Impact of Multiple Intelligence-Based Activities (MIBAs) on the Improvement of Male and Female EFL Students' Aural-Oral Performance

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ABSTRACT

This study aimed at investigating the impact of Gardner's multiple intelligence-based activities (MIBAs) to improve the aural-oral performance of male and female EFL students. The findings revealed that the use of Multiple Intelligences Based Activities had a significant effect on EFL students' aural-oral performance and the experimental group outperformed the control group; however, there was not a significant difference between male and female students in terms of their improvement. The results of the study may offer some implications for the fields of teaching, material preparation, and curriculum designing. This study can be replicated in different settings, with different skills and sub-skills.

Keywords: Multiple Intelligence, Multiple Intelligence-Based Activities (MIBAs), Aural Performance, Oral Performance

RESUMEN

Este estudio tuvo como objetivo investigar el impacto de las múltiples actividades basadas en inteligencias múltiples de Gardner para mejorar el desempeño auditivo-oral de estudiantes masculinos y femeninos de inglés como lengua extranjera. Los hallazgos revelaron que el uso de actividades basadas en inteligencias múltiples tuvo un efecto significativo en el desempeño auditivo-oral de los estudiantes de inglés como lengua extranjera y el grupo experimental superó al grupo de control; sin embargo, no hubo una diferencia significativa entre los estudiantes masculinos y femeninos en términos de su mejora. Los resultados del estudio pueden ofrecer algunas implicaciones para los campos de la enseñanza, la preparación de materiales y el diseño curricular. Este estudio se puede replicar en diferentes entornos, con diferentes habilidades y sub-habilidades.

Palabras clave: inteligencias múltiples, actividades basadas en inteligencias múltiples, desempeño auditivo, desempeño oral

Introduction

Back in 1983, Howard Gardner (2002) proposed that each individual is born with various types of intelligence, such as the interpersonal, intrapersonal, linguistic, visual-spatial, logical-mathematical, bodily-kinesthetic, and musical one, all of which are used to perform particular tasks. Later he added an eighth one, the natural intelligence (2000), and the existential intelligence as a ninth type (2002). He maintained that every person has a combination of all different types of intelligence and learns or completes tasks through multiple ways.

Multiple intelligences theory (henceforth MIT) involve analytical, introspective, and interactive domains that function as organizers to understand the relationship among the intelligences and how they work with one another (McKenzie, 2002). Gardner (1993) noted that the traditional IQ tests measured only logic and language and disregarded other intelligence types. The humanistic features of MIT state, in their educational principles, that every student is unique and that each individual demonstrates various levels of these different multiple intelligences. Since people differ in terms of their strengths and combinations, all intelligence types could be enriched through training and practice. Thus, if the teacher uses a combination of several classroom techniques in a flexible way, students can be more successful.

Classroom activities based on MIT have been regarded as tools through which any content area can be conveyed to students appealing to their different inner capacities, abilities, or intelligence types. The use of numerous and proper activities based on MIT can engage all intelligence types. The notion of Multiple Intelligences Based Activities (MIBAs) ratifies that there is no specific, well-matched teaching method for all students at the same time; consequently, students' differences need to be taken into consideration (Gardner, 1983). In general, teachers have a noticeable role in distinguishing the students' capability and differences using MIT and accordingly lead them to success. Hence, this is a functional theory in classes that helps students to enhance their learning skills (Ibmian & Hadban, 2013).

Multiple intelligence-based instruction is an effective way to develop and improve many academic skills in the field of language teaching (Salem, 2013). Oral proficiency, particularly, is of primary importance in English as a second or foreign language learning in higher education because professional academic programs or career goals affirm that English oral development is an essential part of a second language syllabus (Pan, 2011). Fakhar (2015) defined speaking as an interactive process of constructing meaning that comprises producing, receiving, and processing information. Fauziah (2015), who researched into ELT and MIT in Indonesia, stated that EFL students usually have very poor ability to use English for oral communication and that some efforts are needed to improve their ability in speaking. With Adityas (2016), we think that creative and innovative learning activities can improve the students' multiple intelligences in the class. MIBAs would optimally develop the students' capacities and meet their needs (Adityas, 2016).

Classrooms should support the use of spoken language and provide adequate space for developing skills especially listening and speaking ones. By employing the relevant tasks for these skills, language teachers can enable students to develop a powerful communication system (Nasri & Biria, 2017). Listening is also taken into account as one of the most fundamental and challenging skills, mostly for EFL learners (Alavinia & Viyani, 2018). It is a significant language skill for both communication purposes and in the second language learning process and it plays a key role in all real communications. In the communication process, messages can be received and interpreted imprecisely with no efficient ability to listen and lead to misunderstandings (Morley, 1972). Improving listening comprehension has been a complex problem and teachers as well as students have tried hard to solve it, so a series of listening strategies with the purpose of listening, understanding, and recalling the transferred information must be applied (Khanchali, 2005). Lawtie (2004) claimed that listening is

essential to human communication. However, many educators pay less attention to their students' differences regarding different forms of intelligence and teach this skill by means of traditional methods (Davoudi & Chavosh, 2016).

