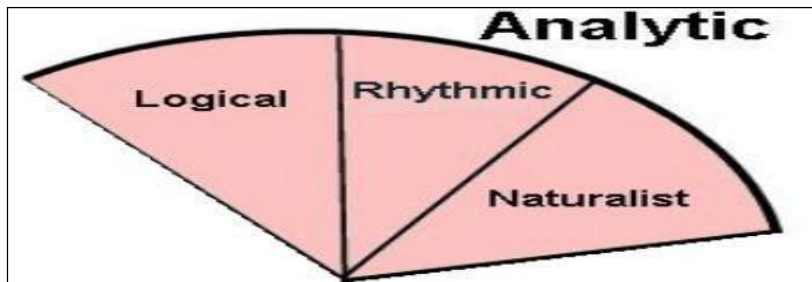
Figure 1: Multiple Intelligences Domains



(Razmjoo, 2008 p.156)

1.7.3.1 The Analytical Domain

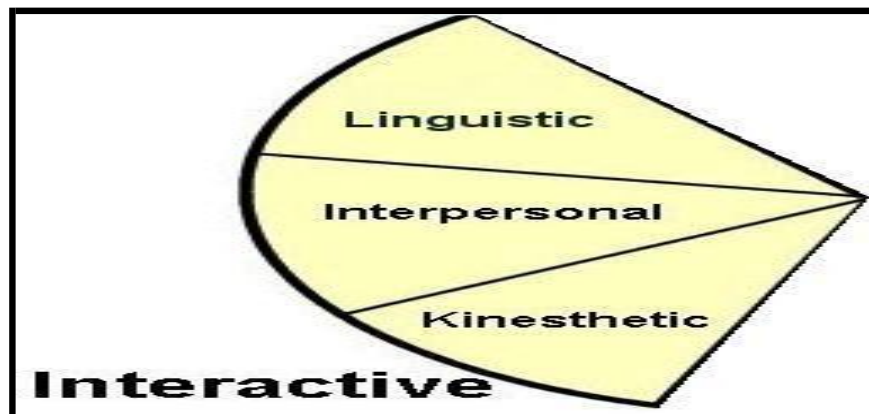
McKenzie (2002) asserts “that the analytical domain consists of the logical, musical and naturalist intelligences. These are the intelligences that endorse analysis of knowledge that is offered to the learner. These three intelligences are considered analytic because they promote the processes of analysing and incorporating data into existing schema, even though they may have other components. The analytical intelligences are by their nature heuristic processes” (as cited in Razmjoo, 2008, p.13).

Figure 1.1 The Analytic Domain

(Razmjoo, 2008 p.157)

1.7.3.2 The Interactive Domain

McKenzie (2002) indicates that “The interactive domain consists of the linguistic, interpersonal and kinaesthetic intelligences. The previously mentioned intelligences are used by the learners in order to identify them and discover their environment. These three kinds of intelligences are categorized as interactive because they both invite and encourage interaction to maintain understanding” (as cited in Razmjoo, 2008, p.157). As stated by McKenzie (2002) “Even if a student completes a task individually, s/he must consider others through the way s/he writes, creates, constructs and makes conclusion. The interactive intelligences are by their nature social processes.” (Ibid)

Figure 1.2 The Interactive Domain

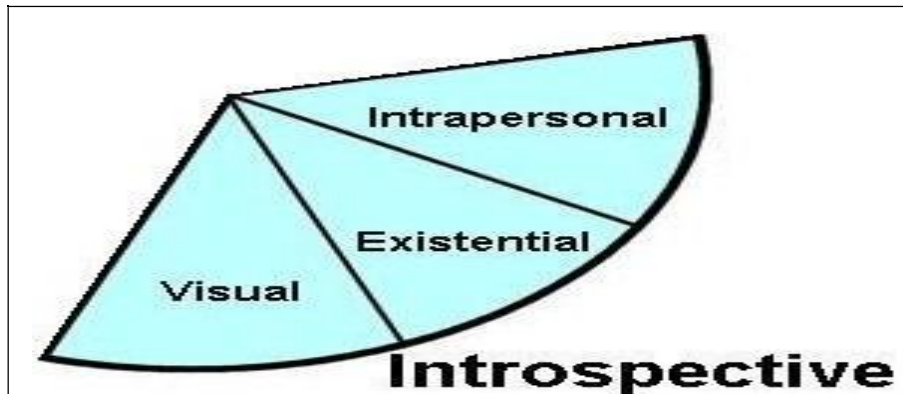
(Razmjoo, 2008 p.157)

1.7.3.3 The Introspective Domain

According to McKenzie (2002), “The introspective domain consists of existential, intrapersonal, and visual intelligences. These types of intelligences have a specifically affective element to them. These intelligences are characterized as introspective because they require a looking inward by the learner, an emotive connection to their own

experiences and beliefs in order to make sense of new learning (as cited in Razmjoo, 2008, p.158).The previously mentioned section indicates that intelligence comprises diverse constructs supporting the idea of Gardner and his colleagues that there are different types of intelligences(Ibid).

Figure 1.3 The Introspective Domain



(Razmjoo, 2008 p.158)

1.8 Criticism on MI Theory

Many educators and scientists criticized Gardner's theory as being an imperfect method for teaching. The following are some (as cited in Davis,K.Christodoulou, J.Seider,S.& Gardner.H,n.d,p.9-12):

- Nikolva (2007) upholds that teachers who use MI theory may not be able to provide all resources; he adds that there is a possibility of encountering overcrowded classrooms which may be inappropriate for applying such theory.
- Fogarty (2005) claims that it is impossible and impractical for a teacher to prepare all their lessons according to all the learning styles found within the classroom. Fogarty adds that it is also difficult to classify and compare learners' abilities.
- Waterhouse (2006a) asserts that it is necessary to have adequate empirical evidence before applying a theory into a classroom
- Waterhouse (2006b) further questioned the validity of Gardner's theory and the existence of the seven intelligences.

Eisner (2003) states that using MI in the classroom neglects the importance of standardization, rather praises student individuality because students are taught using different curriculum and assessed using methods other than a standardized test.

1.9 MI Theory and Education

As Christison (1999) suggests, language educators should be familiarized with the theory of MI to exhibit the way MI is used in lesson planning, language learning tasks, and assessment (as cited in Zari,A. & Afshar,N.n,d,p.24).As a support for this argument, Xie and Lin (2009) conducted a study to sightsee whether implementing MI teaching is better than the traditional teaching. The results showed that the experimental group learners receiving MI instruction learned faster and better than the control group learners(Ibid).Moreover, Green and Tanner (2005) declare that applying MI theory in the classroom might seem challenging, yet participants can find the learning more enjoyable, more personally relevant and more motivating. It is worth mentioning that applying MI in the classroom elicits the students' confidence to progress in areas in which they are not strong. When instruction includes a range of meaningful and appropriate methods, activities, and assessments; this helps to address students 'multiple learning preferences (as cited in Zari,A.&Afshar,N.n,d,p.24).The teacher can then target those specific intelligences and teach new materials using those intelligence strengths.

In order for a teacher to implement the theory of MI in their classroom, they must at first understand the nine intelligences so they will be able to identify the intelligence strengths of their students. According to Armstrong (1995), the first step in using multiple intelligences theory is to determine the educator's own multiple intelligence profile. He adds that as educators learn more about their own profile, they will become more confident in the choices they make that affect their teaching. The types of learning activities educators choose as teachers are directly related to their experiences, which in turn affect the multiple intelligences profile of their students. Gardner's multiple intelligences theory can be used for curriculum development, planning instruction, selection of course activities, and related assessment strategies. MI theory can be used in the teaching of a chosen course.(Ibid)

To show the importance of multiple intelligence theory in language teaching, Richards and Rodgers (2001) argue that "MI is richest in proposals for lesson organization and planning"(Ibid). Similarly, Viens (1999) holds that "MI application provides a range of

activities in the classroom to ensure learners the opportunity to develop and enhance abilities in a range of intelligence areas” (Ibid)

Gardner (2006) presents two suggestions for how can an educator discover in which intelligence(s) each student’s strengths lies in order to create the appropriate MI classroom: “Take them on outings to a children’s museum or to some other setting that provides a rich experience, like a playground with many kinds of games and watch them carefully”(p.84). He adds “Second, give a short questionnaire about their strengths to the students and their parents and if possible their teachers from the previous year”(p.84).

Linda Campbell, the author of *Teaching & Learning through Multiple Intelligences* describes the following five approaches to adding Multiple Intelligences into the classroom:

- 1. Lesson design:** This might involve team teaching (teachers focusing on their own intelligence strengths). Teachers can include all or some of the intelligences in their lessons, or ask student about how they like to be taught.
- 2. Interdisciplinary units:** Secondary schools often include inter-disciplinary units on certain topics.
- 3. Student projects:** Students can be involved in complex projects management; they can be responsible and innovative.
- 4. Assessments:** Students can be involved in the assessment phase by giving them the right to choose how they would be assessed while meeting the teacher's criteria for quality; this way they can show what they have learned.
- 5. Apprenticeships:** this helps students master a valued skill gradually, with effort and discipline over time. According to Guignon (2004), Gardner assumes that it is favoured to keep the one-third of a student's schooling experience for apprenticeships.

Many studies have been conducted to investigate the impact of using MI on various features of second and foreign language learning. Studies have maintained that teaching using MI has many benefits, including (as cited in Gangi, 2001, p.33):

- Achieving students’ learning needs and engaging students to enable them attain higher achievement.
- Promoting the different ways in which learners respond intelligently. In respect of this, Eisner (2003) privileges MI for acknowledging differences; he believes that supporting these dissimilarities would be of extraordinary importance.

- Broadening the vision of education. Since students learn in different ways due to different kinds of intelligence, teachers would have different ways of teaching rather than one.
- Allowing students to understand how they are intelligent.

According to Eisner (2003), Gardner's contributions to education are worth celebrating in that the MI theory offers teachers much to think about in how to teach students.

2. Reading

This second part sheds some light on one of the four fundamental language skills which is reading. This part offers the definition of reading from different points of views; also it deals with types of reading and other issues. In addition, this part encompasses some difficulties that English learners face in the reading comprehension task. The current part ends with some helpful implications for teaching reading to EFL learners.

2.1 Definition of Reading

Many definitions were given to reading, but none of them contradicted the other. Reading was defined as "...a visual and cognitive process to extract meaning from writing by understanding the written text, processing information, and relating it to exciting experience" (Millrood, 2001, p.117). Another definition was that reading is the practice of creating meaning from written texts. It is a complex skill requiring the coordination of a number of interrelated sources of information (Anderson et al, 1985). Whereas Wixon ,Peters,Weber and Roeber (1987) define reading as "the process of constructing meaning through the dynamic interaction among (1) the reader's existing knowledge;(2) the conformation suggested by the text being read; and (3) the context of the reading situation" (as cited in Michigan,1980,p.13). we may conclude that reading is not just a passive process, it is a complex cognitive process in which there is the use of the eyes to receive written symbols(letters ,punctuation marks and spaces) and the use of the brain to convert them into words, sentences and paragraphs that communicate something.

2.2 Types of Reading

2.2.1 Intensive and Extensive Reading

Brown (1989) explains that intensive reading "calls attention to grammatical forms, discourse markers, and other surface structure details for the purpose of understanding literal meaning, implications, rhetorical relationships, and the like" (as cited in Maiji

MacLeod, p.1). He draws an analogy to intensive reading as a "zoom lens" strategy such type of reading is used to look for specific details in the text. This type of reading gave the students the ability to choose the text they want to read in attempt to enlarge their vocabulary and enrich their knowledge.

However, extensive reading as Long and Richards (1971) identify is "occurring when students read large amounts of high interest material, usually out of class, concentrating on meaning, "reading for gist" and skipping unknown words"(Ibid). Such type of reading used for the comprehension of the main idea. Extensive reading aimed to build students' enjoyment and confident.

2.2.2 Skimming

Skimming is a common technique in reading comprehension. It is the strategy of reading a document quickly, searching for key words and phrases in order to get the gist of the text. This type of reading helps the students to have an overview of the whole text which will contribute to their understanding when they read the text in details (Keating, 2011, p.1).

2.2.3 Scanning

Harmer (1991) "scanning is the ability of students to read a text for particular bits of information they are searching for" (p.138); i.e. scanning is a technique used when the learner is reading in order to find out specific information. Therefore, learners do not have to deal with every detail in the text. When scanning, learners try to locate particular information by moving their eyes over the text rapidly, and then get the required information to complete a given task.

2.2.4 Word by Word Reading

The process of word by word reading refers to the breaks that a reader makes after each word he reads. Mattingly (1979) mentioned that this sort of reading will not maintain the minimum rate of intelligibility even if each word is read and understood correctly (ascited in Nofal 2003, p.37).

2.2.5 Reading Aloud

Davies and whitney (1985) describe reading aloud as a particular necessity and a very important skill on foreign language learning classroom, (p.71). Such type of reading creates motivation as all students like to read allowed to show their ability of reading.

2.2.6 Silent Reading

As defined by Haboush (2010), Silent reading is reading without pronouncing words out loud. It is reading to oneself. Reading silently helps students to improve their understanding because it makes them concentrate on what they are reading, rather than the pronunciation of individual words. Reading loudly inside the classroom helps students to read faster and to ignore unnecessary words and thus moving quickly to the information needed.

2.2.7 Top down and Bottom up Reading

Harmer (2001) illustrated the difference between both types using clear example; top down reading is much similar to looking down on a forest from a plane or a lookout on a mountain; on the other hand, bottom up is much similar to one's studying individual trees within the forest as he is in the middle of it. In other words, bottom up focuses on minimal information such as sounds, words, phrases and then gather them all to have an overall picture of the text, while top down focuses on the overall picture. Choosing which type to use is a matter of the reader and their purpose for reading, though top down is said to be more effective (p.101).

2.2.8 Critical Reading

Critical reading is the process of reading that goes beyond just understanding a text means that the reader uses certain processes, models, question, and theories that result in enhancing clarity and comprehension. According to Harmer (2001) Critical reading is to read for critical analysis in order to judge the truth of some information in the text (p.118).

2.3 Reading Comprehension

Crellet (1995,p3) and Lenz (2005,p.1) stated that comprehension is the ability to construct meaning from a text through decoding the writers' word and using previous knowledge about the target text in order to expand and modify one's understanding and knowledge. In short, reading comprehension is the ability to read a text, process it and understand its meaning.

2.4 Reading Comprehension Skills

Mikulecky (1986) assumes that "reading is a conscious and unconscious thinking process .the reader applies many strategies to reconstruct the meaning that the author is assumed to have intended" (p.2). Therefore readers must develop these skills in order to

help them comprehend what they read and improve their reading. Here are some reading comprehension skills stated by Haboush (2010, p 25-33):

1. **Knowing the meaning of words through context:** reader should be able to recognize the meaning of the words from the context.
2. **Prediction:** according to Grellet (1995) prediction refers to “the faculty of predicting or guessing what is to come next ,making use of grammatical ,logical and cultural clues”(p.17). Prediction is thus thinking of what will come next and also thinking of what the written passage is about.
3. **Sequencing:** it is the ability to know in which order certain events happens .It is the skill by which the reader will be able to make decisions about relationships in the text.
4. **Summarizing:** according to Pearson Education Incorporation (2009a),”summarizing refers to the reader’s ability to put a written or spoken text in a shorted version using his own way “ (p.1 of 2).This skill ensures that the reader understands the text.
5. **Note-taking:** Hennings (1982) stated that “having difficulty in memorizing and recalling the main ideas and important details, students should be trained and taught how to take notes”(p.3). Note- taking plays a major role to construct the reader’s overall understanding of the text being read.

2.5 The Process of Reading

Gray (1948) pointed out that there are four steps taking place in reading process: “perception, comprehension, reaction and integration” (as cited in Zintz, 1975, p.8).

Perception is the ability to say words in a meaningful unit, while comprehension is being able to use the context in order to construct “useful ideas”. Reaction is the reader’s own interpretation, point of view and judgment about what an author writes. Last and not least, integration refers to the ability to incorporate the information, idea or notion into the reader’s background of experience so that it becomes useful to him, (Ibid).

2.6 Difficulties in EFL Reading

According to Wahiba Babaiba Medjahdi (2014), Reading skills has an important role in language acquisition/learning; it is observed that EFL learners face a significant number of difficulties which prevent them to perform the reading task. In fact, students suffer mainly from understanding vocabulary. Thus, they might have some difficulties with

words that have similar forms because some words seem to be phonetically the same (in terms of sounds) as in “boss” and “bus”. Other words seem to be similar at the level of morphology like the words “receptive” and “deceptive”. Though they already know both of them, still they might mix between the meanings of pairs of words because they seem to be the same. Another difficulty may occur is the existence of various meaning within the same word for example the word “present” that can mean “gift” and “the act of existing”. The problem with such categories is that the learner knows only one meaning lead him to a wrong understanding of the whole sentence. Also the idioms and proverbs said to be another category of difficulty because these idioms and proverbs are different from the learner’s culture; so that he is going to translate a given proverb word by word, therefore he cannot obtain the real meaning but rather the literary one; for example: “he kicked the bucket” which means “he died” may translate it word by word and cannot gain the right meaning. Moreover, insufficient vocabulary leads to many obstacles in reading comprehension since lexis has a very important role for a successful reading. Thus having a large vocabulary will absolutely end up any problem in understanding the whole text (P.16-17).

As suggested by Whiba Babaiba Medjahdi,(2014), the following are some practical remedial recommendations for both teacher and learners for the sake of better reading comprehension skills (p.37-38):

For the teacher:

- a. The teacher should help the students to recognize their reading purposes first.
- b. The teacher should provide his students with appropriate teaching strategies depending on learning styles and learners’ needs.
- c. Students should be provided with the suitable reading materials taking into account their interest and proficiency level.

For the learners:

For a better understanding and comprehension while reading, an EFL learner has to broaden his vocabulary amount. Learners can develop the vocabulary knowledge through increasing the reading habit and extensive reading; learners have to regard reading as a long-life process.

Another point is that students must have learned how to acquire words that they have never come across before. According to (Nagy et.all,1994), “skilled readers depend not just on knowing a larger number of words, but also on being able to deal effectively with new ones”(as cited in Medjahdi,2014,p.38).

2.7 Teaching Reading Comprehension

Teaching reading comprehension is not that easy task to be achieved, but rather a very demanding and challenging task as well as a very difficult one. Therefore to maintain success teacher should be aware of the various steps in order to achieve reading comprehension. As mentioned by Medjahdi (2014), Here are some suggested steps to make the reading comprehension successful,(p38-44):

2.7.1 Pre-reading Stage

Pre-reading stage is the starting point in the reading process in which the topic and the type of the text are introduced. In this phase teacher can use a variety of techniques in order to make the reading activity easier:

- a. Using picture or any visual aid that help the learner to make prediction.
- b. Ask questions related to the topic.
- c. Prepare the learners for the content of the text.
- d. Think of some of the vocabulary items that will appear in the text.

