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Comparing the Effects of Two Facets of Multiple Intelligences Theory on Developing EFL Learners' Listening

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Abstract

Gardner's Multiple Intelligences Theory (MIT), however having been embraced in the field of language acquisition, has apparently failed to play a role in research on learning styles as an alternative construct. This study aims at examining the potential effects of MI-based activities, as learning styls, on the listening proficiency of Iranian TEFL university students. Based on two assumptions derived from MIT, one of the experimental groups (EG1; N=30) worked on activities across intelligences while the other experimental group (EG2; N=30) focused on the activities related to their most developed intelligence. McKenzie's (1999) MI Inventory was used to identify the subjects' preferred intelligences. There was a significant difference between listening scores on TOEFL before and after the intervention of MI-based activities as well as between the two experimental groups, indicating EG1 outperforming EG2. So, as the findings reveal, integration of MIT can significantly contribute to the enhancement of EFL learners' listening comprehension and the effect is even more significant if teachers practice an integration of all intelligences rather than the most developed ones, only.

Keywords: Multiple Intelligences Theory, learning styles, listening proficiency, Iranian EFL context

1. Introduction

Listening has been considered the cornerstone of language development. For one thing, it has been estimated to be the most frequently used language skill. For instance, Asher (1982) calculated that "by the time a child reaches age six, he or she has listened to his or her native language for a minimum of 17,520 hours, equivalent to more than 50 years of college instruction" (p. 2). Also, owing to the development of communicative and proficiency approaches to the language teaching over the past decades, listening in the second/foreign language classroom is not regarded as a "passive" or "receptive" skill any more, but an active process in that meaning is constructed from a stream of sounds (Feyten, 1991; Field, 2000; Joiner, 1991; Richards, 1983).

Moreover, listening plays an important role in students' academic success (Feyten, 1991; field, 2003). In this respect, listening has been regarded as an enabling skill helping students with other skills. For instance, Dunkel (1991) maintains that the key to achieving proficiency in speaking is the proficiency developed in listening comprehension. Nord (1981) noted that proficiency in listening is "readily transferable to other language skills, (including speaking and reading)" (p. 72).

More recent research testifies to the important role of modernity in people's listening in everyday life. For example, Vandergrift (2007) links the development of listening to modern life condition. As he states, many learners tend to use "the rich variety of aural and visual L2 texts available today via network-based multimedia, such as online audio and video, YouTube, podcasts, and blogs" (p. 191). In this respect, EFL learners are no exception since they are encouraged to use authentic materials and such multimedia may provide them with good source of exposure.

Nevertheless, in spite of a good deal of emphasis on the importance of listening skills in current textbooks, listening still remains as a source of difficulty for language learners. Second language and foreign language professionals have often neglected the importance of teaching listening due to the fact that it is the most difficult skill to teach/learn. As pointed out by Vandergrift (2006), the difficulty of its learning can be attributed to the implicit nature of the skill or the assumption that this skill would automatically develop from other skills as a result of the transfer of training; hence, calling for some strategy training practices to help out the learners. Thus, EFL and L2 teachers should explore innovative ways to help students improve their listening comprehension skills. Much remains to explore about how to best teach listening.

One way for teachers to help EFL students to be more successful in learning English is to broaden their teaching approaches and methods. Due to the recent trend toward learner-centeredness, teachers are encouraged to work with learners' preferences and cater for their learning styles and strategies. Yet, research on learning styles has not been as extensive as work on learning strategies. And literature reveals some gaps and limitations in recent work on learning styles and SLA. For instance, among many instruments developed so far to assess learning styles is Reid's Perceptual Learning Styles Preference Questionnaire (PLSP). Using her proposed learning style model, Reid (1987) makes an

attempt to identify ESL learners' preferences and correlates them with a number of variables; however, research on multiple intelligences is never cited. Reid herself (1990) admits that there were some inadequacies in the process of the development of this psychometric instrument and reports that the initial data on validation scores have been lost. However, many researchers in the field have been pervasively using it failing to validate the scores obtained in their surveys (Isemonger & Sheppard, 2007).