The major focus of this study is to gain insight into the development of students' English aural-oral skills as they always play key roles in the students' language learning processes. Language learners use language functionally in their daily lives to different extents. However, aural-oral communication skills are regarded as the most difficult ones to be developed. Using alternative teaching methods that depend on various abilities and bits of intelligence may help students develop speaking and listening skills.

The current study is significant for both language learners and teachers and it might have some beneficial implications also for researchers. Effective instruction is required in order to improve listening and speaking because these abilities are, at least in our experience, always neglected, so instruction should be modified in a way that encourages learners to practice these skills. Thus, multiple intelligence-based instructions may help learners with different types of intelligence.

Although numerous studies have been previously conducted using MIT in teaching to improve students' skills and sub-skills, a proper methodology and more appropriate MIBA design and implementation to improve students' aural-oral performance are still needed. In a nutshell, there is a need to investigate the use of MIBAs instruction in teaching listening and speaking in Iranian EFL classrooms. The experimental study we conducted intended to cater for this need by investigating the effects of activities which were designed based on MIT to improve the students' aural-oral abilities.

Literature Review

Through the understanding of MI theory principles, English teachers can design activities to help learners learn a foreign language more effectively and successfully. A lot of theoretical and empirical Iranian and international studies have been conducted. Some of the following related empirical studies can be mentioned:

Ibrahim (2007) viewed speaking as a complicated mental process and explored the effect of using a suggested teaching strategy based on MIT to develop oral skills. Participants were third-year native speakers of an Arabic primary school who participated in a training program. A multiple intelligence scale and a checklist were used to obtain the results. The analysis of data indicated the usefulness of the training program based on MIT.

Safein (2012) explored the role of multiple intelligence theory on prospective English teachers' listening and speaking skill development in Cairo. In this pretest-posttest design study, sixty teachers were examined. The experimental group was taught listening and speaking skills using the multiple intelligence approach. After the treatment, the subjects were post-tested using both listening and speaking tests. The results indicated that the multiple intelligence-based program had a significant effect on improving the subjects' listening and speaking skills.

Salem (2013) investigated the impact of multiple intelligence-based instructions on developing speaking skills of pre-service English teachers. To this end, the researcher developed a multiple intelligence-based program to increase the speaking skills considering the individual differences among the students. The sample of the study consisted of 60 fourth-year prospective teachers of English. Following a quasi-experimental research design, one group's pre- and posttests were used to evaluate the usefulness of using this approach. The results revealed that MI-based instruction had a positive effect on developing speaking skills of the pre-service teachers of English.

Heidari and Panahandeh (2013) studied the relationship between their multiple intelligence types and listening strategies with a focus on gender. To this end, they used multiple intelligence and listening strategy questionnaires. Correlation analysis and independent t-tests were used to analyze the data. The results indicated that the most dominant types of multiple intelligence and listening strategies were existential and cognitive, respectively. Also, the least dominant ones were naturalistic intelligence and socio-affective strategies, correspondingly. The whole MI and listening strategies

showed significantly a positive relationship. Likewise, in interpersonal, bodily, and existential intelligence significant differences between male and female students were indicated, but regarding their listening strategies, no significant difference between male and female students was shown.

Saibani and Simin (2015) also examined the relationship between MI and speaking abilities among Iranian EFL learners, as well as the effect of gender on this relationship and they found a significant relationship between them. Moreover, the multiple regression analyses they conducted showed that linguistic-verbal (both in males and females) and interpersonal and intrapersonal intelligences (in males) were the main predictors of speaking ability in this study. Furthermore, it was shown that there was no significant difference between the speaking ability of males and females in the study.

Bas and Beyhab (2017) provided students with numerous MIBAs to improve students' aural-oral performance, with a specific focus on communicative activities used and prepared according to Gardner's MIT. They concluded that the students who were taught by multiple intelligence types were more successful and had a higher motivation level than the students who were taught by traditional instructional methods.

In line with the studies on MI, Alavinia and Viyani (2018) showed the improvement of the Iranian EFL learners' listening performance through the discriminating role of listening instructions with the focus on learners' multiple intelligences. In this investigation, male and female adult participants took an IELTS preparation course. Three dominant types of intelligence (verbal-linguistic, logical-mathematical, and visual-spatial) were recognized by using McKenzie's (2002) MI inventory. The control group consisted of learners with other less frequent intelligence types. The IELTS listening test was run as a pretest, and a 14 session-treatment period was conducted for each group differently, based on each intelligence characteristic. The control group, however, was instructed conventionally. Considering the posttest scores and the analysis of data, a significant difference among experimental groups was indicated.