The well preparation of this phase will ensure the students both the understanding of the topic and the motivation. This stage seeks to:

- a. Improve the interest of the students in the topic.
- b. Prepare them for the content.
- c. Lead them to make prediction\guessing for the reading passage.

2.7.2 While-reading Stage

The while-reading stage or simply the reading stage is the stage where the students are asked to read the text or the passage silently, and the teacher serves as a guide. This stage tends to:

- a. Develop the student's comprehension of the writer's purpose.
- b. Develop the student's linguistic knowledge.
- c. Teach the students how to skim and scan.

2.7.3 Post-reading Stage

Is the final in which the teacher evaluates the outcome of his students and see whether the objectives cited have been obtained. In this phase the teacher can ask students to summarize in writing what they have read, discuss or debate over certain issues latent in the reading text in order to integrate reading to other language skills.

3. MI Theory and Teaching Reading

MI theory may have implications for reading comprehension and vocabulary learning. On the one hand, for the reading comprehension, Gaines and Lehmann (2002) showed that implementing MI theory developed learners' reading comprehension and boosted their academic achievements. In another study, Owolabi and Okebukola (2009) showed learners' interaction with ideas presented in MI classrooms regarding reading comprehension is enhanced (as cited Zari, A. Afshar, N. n, d, p. 26).

On the other hand, for the vocabulary learning, the learners' vocabulary knowledge can be improved by visual techniques, verbal explanation, and linguistic mnemonics. In visualization, learners can match pictures with the words they need to learn. Verbal-explanation is a method used to show the meaning of abstract words. In MI classrooms, teachers use examples, situations, synonyms, antonyms and definitions (Ibid).

3.1 Studies that Used MI in Reading

Abdulkader, Gurdogdo and Eissa (2009). Their study took about two months, the aim behind their research is to investigate MI-based program in order to enhance word recognition and reading comprehension skills. The target population was 60 fifth grade students studying at Kafar El Sheik Governorate in Egypt. The researchers focus on the following reading comprehension skills: guessing the meaning of the words from the context, grammar skills, prediction, reasoning and inferences. The subject was chosen randomly and was divided into two groups, in each group 30 subjects mixed of both genders (boys and girls). One of the groups was an experimental group while the other was the controlling group. Before implanting the program, both groups were to be equal at the level of age, IQ, word recognition skills and reading comprehension skills. The pre-test and the post-test were the same in order to evaluate any possible differences in both groups. The results confirmed that the experimental group made a good achievement in the word recognition and in the test of reading comprehension. Therefore, the usage of MI was recommended in both educations generally and in reading comprehension and word recognition precisely. (as cited in Haboush, 2010, p. 60)

Chen (2004) the researcher's objective was to examine the effect of using MI theory in large computer-assisted EFL classes on students' general abilities in the four

skills. The problem with these large classes was that they were teacher-centered therefore the study also intended at changing the teaching learning process from a teacher-centered into more learner-centered. This study used 100 EFL Taiwanese university students divided into two classes 50 each. Those classes were divided into seven groups where each adopted specific intelligences. The samples were asked to use multimedia to perform some activities such as role-plays, conversations, a presentation of any topic they like and describing photos of one another. The data collection took time in the midterm exam using a reading comprehension exam and classroom observation which after all they were analyzed. The results attested that integrating MI proved to be effective to support student-centered learning. Obviously, progress in the four skills was observed and documented (as cited in Haboush, 2010, p.62)

Uhlir(2003), a study of 16 weeks aimed to enhance students' academic reading achievements using MI theory. The subjects of her study were fifth grade class of 26 students. The instruments used in this study were students' survey, assessments, classroom observation and checklist through which some issues were diagnosed such as: lack of motivation, lack of strategic reading and low achievements in tests. The central focus of the researcher was on the following reading skills: skimming for general understanding, inferences, drawing conclusions, comparing\contrasting, cause\effect, and sequence. After implementing the MI theory the post-test were compared to the pre-test, classroom observation and students' survey were analyzed. Despite the fact that there was a little improvement in students' achievements on reading skill test, significant and remarkable motivation was also noticed through students cooperative learning (as cited in Haboush, 2010, p.63)

Conclusion

The focal points discussed in this chapter were the two variables Intelligence and reading comprehension that are the main concern of this study. Intelligence is generally considered to master the top of a hierarchy of more precise abilities that all related to each other. Many psychologists try to define the word intelligence but there is no accurate and precise definition but generally it is suggested as the general ability that account for the variation for many specific abilities which are measured by the IQ test. the IQ test places both the logical-mathematical intelligence and linguistic intelligence on a crucial position that is to say the test questions target only these two intelligences with the onset of MI theory other types of intelligences were introduced by Howard Gardner in 1983 how suggests that people perceive the world differently this sheds light on individual differences and learning style. Eventually, such a theory give hand to both teachers and learners to better understand, which the aim of this study is. Besides, intelligences, reading is an important process of any language, reading must be seen as an active process. To improve reading comprehension it is required to use the MI theory.

CHAPTER 2

Methodology, Data Analysis and Pedagogical Implications

Introduction	32
1. Methodology and Procedures	
1.1. Research Design	32
1.2. Research Setting and Participants.....	33
1.2.1 Research Setting.....	33
1.2.2 Sample of the Study.....	33
1.3 Research Tools.....	34
1.3.1 HGMI-Test.....	34
1.3.2 TOEFL RCT Tests.....	34
1.3.3 MI-BASED Training Programme.....	34
1.3.3.1 Sample of an MI-based lesson plan.....	35
1.3.4 Participants' Commentaries.....	36
1.4 The Pilot Study.....	37
1.5 Statistical Tools.....	38
1.6 Procedures.....	39
2. Data Analysis and Discussion	
2.1 Data Analysis for Research Question One.....	40
2.2 Data Analysis for Research Question Two.....	42
2.2.1 The Participants Pre-test Achievements.....	42
2.2.2 The Participants Post-test Achievements.....	43
2.2.3 T-test for the Pre and Post tests scores.....	44
2.2.4 Pearson Correlation between the Intelligence Type and Reading	
2.2.5 Comprehension.....	45
2.3 Summary of the results.....	46
3. Pedagogical Implication	
3.1 Implications for Visual Learners.....	47
3.2 Implications for Bodily/Kinesthetic.....	48
3.3 Implications for Interpersonal Learners.....	48
3.4 Implications for Logical/ Mathematical Learners.....	49
3.5 Implications for Musical Learners.....	50
3.6 Implications for Intrapersonal Learners.....	50
3.7 Implications for Naturalist Learner.....	51
3.8 Implications for Verbal/ Linguistic Learners.....	51
3.9 Recommendations for further studies.....	52
Conclusion	52

Introduction

The previous chapter tackled the literature review of the multiple intelligences theory and the reading comprehension skill. Hence setting the ground for the second chapter that is dedicated for the practical part of the study. Chapter two describes the research design, the sample, the tools and the procedures the research has gone through, in addition to the data analysis, discussion of results obtained and pedagogical implications. This chapter is constituted of three sections. The first section provides a full description of the methodology and procedures of the study. Primarily, it supplies the explanation of the overall research design. Thereafter, the pilot study, the sample, the setting and the research tools. Finally, this is followed by the data description and procedures of data collection. Whereas, the second section deals with data analysis and discussion of the two research questions separately. To provide an answer to the research questions, a set of statistical procedures and analysis for each is fulfilled. Moreover, it tackles the summary of the results. The third section is dedicated to the pedagogical implications and suggestions for each type of intelligence as well it includes recommendations for further studies.

1. Methodology and Procedures

The aim of this research is to study how using MI theory based activities can enhance English reading comprehension for EFL learners. Furthermore, to highlight the significance of integrating activities based on Gardner's eight intelligences to improve the teaching methods of reading comprehension,. To achieve this purpose a certain methodological decisions were taken concerning the research methodology, research design and setting to be followed and the sample to be selected that are explained in part one.

1.1 Research Design

This study followed a one group quasi- experimental approach of research in order to find out the influence of MI-based training programme on the first year secondary school EFL learners' reading comprehension. Learners of the sample chosen will learn according to their intelligence profiles and learning preferences and styles.

One first step to experimental designs is to identify the variables; thus, the present design includes two variables: an independent and a dependent. In this respect, the participants' multiple intelligences were the independent variable, while the students reading scores are the dependent variable. To identify the participants' intelligences

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

profiles, the HGMI test was the tool (**See appendix 1**). Additionally, pre and post TOEFL tests were used to measure any progress at the level of the participants reading comprehension (**See appendices 2 & 4**).

Since this quasi-experimental study is a one group pre and post test design, the sample will firstly take HGMI- Test in order to identify the learners' intelligences profiles. This test demonstrates the participant's profile of intelligence and which intelligence(s) is/are the preferred and dominant and which are uncharacteristic. This test goes hand in hand with a diagnostic TOEFL RCT that serves as a pre-test for the experiment. After that; the participants will be integrated into an MI-based training programme in which MI-based reading comprehension activities are to be taught. This step will serve as the treatments phase. Finally, a post-test (practice TOEFL RCT) is administered in order to test whether the MI theory actually improves the reading comprehension ability of the participants of this study.

1.2 Research Setting and Participants

1.2.1 Research Setting

This research took place in a Chikh Omar EL-Mokhtar secondary school that is situated in the district of Ain El-Hadjel, state of M'sila. This study was conducted during the academic year 2017/2018. It lasted for six months (October-March) including nearly twenty four sessions.

1.2.2 Sample of the Study

The population of the study is large to study accessibly, for that the study is limited to one sample drawn from it. The participants in this study were 30 secondary school students taken from the first year students at Chikh Omar EL-Mokhtar secondary school. The sample is of an age average between 15 to 17 years old. This population was chosen for their willingness and interest for reading comprehension in English language and their desire for changing the traditional method of teaching such skill. Additionally, their performance in English proved to be suitable for the study tests and lessons.

1.3 Research Tools

For any research, data collection instruments and tools are necessarily needed in order to achieve the aim of the research. Regarding the present research, the instruments used to reach the intended objective are the HGMI-test (See appendix 1); Diagnostic TOEFL RCT (See appendix 2), MI- based training programme (See appendix 3), and Practice TOEFL RCT (See appendix 4).

1.3.1 HGMI-Test

HGMI-test was adapted from (achieve- goal setting success.com, 2007). It is composed of 102 questions, 12 questions targeted each intelligence type except for the Existential Intelligence that had 6 questions. The participants answer by “y” besides each sentence they feel it is relevant to them; and “n” besides each sentence that is irrelevant. This tool is used for the purpose of identifying the dominant intelligences in the sample chosen. This will help in designing the treatment lessons. The researcher helped in translation and clarification of sentences presented while conducting the test.

1.3.2 TOEFL RCT Tests

The TOEFL test is the most widely used English language test in the world. This test can be used to measure learners’ ability of English Language Proficiency in reading, listening, and writing. The diagnostic/ practice TOEFL RCTs were chosen from Paterson’ Master TOEFL Reading skills book (Paterson’s, a Nelnet company, 2007, p19/p109) written by Paterson’s, provider of education information and advice. The tests were adapted by the researcher taking only the first two passages of the test. Each passage is followed by 10 questions about it. The candidates choose the best answer (A), (B) (C), or (D) to each question. In sum, 20 questions were answered by each individual per test.

1.3.3 MI-BASED Training Programme

The research main concern is to apply the MI-based training programme in a real classroom situation. Our training programme lasted for two school terms (around six months) including nearly twenty four sessions. Each session targeted certain types of intelligences that evoked the participation of the students more interestingly than the traditional way; this was evaluated by a set of observer teachers who attended the sessions. The lessons introduced were designed by the researcher according to the participants’

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

intelligences profiles previously identified using the HGMI adopted from (Chandler, B .M, (ED.), Mccleish, D,B S. Comprehension strategies and multiple intelligence). The lessons targeted different reading strategies and simultaneously different intelligences. Each lesson included activities that targeted different types of intelligence for the purpose of involving the maximum of students into an active atmosphere. The materials used varied according to the topic of the text like: pictures, audio files, flashcards, handouts, games, ppt slides, videos...etc. A sample is presented below in order to clarify more.

1.3.3.1 Sample of an MI-based lesson plan

The lesson was performed on 25/02/2018. Its objective was to teach student how to interpret and use information from a text to do a task; the present task was to analyse a picture. It targeted all the intelligences (except for the existential intelligence).

At the beginning of the lesson students were asked to solve a riddle figuring out that it was: a person in a painting or a photograph. This helped in increasing prediction ability. By solving such a riddle in pairs, the students were using their interpersonal and verbal/linguistic intelligence. The second step was the guided imagery. The Intelligences aimed at were: the spatial/visual and the musical. Students were asked to close their eyes and the teacher read a text describing a picture, listening to a calm music simultaneously. The objective was to help them imagine the picture. Most of the students were excited to accomplish the activity .The music helped them strongly to have a clear image in their minds.

After that, the third step was filling in the missing words. The students were asked to work in two groups. The first group dealt with the first paragraph and the second with the second paragraph. Each student was given a piece of paper in which the paragraph contained some different missing words. The students of the first groups had to cooperate together to complete the first paragraph, and the students of the second group had to cooperate to complete the second group, lastly the two groups had to cooperate together to complete the whole text. This step tended to raise both interpersonal\verbal-linguistic intelligences. It was observed that the first group were reading one by one, and whenever there is a missing word the other one supplied it. The second group were a bit slower using a different strategy copying the answers of each other.

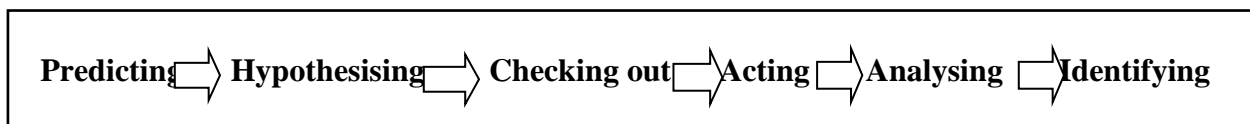
CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

Now, after reading the text and understanding every detail of the picture, the students were asked to create a tableau of the picture they imagined and read about. The students were motivated to do this activity since it targets the bodily-kinaesthetic intelligence. They expressed feeling of like for moving during the session rather than sitting and receiving information all the time; it is more active according to them. The students portrayed the picture with very few differences in comparison with the real one. They paid attention to every detail even the tree behind the father, and the glasses of the grandmother and the father.

After that, they were given the real picture and asked to find five things about it that differ from their tableau or from what they have imagined the picture to look like. The latter is an activity of logical/mathematical intelligence. What was next is to identify the tree in the picture where students were to use their naturalistic intelligence.

The last step was Reflection; the students were asked to tell if they have learned anything new about the target language. Most of their answers were that it was better to analyse a picture this way for they understood it better caring for all the details. They classified the process of analysing a picture as the following:

Figure 2: The Process of Analysing a Picture



1.3.4 Participants' Commentaries

At the end of each training lesson, students were asked to comment about the lesson orally first then by filling a checklist (See appendix 5). Participants commented orally each time on the way the lesson was performed, the things they felt were missing, and gave their additional suggestions for the coming lessons. They also filled the checklists that were continuously checked by the researcher to evaluate the lessons introduced helping in designing better lessons. Participants preferred bodily-kinaesthetic activities the most as mentioned in their checklists. They gave remarks on their desire for an out-classroom sessions as well as for more class discussion.

Most of their commentaries were that they admired the way the lessons were introduced. They have mentioned that the sessions involved the learners' participation

which made them more active. They also mentioned that this method helped them more to save time in understanding the texts. Moreover, they added that the activities introduced made them more motivated and excited, and that they were much more enjoyable than the traditional method of teaching reading comprehension. The most notable commentary about the lessons was that it made them more interested in reading comprehension.

1.4 The Pilot Study

“A well-planned pilot study provides thorough understanding of measures involved in a study” (Brown 1988) .The Pilot study is applied to verify particular data collection method or new techniques in order to offer feedback about the strengths and spotting weaknesses of a particular method.

Before distributing the present study tools: HGMI-Test, TOEFL tests (pre-test / post-test), and applying MI-based programme to the main study sample of first year students. A pilot study was conducted with another sample from Ibrahim Ibn El-Aghlab Tamimi secondary school in M’sila with the same criteria. Students supplied the researchers with information about the difficulty of the tests. They asked for clarifications and translations of some expressions; as well, students were uncomfortable about the duration of the TOEFL tests (25 mn). They have also commented on how much they have enjoyed learning through the variety of activities presented.

Feedback from these students was taken into consideration at the level of:

- **HGMI-test:** translating and explaining the intended meaning from the expressions given. As well, elucidating both the different types of intelligences and the scale this test follows (-12 to 12).
- **TOEFL RCT (Pre/Post):** adding a longer time bound, and shorten the length of both the passages and the questions by choosing only the first two passages (See appendix 2) P 109, P111 and their 20 questions (10 questions for each passage). Other suggestions concerned the clarifications and translations of difficult vocabulary.
- **Treatment:** involving more bodily kinaesthetic activities as opposed to the traditional teaching method to avoid dull lessons.

1.5 Statistical Tools

The used statistical tools in this study are the frequencies, the sample mean (\bar{x}), and the standard deviation to describe the scores. To test the difference between the pre and post-test performance of the participants, the T- test was used. Finally Pearson correlation Coefficient was used to analyze correlation between the type of intelligence and the success in the reading comprehension activities. All statistical operations were conducted by using SPSS, version20 for Microsoft. To clarify things, the following definitions can illustrates these terms:

- The mean \bar{x} is the simple average of the number in a data set. The sample mean formula is:

$$\bar{x} = (\sum x_i) / n$$

Σ = means “add up”

x_i = “all of the x-values”

n = means “the number of items in the sample”

- The word deviation means how far from the normal the number is. The term Standard deviation refers to the measure which is used to quantify the amount variation or how spreads out numbers are.
- The Pearson Correlation coefficient is is a measure of the linear correlation between two variables X and Y

$$r = \frac{\sum_{i=1}^n ((x_i - \bar{x})(y_i - \bar{y}))}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$

n =is the sample size

x_i, y_i = are the single samples indexed with i

- The T-test, or also called Student’s T-test, compares two averages (means) and tells you if they are different from each other. The T-test also tells how significant the differences are. For this study the one group pre and post-test T-test formula was used which is as follows:

$$T = \frac{\bar{d}}{SE(d)}$$

\bar{d} =the mean of the difference between the two observations

$SE(d)$ =standard error of the mean difference

1.6 Procedures

In the first step, a pilot study was conducted to detect any possible problem that participants might encounter in the main study. The main phase of the study began with the administration of the HGMI test that identified the participants' intelligence profiles. Afterwards, the TOEFL RCT was conducted. All necessary instructions have been given to them. The time allotted to the test was 60 minutes. After scoring the answer sheets, the mean and the standard deviation of the pre-test were calculated for a later comparison with the post-test scores. Subsequently, the treatment was applied including a variety of MI-based activities that targeted all the intelligences present within the sample; this could help to increase the participation and involvement of the students during the sessions. Finally, another TOEFL RCT was administered and scores of the students were taken into consideration to determine the mean and the standard deviation of the post-test. Calculating the t-test was the means used whether to validate or eliminate the hypotheses.

