

## Multiple Intelligences - Based Planning of EFL Classes

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### ARTICLE INFO

#### Article history

Received: December 17, 2017

Accepted: March 07, 2018

Published: April 30, 2018

Volume: 9 Issue: 2

Advance access: March 2018

Conflicts of interest: None

Funding: None

#### Key words:

Students' Differences,  
Identifying,  
Gender,  
EFL classes,  
Dominant Multiple Intelligences,  
Questionnaire

### ABSTRACT

The present study aimed to set a plan for teaching EFL classes based on the identification of university students' dominant multiple intelligences in EFL classes, and the differences in the types of intelligence between female and male students in terms of their gender. The problem the present study aimed to address is that the traditional concept that "one size fits all" is still adopted by many EFL teachers, and that EFL students' differences and preferences are noticeably unheeded. It is believed that identifying students' dominant intelligences is a sound remedial solution for such a problem before embarking on any teaching program. Moreover, getting students aware of their different types of intelligence will motivate and encourage them in the classroom. The researchers used a questionnaire as a research instrument for data collection. The results arrived at showed that there were no significant differences in the types of intelligence between female and male students in terms of their gender, except for bodily- kinesthetic intelligence. They also showed that the dominant intelligences were ranked from the highest to the lowest as follows interpersonal, linguistic, spatial, logical-mathematical, bodily kinesthetic, intrapersonal, musical, and naturalistic.

### INTRODUCTION

When teaching EFL classes, many teachers are unaware of their students' different intelligences, potentials, and preferences. They still teach in the traditional view "one size fits all". This philosophy, in many cases, results in unsuccessful and fruitless teaching styles. So it becomes difficult for such teachers to reach or motivate their students in the classroom. In other words, it makes students encounter difficulties in achieving better learning due to specific teaching styles adopted by teachers. The present study aimed to address this problem in the light of Multiple Intelligences theory (henceforth, MI theory). In this respect, Hess (2001) emphasized the importance of variety in all teaching particularly multilevel classes because of the different learning styles and spans of attention to relate to. So a variety of activities is important in all learning environments especially multilevel classes because such varieties of activities and tasks can accommodate different levels of students in the classroom. For example, in a vocabulary lesson, students can have different tasks; some can look up the dictionary definition of words, others can find sentences in the text where the words appeared, while others can have their own sentences with new words. Teachers can change group tasks because students

cannot concentrate on one activity for more than a limited period of time.

Similarly, Harmer (2012) stated that lessons should cater for the different kinds of students' preferences. For example, visual stimuli can be used in one lesson, but using music in another. He added that there should be a record of what kind of activities are successful with which kind of students to make effective future decisions about the type of activities to be included in the lessons. Another important issue which Harmer mentioned is the learners' autonomy which should be encouraged; i.e. directing them how to improve their learning outside the classroom by providing them with enough materials, techniques, and training. This will make them able to work on their own, and will become more confident about their learning.

Such a way of implementing a variety of tasks and techniques in EFL classes can be done via using the philosophy of MI theory, through which a number of techniques and strategies will be available at EFL teachers and students' disposal as well. EFL teachers can adapt/adopt MI theory, which has been proved to contribute to the process of teaching and learning in general and EFL classes in particular (Baum, Veins, & Slatin, 2005). As a principle for paving the

way for teaching any language skills, it is a good idea to identify the dominant intelligences of EFL students to make it easy for the teachers plan and set their activities for their students. Moreover, showing the differences in the types of intelligence between female and male students according to their gender can also help EFL teachers to choose suitable activities for their students. Being aware of students' different intelligences and needs is a good strategy before embarking on any teaching program. The importance of the present study lies in the fact that finding solutions, and suggesting some techniques can help EFL teachers to reach their students and pass over the messages they want to convey. Furthermore, it is the first time that MI theory is researched and experimentally used in Iraqi educational institutions.

### Aims and Goals

The present study aimed to provide answers to the following research questions.