Similarly, Alilateh and Widyantoro (2019) investigated the effect of applying MIBAs in listening comprehension and in the students' motivation for learning English. Mathematical, linguistic, visual, musical, and naturalistic intelligences were used. A listening comprehension test and a questionnaire were used to collect the data. The findings showed that the use of multiple intelligence activities instead of conventional activities was more effective in listening comprehension. Moreover, the use of multiple intelligence activities was more effective than conventional activities in students' interest in learning English.

Rizqiningsih and Hadi (2019) investigated the impact of multiple intelligence-based instructions on the development of speaking skills by English students. They proposed multiple intelligence-based programs to enhance speaking skills and paid close attention to the students' individual differences. Their results showed the effectiveness of MI on the development of the students' speaking skills.

Although previous research studies have explored the effectiveness of MI on language learning, it seems that there is a gap regarding its use, so more investigations are needed to explain MIT and its pedagogical applications to improve language learning skills, especially in higher education. Thus, the main purpose of the current study is not to explore the effects of MIT but to investigate the effect of activities based on this theory to improve aural-oral skills. Therefore, the current study attempts to answer the following research questions:

1. Does the application of MIBAs significantly affect Iranian EFL students' aural-oral performance?

2. Are there any significant differences between Iranian EFL male and female students in terms of the effects of MIBAs which improve their aural-oral performance?

Methodology

The characteristics of the participants, the instruments and materials used in the study, and the procedure for collecting and analyzing the data are explained in this section.

Participants

The participants of the study were 60 Iranian EFL students whose average age ranged from 18 to 23. They were selected out of 120 students studying at Islamic Azad University, Isfahan Branch. Their first language was Persian, and their proficiency level was evaluated using the Oxford Quick Placement Test (OQPT). The students whose scores were between 28 and 36 were considered as intermediate and regarded as the target participants of the current research. They were divided into two equal groups of experimental (EG) and control (CG), with 30 in each group (15 males and 15 females).

Instruments and Materials

In order to collect the required data, the following instruments and materials were used.

Oxford Quick Placement Test (OQPT)

The OQPT is a standard discrete point placement test which was used to place the subjects with similar abilities in the group under investigation. It is designed to give learners and teachers of English a quick way of assessing the approximate level of proficiency for all skills and sub-skills. It consists of 60 multiple choice questions. In this study, the newest available paper and pencil version of the OQPT by Allan (2004) was administered.

Oral Pretest

This test was based on the IELTS Speaking Interview to determine the students' prior knowledge. It consists of a face-to-face interview between the students and the researcher and contains three parts, each with a specific pattern of tasks to test the students' speaking ability in different ways. The students answered questions about themselves and their families. A longer discussion about different topics (people, places, experiences, feelings, habits, preferences) was introduced in Parts 2 and 3. The test was recorded, transcribed and rated by three raters. Interrater reliability was checked to assure homogeneity of the rating by different judges. The Cronbach's alpha reliability coefficient was 0.84.

Oral Posttest

The same pretest was conducted as a posttest to check out the effect of the treatment and to examine whether MIBAs affected the students' oral performance. The same procedure used both for rating and scoring the pretest and the posttest. Interrater reliability was also checked to assure homogeneity of the rating by different judges. The Cronbach's alpha reliability coefficient was 0.86.

Oral Rating Scale

A rating scale with a range of dissimilar interpretations may cause raters to interpret the criteria differently and diminish rater reliability and subjectivity. For this purpose, two types of rating scales were employed:

a. The IELTS speaking band score

The IELTS speaking guidelines and its rating scale were used in this study. The students' speaking performance was primarily distinguished when they talked about familiar topics related to their daily life. They tried to recombine learned materials to express personal meanings. The IELTS scores were reported as band scores on a scale from 1 (*the lowest*) to 9 (*the highest*). It showed the level of the students' fluency. The four criteria of fluency including coherence, lexical resource, grammatical range, and accuracy were described and considered for scoring their oral proficiency.

b. Researcher-made evaluation sheet

A researcher-made rating scale, in the form of a speaking evaluation sheet, was used to record statements of respondents. The students' oral performance was analyzed using that oral rating scale that covered eight speaking components including fluency, accuracy, grammar, pronunciation, coherence, topic development, language use, and delivery. Five experts from the field of TEFL confirmed the validity of this scale.