In a nutshell, the present study concentrated on the implementation of the MI-based reading tasks to see their potential effects on EFL learners' reading comprehension. The researchers proceeded to determine the most frequent intelligences of the EFL learners (sample chosen) so as to cater for well-designed tasks to obviate any existing obstacles to ideal reading. Accordingly, by means of a reliable MI profiling test, the dominant intelligences of EFL learners were highlighted. As well, two TEFL RCTs contributed in determining the performance of the participants before and after the treatment applied.

2. Data Analysis and Discussion

This section is devoted for the data analysis and discussion. To determine the effect of MI-based activities on the reading comprehension of first year secondary school students, both qualitative and quantitative data were collected and analyzed. On the one hand, qualitative data consisted of lesson plans, participants' commentaries at the end of each lesson and at end of the study. On the other hand, quantitative data consisted of students grades from both pre and post-tests before and after the MI based training program study (the scores of diagnostic TOEFL RCT, and the scores of practice TOEFL RCT). The data collected was used in statistical operations using the SPSS programme.

2.1 Data Analysis for Research Question One

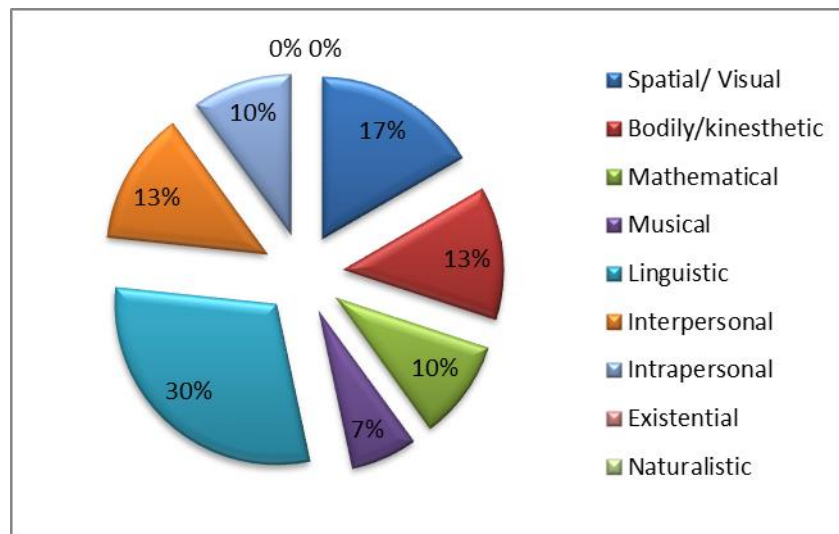
In order to investigate the first research question of the study that is about the most dominant intelligences among the sample of the study, an HGMI intelligence profiling test was conducted. The results for this test are represented in table 4.

Table 4: Students’ Salient Intelligences

Intelligence	Frequency of Intelligences		
	The Strongest	The 2 nd Strongest	The Weakest
1. Verbal/Linguistic	9	2	5
2. Spatial/Visual	5	5	2
3. Bodily/kinaesthetic	4	6	2
4. Interpersonal	4	4	1
5. Intrapersonal	3	3	5
6. Logical/Mathematical	3	3	2
7. Musical	2	2	8
8. Existential	0	3	2
9. Naturalistic	0	2	3

Examining data on table 4 shows that the sample taken (30 students) strongest intelligence was the Verbal/Linguistic intelligence with a frequency count of 9 students. The Spatial/Visual intelligence was the second strongest with a frequency count of 5 students. Simultaneously, the Interpersonal and Bodily Kinesthetic with 4 students per each were classified as the third strongest intelligences. Furthermore, Mathematical and Intrapersonal intelligences were the intelligences preferred for 3 students for each. Meanwhile, only one student showed preference for Musical intelligence. However, students showed weak preference towards the Existential and Naturalistic Intelligences; this may be explained by the absence of care for such intelligences throughout the educational career for the participators. The following graph summarizes the most important intelligences used by the sample of this study.

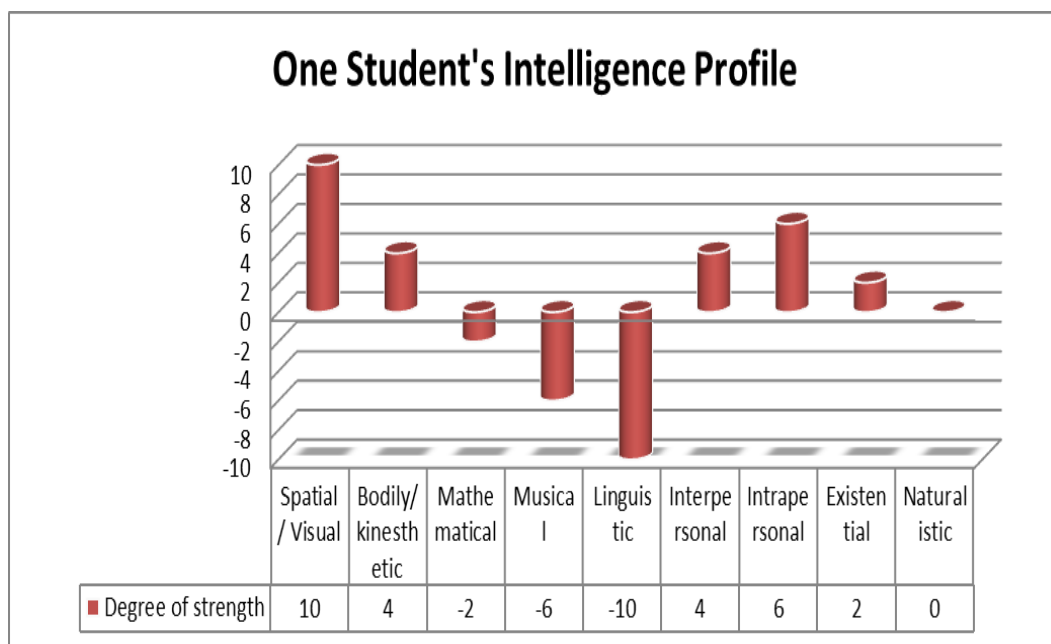
Graph 2: The Participants' dominant Intelligences



Graph 2 shows that the most dominant intelligences for the participants were: Linguistic, spatial/visual, Interpersonal, and Bodily kinaesthetic intelligences.

Intelligences profiles for all participants were prepared in order to understand the learning style and preferences for each learner. The distribution of the MI profile of the participants gives the researcher an idea about the sample chosen. This demonstrates that the sample was well chosen, and approximately all the intelligences are present within the sample. Graph 3 is a representation of an intelligence profile of one participant using the HGMI profiling test.

Graph 3 : One Participant's Intelligence Profile



CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

The intelligences above the line are the strongest. The intelligences under the line are the weakest. Concerning this participant, the strongest intelligence is the Spatial/Visual. Second strongest is the Intrapersonal intelligence. However, the weakest intelligences are: Mathematical, Musical, and Linguistic, whereas the Naturalistic intelligence is within the line which indicates that it is an average strong intelligence. The scale used in this test is (-12 to 12) that means that the strongest intelligence may achieve 12 as a highest score; while the weakest intelligence may achieve -12 as a lowest score.

2.2 Data Analysis for Research Question Two

Regarding the second question of the current study that is about investigating the effect of MI-based activities on the sample EFL learners' reading comprehension, a set of statistical procedures was conducted which are represented flowingly.

2.2.1 The Participants Pre-test Achievements

The results and comments on the achievements of the participants in the pre-test which was TOEFL RCT Diagnostic test adapted from (Paterson' Master TOEFL Reading skills book, 2007, P 19) are demonstrated in table 5 below. The mean and standard deviation have been calculated for the comprehension criteria.

Table 5: The Participants' Pre-test Scores Mean and Standard Deviation

N	Test	Mean	Std. Deviation	Min	Max
30	Pre-test	6,65	4,08	2.00	16.00

The results recorded as shown in table 5 indicate that students' scores in reading comprehension vary between 2 and 16 out of 20 grades. Examining the sample mean value (6.62), indicates a weak performance, and the value of the Std. deviation (4.08) which is small compared to the mean indicates that most of the scores are not widely spread away from the mean value (6.65), indicating that most of the scores are weak. This designates the weak levels among the participants and the presence of difficulties with reading comprehension. This is apparent in the participants' low scores in tests which may be due to the lack of the reading techniques; the students were unable to comprehend difficult words and complex sentences as most of them tend to ask their classmates or the teacher for the meaning, or ignore the difficult words. All of them did not complete answering all pre-test questions and took a very long time in reading the first passage. When they did not

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

understand the general idea of a passage, they skipped answering most of its questions. Moreover, students could not complete answering the 20 questions within the time allotted (1 hour).

Research on EFL reading comprehension skills revealed that the difficulties are faced by many EFL learners are ,according to Mourtaga (2008, p. 1), linked with the lack or the delusion of the reading process. Moreover, the number and rate of recurrence of challenging words in the target reading text, absence of motivation, and sentence complexity. Other problems have connection with the difference between the mother tong language Arabic and the target language English concerning alphabets and sounds. .

2.2.2 The Participants Post-test Achievements

The results and comments on the achievements of the participants in the post-test which was TOEFL RCT Practice test adapted from (Paterson' Master TOEFL Reading skills book, 2007, P 109) are presented in the following table (**See table 6**) as the same procedure of the pre-test. The mean and standard deviation have been calculated for the comprehension criteria and demonstrated below.

Table 6: The Participants Post-test Scores Mean and Standard Deviation

N	Test	Mean	Std. Deviation	Min	Max
30	Pre-test	10,75	3,17	6	17

The results recorded as shown in table 6 indicate that students' scores in reading comprehension post-test vary between 6 and 17 out of 20 grades. Examining the sample mean value (10.75), indicates a strong performance, and the value of the Std. deviation (3.17) which is small compared to the mean indicates that most of the scores are close to the mean value (10.75) which designates the improvement of levels among the participants and the presence of fewer difficulties with reading comprehension compared to the pre-test results. Participants' improved reading comprehension was apparent in their higher performance. The students were more able to comprehend English texts and answer reading comprehension questions with little help. All of the participants completed answering all post-test questions and took less time in reading the two passages. When they did not understand the general idea of a passage, they tried guessing the meaning from

the context and used the different reading strategies. Moreover, students could complete answering the 20 questions within the time allotted (1 hour).

2.2.3 T-test for the Pre and Post tests scores

To answer the main question of this study, the paired groups T-test was used to examine the difference in scores of both pre and post tests. Table 7 shows the value of T test.

Table 7: Results of t-test for One-sample pre and post tests

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-test Post-test	-4,10	1,55	,34	-4,82	-3,37	-11,81	29	,00

The relevant results for the paired t-test are in bold. From this row it can be observed that the t value ($t = 11,81$) at degree of freedom ($df = 29$) and the level of significance ($p = 0.00$). the value of $p = 0.00$ which is $p < 0.05$ indicates a statistically significant mean difference between the participants' scores of both the pre and the post tests, which means that the null Hypothesis is rejected and the alternative hypothesis is accepted. Accordingly it can be concluded from these results that there is strong evidence that the MI teaching intervention improved participants' performance in the post-test.

These results reveal the success of MI-based teaching in developing learners' reading comprehension which is a finding that was in agreement with previous studies that approved the effectiveness of MI theory in enhancing reading comprehension. Previous similar studies were Hamdan (2009), Gaines and Lehmann (2002), Abdulkader, Gundogdo and Eissa (2009,) Buschick (2007), Reidel, Tomaszewski and Weaver (2003) and Ziyad Youcef Haboush (2010).

2.2.4 Pearson Correlation between the Intelligence Type and Reading Comprehension

For the purpose of investigating any relationship between the types of intelligence and reading comprehension, Pearson correlation was conducted. Table 8 shows the Pearson Correlation between the strongest intelligences found in the sample chosen and the participants' post-test marks.

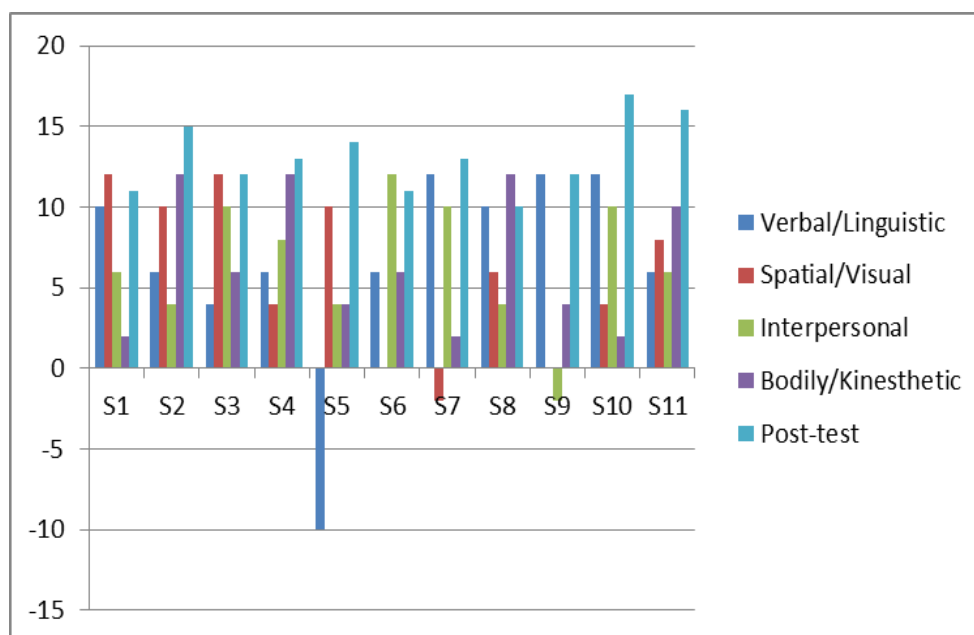
Table 8: Pearson Correlation between Salient Intelligences and the Post-test Mark

		Correlations				
		Linguistic	Spacial	Interpersonal	Bodily	Postest
Linguistic	Pearson Correlation	1	-,007	,000	,151	,345*
Spacial	Pearson Correlation	-,007	1	,011	,182	,409*
Interpersonal	Pearson Correlation	,000	,011	1	-,011	,204*
Bodily	Pearson Correlation	,151	,182	-,011	1	,531*

*. Correlation is significant at the 0.05 level (2-tailed).

Examining the table content shows that there is a positive statistically significant correlation between the intelligences and the reading comprehension post-test marks in a way that the strongest the intelligence is, the higher the post-test mark is. Concerning the linguistic intelligence, from examining the value of Pearson Correlation between linguistic intelligence and post-test mark which is (0.34) indicates the existence of a good correlation between the salient intelligence (linguistic) and the post-test mark. For the Spatial/Visual intelligence, the value of Pearson Correlation is (0,40) signifying the presence of a strong correlation; the same case for interpersonal intelligence with a value of (0,20). The strongest Pearson Correlation was the case of bodily/kinaesthetic intelligence with a value of (0, 53). These findings go hand in hand with the findings of Akram Hachemi (2007) which concluded that the correlation coefficient between intelligence and reading ability is significant with an r value of 0.20 at the $p < 0.05$. By these results, the second research question that investigates if there is a relation between MI theory and reading comprehension was answered and that MI treatment have met with the participants' dominant intelligences. Further results could be obtained from the graph below.

Graph 5: The Comparison of Participants Post-test with their Salient Intelligences



Graph 5 represents the comparison of students' reading comprehension post-test scores with the salient intelligences: Linguistic, Spatial/Visual, Interpersonal, and Bodily/kinaesthetic for the 11 students who had a post-test mark that equals or is higher than the mean (10.75). The high post-test marks are accompanied with the high levels of the dominant intelligences. We can easily recognize that the higher the dominant intelligences score is, the better post-test marks are and vice-versa. We can conclude that the MI-based treatment had its positive effect on the reading comprehension of the sample EFL learners meeting their needs and their learning styles by targeting their dominant intelligences.

2.3 Summary of the results

The findings resulted from this study had shown that the dominant intelligences of the sample chosen are: Verbal/Linguistic, Spatial/Visual, Interpersonal, and Bodily/kinesthetic intelligences. Furthermore, it showed that MI Intelligences theory has a strong positive relationship with reading comprehension and that MI-based activities proved to be an effective way to enhance students' performance in English reading comprehension. The results gained from the present study indicate development in reading comprehension ability and improvement in students' motivation. This study showed the

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

futility of the MI-based programme, it also gave an insight that using MI-based program would certainly determine the success of the lesson, the achievements of the target goals, and above all insuring that the students are no more facing difficulties when reading English texts. We concluded from the findings that the MI-based treatment had its positive effect on the reading comprehension of the sample EFL learners meeting their needs and their learning styles by targeting their dominant intelligences.

This analytical and practical section has shown there were significant differences between the pre-treatment phase and the post-treatment phase favouring the latter. Therefore, the dominant intelligences should be developed during the sessions by the teachers in order to reach better results in reading comprehension. According to present study results, the usage of multiple intelligences theory proved itself to be beneficial in improving students' reading comprehension. Along with these findings this study also suggests a number of pedagogical implications and recommendations for further research represented thoroughly in the following section.

3. Pedagogical Implication

This section is devoted for pedagogical implications and suggestions to teachers of English in Algeria. Some learning/Teaching strategies are suggested for all intelligences separately as to give the chance for all students to be part of the learning process and benefit the introduced data concerning reading comprehension.

3.1 Implications for Visual Learners

Visual learners learn primarily with their eyes .Therefore, it is recommended to intensely use resources that require reading or seeing such as: pictures, videos, posters, chalkboard, magazines, books, PPT slides and any means of technology (computer, data show, electronical dictionaries... etc.) For evaluation, visual learners prefer written assignments. Algerian teachers would face no problem in this since almost all the evaluation is done in writing. (Teaching and Learning Theory,n.d, p3-5):

- Have students use graphic organizers (Venn diagrams, flow charts, graphs, mind maps).
- Have students show their comprehension through various art forms.

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

- Have students predict the next chapter and picture it in their minds.
- Have students build a scene for the setting of a story.
- Have students role-play having imaginary conversations with book characters.
- Have students keep a long-term collage that they add to as the story progresses.
- Have students keep an art journal in which they draw scenes from the story as they read it.
 - Have students create posters and brochures to explain phonetic rules, the writing process, and grammar rules.
 - Have students create visual flash cards with the word on one side and a picture of it on the other—of words they are learning.

