

Investigating EFL Learners' Multiple Intelligences in the Preparatory Year at Taif University

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Abstract—The present paper aims to investigate the English as a foreign language (EFL) learners' multiple intelligences (MIs) in the preparatory year at Taif University in Saudi Arabia, and to provide suggestions for EFL instructors to integrate MIs in their lesson plans for instructional use in the classroom. To achieve these purposes, the researcher attempted to answer three questions. The first question investigated the different types of MIs that EFL learners possess. The second question examined whether there were any statistically significant differences ($\alpha= 0.05$) in EFL learners' MIs due to stream (Humanities, Sciences and Health). The third question was an attempt to synthesize literature in order to suggest ways for instructors to integrate MIs in the EFL classroom. A questionnaire of 4- Likert Scale was used to gather data from four hundred and eighty two students to answer the first two questions. And content analysis was used to answer the third question. The collected data were analyzed in the form of descriptive statistics. The results revealed that students do not tend to have interest in musical and naturalistic intelligences. In addition, there were statistically significant differences among the streams in the perceptions of their MIs in favor of the health stream students. The researcher also synthesized literature and suggested a number of techniques and activities to help instructors integrate MIs in their plans. Based on the results, the researcher presented a number of conclusions and recommendations.

Index Terms—multiple intelligences, English as a foreign language, preparatory year, Taif University

I. INTRODUCTION AND THEORETICAL BACKGROUND

Teaching is a process meant mainly to facilitate students' learning. It is a teacher activity which aims to provide learners with better learning opportunities. In this context, learners have different needs, interests and learning styles. Sometimes, teachers struggle to meet these needs. This entails that teachers should adjust their instructional strategies so that they can cater for the varying needs of EFL learners. Howard Gardner's multiple intelligences could help teachers be aware of students' individual characteristics in order to cater for these needs. They can incorporate these intelligences in their lesson plans for practical use in the classroom.

A. An Overview of Multiple Intelligences

Gardner's theory (1985) proposed various types of intelligence capacities that result in many different ways of understanding and learning about the world. As Gardner (1993) states: *It is of the utmost importance that we recognize and nurture all of the varied human intelligences, and all of the combinations of intelligences. We are all so different largely because we all have different combinations of intelligences. If we recognize this, I think we will have at least a better chance of dealing appropriately with the many problems we face in the world (Gardner, 1993:15).*

Christison (1998) stated that her students demonstrated so many different individual strengths and skills, and they were constantly changing, learning, and grow. She proposed that intelligence was not just one form of cognition. Rather, intelligence comprised different intelligences. Christison & Kennedy (1999) maintained that the theory of multiple intelligences includes more than verbal/linguistic and logical/mathematical abilities. MIs theory implies that all humans possess at least eight different intelligences that represent a variety of ways to learn and demonstrate understanding.

Gardner (1985) identified eight intelligences summarized as follows:

Bodily-kinesthetic intelligence: the ability to use the body to express ideas and to solve problems. This includes physical skills such as coordination, flexibility, speed, and balance. Teachers can help students develop their bodily-kinesthetic intelligence by providing opportunities for physical challenges during the lesson.

Intrapersonal intelligence: the ability to understand oneself, including strengths, weaknesses, desires, and intentions. This includes skills such as understanding how one is similar to or different from others, reminding oneself to do something, knowing about oneself as a language learner, and knowing how to handle one's feelings. Teachers can help students by letting them express their own interests and help them understand their own styles of learning.

Interpersonal intelligence: the ability to understand another person's feelings and intentions. This includes skills such as responding effectively to other people in some pragmatic way, such as getting students to participate in a project. Teachers can help students through activities that involve them in solving problems.

Linguistic intelligence: the ability to use words effectively both orally and in writing. This intelligence includes skills such as the abilities to remember information, to convince others to help you, and to talk about language itself. Teachers can help students by creating a rich print environment; by providing things to look at, listen to, and write about, and by creating opportunities for interaction among students and between the teacher and students.

Logical-mathematical intelligence: the ability to use numbers effectively. This includes skills such as understanding the basic properties of numbers and principles of cause and effect, the ability to predict. Teachers can help students by experimenting with numbers and by using simple machines or computer programs to help students think about cause and effect.