Aural Pretest

This was organized based on the IELTS listening test. It comprised four sections with 10 questions each, with a difficulty level increase for each section. The first two questions, in the form of a conversation, concentrated on social needs. The conversation involved first two speakers and then it became a monologue. The last two sections were connected with instructive or training contexts in the form of an up to four-person conversation followed by a monologue. It took 30 minutes; 10 more minutes were added for students to transfer answers to an answer sheet in the form of a conversation. Each question carried 1 mark. In total, there were 40 questions.

Aural Posttest

The posttest was the same as the pretest and the number of test items was also the same. This was done to examine whether the MIBAs applied in the treatment period affected the students' aural performance. Additionally, the effect of MIBAs on males' and females' performance was investigated through the same aural posttest.

Aural Rating Scale

The aural rating scale, namely the IELTS listening band score, is a scale through which the raw scores can be converted to the IELTS nine-band scale from 1 (*the lowest*) to 9 (*the highest*). It can be calculated using the IELTS listening band score table. Each band corresponds to a degree of the students' English competence.

Books

In order to design the proper MIBAs, the following books were used:

i) *Communicate Listening and Speaking Skills 2* by Pickering (2012), which is a two-book video-based communication course specially developed to improve students' English listening and speaking skills.

ii) *American Headways 2 & 3* by Soars and Soars (2015), which are written for pre-intermediate and intermediate levels, attempt to help learners accelerate their progress in listening and speaking.

iii) *Developing Tactics for Listening* by Richards and Trew (2011), which is an activity-rich listening book in building skills in listening and conversation.

Procedure

In order to measure the participants' general English knowledge, the OQPT was administered to 120 students to make sure that there were not any significant differences among them in terms of their general English knowledge. After administering the placement test, 60 participants were assigned and divided into two equal groups, control and experimental, with 30 in each group, 15 males and 15 females. The IELTS listening and speaking tests were conducted for both groups as pretests to measure their level of aural-oral abilities. For each student, the oral pretest took about 20 minutes as a whole, which included 5 minutes as a warm-up to calm down the interviewee, about 5 minutes for the first part of the oral test, 3 or 4 minutes for the second part, and 5 minutes for the third part. Time was allotted based on the IELTS test design.

In part 1, the researcher asked the students some simple personal questions on everyday familiar topics. The researcher read these questions from a script. The example topics were about work, studying, food, holidays, friends, going out, festivals, sports, schools, and public transport.

In part 2, the researcher gave the students a topic on a card, then gave them one minute to make notes and finally asked them to speak about it for about 2 minutes. The task was to talk about a personal experience such as a memorable day or a significant person. This was followed by a quick question, and the student was required to give a short answer to it.

In part 3, the students and the researcher had a discussion related to the subject area in part 2. The students were asked to do more intricate things, such as evaluating, justifying positions and opinions, making predictions, and expressing preferences. The researcher had a list of questions but she was not limited to it and could respond freely to the students' answers, resembling a natural

conversation. The researcher listened to the students as they were taking the test and finally evaluated their level. The students' oral performance was analyzed using an oral rating scale (IELTS band score) that covers fluency, communicative ability, accuracy, vocabulary, pronunciation and content.

The researcher asked three raters to score the students' pretest and posttest. Interrater reliability was checked to assure homogeneity of the rating by different judges. The Cronbach's alpha reliability coefficient was 0.84 and 0.86 respectively. The validity of the scoring criteria was also checked by five experts in TEFL. Another oral rating scale in the form of a table which was a grading rubric with eight components of speaking including, accuracy, fluency, grammar, pronunciation, coherence, topic development, language use, and topic delivery was designed. For each of the above-mentioned items, five points were allotted.

Three other raters were asked to score each speaking component while they were listening to students' recorded speech. Interrater reliability coefficients for rating in this phase were 0.87 and 0.84 for pretest and posttest respectively. The face and content validities of the rating scale were checked by five TEFL experts. In fact, six raters rated their speaking test to confirm the results. The 40-item listening IELTS test comprised four sections, each with 10 questions with a difficulty level increase for each section and it took 30 minutes in total for students to finish it.

Both experimental and control groups were under instruction for the same number of sessions. The instructions extended for 10 weeks, with three sessions per week and each session lasted 60 minutes. The control group was taught using traditional methods and activities such as role play memorization, repetition drills, listening to audio files to answer knowledge questions, etc.

The main treatment started with the experimental group. The lessons were taught based on appropriate MIBAs which related to Gardner's (1983) definition of each intelligence type, and which could expand their aural-oral performance. In other words, the students were taught English speaking and listening skills through an English speaking and listening program integrated with MIBAs. Each session took 60 minutes. Taking into account the participants' age range, more applicable and suitable MI activities used for practicing listening and speaking at the intermediate level were selected. Each activity was relevant to a type of multiple intelligences. To improve students' aural-oral performance, teachers used activity types like brainstorming, interviewing, cooperative learning, story making and telling, acting out from a scene, debating, and many other various related activities defined based on Gardner's theory.