3.2 Implications for Kinaesthetic Learners

Kinaesthetic learners enjoy hands-on activities. Teachers here are required to supply manipulative materials that are both touchable and moveable; involving them in such learning experiences will make them achieve very satisfactory results. Teachers should bear in mind that since these learners are physical people, it is essential to let them take breaks during the lesson, ask them to do a physical activity, move around and practice actions that can be combined with linguistic responses. According to (Teaching and Learning Theory, n.d, p3-5):

- Have students act out/role play a story.
- Have students create tableaux explaining the main plot.
- Have students track their reading with their finger or a bookmark.
- Have students physically embody different linguistic concepts. For example, they can act out their spelling and vocabulary words.
- Have students impersonate a character in the story to explain how she/he is feeling.

3.3 Implications for Interpersonal Learners

Interpersonal learners feel comfortable in group learning. These learners can be successful in developing English speaking skills while reacting to others. Teachers can involve them in debates, group work, class discussions or assign them some group projects.

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

The true and authentic setting of groups helps them to learn. (Teaching and Learning Theory,n.d, p3-5):

- Have students read with partners and discuss the story events.
- Use reading groups.
- Designate Reading Days when students read and are read to all day.
- Have students help younger students with their reading.
- Have Mock Talk Show Days with characters from the story, and have them explain what is happening in the story.
- Use Oral-Reading Partner Tutoring. Have students read aloud to another student. The listening student assesses the oral reading and offers advice. The student tries again with the advice in mind. Students alternate reading aloud.
- Use Popcorn Reading. The whole class reads a literature selection aloud. One student reads and then calls on another student to continue reading.
- Use choral reading. Students read passages together.
- Have students form Literature Circles, in which groups of students read and discuss passages from literature selections they're reading independently. Each student contributes thoughts about the characters the author, and any other aspect of the selection. Students discuss how they like the story, theme, or conflict.
- Use Jigsaw Reading in which a group of students reads a literature selection together. Then each student becomes an expert on one section and is responsible for teaching the other students about that section.

3.4 Implications for Logical/ Mathematical Learners

Logical / Mathematical learners like logical thinking and grammar analysis. Teachers can use activities like riddles, crosswords, ordering, matching, relating... etc. Although most of the teachers believe that they are not allowed to teach grammar in the communicative approach, grammar analysis which has little to do with communicative ability needs to be dealt with from time to time. (Teaching and Learning Theory,n.d, p3-5):

- Ask students questions in the form of syllogisms: “If _____, then _____.”
- Use similarities and comparisons between characters or stories to demonstrate comprehension.
- Have students make a time line to show the order of events.

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

- Have students create character charts outlining the story characters' important characteristics.
- Present words in list form, showing similarities and differences between word families. For example, act, react, and deactivate would be listed together.
- Use Venn diagrams to show similarities and differences.
- Use the pretest-study-test sequence.

3.5 Implications for Musical Learners

Musical learners are likely to recognize and communicate using melody, rhythm, and harmony. Teachers can use songs, beats, claps, rhymes...etc. Their musical powers can be used in learning English only if teachers intelligently know how to use the rhythmic side of the English language and its tendency to accent. (Teaching and Learning Theory, n.d, p3-5):

- Play music that has a tone that relates to a story you've just read to the class.
- Have students find music that depicts the tone of the story.
- Put the story to music and sing or play it.
- Have students associate various kinds of music and rhythm with different characters parts of the story, parts of the writing process, phonetic rules, and so on.
- Use song lyrics to teach phonetic rules or how to use words.
- Use poetry to teach rhyming and repeated words

3.6 Implications for Intrapersonal Learners

Intrapersonal learners favour self-learning. They are independent of others and prefer to use their self-knowledge in learning. This intelligence is essential for intrinsic motivation and long-term English learning. Students with this intelligence are able to deal with underlying issues that can improve or hamper English learning. (Teaching and Learning Theory, n.d, p3-5):

- Have students choose a way to show that they understand the story.
- Provide time for silent reading.
- Have students keep a Word Log or Book Log to show the words they are learning and the books they are reading.
- Have students write a summary of a story they read, describing their favorite parts and explaining why they like those parts.

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

- Have students use multimodality techniques to learn spelling and vocabulary independently.
- Have students assess their own reading 'strengths and areas of improvement.
- Have students listen to a tape-recorded story and follow along in the book.

3.7 Implications for Naturalist Learners

Naturalistic learners have the ability to recognize elements of and learn from the natural world around us. It is similar to visual and spatial skills; Environmental intelligence will help students master English required to interact with their environment. (Teaching and Learning Theory,n.d, p3-5)

3.8 Implications for Verbal/ Linguistic Learners

Verbal / Linguistic learners is the explanation and understanding through the use of words. While teaching to other types of intelligences is extremely important, this type of teaching focuses on using language and will continue to play the primary role in learning English. (Teaching and Learning Theory,n.d, p3-5):

- Read stories together and ask comprehension and thinking questions.
- Use worksheets to provide repetitive practice.
- Have students write a summary of a story.
- Have students debate the decisions characters made during the story
- Have students read aloud into a tape recorder, and then play back the tape and assess their oral reading skills.
- Have students take home and listen to a book tape-recorded by a classmate.
- Have students retell the story in their own words.
- Have students predict what will happen as the story progresses
- Model oral reading skills to students. Talk to them about reading fluency embellishment, and varied intonations. Have them identify when you are using these skills.
- Reread books or parts of a book for guided reading practice.
- Use dialogue reading. Assign students a specific book character's dialogue to read aloud.
- Reader's Theater. Assign students parts of the script to read aloud.

CHAPTER 2: Methodology, Data Analysis and Pedagogical Implications

However, teachers are urged to encourage their pupils to broaden their favourite learning style by applying the other intelligences whenever possible. Teachers are to provide materials that appeal to the various intelligences. Hence, as an example, the kinaesthetic learner should engage in activities that require movement while a naturalistic one should be involved in activities that include environmental or musical processing.

3.9 Recommendations for further studies

- 1- The current study did not give a sufficient number of activities to existential and naturalist intelligences; other studies can activate all intelligences.
- 2- Other studies can investigate the effect of the intelligences on other language skills other than reading.
- 4- Other researchers can conduct evaluative studies based on MI to examine to what extent *English for Algerians* encompasses the types of intelligences.

Conclusion

This chapter has gone through describing the procedures the research has adopted. It has given a thorough description of the methodology of the study, the sample, the data collection tools and the statistical treatment of the findings which proved that the MI-based suggested programme had positive effects and improved students' English reading comprehension. The results were considered as an indication that MI theory could be a promising and productive solution towards improving reading comprehension.

General Conclusion

The Multiple Intelligences theory by Howard Gardner introduced the concept *Intelligence* to novelty. Along with the thoughts of this theory, intelligence is no more one, but multiple. Gardner's theory was developed around a main point which was that each learner possesses a specific learning style and preference according to their unique intelligences. The study in hand aimed at finding out the impact of using MI-based activities on the reading comprehension of EFL learners. To investigate the effect of implementing MI theory on the teaching of reading comprehension, three main research questions were asked and determined the set of methodological procedures that were followed.

The research first question was about the dominant intelligences of the EFL learners. This question was answered by means of HGMI-test that functioned as a profiling test demonstrating each participant's dominant and weak intelligences. The second question scrutinized the relation between the MI theory and the reading comprehension as well as the effect the MI-based activities has on reading comprehension for EFL learners. To answer this question the participants set for a diagnostic TOEFL RCT to identify their level in reading comprehension. The results gained from the diagnostic TOEFL RCT were used to design the lesson plans for the training program phase. Throughout integrating students in this phase, the researchers tend to help students and elevate their level and achievements in reading comprehension. This latter was then followed by a practice TOEFL RCT in order to measure any enhancement in students' performance in reading comprehension. The third question was about the Pearson correlation between the dominant types of intelligences withing the sample chosen and their post-test achievement. The findings of such revealed that there is a strong positive correlation between the former and the latter.

The researchers hypothesised that there is a statistically significant difference between the participants' reading comprehension test performance before and after applying the Multiple Intelligences-based activities. They also hypothesized that there is a statistically significant correlation between the participants' intelligence type and the performance in the reading comprehension test. The hypotheses were confirmed after applying the research tools of the present experimental design.

To have this work accomplished, the researchers encountered some difficulties without which this work could be better. It is a two-term study in 2017-2018 scholastic year that encountered a long teachers' strike leading to cases of students' absence. The strike at the secondary school made it hard to conduct the experiment, along with the carelessness of the students to be involved; this urged the researchers to change and reduce the sample to thirty students. Moreover, this study focused on teaching in only one high school at Ain El-Hdjel tackling only one class from first year as a sample; therefore some of the results may not apply to other contexts (other public/ private schools). Future studies should be applied on more participants including students in more schools to generate more evidence on the real implementation of MI theory. Furthermore, the sample that is used in the current research work has not been selected randomly. That is, the selection of the sample was purposive to serve the need of the research.

The experiment's final findings showed that there is a strong influence of the learners multiple intelligences upon their reading capacities, which indicates a strong and interchangeable relationship among both variables. Other results showed that the dominant intelligences were linguistic, interpersonal, bodily and visual intelligences; whereas the rest of the intelligences ranged from low to medium. As a result of the training program, these intelligences were activated; thus the percentage of their participation increased. The experiment demonstrates that using MI theory is helpful in enhancing students' ability in

reading comprehension which makes the MI theory highly recommended in teaching reading as well as other skills.

Applying this theory in EFL reading classes, does not require the teacher to re-do the lesson nine times, but to design one lesson that caters for all the students learning preferences and styles. The idea that students learn in different ways ought to be taken into consideration. Thus, teachers should not marginalize bodily kinaesthetic learners by avoiding games and hands-on activities in class. Another suggestion is the use of maps, charts or PPT slides that would help visual learners to be more involved and active in the reading session. Class discussion is highly recommended as it increases the chance of activating both linguistic and interpersonal intelligences. As such, to limit one's intelligences into one is to lose a significant opportunity to help in the emergence of an innovative brain.

The researchers suggested some recommendations for further research. As the current study did not give a sufficient number of activities to existential and naturalist intelligences; other studies can activate all intelligences and target these two types. Other studies can investigate the effect of the intelligences on other language skills other than reading. Last and not least, other researchers can conduct evaluative studies based on MI to examine to what extent *English for Algerians* encompasses the types of intelligences.

List of References

- Abdulkader, A F, Gundogdo, K & Eissa, A M** 2009, 'The effectiveness of a multiple intelligences-based program on improving certain reading skills in 5th-year primary learning disabled students', *Electronic Journal of Research in Educational Psychology*, 7(3), pp. 673-690, 2009, No. 18.
http://www.investigacion-psicopedagogica.org/revista/articulos/18/english/Art_18_313.pdf
- Achieve-goal setting success.com,2007**
- Anderson , B V. (1998).** *Using multiple intelligence to improve retention foreign language vocabulary study*, Saint Xavier University and Skylight, Illinois.
- Armstrong, T** 2000a, *Multiple intelligences*.
http://www.thomasarmstrong.com/multiple_intelligences.htm
- Armstrong, T** 2000b, *Multiple intelligences in the classroom*, 2nd edn, ASCD, Alexandria, Virginia, USA.
- Baum, S, Viens, J & Slatin, B** 2005, *Multiple intelligences in the elementary classroom: A teacher's toolkit*, Teachers College Press, Columbia University. NY.
- Botelho,M,R,L.** (2003). *Multiple intelligences theory in english language teaching: Analysis of current text books, materials and teachers' perceptions*, (MA thesis), The Faculty of the College of Arts and Sciences of Ohio University
- Browne-Miller, A** 1994, *Learning to learn: Ways to nurture your child's intelligence*, Plenum Press, New York.
- Buschick, E M, Shipton, T, Winner, L & Wise M** 2007, Increasing reading motivation in elementary and middle school students through the use of multiple intelligences. MA thesis, Saint Xavier University & Pearson Achievement Solutions, Chicago, Illinois.
- Carolyn (2000).** Emotional Intelligence as Assessed by Situational Judgment and Emotion Recognition Tests: Building the Nomological Net. University of Sydney, Australia
- Chan , D, W .** *Learning and teaching through the multiple intelligence perspective: Implications for curriculum reforming in Hong Kong*, Department of Educational Psychology, The Chinese University of Hong Kong.
- Chandler, B .M, (ED.), Mccleish, D,B S.** *Comprehension strategies and multiple intelligence*.
- Chen, A T** 2004, The use of multiple intelligences theory in large computer-assisted EFL classes in Taiwan, A paper submitted in an adult migrants English programme conference_ 2004, Charles Darwin University, Darwin, Australia.
http://www.ameprc.mq.edu.au/docs/conferences/2004/Tsui-Lan_Anna_Chen.pdf
- Christison, A M** 1998, 'Applying multiple intelligences theory in preservice and inservice TEFL education programs', *English teaching forum*, Vol. 36, No. 2, April - June 1998.
<http://eca.state.gov/forum/vols/vol36/no2/p2.htm>

- Christison, M & Kennedy, D** 2001, *Multiple intelligences: Theory and practice in adult ESL*. *ERIC Digest*.
<http://www.ericdigests.org/2001-1/multiple.html>
- Cobb** (2001). Supporting Teachers' Use of Research-Based Instructional Sequences. Vanderbilt University. Department of Teaching and Learning. USA
- Davies, E Whitney, N (1985)**. *Study skills for reading: Teachers' guide*, Heinemann Educational Books Ltd, London.
- Davis, k, Christodoulou, J, Seide, S, & Haward, G.** *The theory of multiple intelligences*, 31.
- Dornyei (2008)**. Motivation and Motivating in the Foreign Language Classroom. The Modern Language Journal, Vol. 78, No. 3. : Blackwell Publishing on behalf of the National Federation of Modern Language Teachers Associations.
- Haboush, Z Y.** (2010). *The effectiveness of using a programme based on multiple intelligence theory on eight graders' english reading comprehension skills*, The Islamic University of Gaza.
- Hamer, J. (1991)**. *The practice of English language teaching*, new edn, Longman Group Limited, England.
- Hamer, J. (2001)**. *The practice of English Language teaching*. 3rd edn, Pearson Education Limited, Essex, England.
- Gaines, D & Lehmann, D** 2002, Improving student performance in reading comprehension through the use of multiple intelligences, MA thesis, Saint Xavier University and SkyLight, Illinois. Viewed on 17th April 09. (cited in Habbouch)
http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/4b/35.pdf
- Gangi, S.** (2011). *Differentiating instruction using multiple intelligences in the elementary school classrooms : A literature review*, (MA thesis), University of Wisconsin-Stout.
- Gardner, H** 1999, *Intelligence reframed: Multiple intelligences for the 21st century*, Basic Books, USA.
- Gardner, H** 1983, *Frames of mind: The theory of multiple intelligences*, Basic Books, New York.
- Gardner, H & Hatch, T.** (2010). *Multiple intelligence go to school: Educational implications of the theory of multiple intelligence*, Educational Research, vol. 18, No.8 (Nov, 1989), pp.4.10, American Educational Research Association.
- Gottfredson** (1997). Mainstream Science on Intelligence: An Editorial With 52 Signatories, History, and Bibliography. University of Delaware.
- GÖĞEBAKAN, Derya** (2003). How Students' Multiple Intelligences Differ in Terms of Grade Level and Gender. Unpublished MA Thesis. MSc Department of Educational Sciences. September 2003, 112 pages.
- Grellet, F.** (1995). *Developing reading Skills*, CUP, Cambridge, UK.

- Kail, R & Pellegrino, W J** 1985, *Human intelligence: Perspectives and prospective*, W.H Freeman and Company, New York.
- Larsen-freeman** (2000). *Techniques and Principals in Language Teaching*. 2ndedtn.Oxford:Oxford University Press.
- Lazear** (1991). *Teaching for Multiple Intelligences*. Phi Delta Kappa Educational Foundation Blwmington, Indiana
- Lenz ,K (2005).***Special Connections: An introduction to reading comprehension*, Ku.edu.
- Linda Campbell, et. all (2004)** *Teaching and Learning through MI*. 3ndedn.The University of Michigan.
- Medjahdi,W,B.**(2014). *Reading comprehension difficulties among EFL learners: The case of third-year learners at Nehali Mohamed Secondary School Sètif*, (MA thesis), Department of English.
- Mikulecky ,S B .(1986).** *Reading power*, Addison –Wesley Publishing CO, USA.
- Millrood ,R(2015).** *Teacher Development Series: Modular course in english teaching methodology*, Delata Publisher, UK.
- Mourtaga, K** 2008, *Some reading problems of Arab EFL students*, Islamic University of Gaza.
http://www.alaqsa.edu.ps/ar/aqsamagazine/ten_second/8.pdf
- Nofal, K. (2003)** .*Problematic areas in teaching/learning reading*,Amman.UNRW.Eng.2/2003
- Paterson’ (2007).** Paterson’ Master TOEFL Reading skills book, a Nelnet company, USA.
- Pearson Education Incorporation** 2009a, *Summarizing*.
<http://www.teachervision.fen.com/skill-builder/reading-comprehension/48785.html?detoured=1>
- Puchta, H & Rinvolecri, M.(2005).** *Multiple intelligences in EFL: Exercises for secondary and adults students*.(2 Edn), Macmillian Publishers Limited. Oxford , between twons road, Oxford OX43 pp, UK.
- Paula J. Clarke, et all** (2014). *Developing Reading Comprehension*. John Wiley & Sons, Ltd.
- Razamjoo , S,A. (2008).** *On the relationship between multiple intelligence s and language proficiency*, vol.8,No2, Shiras University, Iran.
- Reidel, J, Tomaszewski, T, & Weaver, D** 2003, *Improving student academic achievement through the use of multiple intelligence teaching strategies*, MA thesis, Saint Xavier University and SkyLight, Illinois.
- Richards, C J & Rodgers, S T** 2001, *Approaches and methods in language teaching*, 2nd edn, CUP. London.
http://books.google.com/books?id=9mQ9l3K73BoC&pg=PA115&lpg=PA115&dq=%22In+both+general+education+and+language%22&source=bl&ots=20z0ifXzOj&sig=rBtwy4eLnrT59zBFTA0ZAJa2h-0&hl=ar&ei=Ic55SpnvGc-RsAaG-8GkBQ&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=%22In%20both%20general%20education%20and%20language%22&f=false