Musical intelligence: the ability to sense rhythm, pitch, and melody. This includes skills such as the ability to recognize simple songs and to vary speed and rhythm in simple melodies. Teachers can help students by using tape recorders for listening, singing along, and learning new songs.

Spatial intelligence: the ability to sense form, space, color, line, and shape. This includes the ability to represent visual ideas. Teachers can help students by providing opportunities for visual mapping activities and encouraging students to vary the arrangements of materials in space by creating charts and bulletin boards.

Naturalist intelligence: the ability to recognize and classify plants and animals. It is also the ability to recognize cultural artifacts like cars or sneakers. Teachers can help students by focusing their attention on the world outside the classroom.

B. Implications of Gardner's MIs in EFL Teaching and Learning

The theory of MIs includes a number of educational implications. Armstrong (1994) summarized these ideas into four key points:

1. *Each person possesses all eight intelligences.* In each person, the eight intelligences work together in unique ways. Some people have high levels of all or most of the eight intelligences. Other people are in the middle, with a few intelligences highly developed, most modestly developed, and one or two underdeveloped.

2. *Intelligences can be developed.* Gardner (1985) suggests that everyone has the capacity to develop all eight intelligences with help, instruction and encouragement.

3. *Intelligences work together in complex ways.* Intelligences work and interact with each other. No intelligence really exists by itself in life.

4. *There are many different ways to be intelligent.* There is no standard set of attributes that one must have in order to be considered intelligent.

Campbell (1997) suggests that teachers expand their techniques and strategies beyond the typical linguistic and logical ones used in classrooms. According to Silver, Strong, and Perini (1997), all learners have different abilities, so one strategy that might work well with a group of students might not with another group. Because of individual differences among students, teachers are advised to use a broad range of teaching strategies. Christison (1998) stated that educators have taken the theory, put it together in different ways, and applied it to their lesson planning and curriculum development. They help us understand the diversity we observe in our students and provide a framework for addressing these differences in our teaching. Stanford (2003) maintained that the theory helps teachers accomplish what good teachers have always done: Reach beyond the text to provide varied opportunities for students to learn and show evidence of learning. MIs theory provides a framework for teachers to reflect on their best teaching methods and to understand why these methods. It also helps teachers expand their teaching practices to include a broader range of methods and techniques to reach a wider range of learners. MIs theory opens the door to a wide variety of teaching strategies that can easily be implemented in the classroom. Nolen (2003) added that many teachers struggle with finding ways to reach individual learning styles and needs. One teaching method that can accommodate for this variety of learning styles is Howard Gardner's Multiple Intelligences. He summarized the following implications for the MIs in language teaching and learning:

- Linguistic or verbal intelligence focuses on the mastery of language. People with verbal intelligence tend to think in words. Linguistic intelligence enables one to pay attention to grammar and vocabulary. Those with linguistic intelligence memorize by using words. Teachers can help linguistic learners progress by using language that the student can relate to and comprehend. If used correctly, language can provide a bridge between the material and the learner.

- Musical intelligence makes use of sound. Learners with musical intelligence have a firm understanding of pitch and rhythm. Through music, they are able to convey their emotions.

- Mathematical-logical intelligence includes the ability to detect patterns, reason deductively, and think logically. Learners can explore this intelligence by ordering and re-ordering objects.

- Spatial intelligence includes the ability create mental images in order to solve problems. Learners with spatial intelligence are best taught using pictures or photographs.

- Bodily-kinesthetic intelligence includes the ability to understand the world through the body. Learners can use their body in skilled ways for a distinct purpose. Kinesthesia is the capacity to act gracefully and to apprehend directly the actions or the dynamic abilities of other people or objects.

- Interpersonal intelligence includes the ability to understand and discriminate between people's moods and feelings. It can be enhanced by encouraging students to work together.

- Intrapersonal includes the ability to know oneself. Learners with intrapersonal characteristics need to be praised frequently in the class. It can be enhanced through imagination exercises. Learners could be given long-term projects with various stages that need to be checked before moving onto the next.

- Environmental intelligence includes the ability to understand nature. Learners with naturalistic intelligence often recognize and classify plants and animals. Teachers can plan activities such as: observing nature, labeling specimens from nature, and noticing changes in the environment.