Further, in an attempt to define learning and teaching styles relevant to ESL/EFL contexts, Felder and Henriques (1995) outline some of the teaching styles which only fit some of the students' learning styles. They conclude by suggesting some ways to provide for meeting all educational needs of language learners. Such studies have brought the validity and utility of some of the existing learning style models and instruments under question because they do not encompass the totality of students' individual differences. As yet, the question remains why scholars interested in the impact of learning styles on SLA have failed to include the use of Gardner's Multiple Intelligences model which has been so widely used and embraced in related fields. The present study proposes Gardner's MI model, an under-researched approach to learning styles, as an alternative construct to problematic measures like PLSP.

By taking individual differences into account in a sound educational system, Gardner (1993) believes that an individual-centered schooling will be more beneficial than standard teacher-centered education. He even extends the idea to the point that such a system will provide the learners with both the potential (i.e. intelligence) and tools (i.e. styles) not only during their formal education, but also for lifelong learning.

MIs and learning styles are closely related concepts. Intelligences refer to the capabilities that the students bring into the classroom, while their learning styles are the certain ways in which they prefer to further develop that intelligence and express it in the language learning situation. To put it differently, intelligences or abilities refer to things one is capable of doing such as to perform skills or strategies, whereas styles refer to preferences in the use of those intelligences. For instance, learners with global cognitive style tend to organize information as a whole and prefer to have a whole picture before going into details, no matter what the content might be: verbal, visual, or any other (Messick, 1994).

As Christison (1998) reports, in ESL/EFL courses, instructors tend to focus upon linguistic and visual clues to teach language, which may not reach students who do not respond to those clues. Then, there is the need to develop a model for using MIs and to develop content that touches upon a variety of individuals' preferences. For instance, by varying instructional activities to accommodate learners' preferences (lectures, visuals, hands-on activities, songs) or by offering options for responses to instruction (write a paper, create a model, give a demonstration), teachers can support learners' access to and understanding of content (Christison, 1996; Gardner, 1993; Teele, 2004).

1.1 Multiple Intelligences Theory (MIT)

Gardner's (1983) Multiple Intelligence Theory (MIT) suggests that humans perceive and understand the world in a number of ways. Drawing on neurobiological research, Gardner (1983) recognizes a biological basis for MIs. To him intelligence is the bio-psychological potential to process information, indicating that learning is an outcome of the modifications in the synaptic connections in different areas of the brain. Furthermore, defining intelligence as "the capacity to solve problems or to fashion products that are valued in one or more culture setting" (Gardner, 1983, p. 42), he points out to the significant role of culture in developing the intelligences in that some cultures value some intelligences more than others; thus, providing motivation for the individuals to activate such a potential and master in the related areas.

The theory proposes a re-consideration of measurable intellectual ability which is used in testing intelligence (Gardner, 1983, 1993). Such outlook on intelligence varies from the traditional one which recognizes only two types of intelligences: Linguistic (verbal) and mathematical (computational). However, Gardner claims that as individuals tend to solve problems or develop skills, these intelligences complement each other, operating independently. He proposes a list of nine intelligences which are summarized in Table 1.

Table 1. Summary of Multiple Intelligences

Intelligence	Potential for	Learns best by	Needs
Verbal/ Linguistic	Using language, memorizing, thinking in words, telling stories	Hearing and seeing words, speaking, reading, writing, discussing and debating	Books, tapes, paper writing tools, dialogue, discussion, debates, stories, etc.
Mathematical/Logical	Math, logic, problem-solving, reasoning, understanding cause & effect and patterns	Working with relationships and patterns, classifying, working with the abstract	Things to think about, science materials, manipulative, trips to science museums, etc.

Visual/ Spatial	Representing spatial world in one's mind like reading and drawing maps, charts, mazes, puzzles; Visualization	Working with pictures and colors, Visualizing, using the mind's eye, drawing	Video, movies, slides, art, Imagination games, mazes, puzzles, illustrated book, trips to art museums, etc.
Bodily/ Kinesthetic	Using one's body in athletics, dancing, crafts, using tools, acting	Touching, moving, processing knowledge through Bodily sensations,	Role-play, drama, things to build, movement, sports and physical games, tactile experiences, hands-on learning, etc.
Musical/ Rhythmic	Thinking in music; recognizing & remembering sounds, melodies, rhythms; singing	Rhythm, singing, melody, listening to music and melodies	Sing-along time, trips to concerts, music playing at home and school, Musical instruments, etc.
Interpersonal	Leading, organizing, understanding people, communication resolving conflicts, selling	Comparing, relating, sharing, interviewing, cooperating	Friends, group games, social gatherings, community events, clubs, mentors/ apprenticeships
Intrapersonal	Recognizing strengths and weaknesses, setting goals, understanding self	Working alone, having space, reflecting	Secret places, time alone, self-paced projects, personal choices, etc.
Naturalist	Understanding nature, making distinctions, identifying flora and fauna	Working in nature, exploring living things, learning about plants etc.	Order, patterns same/different, connections to real life and science issues
Existential	Understanding human conditions and truths about life and death, religion, mysticism, higher truth	Reading, watching films and discussing moralities, spiritual matters and fact of human's life	Peace and quiet to concentrate on materials dealing with Spiritual and moral