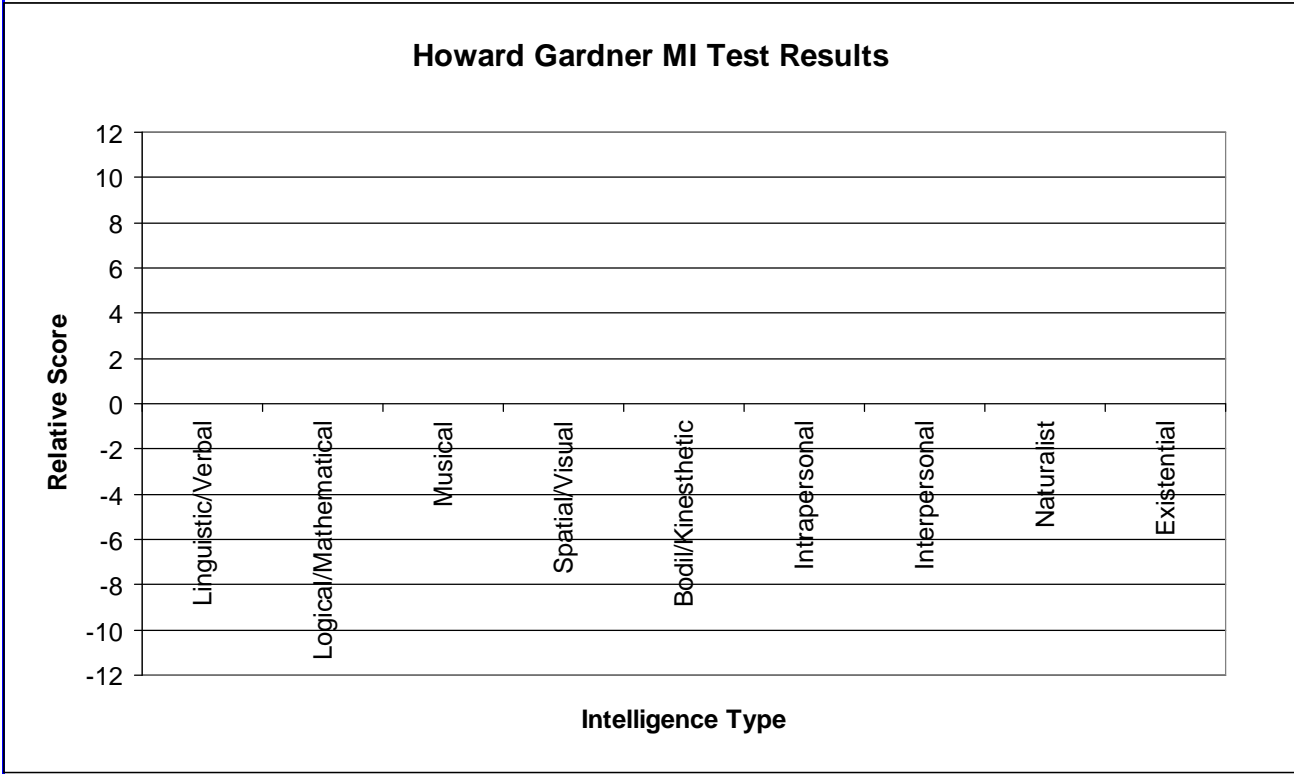
- Shereen Maher Salah**, (2008).The Relationship Between Vocabulary Knowledge and Reading Comprehension of Authentic Arabic Texts. Brigham Young University-Provo
- Strawson, G.** (2010). Mental Reality. Cambridge, Mass: MIT Press
- Tomlinson, et.al** (2001). Differentiating Instruction in Response to Student Readiness, Interest, and Learning Profile in Academically Diverse Classrooms: A Review of Literature
- Tsuda ,N.** *The theory of multiple intelligences and its application in EFL classrooms*
- Uhlir, P** 2003, Improving student academic reading achievement through the use of multiple intelligence teaching strategies, MA thesis, Saint Xavier University & Skylight, Chicago, Illinois.
- Woolley.G** (2011). Reading Comprehension: Assisting Children with Learning Difficulties. Brisbane, Australia: Springer.
- Zarei ,A & Afshar,N** .(2014). *Multiple intelligence as predictor of reading comprehension and vocabulary knowledge*, Indonesian journal applied linguistics, vol. 4 No .1,July 2014,pp.23-28. Studies, Vol. 2, No.5, pp.1013-1021, Academy Publisher, manufactured in Finland.
- Zintz, V M.**(1975). *The reading process: The teacher and the learner*.2 nd edn, Brown Company Publisher, USA.

APPENDIX 01
HGMI-TEST

Howard Gardner Multiple Intelligence - Test

Read each statement quickly and put a "y" in the non-coloured column if that statement DEFINITELY applies to you, and put an "n" in the column if you disagree with the statement or if the statement isn't totally true for you. See the example for how to complete. Remember, the test will only be accurate if you're honest with yourself - so complete the test based on what you actually think and feel, not on how you think you should or want to feel.

Statement	Do you agree with this statement?																																						
Now, add the total number of "y" in each column:	No. of "Y"																																						
Now add the total number of "n" in each column:	No. of "N"																																						
Now take the No. of "N" from the No. of "Y":	' minus "N"																																						
Now plot these results on the graph below. (See the example below/ on the next printed page)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr style="border: 2px solid red;"> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Linguistic/Verbal</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Logical/Mathematical</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Musical</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Spatial/Visual</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Bodil/Kinesthetic</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Intrapersonal</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Interpersonal</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Naturalist</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Existential</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> </table>																				Linguistic/Verbal	Logical/Mathematical	Musical	Spatial/Visual	Bodil/Kinesthetic	Intrapersonal	Interpersonal	Naturalist	Existential										
Linguistic/Verbal	Logical/Mathematical	Musical	Spatial/Visual	Bodil/Kinesthetic	Intrapersonal	Interpersonal	Naturalist	Existential																															



Interpretation:

What intelligences are above the line?
 What intelligences are below the line?
 Are any intelligences above the line more dominant than others?
 Are they all much the same?

Intelligences above the line indicate preferred intelligences, whereas intelligences below the line are the ones that you don't show any preference towards and would be considered 'uncharacteristic for you'.

It's not unusual to have 3 (or sometimes 4-5) intelligences with a similar strength. In this case, it just shows that you are 'well balanced' from an intelligence point of view and exhibit characteristics of several intelligence types.

Read the descriptions for all intelligence types - do you agree?

Howard Gardner Multiple Intelligence - Test

Read each statement quickly and put a "y" in the non-coloured column if that statement DEFINITELY applies to you, and put an "n" in the column if you disagree with the statement or if the statement isn't totally true for you. See the example for how to complete. Remember, the test will only be accurate if you're honest with yourself - so complete the test based on what you actually think and feel, not on how you think you should or want to feel.

Statement	Do you agree with this statement?									
-----------	-----------------------------------	--	--	--	--	--	--	--	--	--

Don't agree with the outcome? Make sure you were completely honest and only said "y" to the statements that DEFINITELY describe how you feel/ think. If any were 'doubtful', change these to "n" and recalculate.

Example:

Now, add the total number of "y" in each column:
Now add the total number of "n" in each column:

No. of "Y"	4	6	7	10	2	5	8	8	3
No. of "N"	8	6	5	2	10	7	4	4	9

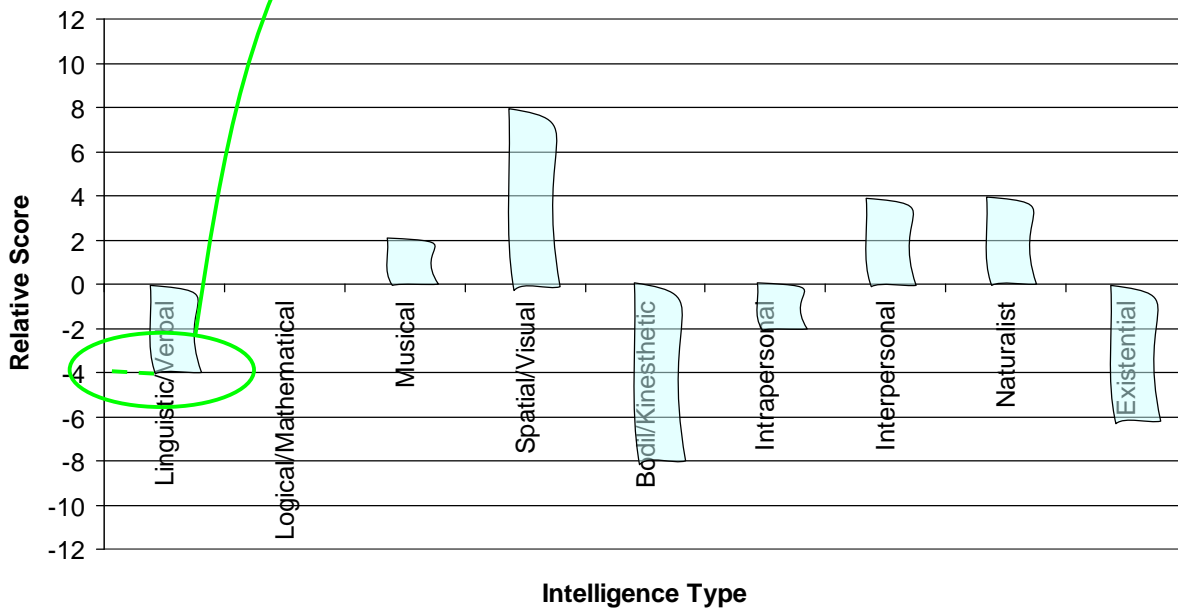
Now take the No. of "N" from the No. of "Y":

' minus "N"	-4	0	2	8	-8	-2	4	4	-6
-------------	----	---	---	---	----	----	---	---	----

Now plot these results on the graph below.

Linguistic/Verbal	-4	0	2	8	-8	-2	4	4	-6
Logical/Mathematical									
Musical									
Spatial/Visual									
Bodil/Kinesthetic									
Intrapersonal									
Interpersonal									
Naturalist									
Existential									

Howard Gardner MI Test Results



APPENDIX 02
THE DIAGNOSTIC
TOEFL RCT
PRE-TEST

PRACTICE TEST 1: DIAGNOSTIC

50 Questions • Time: 25 Minutes

Directions: Each passage is followed by a series of questions. Answer the questions based on the information you gathered from the passage. Choose the best answer to each question and answer each question based on what is *stated* or *implied* in the passage.

QUESTIONS 1–10 REFER TO THE FOLLOWING PASSAGE.

The *cabildo*, which is Spanish for “municipal council,” was the fundamental unit of local government in colonial Spanish America. Following a tradition going back to the Romans, the Spanish considered the city to be of paramount importance, with the surrounding countryside directly subordinate to it.

In local affairs, each municipality in Hispanic America was governed by its *cabildo*, or council, in a manner reminiscent of Castilian towns in the late Middle Ages. A council’s members and magistrates, together with the local judge appointed by the king, enjoyed considerable prestige and power. The size of a council varied but was always small. The *cabildos* of important cities, such as Lima and Mexico, had about 12 members.

The *cabildo* was in charge of all ordinary aspects of municipal government—e.g., policing, sanitation, taxation, the supervision of building, price and wage regulation, and the administration of justice. To assist them in these responsibilities, the city councilors appointed various officials, such as tax collectors, inspectors of weights and measures and the markets, and peace officers. In spite of royal decrees to promote honest and efficient city government, the *cabildos* were often corrupt and rapacious.

By the mid-sixteenth century, appointments to *cabildos* were ordinarily made by the Spanish crown and sometimes became hereditary. Occasionally, the propertied class in a city elected some of the councilors. Sometimes citizens were asked to attend an open town meeting on

important matters. Such open meetings became very important to the movement for the independence of Hispanic America in the early nineteenth century.

- Which choice does the word “paramount” as used in line 6 refer to?
 - Fundamental
 - Government
 - Tradition
 - Surrounding
- Where was the *cabildo* used as a form of government?
 - In Roman colonies
 - In Spanish colonies
 - In Roman provinces
 - In Spanish provinces
- Which of the following answer choices is closest in meaning to the word “reminiscent” as used in lines 11–12?
 - Suggesting something in the past
 - Suggesting a schedule or agenda
 - Suggesting a small village
 - Suggesting an odor
- According to the passage, how was a local judge in Hispanic America selected?
 - He was elected by the council.
 - He was appointed by the king.
 - He was chosen by the town’s wealthy citizens.
 - He was the richest man in the town.

5. According to the passage, how many councilors did Lima have?
- (A) Ten
(B) Eleven
(C) Twelve
(D) Thirteen
6. From the passage it can be inferred that some cabildos were
- (A) poorly educated
(B) important
(C) corrupt
(D) independent
7. What word does the phrase “peace officers” as used in line 29 refer to?
- (A) Sanitation
(B) Policing
(C) Assist
(D) Tax collectors
8. Which is closest in meaning to the word in the passage “responsibilities” as used in lines 25–26?
- (A) Duties
(B) Wages
(C) Sanitation
(D) Inspections
9. From the passage it can be inferred that by the mid-sixteenth century, the cabildo was all of the following EXCEPT:
- (A) Elected by all registered voters
(B) Appointed by the king
(C) Came from the propertied class
(D) Was an inherited office
10. Where can the following sentence best be added to the passage?
- Debates were sometimes heated, and the wealthy landowners had to defend their positions by arresting their opponents.**
- (A) At the end of paragraph 1
(B) At the end of paragraph 2
(C) After the words “peace officers” in paragraph 3
(D) After the words “important matters” in paragraph 4

QUESTIONS 11–20 REFER TO THE FOLLOWING PASSAGE.

- Annie Oakley, an intriguing figure in American entertainment, was a markswoman who starred in Buffalo Bill’s Wild West Show, where she was often called “Little Sure Shot.” She was born in 1860 in Darke County, Ohio, and her original name was Phoebe Ann Moses. As a child, she hunted game with such success that, according to legend, by selling it in Cincinnati, Ohio, she was able to pay off the mortgage on the family farm. When she was 15 she won a shooting match in Cincinnati with Frank E. Butler, a vaudeville marksman, and they were married a year later. For the next ten years they toured the country and performed in theaters and circuses as “Butler and Oakley.” In April 1885, Annie Oakley, now under her husband’s management, joined “Buffalo Bill” Cody’s Wild West Show. Billed as “Miss Annie Oakley, the Peerless Lady Wing-Shot,” she was one of the show’s star attractions for sixteen years. Oakley never failed to delight her audiences, and her feats of marksmanship were truly incredible. At 30 paces she could split a playing card held edge-on, and she hit dimes tossed into the air. She shot cigarettes from her husband’s lips, and, when he threw a playing card into the air, she would shoot it full of holes before it touched the ground. She was a great success on the Wild West Show’s European trips.

- In 1887, she was presented to Queen Victoria, and later in Berlin she performed her cigarette trick with, at his insistence, Crown Prince Wilhelm (later Kaiser Wilhelm II) holding the cigarette. A train wreck in 1901 left her partially paralyzed for a time, but she recovered and returned to the stage to amaze audiences for many more years.
- (40) 11. Which of the following is closest in meaning to the word “intriguing” as used in line 1?
- (A) Frightening
 - (B) Fascinating
 - (C) Fabulous
 - (D) Funny
12. What was Oakley often called while performing in Buffalo Bill’s Wild West Show?
- (A) Little Orphan Annie
 - (B) Little Phoebe Ann
 - (C) Little Sure Shot
 - (D) Little Phoebe Butler
13. Which of the following is the closest in meaning to the word “mortgage” as used in line 11?
- (A) A debt left by a deceased property owner
 - (B) A bank-loan contract using property as security
 - (C) A measurement of debts owed
 - (D) A piece of furniture loaned to a neighbor
14. What does the word “it” as used in the phrase “by selling it” in line 10 refer to?
- (A) Child
 - (B) Game
 - (C) Legend
 - (D) Mortgage
15. The passage implies that Oakley and Butler were married in
- (A) 1873
 - (B) 1874
 - (C) 1875
 - (D) 1876
16. According to the passage, Frank E. Butler was all of the following EXCEPT:
- (A) Annie Oakley’s assistant in her act
 - (B) Annie Oakley’s husband
 - (C) Annie Oakley’s teacher
 - (D) Annie Oakley’s manager
17. Which of the following is closest in meaning to the word “feats” as used in line 26?
- (A) Jokes
 - (B) Accomplishments
 - (C) Displays
 - (D) Mistakes
18. Where can the following sentence best be added to the passage?
- Her story was made into a Broadway musical called *Annie Get Your Gun*, but the real life of Annie Oakley is just as interesting.**
- (A) After the phrase “Little Sure Shot” in paragraph 1
 - (B) After the phrase “Butler and Oakley” in paragraph 2
 - (C) At the end of paragraph 3
 - (D) At the beginning of paragraph 4
19. According to the passage, who performed the cigarette trick with her in Europe?
- (A) Queen Victoria
 - (B) Crown Prince Wilhelm
 - (C) Buffalo Bill Cody
 - (D) Princess Anne
20. Which of the following can be inferred from the passage?
- (A) Annie Oakley was a talented and popular entertainer.
 - (B) Frank E. Butler was jealous of his wife’s talent and popularity.
 - (C) Queen Victoria was brave when she held a cigarette for Annie Oakley.
 - (D) Buffalo Bill Cody was not as good a marksman as Annie Oakley.

QUESTIONS 21–30 REFER TO THE FOLLOWING PASSAGE.

Edward Patrick Eagan was born April 26, 1897, in Denver, Colorado, and his father died in a railroad accident when Eagan was only a year old. He and his

- (5) four brothers were raised by his mother, who earned a small income from teaching foreign languages.

Inspired by Frank Merriwell, the hero of a series of popular novels for boys, Eagan pursued an education for himself as well as an interest in boxing. He attended the University of Denver for a year before serving in the U.S. Army as an artillery lieutenant during World War

- (10) I. After the war, he entered Yale University and, while studying there, won the U.S. national amateur heavyweight boxing title. He graduated from Yale in

1921, attended Harvard Law School, and received a Rhodes scholarship to the University of Oxford where he received his A.M. in 1928.

- (20) While studying at Oxford, Eagan became the first American to win the British amateur boxing championship. Eagan won his first Olympic gold medal as a light heavyweight boxer at the 1920 Olympic Games in Antwerp, Belgium. Eagan also fought at the 1924 Olympics in Paris as a heavyweight but failed to get a medal. Though he had taken up the sport just three weeks before the competition, he managed to win a second gold medal as a member of the four-man

bobsled team at the 1932 Olympics in Lake Placid, New York. Thus he became the only athlete to win gold medals at both the Summer and Winter Olympics. Eagan was a member of the first group of athletes inducted into the U.S. Olympic Hall of Fame in 1983. Eagan became a respected attorney, serving as an assistant district attorney for southern New York and as chairman of the New York State Athletic Commission (1945–51). He married soap heiress Margaret Colgate and attained the rank of lieutenant colonel during World War II.

- (30) (35) (40) (45)

21. What is the main idea of the passage?

- (A) Eagan's life shows how a wealthy student can achieve as much as a poor one.
 (B) Eagan's life shows that military experience makes athletes great.
 (C) Eagan's life shows that a man can be an athlete and a well-educated person.
 (D) Eagan's life shows how easy it is to win two gold medals in different Olympic sports.

