

The Relationship between Multiple Intelligences and Listening Self-Efficacy among Iranian EFL Learners

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Abstract

The present paper aimed at investigating the relationship between listening self-efficacy and multiple intelligences of Iranian EFL learners. Initially, ninety intermediate male learners were selected randomly from among 20 intermediate classes in a Language Academy in Yazd. In order to assure the homogeneity of the participants in terms of overall language proficiency, PET was administered to the learners. Afterwards, based on the standard deviation and mean, 60 participants were chosen from among the original ninety learners. Following that, the learners were asked to complete the listening self-efficacy and multiple intelligences questionnaires. The results of statistical analysis indicated that there was a significant relationship between total multiple intelligence scores and the Listening self-efficacy of the learners. Moreover, all of the intelligence types, except kinesthetic intelligence as well as verbal and visual intelligence were significantly related to Listening self-efficacy. Additionally, it was found that interpersonal intelligence uniquely explained 5.4 percent of the variance in Listening self-efficacy scores and is thus the best predictor of listening self-efficacy scores.

Keywords: listening, self-efficacy, listening self-efficacy, intelligence, multiple intelligences

1. Introduction

Listening in English as a Foreign Language (EFL) seems to have an important role as a source of input for language learners. Carter and Nunan (2001) defined listening as the term which is used in language teaching to refer to a complex process that allows us to understand spoken language. Listening comprehension requires the linguistic and background information to be processed online (Gonen, 2009) as well as accommodating the uncontrollable speed of delivery. Thus, listening comprehension is concerned with a great amount of mental and cognitive processes (Vandergrift, 1999). This may result in a kind of anxiety related to listening demands especially within the context of second language (Vogely, 1999; Gonen, 2009). Another important cause of FL listening anxiety is what Joiner (1986) calls negative listening self-concept which also causes the anxiety related to listening. As Joiner (1986) puts it, this negative self-concept at times results from low self-confidence and having no self-efficacy.

Research shows a negative correlation between listening-related anxiety and the performance on listening comprehension (e.g. Elkhafafi, 2005; Golchi, 2012; Ghapanchi & Golparvar, 2012; Serraj & Noordin, 2013). In contrast, it has been shown that there is a positive relationship between confidence in listening and listening comprehension (Chen, 2008; Magogwe & Oliver, 2007; Rahimi & Abedini, 2009). One of the factors which might bear relevance to the concept of self-efficacy in general and listening self-efficacy in particular is multiple intelligences. Multiple Intelligence Theory (MI) has broadened the vision of educators in general and language educators in particular specifically for its implications for classroom instruction (Baum, Viens, & Slatin, 2005; Fogarty & Stoehr, 2008; Viens & Kallenbach, 2004). Multiple Intelligence Theory (MI) is not at all a novel theory. It has been worked on since the 1980s. Howard Gardner introduced MI for the first time in the eighties (Gardner, 1983), yet it received more attention in English Language Teaching field since the last decade.

Considering the fact that intelligence is an integral element of learning, some scholars (e.g., Geimer, Getz, Pochert, & Pullam, 2000; Kuzniewski, Sanders, Smith, & Ulrich, 1998) have suggested the integration of MI instruction in teaching different school subjects such as mathematics, biology, and language arts. They believe that effective teaching based on MI theory makes students aware of their weaknesses and strengths (Yi-an, 2010), engages them in their learning process, and makes them responsible for the way they demonstrate their learning (Chen, 2005).

With the help of this theory, language teachers can create flexible, reflective, logical, and creative activities by considering students' individual differences (Christison, 1998) and thus more students may find success in schools (Gilman, 2001). Given the significance of the notion of self-efficacy and its close ties with multiple intelligences, the present study aims at investigating the relationship between listening self-efficacy and multiple intelligences of Iranian EFL learners.

2. Literature Review

2.1 *Self-Efficacy and Listening*

Bandura (1997) gives the definition of self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). This definition of self-efficacy presumes that various individuals vary in terms of the levels of self-efficacy under specific circumstances. This theory maintains that individuals with various degrees of self-efficacy (low level and high level) are also different in terms of their perceptions of the activity they need to do as well as the volume of the work and their perceptions concerning these two are the two important components and sources of self-efficacy. He argues that various people have different levels of self-efficacy, with those individuals having low level of this construct being doubtful with regards to their abilities and capabilities. These individuals experience problems and difficulties dealing with the stress and anxiety emanating from low level of self-efficacy, leading to their giving up of the task at hand. In contrast, individuals enjoying high levels of self-efficacy firmly confide in their capacity to succeed, keeping on working on the tasks and activities. Bandura has also defined self-efficacy (1997, p. 21) as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performance”. Thus, self-efficacy is one’s belief in individual capacities and abilities of conducting a certain task rather than the real abilities the individual has.