Wilson (2005) stated that MIs theory helps teachers to develop an effective instruction methodology to promote understanding and learning appreciation of students. The classrooms can then be a place for intellectual and emotional development of the students because all students are individuals with different talents. Gouws (2008) believes that by implementing the theory in the classroom, educators will be able to change their teaching and learning strategies and cater for the individual differences of learners. The implication for educators is that they are constantly responsible for creating a positive learning environment that provides learners with adequate opportunities to practice, using the new knowledge and skills that they have learned. Educators are also responsible to cater the learners' individual learning needs and interests. Not all learners learn equally well from the same experiences. Therefore, educators are required to consider a number of ways for helping learners to achieve outcomes. In addition, learners should be provided with time and help to realize their potential. Maftoon & Sarem (2012) pointed out that teachers should recognize and teach to a broader range of talents and skills that depend on a variety of intelligences. Teachers can take advantage of exercises, activities, and techniques that help enhance their students' intelligences. Another implication added by Maftoon & Sarem (2012) is that by paying attention to all intelligences, teachers can try to design a syllabus taking advantage of a variety of games, stories, music, images to utilize all intelligences in their classes.

Effective assessment comes in alignment with instructional practices (Bellanca, Chapman, & Swartz, 1994, Stanford, 2003). Stanford (2003) pointed out that changing teaching strategies and curricula should be in parallel with changing assessment methods. Traditional assessment limits learners to a pencil-and-paper test as the primary means of demonstrating knowledge and skills. Multiple intelligences theory brings about an awareness of many assessment strategies that allow students to demonstrate that they understand and can use new information in unique ways. Assessment alternatives include logs and journals, graphic organizers, observational checklists, video samples, rubrics, miscue analyses, and portfolios. Such alternative forms of assessment offer students the potential to demonstrate learning content in a variety of ways.

To conclude, all of the intelligences above are a better way for teachers to understand learners' learning styles. Teachers should present materials in a style which engages all or most of the intelligences. Teachers can optimize learning for all the learners if they consider their students' needs and interests. Teachers who teach towards the MIs realize the benefits of active learning. Each of the intelligences is potential in every learner, and it is part of a teacher's job to help learners develop their own intelligences.

C. *Problem Statement and Objective*

Based on the researcher's observation and experience in teaching English as a foreign language, it has been obvious that EFL learners are different in their needs, interests and learning styles. Many teachers find it difficult to reach all learners' learning styles. They need to be aware of these individual characteristics so that they can cater for them in their teaching practices. Howard Gardner's multiple intelligences is a solution that helps teachers meet the variety of learning styles. The researcher believes that it is valuable to investigate these intelligences so that teachers can adjust their instructional strategies to be better able to meet learners' varying needs. The present study aims to investigate the different types of EFL learners' MIs in the preparatory year at Taif University, and to suggest ways to help teachers incorporate these intelligences in their daily lesson plans for practical use in the classroom. By doing this, learners are enhanced to learn in a way that is associated with their strengths and skills.

D. *Research Questions*

This paper is an attempt to answer the questions below:

- 1- What are the different types of EFL learners' multiple intelligences in the preparatory year at Taif University?
- 2- Are there any statistically significant differences ($\alpha = 0.05$) in EFL learners' multiple intelligences in the preparatory year due to stream (Humanities, Sciences and Health)?
- 3- What are the suggestions highlighted in literature for instructors to integrate multiple intelligences in the EFL classroom?

E. *Significance of the Study*

The results of this study should be of importance to:

- EFL instructors to consider which multiple intelligences EFL learners possess during their course of study in the preparatory year. These intelligences will be ranked as high and low so that instructors consider these in their lesson plans for practical use in the classroom.
- EFL instructors to consider suggestions highlighted in literature for integrating multiple intelligences for practical use in the classroom.

- The Quality Assurance and Professional Development Unit to consider the multiple intelligences in their plans of instructors' professional development.
- EFL practitioners in terms of conclusions and recommendations based on the results of the study to conduct further research.
- EFL existing body of research for the reference of EFL researchers and specialists.

F. Definition of Terms

The following terms will have the associated meaning whenever they appear in this paper:

- Multiple intelligences: A set of individual characteristics, strengths and skills learners possess to understand and learn more about the world. According to Gardner (1985), these include the linguistic, musical, mathematical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and environmental intelligences.
- Preparatory Year: A program targeted for high school students who study fundamental courses that prepare them to specialize in the following year.