22. According to the passage, who was Frank Merriwell?

- (A) A teacher at Yale
 (B) A fictional character
 (C) A student at Oxford
 (D) A bobsledder at the Olympics

23. According to the passage, how did Eagan's mother earn a living?

- (A) Renting rooms to immigrants
 (B) Teaching foreign languages
 (C) Doing laundry and cleaning
 (D) Writing fiction for women's magazines

24. Which of the following is the closest in meaning to the word "artillery" as used in line 14?

- (A) Large weapons such as cannons
 (B) Small weapons such as pistols
 (C) Shoulder weapons such as rifles
 (D) Tension weapons such as crossbows

25. According to the passage, Eagan won all of the following EXCEPT:

- (A) Light heavyweight boxing, Olympic gold medal
 (B) U.S. national amateur heavyweight boxing title
 (C) British amateur boxing championship
 (D) Heavyweight boxing, Olympic gold medal

26. According to the passage, where were the 1920 Olympic Games held?

- (A) Antwerp, Belgium
- (B) Paris, France
- (C) London, England
- (D) Lake Placid, New York

27. Where can the following sentence best be added to the passage?

He continued to be active in amateur athletics for the rest of the decade.

- (A) At the end of paragraph 1
- (B) After the word “boxing” in paragraph 2
- (C) After the phrase “get a medal” in paragraph 3
- (D) At the end of paragraph 4

28. Which word or phrase does the word “competition” as used in lines 32–33 refer to?

- (A) Sport
- (B) Gold medals
- (C) 1932 Olympics
- (D) Summer Olympics

29. According to the passage, what was Eagan’s profession?

- (A) He was a boxing trainer.
- (B) He was an attorney.
- (C) He was an army officer.
- (D) He was president of Colgate.

30. According to the passage, what special honor did Eagan receive in 1983?

- (A) He was inducted into U.S. Olympic Hall of Fame.
- (B) He was promoted to lieutenant colonel in the U.S. Army.
- (C) He received a gold medal in four-man bobsledding.
- (D) He was appointed assistant district attorney for Southern New York.

QUESTIONS 31–40 REFER TO THE FOLLOWING PASSAGE.

The first folio edition of the collected works of William Shakespeare was originally published in 1623 as *Mr. William Shakespeares Comedies, Histories & Tragedies*. This folio edition is the major source for contemporary texts of his plays.

The publication of drama in the early seventeenth century was usually left to the poorer members of the Stationers’ Company and to outright pirates. The would-be publisher only had to get hold of a manuscript, legally or illegally, register it as his copy, and have it printed. Sometimes the publisher dispensed with the formality. Such a man was Thomas Thorpe, the publisher of Shakespeare’s sonnets in 1609.

Titus Andronicus was the first play by Shakespeare to be published and was printed by a notorious literary pirate, John Danter, who also brought out, anonymously, a defective *Romeo and Juliet*, largely from shorthand notes made during performance. Eighteen of Shakespeare’s plays were printed in quartos (books about half the size of a modern magazine) both “good” and “bad” before the First Folio (a large-format book) was published in 1623. The bad quartos are defective editions, usually with badly garbled or missing text.

For the First Folio, a formidable project of more than 900 pages, five men formed a partnership, headed by Edward Blount and William Jaggard. The actors John Heminge and Henry Condell undertook the collection of 36 of Shakespeare’s plays, and about 1,000 copies of the First Folio were printed by Isaac Jaggard, William’s son. In 1632, a second folio was issued and in 1663, a third. The latter included *Pericles* and several other plays that may not have been written by Shakespeare. These included *The Two Noble Kinsmen*, which is now thought to have been a collaboration of Shakespeare and John Fletcher.

31. From the passage it can be inferred that the First Folio of Shakespeare's plays is important because it
- (A) was registered at the Stationer's Office by Thomas Thorpe
 - (B) is the major source for contemporary texts of Shakespeare's plays
 - (C) is twice the size of the quarto editions that were badly printed by many publishers
 - (D) was published three years after the establishment of the Plymouth Colony
32. Which of the following is closest in meaning to the word "outright" as used in line 11?
- (A) Unfairly judged as something
 - (B) Proved to be something without question
 - (C) Imprisoned without a trial
 - (D) Opposing the rights of an enemy
33. The passage implies that many publishers
- (A) were unsuccessful authors themselves
 - (B) printed the work of only the best writers.
 - (C) used an author's work without permission
 - (D) paid the author very well for his writing
34. Which of the following is closest in meaning to the phrase "dispensed with" as used in line 15?
- (A) Gave away to customers
 - (B) Managed without something
 - (C) Wrote a denial to an accusation
 - (D) Compensated another's loss
35. According to the passage, when were Shakespeare's sonnets published?
- (A) 1609
 - (B) 1610
 - (C) 1611
 - (D) 1612
36. Which word is closest in meaning to the phrase "brought out" as used in line 22?
- (A) Published
 - (B) Printed
 - (C) Performed
 - (D) Defect
37. According to the passage, how many of Shakespeare's plays were printed in quartos?
- (A) 17
 - (B) 18
 - (C) 19
 - (D) 20
38. The passage implies that John Danter acquired the text of *Romeo and Juliet* by
- (A) paying an actor for a copy of the script
 - (B) buying the copyright from Shakespeare
 - (C) taking notes during a performance
 - (D) hiring an actor to recite the lines to him
39. According to the passage, all of the following were involved in the publishing of the First Folio EXCEPT:
- (A) Edward Blount
 - (B) Henry Condell
 - (C) William Jaggard
 - (D) John Danter
40. Where can the following sentence best be added to the passage?
- They sold quickly to a public anxious to have accurate copies of the master dramatist's plays.**
- (A) At the end of paragraph 1
 - (B) After the word "formality" in paragraph 2
 - (C) After the word "performance" in paragraph 3
 - (D) After the phrase "William's son" in paragraph 4

QUESTIONS 41–50 REFER TO THE FOLLOWING PASSAGE.

(5) Steamboats were shallow-draft boats propelled by steam-driven paddle wheels. In the nineteenth century, they could be seen every day on rivers, particularly on the Mississippi River and its principal tributaries in the United States.

(10) The development of the steamboat as a practical means of transportation began in America in 1787, but it wasn't until 1811 that a steamboat was built specifically to travel along the lower Mississippi River. The boat, called appropriately the *New Orleans*, was built at (15) Pittsburgh, Pa., for Robert Fulton and Robert R. Livingston. In 1812, the two men began operating a regular steamboat service between New Orleans and Natchez, Mississippi. Their vessels traveled at eight miles per hour downstream (20) and three upstream.

(25) In 1816, Henry Miller Shreve launched his steamboat *Washington*, and soon became known as the father of Mississippi navigation, because he adapted steamboat design to fit the shallow waters of the river. He installed the engine high up above the water line and mounted it on a hull that was as shallow (30) as that of a barge. He also added a tall second deck, and afterwards all Mississippi steamboats copied Shreve's design. From then on and until about 1870, the steamboat dominated the economy, agriculture, and commerce of the middle (35) area of the United States.

(40) By 1834, there were 1,200 steamboats, carrying not only cotton and sugar, but also passengers who enjoyed luxuriously appointed lounges with rich rugs, oil paintings, and chandeliers. Many steamboats were famous for their chefs, orchestras, and large staffs of maids and butlers to assist their cabin passengers.

(45) Steamboat pilots had to memorize or guess at the depths of the river and its potential obstacles along long stretches of river in order to navigate safely. The average life span of a steamboat was (50) only four to five years, because most of

the vessels were poorly constructed and maintained. They sank after hitting sand bars and hidden rocks in the river, and many of their boilers exploded, causing (55) many deaths among their passengers. By the 1870s, railroads had become more efficient modes of transport and gradually caused the retirement of almost all the steamboats from the river.

41. In the passage, it is implied that steamboats were used mainly
- (A) in New Orleans
 - (B) in Washington, D.C.
 - (C) along the Hudson River
 - (D) in the Mississippi River valley
42. Which of the following is closest in meaning to the word "tributaries" as used in line 6 of the passage?
- (A) A party honoring a famous person
 - (B) A stream that flows into another
 - (C) A three-wheeled vehicle
 - (D) A state that has a border on three other states
43. According to the passage, in what year were steamboats operating regularly on the Mississippi?
- (A) 1810
 - (B) 1811
 - (C) 1812
 - (D) 1813
44. Which of the following does the phrase "means of transportation" as used in line 9 refer to?
- (A) Steamboat
 - (B) America
 - (C) Built specifically
 - (D) Travel

45. According to the passage, how fast did the *New Orleans* travel downstream between New Orleans and Natchez?
- (A) 3 miles per hour
 - (B) 8 miles per hour
 - (C) 13 miles per hour
 - (D) 18 miles per hour
46. According to the passage why was Henry Shreve called the “father of Mississippi navigation”?
- (A) He designed a steering mechanism that other steamboats used.
 - (B) He was born and raised in a small village on the banks of the Mississippi.
 - (C) He printed maps for the steamboat captains and pilots.
 - (D) He adapted steamboat design to fit the shallow waters of the river.
47. Which of the following is the closest in meaning to the phrase “from then on” as used in line 33 in the passage?
- (A) Subsequently
 - (B) Consequently
 - (C) Apparently
 - (D) Thoroughly
48. According to the passage, after the 1830s, steamboats had all of the following EXCEPT:
- (A) Orchestras
 - (B) Chefs and maids
 - (C) Chandeliers
 - (D) Air conditioning
49. According to the passage, how long did the average steamboat remain afloat?
- (A) Two to three years
 - (B) Three to four years
 - (C) Four to five years
 - (D) Five to six years
50. Where can the following sentence best be added to the passage?
- Mark Twain, a steamboat pilot who became one of America’s greatest writers, told about his brother’s death in a steamboat explosion in his book *Life on the Mississippi*.**
- (A) After the words “Mississippi River” in paragraph 2
 - (B) After the phrase “Shreve’s design” in paragraph 3
 - (C) After the word “chandeliers” in paragraph 4
 - (D) After the phrase “their passengers” in paragraph 5

ANSWER KEY AND EXPLANATIONS

1. A	11. B	21. C	31. C	41. D
2. B	12. C	22. B	32. B	42. B
3. A	13. B	23. B	33. C	43. C
4. B	14. B	24. A	34. B	44. D
5. C	15. D	25. D	35. A	45. B
6. D	16. C	26. A	36. A	46. D
7. B	17. B	27. D	37. B	47. A
8. A	18. A	28. C	38. C	48. D
9. A	19. B	29. B	39. D	49. C
10. B	20. A	30. A	40. D	50. D

- The correct answer is (A).** The other choices are incorrect definitions.
- The correct answer is (B).** The answer is stated in the first paragraph.
- The correct answer is (A).** The other answer choices do not relate to the meaning of the word.
- The correct answer is (B).** The answer is stated in the second paragraph.
- The correct answer is (C).** The answer is stated in the second paragraph.
- The correct answer is (D).** Choice (D) can be inferred from the final two sentences in the passage. There is nothing in the passage to indicate the educational level of cabildos, so choice (A) cannot be inferred. The work of cabildos was important, so there is no basis to consider that only “some” cabildos were important. Choice (C) is directly stated in the third paragraph.
- The correct answer is (B).** A police officer keeps the peace.
- The correct answer is (A).** Only choice (A) makes sense and is general enough in the context of the sentence. Choice (B) does not make sense. Choices (C) and (D) are only two of the various responsibilities that cabildos might be in charge of.
- The correct answer is (A).** It is NOT true. Sentence 2 in the fourth paragraph disproves this answer.
- The correct answer is (B).** Paragraph 2 describes the functioning of cabildos, so it is the best place to add a sentence that provides more details about this aspect. Choice (A), paragraph 1, discusses the background of cabildos, not their functions. Inserting the sentence into paragraphs 3 or 4 would interrupt the flow of ideas in either paragraph.
- The correct answer is (B).** *Fascinating* means to hold the attention of someone by being interesting. *Fabulous* means hard to believe or incredible. Neither choices (A) or (D) are correct definitions.
- The correct answer is (C).** The answer is stated in the first paragraph.
- The correct answer is (B).**
- The correct answer is (B).** Omit the phrase “according to legend” and it is easier to see that the antecedent is *game*.
- The correct answer is (D).** Sentence 2 of the first paragraph states that Oakley

was born in 1860. The final sentence in the paragraph states both that she was 15 when she worked with Butler and that she married him a year later. Add 15 plus 1 to find that she was 16 when she married Butler. Sixteen plus 1860 equals 1876 when they married.

16. **The correct answer is (C).** It is not true. Choice (A) can be inferred from the third paragraph. Choice (B) is stated in the first paragraph. Choice (D) is stated in the second paragraph.
17. **The correct answer is (B).** Substitute the answers into the sentence and answer (B) makes the most sense in context.
18. **The correct answer is (A).** The sentence sums up Oakley's life. If it were inserted in any of the other choices, it would not make sense because it would interrupt the description of what she did in her life.
19. **The correct answer is (B).** The answer is stated in the fourth paragraph.
20. **The correct answer is (A).** There is no information in the passage to support either choices (B) or (D). Choice (C) is contradicted in the fourth paragraph.
21. **The correct answer is (C).** Only choice (C) includes both Eagan's education and athletic ability. Choice (A) is not supported by information in the passage. Choices (B) and (D) are misreadings of the passage.
22. **The correct answer is (B).** The answer is stated in the second paragraph.
23. **The correct answer is (B).** The answer is stated in the first paragraph.
24. **The correct answer is (A).** Eliminate choice (D) immediately because Eagan served in World War I.
25. **The correct answer is (D).** It is NOT true. Paragraph 3 states that Eagan did not win this medal.
26. **The correct answer is (A).** The answer is stated in the third paragraph.
27. **The correct answer is (D).** Adding the sentence to the end of paragraph 4 picks up and adds to the information in the preceding sentence. There is no reference to athletics in the first paragraph, so adding the sentence there makes no sense. The sentence would interrupt the sense of the paragraphs if added where either choice (B) or (C) indicate.
28. **The correct answer is (C).** The answer is stated at the end of the sentence.
29. **The correct answer is (B).** The answer is stated in the fourth paragraph.
30. **The correct answer is (A).** The answer is stated in the first sentence of the fourth paragraph.
31. **The correct answer is (C).** The First Folio had twice as many plays as had been printed previously and the inclusion of the two actors in the publishing team implies that good texts were used. Choice (B) is stated in the first paragraph and the question asks for an inference. There is no information to support either choices (A) or (D).
32. **The correct answer is (B).** The other answer choices are incorrect definitions.
33. **The correct answer is (C).** Statements in the second and third paragraphs support this answer.
34. **The correct answer is (B).** The other answer choices are incorrect.
35. **The correct answer is (A).** The answer is stated in the final sentence of the second paragraph.
36. **The correct answer is (A).** To publish means to issue books, whereas to print means to imprint letters onto paper. [Very fine distinction and difficult for an ELL person to figure out from the context which uses both *publish* and *print* in the same sentence.]

37. **The correct answer is (B).** The answer is stated in the third paragraph.
38. **The correct answer is (C).** The answer is supported by sentence 1 of the third paragraph.
39. **The correct answer is (D).** It is NOT true. Paragraph 4 supports this answer as being not true, but correct.
40. **The correct answer is (D).** The word “they” is a clue to the best place to insert this sentence. The antecedent for choice (A) is “folio edition,” which is singular. The antecedent for choice (B) is singular, “formality,” which also does not make sense. The antecedent for choice (C) is *Romeo and Juliet*, which is also singular. Only choice (D) provides a plural antecedent “1,000 copies” and also makes sense.
41. **The correct answer is (D).** The first paragraph supports this inference. Also, mention is not made in the passage of the other areas.
42. **The correct answer is (B).** The other answer choices use some form of the word *tributary*, but only choice (B) is correct. Choice (A) refers to tribute, choice (C) refers to tricycle, and choice (D) refers to tri-state.
43. **The correct answer is (C).** The reference in lines 17–18 to “regular steamboat service” supports this answer.
44. **The correct answer is (D).** Substitute the answer choices into the sentence and the only one that makes sense is choice (D).
45. **The correct answer is (B).** The answer is stated in the second paragraph.
46. **The correct answer is (D).** The answer is stated in the third paragraph.
47. **The correct answer is (A).** The other answer choices do not make sense.
48. **The correct answer is (D).** It is NOT true. The other answer choices are supported by information in paragraph 3.
49. **The correct answer is (C).** The answer is supported by the phrase “average life span of a steamboat” in line 49.
50. **The correct answer is (D).** Adding the sentence as indicated in choices (A), (B), and (C) would interrupt the flow of thought. Choice (D) inserts the sentence as an example to illustrate the detail about explosions on steamboats.