Successful performance is not merely guaranteed by individual's high level of self-efficacy and his enthusiasm for doing something. As a matter of fact, these individuals may end up failing. Yet, individuals enjoying high level of self-efficacy are not driven to hide themselves behind outside factors like the physical conditions in a context or the fact that they suffer from disadvantages as individuals with low self-efficacy do. On the contrary, they believe they need to work harder for achieving success as well as to try to obtain control over “potential stressors or threats” (Bandura, 1997, p. 39). These characteristics of individuals with high level of self-efficacy makes them distinct from individuals who have low level of self-efficacy. This allows them to have very good performance.

The words “helpless” and “mastery-oriented” (p. 5) are used by Dweck (2000, p. 5) to account for how different learners react to failure. Individuals in the low self-confidence group avoid keeping on a task should it be challenging for them. These individuals have a negative perception of themselves, thinking they are unable to cope with the difficulties they are experiencing. They believe that their failure is a reflection of “their whole intelligence and perhaps their self-worth” (p. 10). In contrast, individuals in the mastery-oriented group focus on completing the activity without becoming doubtful about their abilities and capabilities. They seek to find the solution to the problems and difficulties by learning strategies and techniques that are different from those they have already used. Moreover, they enjoy using this process.

The distinctive qualities of the individuals in the helpless group characterize them as low self-efficacy group of people. In contrast, mastery-oriented people are characterized as individuals who have high level of self-efficacy. According to Dweck (2000, p. 8), the reduced number of correct answers and the increased number of incorrect answers given by the individuals “may be because the failures were so meaningful to them”. Individuals in the helpless group believe they themselves and not their performance are a failure. Learners in the other group, namely mastery-oriented, however, could give the exact correct number of answers (both correct and incorrect ones). Their ability to remember the number of correct answers can be probably attributed to the fact that they did not torment themselves about the failure. These individuals conceded where they had failed and sought to have better performance the next time.

When it comes to teaching and learning foreign language, there needs to be a focus on those foreign language learners who have low level of self-efficacy for listening comprehension. A study conducted by Yang (1999) on Taiwanese college students showed that despite the fact that most of these learners mentioned the need to acquire English listening skills, more than half of them maintained that learning such skills was more difficult compared to learning other domains of English learning including reading and writing.

A study conducted by Pajares (2006) showed that learners having higher self-efficacy outperform those learners with lower self-efficacy although there is not any relation between self-efficacy and listening self-efficacy. This is because self-efficacy is a reflection of how capable people believe they are instead of how capable they actually are (Pajares, 2006).

A study conducted by Zimmerman and Cleary (2006) showed that self-efficacy has a significant impact on personal academic performance. This is because only having knowledge and capacities do not necessarily guarantee the effective use of self-efficacy under difficult circumstances. They argued that many factors can act as barriers in the way of learning, preventing learners from behaving effectively. Learners who have high self-efficacy cope effectively with the challenges and they are predicted to perform successfully. Many studies that have investigated the correlation between self-efficacy and academic performance have confirmed the arguments given by Zimmerman and Cleary (2006).

Caprara et al. (2008) in a study concluded that having high level of self-efficacy for self-regulated learning in middle school led to higher grades. A study conducted by Moos and Azevedo (2009) showed a positive effect computer self-efficacy has on learning performance as well as learning processes. The impact of self-efficacy on problem-solving efficiency has been examined by other studies (Hoffman & Spatariu, 2008, Malouff et al, 2007), self-regulations (Bandura & Jourden, 1991; Schunk, 1983; Caprara et al, 2008), and anxiety (Wilfong, 2006; Schwarzer & Hallum, 2008).

A review of previous studies (e.g. Gist, 1987; Bandura, 1977; Salomon, 1984) shows that academic performance can be predicted by self-efficacy. Perceptions and beliefs regarding self-efficacy are a good predictor of academic achievement since these beliefs regarding one's capabilities in performing task will influence the behaviors in future. Learners in academic contexts vary in terms of their self-efficacy and behave differently with regards to both endurance and persistence. Research shows that learners who have low self-efficacy participate in fewer efforts and quit more easily in the face of challenges. This leads to weak performance, decreasing their self-efficacy. Learners who have high self-efficacy in their abilities of doing certain tasks make greater attempts and endure longer even in the face of difficulties or challenges (Gist, 1987; Bandura, 1977; Salomon, 1984).