II. REVIEW OF RELATED STUDIES

Many studies have provided evidence that MIs theory and its implications have a direct impact on developing EFL learners' skills and strengths (Khamis, 2005; Mohammadi, Abidin & Ahmad, 2012; Faoury, 2012; Ghamrawi, 2013). Other studies have also emphasized the importance of raising students' and teachers' awareness of the MIs theory, and incorporating it in teachers' instructional practices (Fortner, 2004; Mohammadi, Abidin & Ahmad, 2012).

Krstanoviae (2003) examined the implication of MIs Theory for learning styles in the EFL classroom. The multiple intelligence profiles of students and teachers at two secondary schools were obtained in order to identify their strengths and weaknesses in the different intelligences. In addition, the teachers' and learners' preferences for EFL activities catering for the intelligences were defined. Results showed the need for raising both the teachers' and learners' awareness of the existence of MIs learning styles.

Fortner (2004) investigated the relationship between middle school English teachers' instructional practices related to brain-based learning in multiple intelligences and students' achievement. The participants completed a questionnaire, as well as an instructional practices survey to measure pedagogical practices related to brain-based learning in MIs. The results indicated some implications for integrating multiple intelligences into instructional practices as a means to improve students' achievement.

Khamis (2005) investigated the effect of a multiple-intelligences based teaching program on Jordanian tenth grade students' paragraph writing ability in English. The researcher developed a four-question achievement test intended to measure students' paragraph writing ability. The results indicated a statistically significant difference in all students' paragraph writing ability on English in favor of the multiple-intelligences-based teaching program.

Madkour (2009) explored the experiences of 20 qualified teachers who used the MIs for improving the teaching strategies of English as a second language (ESL) at university level. The findings of the study confirmed the importance of multiple intelligences to language acquisition. Synthesis of the study findings revealed seven themes. These include using MIs as integrated domains; integrating MIs into language learning theories; enhancing MIs through cooperative learning; using technology for teaching MIs; incorporating language taxonomies into MIs; differentiated instruction is compatible with MIs; and employing authentic assessment in ESL enhances MIs. The Study's recommendations included training strategies for ESL teachers to use MIs in order to improve students' language acquisition.

Mohammadi, Abidin & Ahmad (2012) explored the relationship between students' strengths in MIs and achievement in learning English. Findings from this study suggested that in a learning environment where MIs may not be actively used, there is a tendency to have weak and negative correlation between multiple intelligences and English language achievement. Yet, there are distinct differences in the relationship between the two streams of Science and Art regarding the subjects they take. Practical implications for these findings recommended that teachers ought to utilize multiple intelligences in the teaching and learning process to provide opportunities for students to enhance their MIs.

Al Faoury (2012) investigated the effect of an integrative skills program on developing Jordanian university students' achievement in English and select-multiple MIs. The study also aimed to explore the effect of gender and the interaction between gender and the instructional program on students' achievement in English and students' linguistic, logical, interpersonal and intrapersonal intelligences. The results of the study revealed that there was a statistically significant difference between the mean scores of students' achievement in the posttest due to the effect of the teaching method in favor of the students in the experimental group who were taught using the integrative method. In addition, the findings indicated that there was a statistically significant difference between the mean scores of students' linguistic, logical, interpersonal and intrapersonal intelligences due to the teaching method in favor of the students in the experimental group who were taught using the integrative method.

Ibnian & Hadban (2013) explored implications the MIs theory has in English language teaching field. The study attempted to investigate the main features of the multi-intelligence theory and the implications of the multi-intelligence theory in English language teaching field. Results of the study showed that in EFL class, it is possible to motivate learners by making use of the nine different types of intelligence.

Ghamrawi (2013) investigated teachers' use of the MIs theory on vocabulary acquisition by preschoolers during English as a second language (ESL) classes in a K-12 school in Lebanon. The study used mixed methods, including observations of videotaped sessions, teacher surveys, and student interviews. Results indicated that students acquired new vocabulary faster using traditional methods of teaching; however, their retention of such vocabulary was significantly weaker when compared with the vocabulary acquired in MIs classes. In addition, the MIs profile of the teachers was correlated with their teaching styles and lesson delivery. Furthermore, teachers who used MI in their teaching also had lower usage of higher order thinking skills. The study recommends the utilization of MIs in ESL teaching and learning, yet also stipulates some aspects to be taken into consideration.