The methods, presented in Table 1, by which learners learn best, are actually suggestive of the learning styles which help learners to process the information. Felder and Henriques (1995) opine that the dimensions of learning styles should be defined in terms of the type of information students perceive (i.e. sensory or intuitive), the type of modality they perceive the sensory information (i.e. visual, verbal or tactile), the way of processing information (i.e. actively or reflectively) and the way of understanding (i.e. sequentially or globally). By comparison, MI model encompasses almost all the dimensions of learning styles suggested above. For instance, musical intelligence can be associated with the ability of understanding "sensory" type of information in a "global" way as people with this potential are among right-brain thinkers who are better at learning language music and rhythm. Intrapersonal people perceive information "intuitively" and process it "reflectively". Those who fall in the kinesthetic profile process the information "actively", using "tactile" modality. Therefore, one may come to the understanding that MI framework is much more detailed and nuanced than PLSP introduced by Reid (1984) and used by herself and many others to study learning styles in SLA. Reid's model tends to measure six constructs including, auditory, visual, tactile, kinesthetic, group and individual while by comparison, MI model encompasses more variety of constructs. Also, comparing the reliability estimates (Cronbach's alfa) of the scores from six scales of PLSP, as reported by a number of studies, Isemonger and Sheppard

(2007) found the model defective. In accordance with the results of their comparative study, they found that, among all six constructs, visual and auditory constructs were the least reliable (i.e. with the reliability scores of .37 and .39, respectively).

1.1.1 Pedagogical Implications of MIT

Gardner (1993) points out that a shift from intelligence to intelligences could have major educational implications. Describing his MIT, Gardner (1993) refers to two complementary facets of the theory. The first implication is that all students, as human beings --if not totally impaired-- possess these intelligences, but they are different in the degree to which each has developed them. So, it is possible to teach to their specific strong intelligences, develop them and through drawing on those strengths, better convey educational materials. It is also possible that teachers recognize all the intelligences on the part of their students so that they teach to a broad range of skills and talents; i.e. learning styles and multiple intelligences, not just one or two of them. The second facet, as Gardner (1993) recalls, is that each individual, even identical twins, possesses their own individual strengths and weaknesses that make up their distinctive idiosyncratic intelligence profiles. Such differences, he presumes, are related to different factors like having different experiences and motivations. In addition, knowing that each individual has their own set of intellectual strengths and weaknesses, teachers will choose appropriate kinds of tasks and activities for presenting the material to meet those individual needs (Lazear, 1999).

One of the main concepts congruent with MIT is the possibility to make progress once the individual dominant intelligence is accounted for. As pointed out by Maker, Nielson and Rogers (1994), students may make progress in learning by exhibiting their potentials either across all intelligences or within only selected intelligences. Also, as Chapman (1993) maintains, there are two facets to the implications of MIT: 1) accommodating the different range of strengths on the part of students, trying to strengthen the weaknesses; 2) accommodating the particular strength of students recognizing students' specific preferences. Hereby, the present study aims at investigating whether MIs play a role in developing listening. If so, which one of the two conditions mentioned above provides ground for students' making progress in listening. In other words, how can EFL instructors enhance listening instruction by considering students' diverse intelligences and learning styles?