The findings of various studies (Schunk, 1996; Zimmerman et al, 1992; Schunk & Hanson, 1985; Pajares, 1996) indicate that self-efficacy which impacts learners' behaviors can predict academic performance in a better way than actual abilities since learners with the same level of capacities but different amounts of self-efficacy have different behaviors with respect to both efforts and persistence, influencing their academic performance. However, Pajares & Valiante (1997) maintain that this does not imply that they can be successful. Individuals can successfully reach positive results even beyond their abilities since desirable performance entails both self-efficacy and required skills and knowledge. The attitudes and activities of individuals toward the knowledge and skills are determined by the way in which people perceive their own capabilities. Personal efficacy beliefs also impact the quality of knowledge and skills acquisition.

Self-efficacy can predict the subsequent performance. In the same way, individuals' beliefs regarding capabilities and abilities for conducting certain tasks impact learners' behaviors. However, a review of literature shows that self-efficacy for learning has been distinguished from self-efficacy for performance with respect to task familiarity (Schunk, 1996; Schunk, 1989; Zimmerman et al, 1992). They argued that when learners know the tasks, they form self-efficacy related to the tasks performance by analyzing and interpreting the prior successes and acquired skills. At this level, performance can be predicted well by performance self-efficacy. However, when learners have no familiarity with tasks, they are likely to judge the capabilities on the basis of relevant skills since they have no idea about what skills will be necessary for the tasks. Schunk (1989) argued that at this level, learners' self-efficacy comes from their perceived capacities for self-regulatory learning. They judge about the extent to which their learning similar skills in the past was effective, the tasks would require what kinds of techniques and skills, how easily new skills would be mastered, and what the quality of monitoring the learning performance would be. Self-efficacy for performance is one of the variables that can predict performance since it displays the individual differences contributing to the quality of performance. However, studies show the significance contributions self-efficacy for learning make to subsequent performance, skills as well as self-efficacy assessments (Schunk, 1996; Zimmerman et al, 1992; Schunk & Hanson, 1985; Pajares, 1996).

Wu (1998) in his study found out that lower-proficiency listeners were more inclined to employ top-down processing to compensate for their lack of linguistic knowledge. Renandya and Farrell (2011) in their study concerning strategy-instruction believe that the technique of strategy-based instruction should not replace basic language teaching. In his investigation Zeng (2007, p. 89) believes that "listening practices in word recognition, phonological rules, rhythmic groupings, tone placements, intonation rises and falls, and in discriminating differences in word order and grammatical form should be put in priority for low-intermediate listeners in listening classrooms".

Chang and Read (2006) studied the effect of key word method on listening comprehension and discovered that after being exposed to the key words found in the listening materials, lower-proficiency students' attention was

often drawn to local cues involving those pre-taught words and consequently failed to catch the overall picture of the spoken text. A study conducted by Chang (2006) revealed that the linguistic threshold for L2 listeners is required in order to help learners to attain to have improvement in listening comprehension.

Graham, Santos, and Vanderplank (2011) found that teachers believe that listening instruction is very difficult. They believe that most teachers in teaching listening utilize the “comprehension approach” proposed by Field (2008). Andon and Eckerth (2009) examined teachers’ beliefs on task-based language teaching (TBLT). They further investigated the ways “published accounts [of TBLT] are reflected in teachers’ pedagogic principles” (p. 286) in ELT context. Andon and Eckerth came to the conclusion that their participants were aware of main principles from the TBLT literature but this knowledge was limited to a small number of articles and some of its main themes were reflected in their teaching and discussions of their practice. In a study conducted by Basturkmen (2012) he found out that the level of correspondence between beliefs and practices for experienced teachers is higher than that of novice teachers.

2.2 Multiple Intelligences

Today, what one can do is more widely thought than what one does with the advances in the field of education and psychology. Multiple intelligence theory has been proposed to take into account several new training methods for his purpose. After reviewing traditional intelligence approach, Neuropsychology and development expert Gardner proposed for the first time seven different universal capacities in his book “Frames Of Mind” which was published in 1983 (Lash, 2004). In 1983, Gardner set forth that any individual has a variety of intelligence degree (mathematical-logical, verbal-linguistic, musical-rhythmic, bodily kinesthetic, intrapersonal, social, visual-spatial and nature) and this revealed multiple intelligence theory which describes the learning styles, interests, capabilities and tendencies of individuals.

Multiple Intelligences Theory (MIT) is a new vision questioned by educators and language educators specifically for its application in the language classroom. Multiple Intelligence Theory (MIT) is not at all a novel theory; It has been worked on since 1980s. Howard Gardner introduced MIT for the first time in eighties (Gardner, 1983), yet it received more attention in English Language Teaching field since the last decade. This interest correlates with language educators’ interest in maximizing the language learning. Intelligence is a psychological notion connected with learning on which educators base a lot of their professional decisions. Since the late nineteenth century and early twentieth century, various theories about intelligence have been put forward, and many attempts to define and to measure human intellectual capabilities have been made.