To sum up, the MIs studies discussed above revealed that there is a positive relationship between using the MIs theory and students' achievement. However, the context in which these studies have been experienced is different. The present study is an attempt to investigate the multiple intelligences EFL learners possess in their preparatory year at university level. The researcher examined which of these intelligences ranked higher than others to provide instructors with ideas to consider the multiple intelligences in their lesson plans. In addition, the researcher reviewed literature to synthesize ways for instructors to integrate multiple intelligences for practical use in the EFL classroom.

III. METHOD

In this section, the researcher describes the methodology followed to collect and analyzes data. It shows how population and sample of the study were identified, how validity and reliability of the study instrument was checked, procedures followed to conduct the study, and statistical analysis used to analyze the data.

A. Population and Sample Selection

The study population comprised two thousand and five hundred students learning English in the first semester of the academic year 2015-2016. Four hundred and eighty two students responded to the questionnaire.

B. Study Instrument

The researcher adopted the MI questionnaire used by ITC publications to measure and ranks EFL learners' multiple intelligences in their preparatory year. It has been translated into Arabic, and a bilingual specialized in English and Arabic was asked to make back translation to ensure validity. A 4- Likert Scale (1= Agree, 2= strongly agree, 3= disagree, 4= strongly disagree) was used to investigate the EFL learners' MIs.

C. Instrument Validity and Reliability

It can be argued that the instrument is valid since it has been developed by a recognized institution in the field. However, five EFL specialists were kindly requested to check if the items were appropriate and relevant to the context. In addition, in order to check the instrument reliability the checklist was distributed to 20 EFL students. They were asked to respond to the questionnaire. It was then distributed to them again after two weeks. The results were analyzed and the correlation coefficient (Pearson) between the previous and post time was 0.87. The Cronbach alpha reliability for the checklist was .85.

D. Study Procedures

The researcher formally requested the approval of the preparatory year dean to conduct the study and distribute the questionnaire to the EFL learners during their course of study. The instrument was checked for validity and reliability. Having the consent of the participants, the questionnaire was distributed and collected after being filled in. The researcher processed the results using the appropriate statistical methods to get the findings. Based on the findings, relevant conclusions and recommendations were drawn.

E. Statistical Analysis

Descriptive statistical analysis was used to answer the first two questions which aimed to investigate the multiple intelligences EFL learners possess, and content analysis was used to answer the third question meant to suggest ways for teachers to integrate MIs in the classroom.

IV. RESULTS AND DISCUSSION

To answer the first question related to the different types of EFL learners' multiple intelligences, Table 1 shows the means and standard deviation of all the students' perceptions towards multiple intelligences in health, sciences and humanities streams

TABLE 1.
MEANS AND STANDARD DEVIATION OF THE STUDENTS' PERCEPTIONS OF THEIR MIs IN THE THREE STREAMS

No.	Descriptive Statistics			
	Domains	No.	Mean	Std. Deviation
1	musical intelligence	482	2.33	.69
2	naturalistic intelligence	482	2.06	.52
3	verbal/ linguistic intelligence	482	1.94	.47
4	intrapersonal intelligence	482	1.91	.45
5	mathematical/ logical intelligence	482	1.87	.42
6	visual/ spatial intelligence	482	1.86	.44
7	interpersonal intelligence	482	1.84	.47
8	bodily/ kinesthetic intelligence	482	1.81	.44

It is clear from the table above that the students in all the three streams do not agree with only the first two domains regarding their perceptions of their multiple intelligences, and they agree with the other six domains. The mean in the first two domains is more than 2, which indicates that they do not tend to have interest in musical and naturalistic intelligences. This could be explained on the ground that many students have a negative attitude towards music in general, and the context in which they live probably does not enhance their interest in nature, environment, gardens, and plants as other sectors take care of these aspects in nature. In addition, students do not study music or nature- related courses that may enable them to realize the importance of these two domains in their life, and to encourage them to have interests in them. Not being interested in music may negatively affect their listening and speaking competencies in terms of recognizing and performing tone, pitch, rhyme and rhythm. All in all, the students in general have a relatively positive attitude towards all the domains of MIs except the first two. This can be due to fact that the six domains of MIs directly relate to them and fostered in the courses they study at university.