APPENDIX 03

A SAMPLE LESSON PLAN FROM THE MI-BASED TRAINING PROGRAMME

Appendix 3: Lesson Plan

Intelligence: All Intelligences

Activity: Analysing a Picture

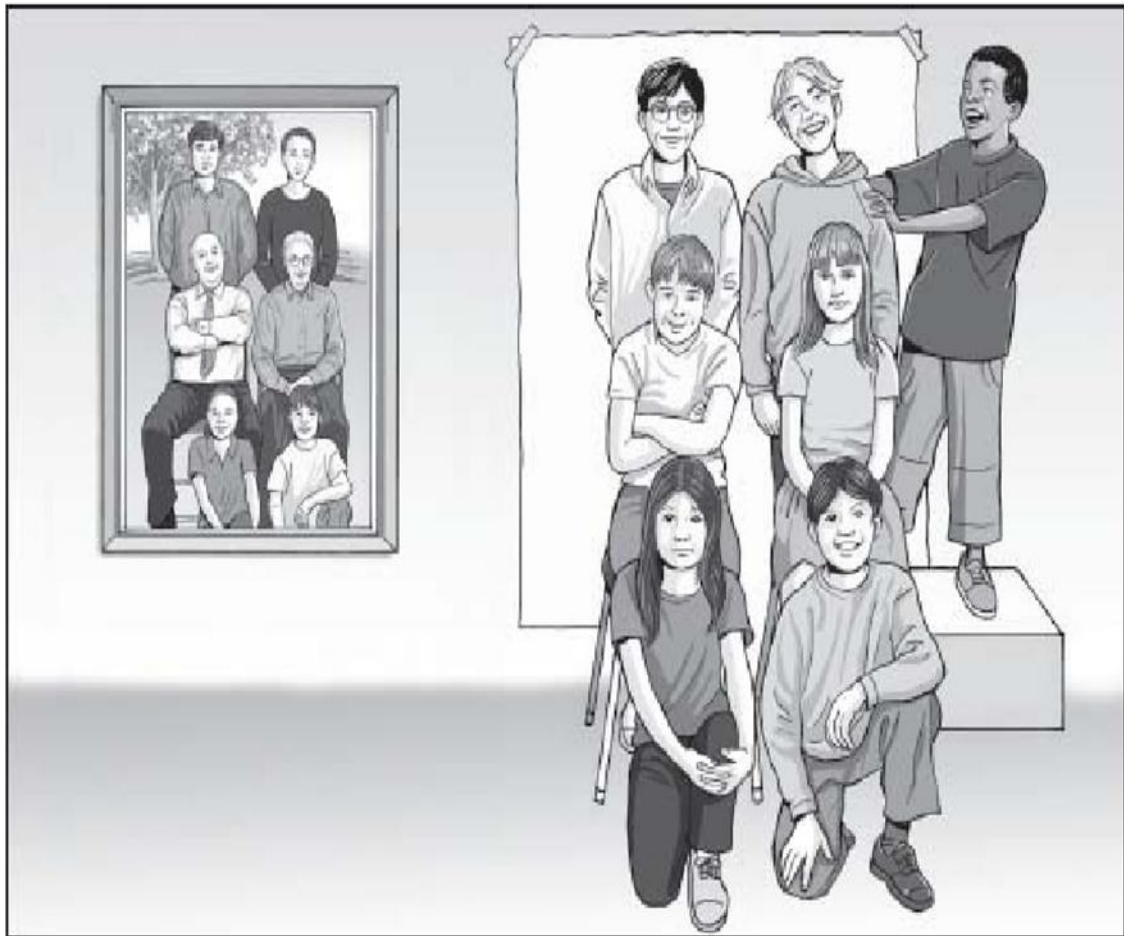
Text: Narrative, Descriptive, “A memory”

Use: Before, During and After Reading

Procedures

1. Give students a riddle and ask them to solve it in pairs: “I have eyes, but I see nothing. I have ears, but I hear nothing. I have a mouth, but I cannot speak. if I am young, I stay young; if I am old, I stay old .what am I” (intelligences: interpersonal, verbal/ linguistic)
2. Guided imagery: tell students to close their eyes and to relax; then describe a picture or a scene or a portrait. Ask them to imagine it. Play music while you are giving the students the description. (intelligences: spatial/ visual intelligence, musical)
3. Distribute to each person in small group a written description of the same picture they have just heard described. Each description is incomplete, however, and no two in the group are the quite the same. For example, one description has certain words missing; the others have different words missing. The students work together with the other members of their group to fill in the missing words so they all end up with a complete description of the picture. (intelligence: interpersonal, verbal/ linguistic)
4. Ask the students to create a tableau of the picture by acting out the description they have just completed. (intelligence: body/kinesthetic)

5. Show the students the picture. Ask them to find five things about it differ from their tableau or from how they imagined the painting to look. (intelligence: logical/ mathematical)
6. Ask students to identify the tree in the painting. (intelligence: naturalist)
7. Reflection: ask students if they have learned anything about how to look at a picture. Ask them if they have learned anything about the target language. (intelligence: intrapersonal)



The Text: “A Memory” (Devised by the Researcher: Ladghem

Chikouche Zouweyna)

After a tiring day of work, I chose to escape to warm and joyful memories. I took my photo album, and engaged in remembering my childhood. Here is a picture that I love so much. My father was standing on the left wearing a pair of medical glasses and a bleu chemise. He had black hair and fair complexion. His brown eyes were sparkling under the golden sun beams. On his left was my mother standing having a compassionate smile. She seems so beautiful and tender. She was wearing a red dress with long sleeves. In front of them were two chairs where my grandfather and grandmother were sitting. My grandfather was sitting in front of dad. He wore classical clothes, a white chemise with a red tie and black pants. On his left was my grandmother. I like her grey hair that expresses nothing but long tiring days and nights of pleasing the whole family. Grandma wears medical glasses. She is smiling for my uncle who was taking the picture. Down on the ground were my two little sister and brother Selene and James. Selene loved my grandpa more so she chose to sit in front of him leaning on his legs and sitting on only one knee and holding the other with both hands. On the other hand, James adores grandma so he was leaning on her legs too with a big smile putting his left elbow on his left knee and his right hand on his right knee. This photo was taken outside in my uncle's farm. The apple tree behind my dad reminds me of my childhood days, because there where I used to play with grandpa. Oh! How gorgeous my family is! I miss those days.

APPENDIX 04
THE PRACTICE
TOEFL RCT
THE POST-TEST

Practice Test 2

Directions: Each passage is followed by a series of questions. Answer the questions based on the information you gathered from the passage. Choose the best answer to each question and answer each question based on what is *stated* or *implied* in the passage.

QUESTIONS 1–10 REFER TO THE FOLLOWING PASSAGE.

(5) People have been donating blood since the early twentieth century to help accident victims and patients undergoing surgical procedures. Usually a pint of whole blood is donated, and it is then divided into platelets, white blood cells, and red blood cells. People can donate blood (for red blood cells) about once every two months.

(10) Transfusing the blood from the donor to the recipient is straightforward. It involves taking the blood from a donor's arm vein by means of a hypodermic syringe. The blood flows through a plastic tube to a collection bag or bottle that contains sodium citrate, which prevents the blood from clotting.

(15) When the blood is given to a patient, a plastic tube and hypodermic needle are connected to the recipient's arm. The blood flows down from the container by gravity. This is a slow process and may last as long as 2 hours to complete the infusion of blood into the recipient. The patient is protected from being infected during the transfusion. Only sterile containers, tubing, and needles are used, and this helps ensure that transfused or stored blood is not exposed to disease-causing bacteria.

(20) Negative reactions to transfusions are not unusual. The recipient may suffer an allergic reaction or be sensitive to donor leukocytes. Some may suffer from

(25) an undetected red-cell incompatibility. Unexplained reactions are also fairly common. Although they are rare, other causes of such negative reactions include contaminated blood, air bubbles in the blood, overloading of the circulatory system through administration of excess blood, or sensitivity to donor plasma or platelets.

(30) Today, hospitals and blood banks go to great lengths to screen all blood donors and their blood. All donated blood is routinely and rigorously tested for diseases, such as HIV (which causes AIDS), hepatitis B, and syphilis. When the recipient is a newborn or an infant, the blood is usually irradiated to eliminate harmful elements. Donated blood is washed, and the white blood cells and platelets are removed.

(35) Storing the blood sometimes requires a freezing process. To freeze the red blood cells, a glycerol solution is added. To unfreeze, the glycerol is removed. The ability to store blood for long periods has been a boon to human health.

- (40) 1. Which of the following words is closest in meaning to the word "donating" in line 1?
- (45) (A) Adorning
(50) (B) Giving
(55) (C) Taking
(60) (D) Distributing

2. In line 5, the word “it” refers to
- (A) accident victims
 - (B) surgical procedures
 - (C) a pint of whole blood
 - (D) surgery patients
3. According to the passage, how often can people donate blood for red blood cells?
- (A) Every four months
 - (B) Every three months
 - (C) Every two months
 - (D) Every month
4. Where in the passage is the best place for the following sentence?
- Inserting the needle into the recipient’s arm causes little pain.**
- (A) After the last sentence in the first paragraph
 - (B) After the word “syringe” in paragraph 2
 - (C) After the word “arm” in paragraph 3
 - (D) After the word “transfusion” in paragraph 3
5. Which sentence in paragraph 2 explains how clotting is prevented in the blood container?
- (A) The first sentence
 - (B) The second sentence
 - (C) The third sentence
 - (D) None of the above.
6. All of the following are mentioned as potential negative reactions to transfusions EXCEPT:
- (A) allergies
 - (B) red-cell incompatibility
 - (C) air bubbles in the blood
 - (D) sensitivity to donor leukocytes
7. What answer choice is closest in meaning to the word “undetected” in line 35?
- (A) Not wanted
 - (B) Not captured
 - (C) Not found
 - (D) Not illustrated
8. Look at the phrase “go to great lengths to screen” in paragraph 5, lines 44–45. Choose the word that has the same meaning.
- (A) Routinely
 - (B) Rigorously
 - (C) Irradiated
 - (D) Removed
9. Based on the information in the passage, what can be inferred about blood transfused to infants and newborns?
- (A) It is as rigorously tested as blood for adults.
 - (B) It is treated with radiant energy.
 - (C) It is not treated differently from adults.
 - (D) It is not dangerous for children.
10. What does the author imply in the passage?
- (A) Transfusing blood is a dangerous process.
 - (B) Storing blood benefits mankind.
 - (C) Clotting cannot be prevented.
 - (D) Freezing blood destroys platelets.

QUESTIONS 11–20 REFER TO THE FOLLOWING PASSAGE.

Duncan Phyfe made some of the most beautiful furniture found in America. His family name was originally Fife, and he was born in Scotland in 1768. In 1784, the Fife family immigrated to Albany, New York where Duncan's father opened a cabinetmaking shop. Duncan followed in his father's footsteps and was apprenticed to a cabinetmaker. After completing his training, Duncan moved to New York City.

Duncan Fife was first mentioned in the 1792 NYC Directory as a furniture "joiner" in business at 2 Broad Street. Two years later, he moved, expanded his business, and changed his name to Phyfe. He was a quiet-living, God-fearing young man who felt his new name would probably appeal to potential customers who were definitely anti-British in this post-Revolutionary War period.

Duncan Phyfe's name distinguished him from his contemporaries. Although the new spelling helped him better compete with French émigré craftsmen, his new name had more to do with hanging it on a sign over his door stoop.

The artisans and merchants who came to America discovered a unique kind of freedom. They were no longer restricted by class and guild traditions of Europe. For the first time in history, a man learned that by working hard, he could build his business based on his own name and reputation and quality of work.

Phyfe's workshop apparently took off immediately. At the peak of his success, Phyfe employed 100 craftsmen. Some economic historians point to Phyfe as having employed division of labor and an assembly line. What his workshop produced shows Phyfe's absolute dedication to quality in workmanship. Each piece of furniture was made of the best available materials. He was reported to have paid \$1,000 for a single Santo Domingo mahogany log.

Phyfe did not create new designs. Rather, he borrowed from a broad range

(50) of the period's classical styles, Empire, Sheraton, Regency, and French Classical among them. Nevertheless, Phyfe's high-quality craftsmanship established him as America's patriotic interpreter of European design in the late eighteenth and early nineteenth centuries.

Although the number of pieces produced by Duncan Phyfe's workshop is enormous, comparatively few marked or labeled pieces have been found extant. In antiques shops and auctions, collectors have paid \$11,000 for a card table, \$24,200 for a tea table, and \$93,500 for a sewing table.

11. Based on the information in the passage, what can be inferred about Duncan Phyfe?

- (A) He was an excellent businessman with a good sense of craftsmanship and design.
- (B) He regretted that Great Britain no longer governed New York City.
- (C) He built all his furniture by himself in a workshop in Santo Domingo.
- (D) He joined the cabinetmakers' guild after he moved to Scotland in 1792.

12. According to the passage, which of the following does the author imply?

- (A) Duncan Fife and his father had the same first name.
- (B) Duncan Fife worked for his father in Scotland.
- (C) Duncan Fife and his father were in the same business.
- (D) Duncan Phyfe made over 100 different kinds of tables.

13. Which sentence in paragraph 2 explains Duncan's name change?

- (A) The first sentence
- (B) The second sentence
- (C) The third sentence
- (D) None of the above.

14. Which choice does the word “it” refer to in line 27?
- (A) His spelling
(B) His chair
(C) His French
(D) His name
15. Which choice is closest in meaning to the word “guild” in line 31?
- (A) Verdict of a jury
(B) Organization of craftsmen
(C) Political party of émigrés
(D) Immigrant’s club
16. Which of the following does the word “freedom” in line 30 refer to?
- (A) No longer restricted
(B) Restricted
(C) By working hard
(D) Took off
17. Where in the passage could the following sentence be added to the passage?
- Every joint was tight, and the carved elements were beautifully executed.**
- (A) After the word “workmanship” in paragraph 5
(B) After the word “cabinetmaker” in paragraph 1
(C) After the word “stoop” in paragraph 3
(D) After the word “table” in the last paragraph
18. In his business, Duncan Phyfe used all of the following EXCEPT:
- (A) division of labor
(B) an assembly line
(C) continental designs
(D) the least expensive materials
19. Based on information in the passage, what can be inferred about Duncan Phyfe’s death?
- (A) He died in the eighteenth century.
(B) He died in Albany.
(C) He died in the nineteenth century.
(D) He died in Scotland.
20. The author implies that
- (A) furniture from Duncan Phyfe’s workshop no longer exists
(B) furniture from Duncan Phyfe’s workshop costs a lot of money today
(C) furniture from Duncan Phyfe’s workshop was ignored by New Yorkers
(D) furniture from Duncan Phyfe’s workshop was made by his father

QUESTIONS 21–30 REFER TO THE FOLLOWING PASSAGE.

Roman gladiators are intriguing figures in history. We get “gladiator” from the Latin word *gladius*, which means sword. Gladiators were professional combatants who originally performed, to the death, at Etruscan funerals. The losers became armed attendants in the next world to the person whose funeral was being held.

(5) In Rome, these exhibitions became very popular and increased in size from 3 pairs at the first known exhibition in 264 B.C. to 300 pairs in the middle of the first century B.C. These spectacles increased to as many as 100 pairs under the emperor Titus, while the emperor Trajan in 107 A.D. had 5,000 pairs of gladiators for his triumph.

(10) There were various classes of gladiators, distinguished by their arms or modes of fighting. The Samnites fought with the national weapons—a large oblong shield, a visor, a plumed helmet, and a short sword. Thracians had a small round shield, called a buckler, and a dagger curved like a scythe. They usually fought the Mirmillones, who were armed in Gallic fashion with helmet, sword, and shield. Similarly, a Retiarius,

- (30) or net man, was often matched with a Secutor, or pursuer. The netman wore nothing but a short tunic or apron and tried to entangle the fully armed pursuer with the cast net he carried in his right hand. If successful, the netman dispatched the pursuer with a large, threepronged weapon called a trident, which the netman carried in his left. Others fought on horseback, and some carried a short sword in each hand. There were also gladiators who fought from chariots and others who tried to lasso their antagonists.
- Gladiators came from a variety of social classes. Though they were usually slaves and criminals, a ruined man of high social position might hire himself out as a gladiator. Emperor Domitian had unusual gladiators, dwarfs and women, and the half-mad emperor Commodus fought in the arena, where he won his bouts with the aid of his Praetorian Guard.
- To a victorious gladiator was given branches of palm and sometimes money. If they survived a number of combats, they were often freed from gladiatorial service. However, many gladiators reentered after discharge. Some became politically important bodyguards to controversial politicians.
21. What is the main topic of the passage?
- (A) The life of Roman gladiators
(B) The emperors of Rome
(C) The weapons used in the Roman arena
(D) The social status of gladiators
22. According to the passage, where did gladiators originally perform?
- (A) In Roman arenas
(B) At Thracian cities
(C) At Etruscan funerals
(D) In Trajan's triumph
23. According to the passage, when did the first known gladiatorial exhibition take place in Rome?
- (A) In 50 B.C.
(B) In 264 B.C.
(C) In 107 A.D.
(D) In 157 B.C.
24. Which of the words below is closest in meaning to the word "spectacles" as used in line 14?
- (A) Eyeglasses
(B) Displays
(C) Prospects
(D) Corpses
25. The word "they" in line 26 refers to which of the following?
- (A) Samnites
(B) Gladiators
(C) Thracians
(D) Daggers
26. All of the following were used as weapons by gladiators EXCEPT:
- (A) a buckler
(B) a cast net
(C) a tunic
(D) a trident
27. Where would the following sentence fit best in the passage?
- In the 2000 film *Gladiator*, Joaquin Phoenix played the role of Commodus and fought Maximus, the gladiator.**
- (A) At the end of paragraph 1
(B) At the end of paragraph 2
(C) At the end of paragraph 3
(D) At the end of paragraph 4

28. Which word is closest in meaning to the word “antagonists” as used in line 43?
- (A) Enemies
(B) Injured soldiers
(C) Horsemen
(D) Fighters
29. From the passage, it can be inferred that
- (A) gladiators could become Emperor
(B) emperors enjoyed fighting gladiators
(C) gladiators sometimes gained their freedom
(D) emperors fought on horseback
30. Where could the following sentence best be added to the passage?
- Some, in turn, became trainers of new gladiators.**
- (A) After the word “history” in paragraph 1
(B) After the word “shield” in paragraph 3
(C) After the word “classes” in paragraph 4
(D) After the word “service” in paragraph 5

QUESTIONS 31–40 REFER TO THE FOLLOWING PASSAGE.

- The Forbidden City is the former imperial palace in the center of Beijing, China. Construction began in 1406, and the emperor’s court officially moved in by 1420. The Forbidden City got its name because most people were barred from entering the 72-hectare site, surrounded by walls. Even government officials and the imperial family were permitted only limited access. Only the emperor could enter any section at will.

- The architecture of the Forbidden City conforms rigidly to traditional Chinese principles. All buildings within the walls follow a north-south line, and the most important ones face south to honor the sun. The designers arranged the other buildings, and the ceremonial spaces between them, to impress all visitors with the great power of the Emperor, while reinforcing the insignificance of the individual. This architectural con-

cept was carried out to the smallest detail. For example, the importance of a building was determined not only by its height or width but also by the style of its roof and the quantity of statuettes placed on the roof’s ridges.

- In recognition of the importance of its unparalleled architecture, UNESCO added the palace to its World Heritage List in 1987. Today, visitors from all over the world do not wait for an imperial invitation to walk about this palace, now a museum of imperial art.

One of the most impressive landmarks of the Forbidden City is the Meridian Gate, the formal entrance to the southern side of the Forbidden City. The gate, with its auxiliary wings on either side of the entryway, is 38 meters high at its roof ridge. When you stand in front of this majestic structure, you understand how awed people felt when they stood there listening to imperial proclamations.

As you walk through the gate, you come into a large courtyard, 140 meters long and 210 meters wide. Running through the courtyard is the Golden River, which is crossed by five parallel white marble bridges. These bridges lead to the Gate of Supreme Harmony, which, in turn, leads to the heart of the Forbidden City. Its three main halls stand atop a three-tiered marble terrace overlooking an immense plaza. The plaza has enough space to hold tens of thousands of subjects paying homage to the emperor.

At the northernmost end of the Forbidden City is the Imperial Garden, which is totally different from the rest of the compound. Instead of rigid formality, you see a seemingly spontaneous arrangement of trees, fishponds, flowerbeds, and sculpture. Here is the place of relaxation for the emperor. The motion picture *The Last Emperor* (1987), which portrays the life of Hsüan-t’ung P’u-i, was filmed partly within the Forbidden City.