1. Is there a significant difference between the students' types of intelligence in terms of their gender?
2. What are the dominant types of students' intelligence?

The present study also aimed to provide EFL teachers with some solutions and techniques for dealing with the differences among students in the classroom to enable them run their classes more successfully.

In the light of the research questions, the following hypothesis has been set.

There are no significant differences between students' dominant types of intelligence according to gender.

### LITERATURE REVIEW

Traditionally, the concept of intelligence has been interpreted as something inherited and unchanged or developed by age. It was limited to two types of intelligence, namely linguistic and logical mathematical. This narrow view of intelligence encouraged scientists to look for other alternatives for defining and interpreting the concept of intelligence (Gardner, 2006). It took more than 80 years, when Gardner, the American Professor of Cognition and Education at Harvard University, (1983, 1993, 2006) proposed his salient MI theory for the first time to challenge such a viewpoint on intelligence. In MI theory, Gardner ascertained that all human beings possess different levels of eight types of intelligence, viz linguistic, musical, spatial, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic. He added that these types of intelligence can be developed when conducive circumstances, practices, and training are provided. The key points of MI theory are that all of us have the full range of intelligences that is what makes us human beings, no two individuals have exactly the same intellectual profile due to the different experiences people undergo in real life, and to be very intelligent does not mean that one necessarily acts intelligently.

The role of MI theory in education has been appreciated as a source of new strategies and concepts to run EFL classes successfully among other different specializations. In this respect, Baum et al. (2005) said that many educators use MI

theory because it validates what they already know and do. They also believed that their students represent a diversity of cognitive strengths and ways of learning by doing diverse practices in response. MI theory is also popular because it is compatible with the philosophies and approaches already in place in many schools, such as whole language, cooperative learning, etc. This has encouraged teachers worldwide to integrate and use MI theory as a philosophy in their classes. Concerning class diversity, MI theory is considered as a lens through which educators scrutinize their practices in order to extend what they currently do well and better meet the diverse needs of their students (Baum et al., 2005).

Due to the role of MI theory in enhancing teaching and learning a foreign language, a number of studies were conducted on the role of MI theory in improving students' different language skills. For example, in 2001, Kezar emphasized the role of MI theory in higher education, as there were not enough studies in this respect. She wanted to bridge such a gap by highlighting three trends, namely joining more students into higher education in the next few decades, acknowledgement of the needs of a diverse student body, and importance of considering and investigating the role of MI theory in higher education due to accountability and assessment. The theory of MI has triggered higher educators to develop their skills based on the fact that the essence of MI theory is to search for such diversity and differences prevalent among them. Moreover, since educational institutions aim to build all the learners and educators' intelligences in a society, this aligns with the potential of MI theory to develop students' intelligences and achieve better learning.

It is worth mentioning that the studies conducted on the role of MI theory covered different language skills at different levels especially in EFL classes. For example, Akkuzu and Akçay (2011) designed a learning environment based on MI theory and studied its effectiveness on the achievement, attitudes and retention of students. For conducting their study, they used different activities and techniques which enhanced students' learning achievement. Maftoon (2012) also studied the role of MI theory in second language acquisition. Due to its crucial role in the process of language teaching and learning, Boonma (2014) addressed the role of MI theory and its application in the process of language teaching and learning. The study suggested some techniques and strategies to teach through MI, and recommended that EFL teachers should integrate this philosophy in their classes for its great contribution in enhancing teaching and achieving better learning. Rostami and Soleimani (2015) studied the relationship between students' multiple intelligences and their performance on writing different types of essays. They found out that there was a significant and positive correlation between total multiple intelligences and students' writing performance of the different types of essays.

Finally, Madkour and Mohamed (2016) also investigated the effect of college students' multiple intelligences on their motivation and language proficiency. They found out that identifying student' multiple intelligences motivated students and improved their language skills.