As it was stated above, students were faced with the activities designed according to the eight types of intelligences proposed by Gardner (2011) to facilitate learning. The materials, appropriate MIBAs, for the treatment were precisely extracted from the books entitled *Communicate listening and speaking skills 2*, *American Headway 2 & 3*, pre-intermediate and intermediate levels, and *Developing Tactics for Listening*.

The control group was taught in a separate class through traditional speaking activities including repetition and memorization. The teacher asked the students some questions from their textbook exercises and focused on the accurate use of vocabulary and grammar. It was a teacher-centered classroom and the main interaction was between teacher and students. After the treatment, the posttest which was exactly the same as the pretest was conducted to all participants and the results were gathered for further analysis.

When the treatment process was completed, both experimental and control groups were post-tested to investigate the impact of the teaching process on the aural-oral performance of the students and to explore if there was any difference between those two groups. The same test (pretest) was administered as posttests, under the same conditions, to both groups in order to measure the significant differences in the students' performance. The results were also analyzed to look for gender differences.

Results

Preliminary Analyses

Before conducting any parametric tests such as a one-way ANOVA or a two-way ANCOVA, the underlying assumptions needed to be tested. The most important assumption was the assumption of normality. To test this assumption, the Kolmogorov-Smirnov test was conducted on the OQPT, pretest, and posttest scores of the students in both the experimental group (EG) and the control group (CG). The results of this analysis are presented in Table 1.

Table 1 - *Normality Test Results for the OQPT, Pretest, and Posttest Scores of the Students*

Tests	Groups/Tests	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Oral Performance	Female EG Pretest	.16	15	.20	.89	15	.08
	Female EG Posttest	.20	15	.09	.92	15	.24
	Male EG Pretest	.19	15	.11	.93	15	.33
	Male EG Posttest	.20	15	.10	.89	15	.08
	Female CG Pretest	.18	15	.11	.94	15	.39
	Female CG Posttest	.20	15	.08	.92	15	.22
	Male CG Pretest	.21	15	.06	.88	15	.06
	Male CG Posttest	.16	15	.20	.96	15	.73
Aural Performance	Female EG Pretest	.21	15	.06	.88	15	.06
	Female EG Posttest	.21	15	.06	.89	15	.07
	Male EG Pretest	.18	15	.12	.94	15	.40
	Male EG Posttest	.16	15	.20	.93	15	.32
	Female CG Pretest	.16	15	.20	.92	15	.23
	Female CG Posttest	.19	15	.10	.91	15	.31
	Male CG Pretest	.20	15	.10	.92	15	.21
	Male CG Posttest	.18	15	.11	.94	15	.37
OQPT	Female EG	.15	15	.20	.91	15	.14
	Male EG	.18	15	.20	.90	15	.07
	Female CG	.20	15	.10	.91	15	.15
	Male CG	.17	15	.20	.89	15	.06

In Table 1, the *p* value under the *Sig*. column of the Kolmogorov-Smirnov test can be examined as follows: in case the *p* value is larger than the significance level of .05, the distribution of scores for that given test could be considered normal. Because all the *p* values lined up under the *Sig*. column of the Kolmogorov-Smirnov test were found to be larger than .05, it could be concluded that the OQPT, pretest, and posttest scores of the male and female students in both EG and CG formed normal distributions. Now that the normality assumption was met, we can proceed with the inferential statistics analysis of the results.

To ascertain the homogeneity of the male and female students in both groups in terms of their overall language proficiency, their OQPT test scores were compared via a one-way ANOVA. The results of this comparison are displayed in Tables 2 and 3:

Table 2 - *Descriptive Statistics for the OQPT Scores of the Students*

					95% Confidence Interval for Mean	
	N	Mean	*Std.* Deviation	*Std.* Error	Lower Bound	Upper Bound
Female EG	15	30.26	1.98	.51	29.16	31.36
Male EG	15	31.06	2.84	.73	29.49	32.63
Female CG	15	30.13	1.80	.46	29.13	31.13
Male CG	15	31.00	2.82	.73	29.43	32.56
Total	60	30.61	2.38	.30	30.00	31.23

Table 2 shows the mean scores on the placement test for the females in the EG (*M* = 30.26), the males in the EG (*M* = 31.06), the females in the CG (*M* = 30.13), and the males in the CG (*M* = 31.00). It can be noticed that the obtained mean scores were different from one another. To understand if the differences among these OQPT mean scores were statistically significant or not, the results of the One-Way ANOVA were considered.

Table 3 - *Results of One-Way ANOVA for Comparing OQPT Scores of the Students*

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	10.58	3	3.52	.60	.61
Within Groups	325.60	56	5.81		
Total	336.18	59			

According to the results displayed in Table 3, the differences among the OQPT mean scores of the four groups of students were not statistically significant because the *p* value under the *Sig.* column was larger than the specified level of significance (i.e., .61 > .05).