1.1.2 MIT and Listening

Although there are a number of advocators of MIT who have described and realized the beneficial contribution of the theory to English learners' academic achievement (e.g. Armstrong, 2000; Campbell, Campbell & Dickinson, 1996; Lazear, 1999), there is scare reference to the role of MIs in higher achievement of listening proficiency and the strategies and tasks involved. From one perspective, "learner-centered listening" refers to "activities in which second language listeners are encouraged to share … their understandings of a spoken text. The focus of attention is the exchange of individuals' reasonable interpretations, rather than the retrieval of correct answers from the text" (Lynch, 2009, p. 134). Thus, exchanging individual insights and perceptions of the learning process lies at the heart of such approach, allowing for the learner's use of a number of skills and styles to get their interpretations across. Here, MIT provides different ways to lead to this final interpersonal relationship.

From another perspective, listening involves "the active and dynamic process of attending, perceiving, interpreting, remembering and responding to the expressed (verbal and nonverbal) needs, concerns and information offered by other human beings" (Purdy, 1997, p. 8). So, it can be hypothesized that above-mentioned processes involved in listening can be associated with different MIs. To put it differently, listening activities involve almost all the subscales proposed by MIT. For instance, visual intelligence and abilities are needed for remembering and interpreting the context, topic, background knowledge or schematic knowledge. Interpersonal intelligence and skills are needed for responding through interaction. Linguistic abilities can facilitate verbal processes while kinesthetic intelligence can contribute to the process of nonverbal interaction. Musical intelligence can contribute to the process of perceiving the sound system of the language. Intrapersonal intelligence is needed for self-perception which is, in turn, needed for responding. Logical intelligence can facilitate analyzing information about semantic and structural elements of the input and naturalist intelligence is needed for perceiving, interpreting and remembering patterns of speech in the incoming input.

1.2 Statement of the problem

The neglect of listening instruction is especially prevalent in EFL settings where English is taught as a school subject and is used only inside the classroom. EFL students have practically very little exposure to the real target language as produced by the native speakers. Consequently, these students face great difficulties understanding English when they have to communicate in English. In this regard, EFL teaching and learning in Iran is no exception.

However, in addition to an international call for a change of teaching strategy to achieve the goal of enhancing listening proficiency (e.g. Goh, 2000; Hasan, 2000; Vandergrift, 1999), locally, it has also been realized that focusing on traditional methods would ultimately result in depriving students of getting actively involved in using the language naturally as well as meeting their individual needs; thus, making students passive (Askarzadeh Torghabeh, 2007; Hayati, 2009; Jahangard, 2007).

With regard to this, it has been noted that "learning must become personalized for all students" (Teele, 1996, p. 75). Thus, it calls for some empirical investigation to find out whether it also holds true to deal with Iranian EFL learners' deficiency of listening competency. More specifically, an investigation of the related literature reveals that the missing link is a study on the intervention of MI-based activities in Iranian EFL context focusing on listening.

1.3 Research Objectives and Questions

This study aims at accommodating learners' MIs based on the assumption that each individual is empowered to learn and to act more effectively if both learners and teachers are aware of those differences (Christison, 1996, 1998; Gardner, 1993). So, in order to find out how developments in instructional design through incorporating different facets of MIT can impact on learning outcomes, mainly listening proficiency, this study aims at answering the following research questions:

1. To what extent is there a difference between Iranian TEFL students' listening proficiency scores before and after the intervention of MI-based activities for each of the experimental groups?

2. Is there a difference of performance on listening between the experimental groups?

2. Method

2.1 Participants

The whole group (about 300) of Iranian university students majoring TEFL were chosen as the statistical population, from whom a total of 60 students were randomly selected based on their year of enrolment in the university. The subjects of this study, then, were a total of 60 Iranian TEFL university students consisting of 50 females and 10 males, with an age range of 19 to 26 years old. They were sophomore students who were attending Conversation 2 classes (for four credit units) upon their successful completion of Conversation 1. The subjects were equally divided into two groups as randomly assigned as Experimental Group1 (EG1) and Experimental Group2 (EG2) with a number of 30 students in each group. Since the main researcher had to attach to the protocol of the university regarding the appointing of students to classes, she had no control over deciding the number of participants, nor over appointing them into groups. Thus, the intact group of the study was randomly assigned to the experiment by the decisions made by the university administration.

The two groups were assumed to be homogeneous since they were all in the same grade at the same learning situation. Also, the participants' scores on the listening proficiency test at the beginning of the program showed no significant difference between the two groups of the study, indicating that they were almost at the same level of proficiency. Besides, cares were taken to make sure all the subjects received the same teaching materials and tests throughout the semester. All the subjects had studied English as a compulsory course for an average of four to six hours per week over a period of seven years at high school level.