### **Gardener's Eight Types of Intelligence**

Armstrong (2009) elaborated the types of intelligences proposed by Gardner, which enable humans to interact in different ways with the world they live in. These include:

#### **Linguistic Intelligence**

This type of intelligence refers to the use of words effectively, whether orally or in writing, through telling a story. It includes the ability to deal with different aspects of a language, and use it in different everyday situations. It is best represented by writers, novelist, poets, lawyers, teachers, linguists, preachers, story tellers, etc.

#### **Logical- mathematical Intelligence**

This type of intelligence is about how to use numbers effectively. It also includes sensitivity to logical patterns, relationships, statements, propositions, and functions. The processes used in this service subsume categorization, classification, inference, generalization, calculation, and hypothesis testing. It is best represented by mathematicians, accountants, scientists, etc.

#### **Spatial Intelligence**

This intelligence refers to visualizing and understanding the world accurately. It also refers to the ability to decorate, design, paint, or invent. It has the sensitivity to color, line, and the relationship that exists between these elements. Moreover, it refers to the ability to represent new ideas and adapt oneself appropriately in a spatial matrix. It is represented by artists, decorators, etc.

#### **Bodily-Kinesthetic Intelligence**

This intelligence focuses on using the whole body to express ideas and feelings. This type of intelligence is important for making messages clear when talking to others. It is represented by athletes, dancers, actors, sculptors, etc.

#### **Musical Intelligence**

This intelligence is about the way we respond to music in different ways such as composing, listening to, and discriminating sounds. People with a developed musical intelligence can make use of being in a world of beat, rhythm, tone, pitch, volume and directionality of sound. It is represented by composers, performers, singers, musicians, etc.

#### **Interpersonal Intelligence**

This intelligence enables us to approach other people, and understand them through facial expressions, gestures, and voice. People with developed interpersonal intelligence can talk to, and discuss with other people effectively. This type of intelligence is represented by counselors, political leaders, negotiators, etc.

#### **Intrapersonal Intelligence**

This intelligence is about understanding one's self and one's abilities, and awareness of inner moods. It accounts for self- control,

regulation. Meta cognitive skills are exercised through this intelligence. It is represented by psychotherapists, religious leaders, etc.

#### **Naturalistic Intelligence**

This type of intelligence is about how to be in harmony with nature. It shows the ability to distinguish and recognize different types of plants, trees, animals, and species in nature, cloud formation, and mountains. It is represented by naturalists, biologists, explorers, animal activists, etc.

### **METHOD**

The present study used a questionnaire<sup>1</sup> adapted from Berman (2002). First, the questionnaire was presented to a panel of seven juries to check its suitability for administration in the context of Iraqi Kurdistan universities. Moreover the questionnaire was checked for its internal consistency and reliability following Cronbach alpha using SPSS software. Given the fact that a coefficient of reliability ranges from 0 to 1, it was found that the coefficient of Cronbach's alpha for this questionnaire was 0.84, which was considered highly reliable. Taking juries' notes on the questionnaire into consideration, the questionnaire was then given to a sample of students to respond so as to identify their dominant intelligences, and the differences in the types of intelligence between female and male students according to gender. The sample included 17 (4 females and 13 males) seniors at the Department of English/Faculty of Humanities/University of Zakho/Kurdistan Region of Iraq, whose ages ranged from 22 to 25 years. Non-probability sample strategy<sup>2</sup> (also known as a purposive sample) was adopted since such students are already set in an intact class, and it was not possible to use random selection with such cases (Cohen, Manion, & Morrison, 2007). The strategy of identifying learners' dominant multiple intelligences, which can be implemented in teaching any language skills, will be considered as a base and a road map for planning lessons on different language skills, and setting activities for teaching such skills including speaking, listening, reading, writing, grammar, vocabulary, etc.

### **DATA ANALYSIS**

The questionnaire was analyzed using One-sample T Test and Paired-Samples T Test via SPSS (version 20). The data collected via the questionnaire were analyzed in terms of the research questions set at the beginning of the study as follows:

#### **Research Question 1**

Is there a significant difference between the students' types of intelligence in terms of their gender?