To discuss the question in more details, tables 2, 3 and 4 show means, standard deviation of the students' perceptions of MIs in each stream separately.

TABLE 2.
MEANS AND STANDARD DEVIATION OF THE STUDENTS' PERCEPTIONS OF MIs IN THE HEALTH STREAM

No.	Descriptive Statistics			
	Domains	No.	Mean	Std. Deviation
1	musical intelligence	49	2.44	.80
2	naturalistic intelligence	49	2.11	.65
3	verbal/ linguistic intelligence	49	1.94	.48
4	intrapersonal intelligence	49	1.90	.60
5	mathematical/ logical intelligence	49	1.88	.47
6	visual/ spatial intelligence	49	1.82	.38
7	interpersonal intelligence	49	1.75	.48
8	bodily/ kinesthetic intelligence	49	1.68	.34

The table above displays that health stream students are not interested in the first two domains of musical and naturalistic intelligences, which goes with the results displayed in table 1.

TABLE 3.
MEANS AND STANDARD DEVIATION OF THE STUDENTS' PERCEPTIONS OF MIs IN THE SCIENCE STREAM

No.	Descriptive Statistics			
	Domains	No.	Mean	Std. Deviation
1	musical intelligence	216	2.35	.69
2	naturalistic intelligence	216	2.08	.497
3	verbal/ linguistic intelligence	216	1.93	.476
4	intrapersonal intelligence	216	1.88	.472
5	mathematical/ logical intelligence	216	1.86	.403
6	visual/ spatial intelligence	216	1.86	.461
7	interpersonal intelligence	216	1.84	.481
8	bodily/ kinesthetic intelligence	216	1.78	.456

The table above shows that science stream students are not interested in the first two domains of musical and naturalistic intelligences as well, which goes with the results displayed in table 1 and 2.

TABLE 4.
MEANS AND STANDARD DEVIATION OF THE STUDENTS' PERCEPTIONS OF MIS IN THE HUMANITIES STREAM

No.	Descriptive Statistics			
	Domains	No.	Mean	Std. Deviation
1	musical intelligence	217	2.30	.66
2	naturalistic intelligence	217	2.04	.51
3	verbal/ linguistic intelligence	217	1.94	.43
4	intrapersonal intelligence	217	1.91	.47
5	mathematical/ logical intelligence	217	1.91	.41
6	visual/ spatial intelligence	217	1.88	.44
7	interpersonal intelligence	217	1.86	.41
8	bodily/ kinesthetic intelligence	217	1.81	.45

The table above shows that humanities stream students do not tend to have interest in the first two domains of musical and naturalistic intelligences, which also goes with the results displayed in table 1, 2 and 3.

As regards the second question which seeks whether or not there are any statistically significant differences in EFL learners' MIs due to stream (Humanities, Sciences and Health, table 5 shows the means and standard deviation of the students' perceptions of MIs in the three streams.

TABLE 5.
MEANS AND STANDARD DEVIATION OF THE STUDENTS' PERCEPTIONS OF MIS IN THE THREE STREAMS

No.	Domains	Streams	No.	Mean	Std. Deviation
1	Verbal/ linguistic intelligence	Health	49	1.82	.38
		Science	216	1.93	.47
		Humanities	217	1.91	.47
		Total	482	1.88	.47
2	Mathematical/logical intelligence	Health	49	1.88	.47
		Science	216	1.86	.40
		Humanities	217	1.88	.44
		Total	482	1.87	.42
3	visual intelligence	Health	49	1.68	.34
		Science	216	1.84	.48
		Humanities	217	1.91	.41
		Total	482	1.86	.44
4	Interpersonal intelligence	Health	49	1.90	.60
		Science	216	1.86	.46
		Humanities	217	1.81	.45
		Total	482	1.84	.47
5	Musical intelligence	Health	49	2.44	.80
		Science	216	2.35	.69
		Humanities	217	2.30	.66
		Total	482	2.33	.69
6	Naturalistic intelligence	Health	49	2.11	.65
		Science	216	2.08	.49
		Humanities	217	2.04	.51
		Total	482	2.06	.52
7	Bodily/kinesthetic intelligence	Health	49	1.75	.48
		Science	216	1.78	.45
		Humanities	217	1.86	.41
		Total	482	1.81	.44
8	Intrapersonal intelligence	Health	49	1.94	.48
		Science	216	1.88	.47
		Humanities	217	1.94	.43
		Total	482	1.91	.45

It appears from the means in the table above that there are differences among the streams in the students' perceptions of their MIs. However, analysis of variance (ANOVA) test was made to see if these differences were statistically significant. Table 6 displays the results of the ANOVA test.