Effects of MIBAs on Oral Performance

To test whether the use of MIBAs had any significant effects on male and female EFL students' oral performance, the post-test scores of the EG and CG students were compared with each other. To this end, a two-way ANCOVA was run to detect the differences between male and female participants in both groups with respect to their oral performance.

Table 4 - *Descriptive Statistics for Oral Posttest Scores of Male and Female students in the CG and EG*

Groups	Gender	Mean	Std. Deviation	*N*
EG	Female	7.61	.45	15
	Male	7.72	.22	15
	Total	7.66	.35	30
CG	Female	6.04	.43	15
	Male	6.00	.63	15
	Total	6.02	.53	30
Total	Female	6.82	.91	30
	Male	6.86	.99	30
	Total	6.84	.94	60

The oral posttest mean scores of the female and male students in the EG were 7.61 and 7.72, respectively. Additionally, the oral posttest mean scores of the female and male students in the CG were 6.04 and 6.00, respectively. There was also a difference between the total mean scores for EG (*M* = 7.66) and CG (*M* = 6.02). To find out whether the differences between males and females and between the two groups were statistically significant or not, the researcher had to examine the *p* values in front of Groups and Gender under the *Sig.* column in the two-way ANCOVA table below.

Table 5 - *Two-Way ANCOVA for Oral Posttest Scores of the Male and Female Students in the CG and EG*

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	45.73	4	11.43	90.80	.00	.86
Intercept	4.56	1	4.56	36.24	.00	.39
Pretest	5.06	1	5.06	40.21	.00	.42
Groups	38.71	1	38.71	307.46	.00	.84
Gender	.05	1	.05	.44	.50	.00
Groups * Gender	.01	1	.01	.15	.69	.00
Error	6.92	55	.12			
Total	2863.44	60				
Corrected Total	52.65	59				

As is shown in Table 5, there was a statistically significant difference in the oral posttest scores of the students in the EG (*M* = 7.66) and CG (*M* = 6.02) since the *p* value under the *Sig.* column in front of Groups was smaller than the specified level of significance (i.e., .00 < .05). The magnitude of this difference, as shown under the Partial Eta Squared column, was very large based on Cohen (1988, as cited in Pallant, 2010), .01 = small, .06 = moderate, and .14 = large.

However, the *p* value corresponding to Gender was greater than the significance level (.50 > .05), indicating that gender could not modify the relationship between the application of MIBAs and oral performance. Moreover, the interaction between the two independent variables of the study (application or deprivation of MIBAs and Gender) failed to exert a statistically significant impact on the performance of the students on the oral posttest owing to the fact that the *p* value in front of Groups*Gender appeared to be greater than the significance level (.69 > .05).

Once again, to find out whether using MIBAs had any significant effects on male and female EFL students' oral performance, the post-test scores of the EG and CG students were given to three other raters to score using an evaluation sheet, then the results were compared. Similar to the preceding analysis, a two-way ANCOVA was conducted to spot any possible differences between male and female EFL students in the two groups of EG and CG in terms of their oral performance:

Table 6 - *Descriptive Statistics for Oral Posttest Scores of Male and Female of the CG and EG on the Speaking Evaluation Sheet*

Groups	Gender	Mean	Std. Deviation	*N*
EG	Female	7.43	.41	15
	Male	7.53	.31	15
	Total	7.48	.36	30
CG	Female	5.80	.46	15
	Male	5.84	.43	15
	Total	5.82	.44	30
Total	Female	6.61	.93	30
	Male	6.68	.93	30
	Total	6.65	.92	60

For the evaluation sheet, the posttest mean scores of the female and male students in the EG were found to be 7.43 and 7.53, respectively. Besides, the posttest mean scores of the female and male students in the CG equaled 5.80 and 5.84, respectively. Furthermore, there was a difference between the total mean scores for EG (*M* = 7.48) and CG (*M* = 5.82). To find out whether the differences between males and females and between the two groups were statistically significant or not, the researcher had to examine the *p* values in front of Groups and Gender under the *Sig*. column in the two-way ANCOVA table below.