2.2 Instruments

One of the instruments used in this study was McKenzie's (1999) MI inventory which was downloaded from http://surfaquarium.com/MI/inventory.htm. This inventory is a 90-item survey which has been developed to measure nine distinct dimensions of intelligence as proposed by Gardner. Each of the sections or subscales contains ten items. The respondents are instructed to score themselves "one" for each item they feel they identify with. If they feel the statement does not accurately describe them, they are advised to leave the space provided blank. The scores measured by each subscale range from zero to ten. A total score for each section would indicate the participant's rate of tendency toward that particular type of intelligence. Thus, the respondents' MI profile would be identified according to the highest score they gain in any section. A total sum of their scores in all different sections would indicate their total MI score. The content validity of the inventory was verified by a panel of experts consisting of three academic members of the English department with an average experience of fifteen years of teaching and research in the field of Applied Linguistics. There was no need to make alternations. Also, the internal consistency was measured as .76 Cronbach alpha (CA) to assure reliability. As for English comprehensibility for the participants, care was taken to evaluate the matter by having the participants review the content of the inventory and raise their questions. Everything was explained and clarified for them in both English and their mother tongue; i.e. Persian (Farsi).

Also, two standard published tests of listening proficiency (TOEFL, 1986) were used. Each of the tests contains fifty questions of the type of PBT to measure the participants' listening proficiency. The test has been reported to have a reliability rate of .86 as measured by the method of CA. There are two separate listening tests which are found in the third unit of the book. There was a time limit of thirty minutes for the test takers to complete. Thus, the subjects of the study were rated for their listening proficiency by taking two different versions of this test. The researcher administered the tests twice throughout the study: at the beginning as a pre-test and at the end, as a post-test.

2.3 Procedure and Design

Based on the rationale derived from two perspectives of MIT, the participants were divided into two groups as randomly assigned to Experimental Group 1 (EG1) and Experimental Group 2 (EG2). "EG1" was intended to practice activities across all intelligences while "EG2" was formed based on selected designated intelligences. "EG1" received the treatment in the form of random assignment of the activities across MI profiles. The grouping was formed by students' own selection so that each group consisted of a variety of MIs. However, for the "EG2", the students were divided into MI groups according to their MI profiles. This class worked on the activities which were related to each particular MI group.

Lesson plans were adapted to individual MI profiles in order to presumably increase positive motivation. To do so, drawing on ideas from Armstrong (2000), MI-based activities were incorporated into classroom activities. For instance, hands-on activities were used to tap bodily/kinesthetic intelligence. Cooperative group and pair works fit best for interpersonal intelligence. Visual-based activities were adapted to visual/spatial intelligence while inference activities

would draw out logical/mathematical skills. Those activities which required the exchange of the information would best follow up verbal/linguistic while the activities requiring reflection on the ideas would best fit intrapersonal intelligence. Those activities dealing with elements of nature and patterns were designated for the naturalist.

The design of the study is shown in the diagram below:

EG1 O1 → X1 → O2
EG2 O1 → X2 → O2

As seen above, O1 is the pre-test data, O2 is the post-test data, and X1, X 2, are two different programs.

Both study groups were informed about MIT through class discussion and examples. McKenzie's (1999) MI inventory was adopted and distributed among the participants. The participants were given the MI inventory to identify their MI profiles based on the type of intelligence for which they obtained the highest score. Care was taken throughout the research procedure to clarify every item for the students. For example, the researcher explained all the difficult words in either English or Persian in cases where the participants had difficulty to understand the items. They were also assured that the information would be kept confidential and used for research purposes, only.

The way each group; i.e. EG1 or EG2, was instructed differed from one to another. EG1 was instructed based on the regular procedure suggested by the design of their course book titled as "Interchange 2" by Jack C. Richards with Jonathan Hull and Susan Proctor (2005). The approach adopted for the book is based on Communicative Language Teaching (CLT). However, for EG2, the activities of the same teaching materials, for both the classroom and English laboratory, were selectively assigned to the MI groups in relation to the profile they fell in. In cases where there were no activities in the book to be matched with some of the MI groups, the researcher either alternated some of them or developed new ones. Lesson plans for the whole semester were designed for both groups, accordingly.