31. Which sentence in paragraph 1 explains who could go anywhere in the Forbidden City at any time?
- (A) Sentence 2
(B) Sentence 3
(C) Sentence 4
(D) Sentence 5
32. How long did it take to build the Forbidden City?
- (A) About five years
(B) About seven years
(C) About ten years
(D) About fourteen years
33. From the passage, it can be inferred that
- (A) Chinese architects borrowed ideas from many different countries
(B) the design of the Forbidden City is dull and colorless
(C) the architecture of the Forbidden City exemplifies traditional Chinese values
(D) the garden of the Forbidden City was laid out in a strict, rectangular pattern
34. Which phrase is closest in meaning to the word “unparalleled” as used in line 30?
- (A) At an angle from the main line
(B) A high quality found nowhere else
(C) Partially designed in a foreign country
(D) Careless of small details in design
35. Which word(s) does the word “its” refer to in line 31?
- (A) UNESCO
(B) Architecture
(C) Palace
(D) World Heritage List
36. From the passage, it is implied that the main entrance area to the Forbidden City is
- (A) surrounded by three tall walls
(B) painted gold and green
(C) decorated with statuettes
(D) not very impressive
37. Which phrase is closest in meaning to the word “proclamations” as used in lines 45–46?
- (A) Music composed for public ceremonies
(B) Speeches encouraging soldiers to fight
(C) Official public announcements
(D) Poetry written for the emperor
38. All of the following are found in the Imperial Garden EXCEPT:
- (A) fishponds
(B) sculpture
(C) white marble bridges
(D) flowerbeds
39. According to the passage, what do the bridges over the Golden River lead to?
- (A) The Meridian gate
(B) The center of Beijing
(C) The Gate of Supreme Harmony
(D) The Imperial Gardens
40. Which phrase is closest in meaning to the word “spontaneous” as used in line 65?
- (A) Without meaning
(B) Without thinking
(C) Without planning
(D) Without drawing

QUESTIONS 41–50 REFER TO THE FOLLOWING PASSAGE.

Early mariners gradually developed ways of observing and recording in their journals their position, the distances and directions they traveled, the currents of wind and water, and the hazards and havens they encountered. The information in these journals enabled them to find their way home and, for them or their successors, to repeat and extend the recorded voyages. Each new observation could be added to an ever-increasing body of reliable information.

Ship captains and navigators were not concerned about running into other vessels, but as heavy traffic developed along shipping routes, avoiding such collisions became a serious matter. In all fields of navigation, keeping a safe distance between ships moving in different directions at different speeds became as important as knowing how to reach one's destination.

The larger the ship, the easier it is to see, but the larger a ship, the more time it requires to change its speed or direction. When many ships are in a small area, an action taken by one ship to avoid colliding with another might endanger a third. In busy seaports, such as Hamburg and New York, this problem has been solved by assigning incoming and outgoing ships to separate lanes, which are clearly marked and divided by the greatest practical distance.

The speed of jet airplanes makes collision a deadly possibility. Even if two pilots see one another in time to begin evasive action, their maneuvers may be useless if either pilot incorrectly predicts the other's move. Ground-based air traffic controllers assign aircraft to flight paths that keep airplanes a safe distance from one another.

When steam engines began to replace sails during the first half of the nineteenth century, a ship's navigator had to compute fuel consumption as well as

course and location. Today, in airplanes as well as in ships, large amounts of fuel, needed for long trips, reduce the cargo capacity, and economy requires that its consumption be kept to a minimum.

In modern air and sea navigation, a schedule has to be met. A single voyage or flight is only one link in a complicated and coordinated transportation network that carries goods and people from any starting place to any chosen destination. Modern navigation selects a ship's course, avoids collision with other moving ships, minimizes fuel consumption, and follows an established timetable.

- (5) (10) (15) (20) (25) (30) (35) (40) (45)
41. What is the main topic of the passage?
 (A) Historical records of navigation
 (B) Airplane navigation in Europe
 (C) Schedules and shipping long distances
 (D) The growing importance of navigation
42. Which of the choices is closest in meaning to the word "hazards" as used in lines 5–6?
 (A) Dangerous obstacles
 (B) Safe seaports
 (C) Whales and large fish
 (D) Inaccurate navigation
43. Which of the following has the same meaning as the word "collisions" as used in line 16?
 (A) Other vessels
 (B) Running into
 (C) Avoiding such
 (D) Serious matter
44. Which of the following does the word "it" in line 23 refer to?
 (A) Ship
 (B) Time
 (C) Speed
 (D) Larger

45. Where can the following sentence be added to the passage?
- In fact, many harbors were burned down from fires begun as a result of ships' colliding in port.**
- (A) After the word "encountered" in paragraph 1
(B) At the end of paragraph 2
(C) After the word "third" in paragraph 3
(D) After the word "possibility" in paragraph 4
46. How are ships kept apart in the ports of Hamburg and New York?
- (A) The port controllers guide ship captains by radio.
(B) Incoming and outgoing ships are assigned to clearly marked lanes.
(C) Ships are not allowed to change their course or their speed while in port.
(D) Captains use their journals to determine the hazards in port.
47. What does the author imply about the speed of jet airplanes?
- (A) Air traffic is now safer than it was with planes with piston-driven engines.
(B) Radio communication between ships and planes help schedules.
(C) Collisions of jet airplanes almost always result in the deaths of passengers and crew.
(D) Pilots are now able to predict evasive maneuvers that others will take.
48. What can be inferred about fuel consumption in the nineteenth century?
- (A) A ship's captain had to decide how many sails would be used on a ship.
(B) A navigator had to determine how much fuel a ship needed for a voyage.
(C) A large amount of fuel made room for extra cargo space.
(D) A journal was kept about the amount of coal a steam engine used during a voyage.
49. Look at the word "timetable" in the last sentence of the passage. Which of the following words has the same meaning?
- (A) Schedule
(B) Network
(C) Navigation
(D) Established
50. Which of the following statements is supported by the passage?
- (A) Information in mariners' journals is better than modern navigation techniques.
(B) Collisions in the air are more dangerous than those at sea.
(C) Mariners today have to compute more things than those in the past did.
(D) Air traffic controllers use the same navigation techniques as sea captains.

ANSWER KEY AND EXPLANATIONS

1. B	11. A	21. A	31. D	41. D
2. C	12. C	22. C	32. D	42. A
3. C	13. C	23. B	33. C	43. B
4. C	14. D	24. B	34. B	44. A
5. C	15. B	25. C	35. A	45. C
6. C	16. A	26. C	36. A	46. B
7. C	17. A	27. D	37. C	47. C
8. B	18. D	28. A	38. C	48. B
9. B	19. C	29. C	39. C	49. A
10. B	20. B	30. D	40. C	50. C

- The correct answer is (B).** *Adorning* means “making beautiful” or “adding decorations to.” *Taking* is the opposite of *donating*. *Distributing* is similar to *donating* but means “giving the same amount to more than two people.”
- The correct answer is (C).** *It* refers to “a pint of whole blood.” The whole phrase is necessary for the rest of the sentence to be understood. All other answer choices are plural; *it* is singular.
- The correct answer is (C).** The last sentence of paragraph 1 is, “People can donate blood [for red blood cells] about once every two months.”
- The correct answer is (C).** The sentence fits best in the third paragraph, after the first sentence. The paragraph is about what happens to the person who receives the blood. That person is a recipient or a patient.
- The correct answer is (C).** The sentence is as follows: “The blood flows through a plastic tube to a collection bag or bottle that contains sodium citrate, which prevents the blood from clotting.”
- The correct answer is (C).** “Air bubbles in the blood” is not a reaction to a transfusion. It is a *cause* of a negative reaction.
- The correct answer is (C).** *Undetected* means “not discovered” or “not realized.” In the sentence, the other answer choices are incorrect.
- The correct answer is (B).** The correct word is *rigorously*.
- The correct answer is (B).** In the fifth paragraph, it is stated that blood is irradiated when the recipient is a newborn or an infant. To radiate means to treat with radiant energy.
- The correct answer is (B).** None of the other answer choices are stated or implied in the passage.
- The correct answer is (A).** The other answer choices use countries and dates mentioned in the passage but in an incorrect way.
- The correct answer is (C).** The first name of Duncan’s father is neither mentioned nor implied. Duncan did not work in Scotland. He worked after he came to America. Duncan Phyfe employed 100 craftsmen, but the passage does not say how many kinds of tables his workshop made.
- The correct answer is (C).** “He was a quiet-living, God-fearing young man who felt his new name would probably appeal to potential customers who were definitely anti-British in this post-Revolutionary War period.” In paragraph 2, this is the only sentence about his name change.
- The correct answer is (D).** Phyfe did not put *his spelling*, *his chair*, or *his French* on a sign over his door stoop.
- The correct answer is (B).** As the word was used in the fourth paragraph, it refers to the organizations that trained craftsmen for a variety of work. Guilds also controlled who could work in a particular craft and stood for high standards. As the word was used in the

- fourth paragraph, trials are not mentioned. The verdict of a jury may be "Guilty" but never "guild." As the word was used in the fourth paragraph, it does not refer to émigrés, political parties, or clubs.
16. **The correct answer is (A).** *No longer restricted* is the correct phrase.
 17. **The correct answer is (A).** The sentence best fits in the fifth paragraph after the following sentence: "What his workshop produced shows Phylfe's absolute dedication to quality in workmanship." The inserted sentence tells the reader about the results of Phylfe's dedication to quality in workmanship.
 18. **The correct answer is (D).** In paragraph 5, the last sentence reports that Phylfe spent a lot of money on materials.
 19. **The correct answer is (C).** Paragraph 2 tells the reader that Phylfe began his work as a joiner in 1792, in the late eighteenth century. Paragraph 6 tells us he interpreted European design in the late eighteenth and early nineteenth centuries.
 20. **The correct answer is (B).** The last paragraph says that few pieces of Phylfe's work have been found, but they do exist ("are extant"). His furniture was not ignored; it was popular. His father did not work for him.
 21. **The correct answer is (A).** The emperors, weapons, and social status are mentioned in the passage, but they are only part of the main topic, not the main topic itself.
 22. **The correct answer is (C).** See the third sentence of the first paragraph.
 23. **The correct answer is (B).** See paragraph 2, first sentence.
 24. **The correct answer is (B).** *Spectacles* sometimes means the same thing as eyeglasses but not in this passage. The other two words are distractors that have no connection to the meaning of the word *spectacle*.
 25. **The correct answer is (C).** *They* is a plural pronoun, which has to refer to a plural noun. The plural noun in the preceding sentence is *Thracians*.
 26. **The correct answer is (C).** A *tunic* is an article of clothing, not a weapon.
 27. **The correct answer is (D).** This sentence would best fit the passage at the end of paragraph 4. It adds information about the previous sentence that mentions the emperor Commodus.
 28. **The correct answer is (A).** The other answer choices are not related to the meaning of the word as it is used in the last sentence of paragraph 3.
 29. **The correct answer is (C).** See the second sentence of paragraph 5. Gladiators could not become emperors. Although Commodus fought gladiators, no other emperor did so. The passage does not mention whether emperors fought on horseback.
 30. **The correct answer is (D).** The sentence best fits in paragraph 5, after the second sentence. *Some* refers to gladiators who had been freed from gladiatorial service.
 31. **The correct answer is (D).** Only the emperor could enter any section at will. See the last sentence of paragraph 1.
 32. **The correct answer is (D).** See sentence 2 in paragraph 1.
 33. **The correct answer is (C).** The first sentence of the second paragraph tells the reader that Chinese architects did not borrow ideas from any other country. The first sentence of the third paragraph tells the reader how important the design was. Paragraph 4 tells the reader to enter through the Meridian Gate.
 34. **The correct answer is (B).** *Unparalleled* is not related in meaning to *parallel*. The last two answer choices are distractors that contain words, but incorrect ideas, from the passage.
 35. **The correct answer is (A).** *Its* refers to UNESCO.
 36. **The correct answer is (A).** The fourth paragraph tells the reader about the gate and its two auxiliary walls.
 37. **The correct answer is (C).** All other choices are distractors that incorrectly define the word *proclamations*.
 38. **The correct answer is (C).** White marble bridges are found in the courtyard behind the Meridian gate. See the second sentence of paragraph 5.

39. **The correct answer is (C).** See the fifth paragraph of the passage.
40. **The correct answer is (C).** The other three choices are distracters that are not related in meaning to the correct answer.
41. **The correct answer is (D).** The three other choices are mentioned or implied in the passage, but the main topic includes these ideas.
42. **The correct answer is (A).** *Safe seaports* are not hazards. *Whales and large fish* could be a hazard but are not as close in meaning to *hazards* as *dangerous obstacles*. *Inaccurate* is a distractor that is not related to the meaning of the word in context.
43. **The correct answer is (B).** The correct phrase is *running into other vessels*.
44. **The correct answer is (A).** The correct word is *ship*.
45. **The correct answer is (C).** The sentence best fits in paragraph 3, after the second sentence. This sentence reports the results of two ships colliding in a harbor.
46. **The correct answer is (B).** See the third sentence in paragraph 3.
47. **The correct answer is (C).** See the first sentence of paragraph 4.
48. **The correct answer is (B).** See the first sentence of paragraph 5.
49. **The correct answer is (A).**
50. **The correct answer is (C).** The passage reports how navigation became more complex over time.

**ANSWER SHEET PRACTICE TEST 3**

- | | | | | |
|-------------|-------------|-------------|-------------|-------------|
| 1. A B C D | 11. A B C D | 21. A B C D | 31. A B C D | 41. A B C D |
| 2. A B C D | 12. A B C D | 22. A B C D | 32. A B C D | 42. A B C D |
| 3. A B C D | 13. A B C D | 23. A B C D | 33. A B C D | 43. A B C D |
| 4. A B C D | 14. A B C D | 24. A B C D | 34. A B C D | 44. A B C D |
| 5. A B C D | 15. A B C D | 25. A B C D | 35. A B C D | 45. A B C D |
| 6. A B C D | 16. A B C D | 26. A B C D | 36. A B C D | 46. A B C D |
| 7. A B C D | 17. A B C D | 27. A B C D | 37. A B C D | 47. A B C D |
| 8. A B C D | 18. A B C D | 28. A B C D | 38. A B C D | 48. A B C D |
| 9. A B C D | 19. A B C D | 29. A B C D | 39. A B C D | 49. A B C D |
| 10. A B C D | 20. A B C D | 30. A B C D | 40. A B C D | 50. A B C D |

answer sheet

Appendix 05 :
The Participants
commentaries checklist

Participants' Check list

Dear participants,

Please answer the following questions after attending the session.

1. Have you participated today ? why ?

Comment:

2. Did you use any of your eight intelligences today? What was it? Tell in which activity

Comment:

3. Was the lesson enjoyable? Tell which activity made it so and why?

Comment:

4. Did you find the text easy/difficult to read?

Comment:

5. If the text was difficult tell at which level:

- Vocabulary
- Sentence complexity
- Topic
- Others

6. How have you read the text? What strategy have you used?

Comment:

7. Have the teacher interacted with you? Have you interacted with your classmates? how?

Comment:

8. What suggestions can you provide for the next lesson?

Comment:

Résumé

La théorie des Intelligences multiples a été développée par Howard Gardner au début des années 1980. Il affirme que chaque personne a plusieurs intelligences distinctes en corrélation avec une partie spécifique du cerveau. Cette théorie explique aussi comment chaque personne perçoit le monde à travers chacune de ses intelligences. A la lumière de cette théorie on a fait cette recherche intitulé : L'impact des Activités basé sur l'Intelligence Multiple sur la Compréhension de la lecture en Anglais pour les apprenants EFL. La recherche a commencé en identifiant les profils d'intelligence multiple des apprenants de vingt étudiants utilisant le test d'intelligence intelligente Howard Gardner (HGM-test) pour connaître l'intelligence dominante des apprenants. En outre, tous les élèves ont été invités à répondre au test de diagnostic de la TOEFL (Compétences de lecture du TOEFL de Paterson's, p.19) pour évaluer leur compréhension de la lecture. Les étudiants ont été intégrés au programme de formation dans lequel ils ont appris la compréhension de la lecture grâce à des activités basées sur les intelligences multiples. À la fin du programme de formation, les étudiants qu'ont été invités à répondre au test de pratique de lecture TOEFL (Paterson's Master TOEFL Reading Skills, p.109) Afin de mesurer les progrès réalisés par les élèves dans la compréhension de la lecture. L'analyse des résultats a montré que les principaux types d'intelligence dans les apprenants EFL sont : linguistique, interpersonnels, visuels et corporels. Les résultats indiquent également qu'il y a une relation entre la théorie d'intelligence multiple et la compréhension de la lecture en Anglais aussi que les activités de lecture du MI ont un effet positif sur la compréhension de lecture des apprenants intermédiaires EFL. L'effet sert à améliorer leur compétence de appréhender la lecture. Enfin, d'autres recommandations et suggestions pédagogiques ont été données.

Les mot clé : La théorie des Intelligences multiples, Howard Gardner, intelligences, TOEFL, HGM-test, linguistique, interpersonnels, visuels et corporels, EFL, la compréhension de la lecture.

ملخص

طورت نظرية الذكاءات المتعددة من طرف العالم والباحث هاورد غاردنر في أوائل عام 1980. تنص هذه النظرية على أن كل شخص يتمتع بعدة ذكاءات مختلفة مرتبطة بجزء معين في المخ. كما تشرح هاته النظرية كيف أن كل شخص باستطاعته فهم ما حوله باستعمال ذكاءاته. كانت هذه النظرية مصدر إلهام بحثنا الذي عنوانه: تأثير إستخدام نشاطات القراءة المعتمدة على نظرية الذكاءات المتعددة على فهم القراءة باللغة الانجليزية. تطرقنا في بداية البحث الى إيجاد ملمح الذكاء لكل طالب مشارك في التجربة (20 تلميذة) بالإضافة إلى خضوع التلاميذ الى إختبار توفل للقراءة والذي استخدم كإختبار قبلي من أجل تقييم مستواه في فهم القراءة باللغة الانجليزية. بعد ذلك تم دمج التلاميذ في برنامج تدريبي والذي من خلاله تم تدريسهم القراءة باللغة الانجليزية باستعمال الأنشطة القائمة على نظرية الذكاءات المتعددة. في نهاية البرنامج التدريبي خضع التلاميذ الى إختبار توفل للقراءة آخر استخدم كإختبار بعدي لقياس مدى تقدمهم في القراءة باللغة الانجليزية. تحليل نتائج التجربة أظهر أن أنواع الذكاء البارزة في العينة كانت: الذكاء اللساني, ذكاء معرفة الاخرين, الذكاء البصري/ المكاني والذكاء الحركي الجسدي. أظهرت النتائج أيضا أن نظرية الذكاءات المتعددة لها علاقة مع فهم القراءة و أن لها تأثير إيجابي على فهم التلاميذ. أخيرا قدمت توصيات وإقتراحات بيداغوجية لكيفية تطبيق هاته النظرية.

الكلمات المفتاحية نظرية الذكاءات المتعددة, هاورد غاردنر, ذكاءات, البرنامج التدريبي, الذكاء اللساني, ذكاء

معرفة الاخرين, الذكاء البصري/ المكاني والذكاء الحركي الجسدي.