Table 7 - *Two-Way ANCOVA for Oral Posttest Scores of the Male and Female Students in the CG and EG on the Speaking Evaluation Sheet*

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	45.16	4	11.29	107.24	.00	.88
Intercept	3.17	1	3.17	30.13	.00	.35
Pretest	3.69	1	3.69	35.04	.00	.38
Groups	39.26	1	39.26	372.87	.00	.87
Gender	.02	1	.02	.23	.62	.00
Groups * Gender	.04	1	.04	.38	.53	.00
Error	5.79	55	.10			
Total	2706.52	60				
Corrected Total	50.96	59				

Table 7 showed that there was a statistically significant difference in the oral posttest scores of the students in the EG (*M* = 7.48) and CG (*M* = 5.82) due to the fact that the *p* value under the *Sig*. column in front of Groups was smaller than the specified level of significance ($p < .05$). The magnitude of this difference (.87) was found to be very large. However, the *p* value corresponding to Gender was greater than the significance level (.62 > .05), indicating that gender could not modify the relationship between the application of MIBAs and oral performance. Moreover, the interaction between the two independent variables of the study (application or deprivation of MIBAs and Gender) failed to exert a statistically significant impact on the performance of the students on the oral posttest owing to the fact that the *p* value in front of Groups*Gender appeared to be greater than the significance level (.53 > .05).

Effects of MIBAs on Aural Performance

To see whether using MIBAs had any significant effects on male and female EFL students' aural performance, the post-test scores of the EG and CG students had to be compared using a two-way ANCOVA. It was employed to capture any possible differences between male and female EFL students in the two groups of EG and CG in terms of their aural performance while controlling for a covariate (i.e., the pretest scores of the students).

Table 8 - *Descriptive Statistics for Aural Posttest Scores of Male and Female Students in the EG and CG*

Groups	Gender	Mean	Std. Deviation	*N*
EG	F	8.00	.42	15
	M	7.96	.44	15
	Total	7.98	.42	30
CG	F	6.10	.63	15
	M	6.06	.53	15
	Total	6.08	.57	30

Total	F	7.05	1.10	30
	M	7.01	1.07	30
	Total	7.03	1.08	60

The mean scores of female and male participants in EG were 8.00 and 7.96, respectively, and the mean scores of female and male participants in CG turned out to be 6.10 and 6.06, respectively. There were clearly large differences between EG and CG members (both female and male) on the aural posttest. However, the total mean score of females (*M* = 7.05) and males (*M* = 7.01) did not seem to be large. A two-way ANCOVA table had to be examined to find out whether there was a statistically significant difference between the EG and CG, and a gender difference in each group.

Table 9 - *Two-Way ANCOVA for Aural Posttest Scores of the Male and Female Students in the EG and CG*

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	62.09	4	15.52	124.81	.00	.90
Intercept	3.29	1	3.29	26.46	.00	.32
Pretest	7.92	1	7.92	63.73	.00	.53
Gender	40.48	1	40.48	325.50	.00	.85
Groups	.03	1	.03	.27	.60	.00
Gender * Groups	.05	1	.05	.40	.52	.00
Error	6.84	55	.12			
Total	3037.00	60				
Corrected Total	68.93	59				

Table 9 shows that there was a statistically significant difference in the aural posttest scores of the students in the EG and CG due to the fact that the *p* value under the *Sig.* column in front of Groups was less than the alpha level of significance (i.e., .00 < .05). The effect size, shown under the Partial Eta Squared column, indicated a very large effect size for the application of MIBAs.

However, the *p* value in front of gender was not smaller than the significance level (.60 > .05), which means that gender failed to have a significant effect on the aural performance of the students in the EG and CG. Finally, the interaction effect between MIBAs and gender did not reach statistical significance since the *p* value in front of Groups*Gender was greater than the significance level (.52 > .05).

Discussion

After collecting the data, the researcher analyzed them to find out the effectiveness of the treatment on students' aural-oral performance. The results of the study revealed that the EG outperformed the CG. The use of MIBAs had a significant effect on EFL students' aural-oral performance as there were statistically significant differences between the pre and post administration of the test. However, there was not a significant difference between male and female students related to this issue. There are many reasons for using MIBAs in language teaching, and it can be claimed that they are very useful tools which can help the students have a better performance in listening and speaking.

The obtained results are in line with the results of a number of previous studies. For example, Ibrahim (2007) stated that training programs based on MI activities have a positive effect on improving EFL students' oral performance. It can be related to the nature of MIBAs: they may activate students' minds and help them be involved in the learning process more actively. The findings of the present study are also consistent with the results of Salem's (2013) study that stated that MI-based instructions had a positive effect on developing pre-service English teachers' oral skills. This development can happen because of the positive effects of MIBAs on students' achievement levels and attitude toward English lessons (Bas & Beyhan, 2017). By applying these activities, teachers help learners develop cognitive skills to reinforce their strengths and overcome their weaknesses. They are supported by Rizqiningsih and Hadi (2019) who claimed that this type of instruction had a significant effect on developing the English language students' speaking skills. And they also coincide with the study conducted by Sayed (2005), Dorgham (2011), Van Don (2014) and Adityas (2016). All of these studies revealed that integrating MI classroom activities is effective in developing English speaking skills.