Table (1) shows the mean scores of the students' dominant types of intelligence in terms of their gender. As it is seen in Table(1), P-values scored by the students were higher

1 This questionnaire was adapted by kind permission of Crown House Publishing. Original text is taken from "A Multiple Intelligences Road to an ELT Classroom" by Berman (2002) / ISBN 9781899836239.

2 For more details on probability and nonprobability sample strategy, see Cohen et al. (2007).

than the level of significance.05; except for the bodily-kinesthetic intelligence, which scored a P-value less than.05. As such, there are no statistically significant differences between the types of intelligence of female and male students; except for the bodily kinesthetic intelligence which scored a P-value.02, which is less than.05. There is a statistically significant difference between male and female students in bodily kinesthetic intelligence in favor of males.

#### Research Question 2

What are the students' dominant types of intelligences?

Table (2) shows the students' dominant types of intelligence according to the means and standard deviation obtained in this respect. The mean scores and p-values of the dominant types of intelligence were ranked from the highest to the lowest as follows: interpersonal intelligence, linguistic intelligence, spatial intelligence, logical-mathematical intelligence, bodily-kinesthetic intelligence, intrapersonal intelligence, musical intelligence, and naturalistic intelligence.

## DISCUSSION

The results arrived at in this study are shown in Tables (1 & 2). These results showed no significant differences between the types of intelligence in terms of students' gender, except for the bodily-kinesthetic intelligence in favor of the male students. This might be due to the fact that females do not have freedom like boys to go out and do exercises. In other words, there are more restrictions on girls than boys in our societies. In this respect, since there were no significant differences between male and female students' intelligences, the hypothesis is rejected. Moreover, the students' dominant types of intelligence are ranked as follows: interpersonal intelligence, linguistic intelligence, spatial intelligence, logical-mathematical intelligence, bodily-kinesthetic intelligence, intrapersonal intelligence, musical intelligence, and naturalistic intelligence.

The interesting thing about MI theory is its flexibility when used for teaching in any context at any level. So it is a matter of adaptation and providing the students with a good learning environment when teaching through this theory. Awareness of students' differences, preferences, and types of intelligence should be well thought of before applying MI theory.

Likewise being aware of students' needs and preferences will make it easy for teachers to choose the suitable types of activities and techniques for their lessons. This, in fact, depends on the type of subject and the context in which a certain topic is taught. So, it is a matter of adapting and adopting a certain method and technique in the lesson when teaching a certain language skill. As mentioned before, knowing students' needs and intelligences will help teachers to pass their messages over to the students in the classroom. Moreover, learning will be achieved in a better way, just in contrast with the traditional ways of teaching where teachers imposed one style of teaching in the classroom and neglected their students' needs; this led to unsuccessful lessons, and made it difficult for the students to understand the subjects and improve their learning. The interesting thing about MI theory is that there is no specific way of teaching through this theory. It requires understanding the theory first, and then planning how to apply it in a certain program (Baum et al., 2005.). It is important for the teachers who want to teach through this theory to adapt the theory so as to fit their students' needs, culture, educational background, gender, and age. The techniques and strategies used in teaching any language skill through the philosophy of MI will enable the students to develop their language skills. Similarly, Fleethan (2006) suggested some guidelines for teachers when teaching any topic through MI philosophy. He recommends that the teaching materials and the techniques teachers want to apply and use should work for their situations and context of teaching, improve their teaching, achieve students' better