TABLE 6.
ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Linguistic/ verbal intelligence	Between Groups	1.534	2	.767	3.490	.031
	Within Groups	105.278	479	.220		
	Total	106.812	481			
Mathematical/ logical intelligence	Between Groups	.025	2	.012	.068	.935
	Within Groups	87.896	479	.183		
	Total	87.921	481			
Visual intelligence	Between Groups	2.272	2	1.136	5.830	.003
	Within Groups	93.349	479	.195		
	Total	95.621	481			
Interpersonal intelligence	Between Groups	.400	2	.200	.888	.412
	Within Groups	107.754	479	.225		
	Total	108.154	481			
Musical intelligence	Between Groups	.852	2	.426	.882	.415
	Within Groups	231.263	479	.483		
	Total	232.115	481			
Naturalistic intelligence	Between Groups	.305	2	.153	.559	.572
	Within Groups	130.812	479	.273		
	Total	131.117	481			
Bodily/ kinesthetic intelligence	Between Groups	.863	2	.432	2.211	.111
	Within Groups	93.483	479	.195		
	Total	94.346	481			
Intrapersonal intelligence	Between Groups	.495	2	.247	1.179	.309
	Within Groups	100.466	479	.210		
	Total	100.960	481			

It is evident from the table above, that there are statistically significant differences ($\alpha= 0.05$) among the streams in the students' perceptions of their linguistic/verbal and visual intelligences in favor of the health stream. This is true as table 5 shows that the mean in the linguistic/verbal intelligence for the health stream is 1.82, whereas the means for the science and humanities streams were 1.93 and 1.91 respectively. In addition, the visual intelligence mean for the health stream is 1.68, while those for the science and humanities streams were 1.84 and 1.91 respectively. Health stream students joined the university based on the high grades they got in the competency and achievement tests administered to them. Besides, these groups of students are frequently requested to perform presentations and write reports based on visual aids, which would enhance their verbal and visual strengths. Besides, the majority of those students came from a rich educational background where there is focus on extra-curricular activities that would enhance various types of MIs.

Concerning the third question which aimed to suggest ways for instructors to integrate MIs in the EFL classroom, educators suggested various ways, activities and techniques for teachers to benefit from in their lesson plans for practical use in the classroom (Christison, 1999; Kallenbach, 1999; Spirovska, 2013).

Christison (1999) stated that rather than functioning as a prescribed teaching method, curriculum, or technique, MIs theory provides a way of understanding intelligence, which teachers can use as a guide for developing classroom activities that address multiple ways of learning and knowing. Kallenbach (1999) maintained that teaching strategies informed by MIs theory can transfer some control from teacher to learners by giving students choices in the ways they will learn and demonstrate their learning. By focusing on problem-solving activities that draw on multiple intelligences, these teaching strategies encourage learners to build on existing strengths and knowledge to learn new content and skills.

Christison (1999) identified four ways in which the MI theory can be used in the classroom as follows:

- 1- As a tool to help students develop a better understanding and appreciation of their own strengths and their preferred ways of learning.
- 2- As a tool to develop a better understanding of learners' intelligences.
- 3- As a guide to provide a greater variety of ways for students to learn and to demonstrate their learning.
- 4- As a guide to develop lesson plans that address the full range of learners needs.

Krstanoviae (2003) suggested a number of techniques and activities for EFL teachers to integrate the multiple intelligences in the classroom:

Linguistic Intelligence: lectures, presentations, discussions, debates, speeches, word games, journal writing, word search puzzles, crossword puzzles, reporting, process writing, reading activities, and publishing.

Logical-Mathematical Intelligence: mystery solving, problem solving, classifying, placing in categories, conducting experiments, Socratic questioning, analogies, and logic puzzles

Spatial Intelligence: color cues, charts, diagrams, maps, using drawings, using symbols, describing pictures, visual imagery, posters, videos, painting, computer use, graphic symbols, and visualization

Bodily-Kinesthetic Intelligence: hands-on activities, role play, simulations, manipulating objects, miming, and using gestures

Musical Intelligence: songs, singing, chants, background memory music, and creating melodies

Interpersonal Intelligence: pair-work, group-work, peer teaching, cooperative groups, team games, group brainstorming, active listening, and simulation

Intrapersonal Intelligence: reflection moments, options for homework and assignments, opportunities for choices, setting goals, independent study, and individual work.