Thus, having two groups of subjects to investigate the research problem and because it was not feasible to randomly assign individuals to each of the groups and use a true experimental design, as contended in literature (e.g. Creswell, 2003; Gay, Mills & Airasian, 2009), a quasi-experimental design model, of the kind of "the pre-test/post-test non-equivalent control group design", as an "intervention" design, seemed to be best applicable to this study. It was the intact group who was randomly assigned to the treatment, not random assignment of the individuals to each group.

In order to provide answers to the research questions, the researcher first analyzed the collected data descriptively using measures of central tendency. Besides, paired Sample t-test revealed the differences between two sets of scores; i.e. those obtained from pre- and post- listening proficiency tests to determine if the intervention had any impact on the participants' listening proficiency.

3. Results and Discussion

Of all nine intelligence profiles, the participants were divided into eight groups at different rates. The only intelligence profile which was excluded from the study was existential intelligence since there was only one participant who gained the highest score in that intelligence and thus could not be considered a group. This particular participant was added to the visual group due to her second highest score which was obtained for that intelligence. Then, the distribution of the subjects in intelligence profiles was identified for each study group.

As for the comparison of the subjects' performance on listening before and after the intervention, Table 2 presents the difference.

Table 2. Descriptive Statistics for Pre-listening and Post-listening Scores for All Subjects

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-listening	27.07	56	6.111	.817
	Post-listening	31.12	56	5.88700	.78668

By looking at the results of the t-test, we can see that the number of cases was reduced from 60 (at the time of pre-test) to 56 (post-test) since one participant from EG2 and three from EG1 dropped the course towards the end of the semester. The missing data was automatically excluded from the analysis. As tabulated in the above table, the mean score on the listening test before the intervention (Time 1) was 27.07 and the mean score at Time 2 was 31.12. Therefore, it can be concluded that there was an increase in listening proficiency from Time 1 (prior the intervention) to Time 2 (after the intervention).

The data presented in Table 3 demonstrate the statistical differences between the participants' performance on pre- and post-tests.

Table 3. Results of Paired-samples T-test on Pre-listening and Post-listening for All Subjects

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	SD	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pre-Post Listening	-4.053	4.69	.627	-5.310	-2.797	-6.46	55	.000

Based on the results of paired-samples t-test presented above, the probability value indicates a significant difference between the two scores obtained from the pre- and post-listening tests. The value of eta-squared obtained for this test was .4314 which indicates a large effect size. So, it can be concluded that there was a large effect size of the intervention with a substantial difference in the listening scores which were obtained before and after the interventions, regardless of the type of intervention; i.e. whether the tasks are given to the MI strengths or across the MIs. This is a support for Schumann's (1997) who states that the use of MIT in lesson can better maintain learning.

Table 4 presents the data about each group's number of participants, mean scores on listening, standard deviation (SD), maximum and minimum of scores for both pre- and post-tests.

Table 4. Descriptive Statistics for Pre-listening and Post-listening for Each of the Study Groups

Stage	Group	N	Minimum	Maximum	Mean	SD
Pre-Listening	EG1	30	16.00	39.00	27.03	5.933
	EG2	30	17.00	40.00	26.63	6.122
Post-Listening	EG1	27	22.00	45.00	31.77	5.713
	EG2	29	20.00	41.00	30.51	6.080

Table 5 presents a comparison of study groups' listening scores before and after the intervention.

Table 5. Statistical Results of Paired-sample t-test for the Study Groups

		Paired Differences							
					95% Confidence Interval of the Difference				
Group		Mean	SD	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
EG1	**Pre-Post Listening**	-4.370	4.55	.877	-6.173	-2.567	-4.98	26	.000
EG2	**Pre-Post Listening**	-3.758	4.87	.905	-5.612	-1.94	-4.15	28	.000

Thus, having conducted a paired-samples t-test, the impact of the intervention on the experimental groups' listening proficiency scores could be determined. There was a statistically significant difference in EG1's listening proficiency scores from pre-intervention to post-intervention with the eta-squared statistics (.48) which indicates a large effect size. By the same token, the impact of the intervention for EG2 was significant. The eta-squared statistics (.38) shows a large effect size. So, according to the results of the t-test, there was a significant difference in the listening scores of both study groups from the beginning of the study to the end, indicating the positive effects of the interventions. However, the experimental group who received the activities across intelligences (EG1) outnumbered those who were taught only to their strengths; i.e. their most developed intelligence. Such a difference may be accounted for by the fact that, as once put by Stanford (2003), ". . . no one set of strategies will work best for all students at all times" (p. 82). In addition, the findings suggest that including a wider spectrum of MIs in instruction means catering to a wider variety of individual learning styles.