**Table 1.** Students' dominant types of intelligence in terms of their gender

Intelligence	Gender	N	Mean	Standard deviation	Mean difference	t	P value	Level of significance
Interpersonal intelligence	Male	4	25.00	3.91	3.00	1.58	0.13	P > 0.05
	Female	13	22.00	3.13				
Linguistic intelligence	Male	4	21.75	3.59	0.98	0.59	0.55	P > 0.05
	Female	13	20.76	2.65				
Spatial intelligence	Male	4	22.50	5.06	0.88	0.38	0.70	P > 0.05
	Female	13	21.61	3.66				
Logical-mathematical intelligence	Male	4	22.00	5.94	1.92	0.76	0.45	P > 0.05
	Female	13	20.07	3.88				
Bodily-kinesthetic Intelligence	Male	4	22.75	3.40	4.28	2.43	0.02	P < 0.05
	Female	13	18.46	2.98				
Intrapersonal Intelligence	Male	4	19.00	1.41	0.15	0.098	0.92	P > 0.05
	Female	13	18.84	2.99				
Musical intelligence	Male	4	20.50	8.18	4.34	1.22	0.23	P > 0.05
	Female	13	16.15	5.59				
Naturalist intelligence	Male	4	18.50	1.29	3.19	1.79	0.09	P > 0.05
	Female	13	15.30	3.42				

**Table 2.** Mean scores & standard deviations of Students' types of intelligence

Intelligences	Mean	Standard deviation	Mean difference	Df	t-value	P value	order
Interpersonal intelligence	22.7059	3.45985	4.70588	16	5.608	0.000	1
Linguistic intelligence	21.1176	2.73593	3.11765	16	4.689	0.000	2
Spatial intelligence	21.8235	3.87678	3.82353	16	4.066	0.001	3
Logical–mathematical intelligence	20.5294	4.31737	2.52941	16	2.416	0.028	4
Bodily-kinesthetic Intelligence	19.4706	3.51990	1.47059	16	1.723	0.104	5
Intrapersonal Intelligence	18.8824	2.66651	0.88235	16	1.364	0.191	6
Musical intelligence	17.1765	6.29717	-0.82353	16	-0.539	0.597	7
Naturalistic intelligence	16.0588	3.32548	-1.94118	16	-2.407	0.029	8

**Table 3.** The activities designating different intelligences

Activity	Intelligences involved
Brainstorming and thinking individually, discussing, word games, storytelling, journal writing, critical thinking	Logical mathematical, spatial, intrapersonal, linguistic, and interpersonal
Pair and group working, Interacting in the classroom, asking questions, peer editing	Interpersonal, linguistic
Reading a text by a student or by a teacher.	Linguistic
Words Games	Logical- mathematical, linguistic, intrapersonal
Writing journals	Linguistic and intrapersonal
Doing assignment outside the classroom	Intrapersonal intelligence
Watching a video, listening to music, background music	Musical and spatial
Using pictures , min mapping	Spatial

learning, and enable them to better adapt and adopt the ideas. So there is much space and flexibility to teach through MI. For example, on teaching language skills teachers can include different techniques and strategies for teaching language skills as shown in Table (3).

## CONCLUSION

The present study investigated the differences in the types of intelligence between female and male students, and students' dominant types of intelligence, and arrived at the following concluding remarks.

1. Apart from bodily-kinesthetic intelligence, there was not any statistical significant difference in the mean scores of the students' dominant types of intelligence in terms of their gender. In other words, male and female students participated in the present study possessed almost similar dominant intelligences. The only significant difference according to gender was in bodily-kinesthetic intelligence, and was in favor of the male students. This might be due to the fact that there are more cultural constraints on females than males in our societies, as customs do not give females enough

freedom to do activities outdoors except in very limited cases. As for males, there is much space and flexibility to perform activities outdoors, and without any constraints. Hence, in the light of what is mentioned above, the hypothesis was not verified and rejected.

2. The dominant types of intelligence scored by the students were ranked from the highest to the lowest as follows: interpersonal intelligence, linguistic intelligence, spatial intelligence, logical-mathematical intelligence, bodily-kinesthetic intelligence, intrapersonal intelligence, musical intelligence, and naturalistic intelligence.

3. The study shows the importance of being aware of students' differences in the classroom before embarking on teaching any program. Identifying students' differences and preferences will help teachers plan their classes and run them successfully. The approach suggested in the present study can be used at any language level, and teachers can teach any language skill by adapting/adopting the techniques and ideas presented in this study.

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