The efficiency of the treatment on students' aural performance was realized through data analysis. It was found that the participants who were taught by MIBAs significantly performed better than the participants in the control group in terms of aural proficiency. Although female participants performed better than male ones, this difference was not statistically significant. The results of this study concur with some previous results in the literature. According to Mahdavy (2008), multiple intelligence was a predictor of listening proficiency, the findings of the study revealed that although all the intelligence types positively correlated with performance on listening comprehension tests, just linguistic intelligence as a predictor of listening proficiency was statistically significant, a part from the type of the test administered, if it was a TOEFL or an IELTS listening proficiency test. Likewise, Safein (2012) confirmed the significant effect of the multiple intelligence-based programs on improving the subjects' listening and speaking skills.

The results of the present study are also consistent with findings of Heidari and Panahande's (2013) study who found some significant positive relationship between the whole MI and listening strategies. Similarly, no significant difference was found between male and female students in terms of their listening strategies; however, some significant differences were found between male and female students regarding interpersonal, bodily-kinesthetic, and existential intelligence. In another study, Alavinia and Viyani (2018) referred to the effective role of different listening instructions based on students' multiple intelligence types to improve Iranian students' listening performance. Alilateh and Widyantoro (2019) showed that applying multiple intelligence activities can be more effective in listening comprehension and students' interest than conventional activities.

The findings of the current study and the previous literature confirmed the positive effect of MIBAs on language students' listening comprehension and performance as all the listening activities based on all multiple intelligence types were helpful for students and led them to have better comprehension as well as better performance.

In addition, MIBAs help students participate more actively in the class and consequently make the learning process more learner-centered which may considerably contribute to the improvement of the oral performance. Therefore, teachers must value instructional techniques which take several intelligence types and learning styles into consideration, to involve students in their learning and also to strengthen learning in numerous ways (Statti & Torres, 2020). In sum, the results of most of the studies matched with the results of the current study and the rationale behind this result is due to the fact that most MIT-based activities are communicative. Thus, they encourage and motivate students and by applying these activities, researchers could find the students' weaknesses and strengths and empower them to use each type of intelligence to improve their abilities in language learning.

Conclusion

Applying MIBAs in a teaching method makes learning more attractive and effective. To sum up, it can be mentioned that MIT plays a significant role in enhancing EFL students' aural-oral performance development. Therefore, it is necessary for English teachers to provide additional help and support for students to promote their listening and speaking skills more effectively. since there are innumerable activities derived from multiple intelligence theory, students may enjoy learning in different ways and via various materials provided by the teachers. MIBAs can influence the students' learning process in the classroom through a learning environment based on their needs (Al-Zyoud & Nemrawi, 2015). Phillips (2010) claimed that multiple intelligences theory boosts the students' collaboration and interaction, through which they become more aware of their own abilities. Given that no significant difference between the participants in terms of their gender was found, MIBAs can be used positively and effectively to improve the aural-oral performance of both female and male EFL students.

The results of the study would be useful for educators and curriculum designers. Educators can become more familiar with the concept of MI and apply it in their classes and consequently help their students to employ easier tasks and practice and learn more effectively. When teachers are aware of the students' strengths and weaknesses in different intelligence areas they can recognize and cultivate the students' intellectual abilities accordingly and adapt their instruction to the students' level, needs, interests, and learning styles. Besides, they provide more chances for students to learn the accessible materials in the classrooms.

Curriculum designers can design and supply a series of instructional materials in multiple modes so the diverse instruction they receive can be advantageous. MIBAs instruction can even be applicable for other subject lessons. In addition, this study would pave the way for researchers who are interested in conducting similar studies and encourage them to conduct more research on this domain.

Like other studies, there were some limitations in the process of the current investigation. The first one is related to sample representativeness: sixty participants in two groups, control and experimental, and four 15-member sub groups of males and females took part in the current research. It can be conducted with a larger number of participants in order to gain more precise and generalizable results. Second, the treatment duration: the treatment took a period of 10 weeks, with three sessions per week. It can be conducted in a longer period and the effects can be measured to understand the effects of MI-based activities and the traditional method on aural-oral development in a wide-ranging view.

The current study would open a window of opportunity for performing further research in this field in the future. In this study, the effect of MIBAs on EFL students' aural-oral performance was investigated but the effects of each intelligence type were not taken into account separately. Therefore, other researchers could study the effects of different types of intelligence on EFL students' speaking enhancement and listening comprehension and aural performance and compare these various types of intelligence with one another. Investigating the effect of MIBAs on other skills and subskills is also recommended. This study was conducted with university students at the intermediate level, but it can be done in other educational places and levels. A final idea involves the analysis of the content of school textbooks in Iran and other countries, even in the form of comparative studies in terms of Gardner's MI theory.

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