4. Conclusion

The results demonstrate that the participants possessed all nine intelligences to some degree, providing support for Gardner's hypothesis who believes that each individual from any culture possesses "core abilities in each of the

intelligences" (Gardner, 1993, p. 28) but the level these intelligences function in people varies from one person to another. The subjects' responses to the MI inventory items suggest that MIs are prevalent in their lives.

The findings support the hypothesis that the incorporation of MI-based activities by touching upon a combination of MIs is more effective than when they are assigned to the students' intellectual strengths, only. Thus, the findings testify to one of the important aspects of MIT which focuses on the interaction of Multiple Intelligences. An aspect of MIT proposes that individuals should be perceived as "a collection of aptitudes" (Gardner, 1993, p. 27), rather than being identified with only one intelligence. In every culture, these intelligences should interact with each other to present a cultural role. Language learning, like any other skills, is a complex interaction of a number of intelligences, not just "linguistic" (Gardner, 1983, 1993; Campbell, 1994). The findings of this study suggest that a combination of different intelligences should be accommodated to provide for better improvement of listening proficiency in Iranian EFL context. This is in accordance with what Felder and Henriques (1995) propose as "a multi-style approach to foreign language education". To them, information should be presented in a variety of modes in that instead of using only students' preferred modes, their less preferred modes should be accommodated as well because they may encounter problems that require the use of those less developed learning styles.

Since the ultimate objective of this study was to explore the potential ways to help with the problem of listening deficiency, it can be concluded that one effective way is to encourage active participation in oral courses. Students should learn not to rely on their teacher's instruction and use their own strategies to learn to listen. They should realize that they themselves should be active in listening tasks (Goh & Taib, 2006; Vandergrift, 2003).

The other conclusion to draw is that MIs function differently in different cultural contexts and the L2 learner responsibility to adapt to the cultural norms of the L2 community differs from one culture to another. In this respect, Iranian learners of English have been raised to develop certain intelligences like linguistic and mathematical throughout their academic life whereas they should also experience developing other intelligences such as kinesthetic and musical which are valued in English speaking communities. Doing so, they are more likely to promote their listening proficiency as cultural knowledge of the L2 speaking community can be influential (Bakhtiarvand & Adinevand, 2011).

Further, although literature does not provide us with much implication of the MI theory in the tertiary level, especially for English majoring students, it does not mean that MIT is not applicable for adult learners. As a matter of fact, as the results of this study indicate, since there are a number of components common in both MIT and andragogy, the theory could be incorporated into an adult learning setting, too. However, since the MI theory has not introduced a pedagogical framework, educators can use the concepts of the theory in various ways until an approach is justified to be practiced in a particular pedagogical setting (Campbell, Campbell & Dickenson, 1996).

4.1 Suggestions

Through an interaction between the learning context, university instructors and students, Iranian TEFL students can be empowered to improve their listening proficiency. To this end, the learning context can provide for the success in two dimensions: the collaborative environment of the classroom by designating a variety of activities to be practiced in groups of MIs and personalized atmosphere of the language laboratory focusing on particular activities like linguistic aspects of listening. Instructors, as reflective practitioners, are required to be familiar with the nature of MIs and the way they can be related to different processes of listening. Thus, they can use their knowledge to awaken students' strengths and preferences through selected activities. Then, by making informed choices about their teaching strategies, teachers should use a broad range of techniques to fit those individual differences. Teachers should also help their students to not only rely on their own strengths, but also try to extend more intelligences to solve problems. In other words, "what must be done to achieve effective language learning is to balance instructional methods, somehow structuring the class so that all language learning styles are simultaneously-or at least sequentially-accommodated" (Oxford, 1990, as cited in Felder & Henriques, 1995, p. 28). Finally, university instructors can contribute to reflective learning by encouraging the students to reflect on their preferred MIs and use them in real life situations. Students, as reflective partners, are allowed to make choices about learning activities; thus, deciding for the right activities for developing listening proficiency.

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