Naturalist Intelligence: nature walks, field trips, ecology projects, nature videos, and Eco study.

In life, none of the intelligences work in isolation. Likewise, none of the activities and techniques mentioned focus only on one intelligence. There is no doubt that learners have certain intelligences more developed than others. Integrating multiple intelligences and learning styles into the EFL classroom enables teachers to accommodate learner diversity and respect each learner's uniqueness. Learners are allowed to work in their comfort zones; however, through exposure to diverse learning modes and techniques, they are also challenged to adapt and develop the intelligences which would otherwise be neglected. This developmental model allows for personal growth in neglected intelligences and it allows the teacher to work with the learner's strengths and help develop the weaknesses. Working with the learner's intelligences will heighten motivation and reduce anxiety and foster learning. Oxford (1999) suggested that teachers can reduce learners' language anxiety by providing "activities that address varied learning styles and strategies in the classroom".

Spirovska (2013) suggested a wide range of activities which might be used in order to cater for the different types of intelligences and applied in EFL/ESL classroom. These activities can be grouped as follows:

Linguistic Intelligence: reading a story, choosing appropriate word to fill in a gap in a sentence, choosing an appropriate synonym or antonym for a given word, answering multiple questions related to a text.

Logical Mathematical Intelligence: sequencing events in a chronological order, finding logical errors, presenting timelines of events presented in a story or a text, jigsaw puzzles and games, concept maps.

Bodily Kinesthetic Intelligence: drawing, coloring, miming, dramatization, making models of objects and using realia (real objects), games.

Visual Spatial Intelligence: drawing diagrams, concept maps, matching pictures with words, describing pictures or images.

Musical Intelligence: songs, tongue twisters, rhymes, playing songs in order to introduce a topic or analyze the lyrics, transforming lyrics into a text.

Interpersonal Intelligence: analyzing a character, reflections on characters and their actions or motivation, analyzing or retelling/rewriting a text from another's character point of view, group work.

Intrapersonal Intelligence: journal keeping, activities in order to elicit personal experiences (reflections, discussions and sharing personal experiences).

Naturalistic Intelligence: comparison between a novel and a film, news broadcasted by two different resources, categorizing, analyzing settings, field trips and projects.

V. CONCLUSIONS AND RECOMMENDATIONS

The present paper aimed to investigate EFL learners' MIs in the preparatory year at Taif University in Saudi Arabia, and to provide suggestions for EFL instructors to integrate MIs in their lesson plans for instructional use in the classroom. The results revealed that students do not tend to have interest in musical and naturalistic intelligences, which can be due to having a negative attitude towards music in general, and that the context does not probably enhance their interest in nature. In addition, there are no formal courses that support students in learning music or nature at university. This would have a negative effect on their listening and speaking competencies in terms of recognizing and performing tone, pitch, rhyme and rhythm. In addition, the results indicated there were statistically significant differences among the streams in the perceptions of their MIs in favor of the health stream students who generally scored higher than the other two groups in the competency and achievement tests before joining the university. Scholars suggested a number of ways, techniques and activities for teachers to incorporate MIs in the ELF classroom, and to consider these ways in their lesson plans for practical use in the class. Based on these findings, teachers are recommended to identify students' learning styles, interest and multiple intelligences, and consider the results in their lesson plans to devise teaching techniques in such a way that meet the varying needs, learning styles and intelligences of their students. There are a number of ways suggested in this paper to help EFL teachers integrate multiple intelligences in their classes. The Quality Assurance and Development Unit in the English Language Center is recommended to consider the results of this paper in their plans of teachers' professional development. It may conduct sessions where multiple intelligences are introduced, discussed, and instructors are invited to benefit from the scholars' techniques that may help them meet students' various strengths and learning styles. It may also highlight the areas revealed in this study where students have a negative attitude towards musical and naturalistic intelligences. Instructors may be asked to utilize their expertise to suggest ways to help students strengthen their musical and naturalistic intelligences in the EFL courses they study at university.

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