The notion of intelligence has a great effect on ones’ educational opportunities, job selection and social status (Christison, 1998). The existence of different theories of intelligence indicates that intelligence is a vibrant concept in psychology (Akbari and Hosseini, 2008). Many philosophers and psychologists have accepted the notion that intelligence has a lot to do with being flexible in following one’s goals. This means that there are as many types of human intelligence as there are types of human goal. The Multiple Intelligences Theory (MIT), proposed in the early 1980s by Gardner, provided evidence that there are several independent ability areas, unlike traditional general intelligence concentrating on a narrow range of two logical-mathematical and linguistic intelligences. He redefined the concept of intelligence as a “bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (Gardner, 1999, pp. 33-34).

Recent interest in the field of foreign/second language education has focused on research topics related to individual differences and personal factors. Individual differences, which is a widely current expression in the foreign language teaching field, refers to the different levels of success or failure that foreign language learners can be expected to meet (Diller 1981; Skehan 1989; Sparks 1995). In fact, the focus on individual differences has been a highly important theme both in general education and language learning based on the premise that “pedagogy is most successful when these learner differences are acknowledged in teaching” (Richard-Amato, 2003, p. 114). Numerous contributory language and non-language factors to explain those differences have been examined during the recent years (Brown 1994; Ellis 1985; Gass & Selinker 1994; Larsen-Freeman & Long, 1991; Spolsky 1989). It is believed that one of the most noteworthy and conspicuous constructs that differentiates human beings is intelligence (Lubinski, 2000).

2.2 Research Questions

Q1: Is there any significant relationship between multiple intelligences as a whole and listening self-efficacy?

Q2: Is there any significant relationship between each one of the multiple intelligences and listening self-efficacy?

Q3: Which one of the multiple intelligences best predicts listening self-efficacy?

3. Method

3.1 Participants

The original participants of the present study were 90 intermediate language learners studying English in a Language Academy in Yazd, Iran. They ranged in age from 18 to 26. The initial ninety participants were selected randomly from among 20 classes of the intermediate level available at the time of this study at this language academy. To this end, 7 such classes were chosen. The participants were mostly university students. All the participants were male learners. Preliminary English Test (PET) was administered to the initial 90 intermediate subjects. The results of this test were used to select 60 homogeneous participants. To this end, drawing on the mean and standard deviation, sixty learners were chosen.

3.1.1 Selecting the Homogenized Participants

As mentioned earlier, to homogenize the intermediate participants of the study with respect to overall language proficiency, PET was given to the 90 initial subjects selected randomly from a larger pool. Table 1 and Figure 1 display descriptive statistics and the histogram of the participants' PET scores, respectively.

Table 1. Descriptive Statistics of the Original 90 Intermediate Participants' PET Scores

	N	Minimum	Maximum	Mean	Std. Deviation
PET Scores	90	28.00	50.00	38.82	5.429
Valid N (list wise)	90				

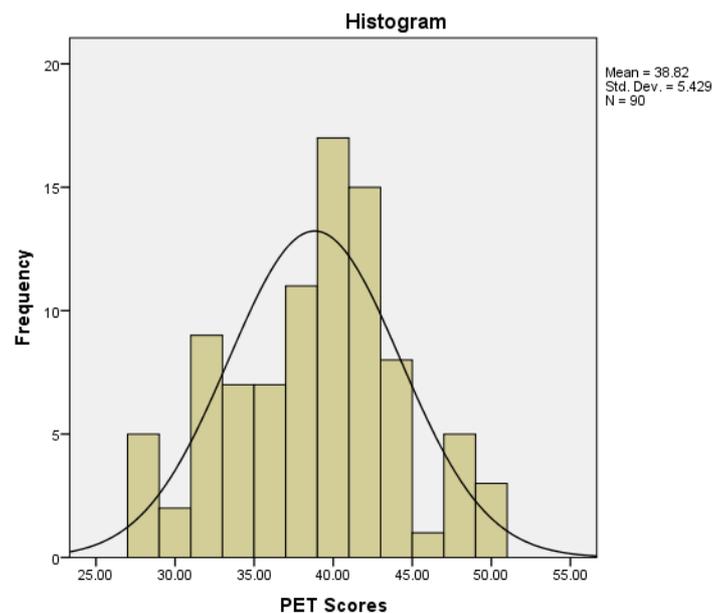


Figure 1. Histogram of the Original 90 Intermediate Participants' PET Scores

As it can be noticed, the mean score is 38.82 and the standard deviation is 5.429. On the basis of this data, the researcher excluded the participants whose scores fell beyond one standard deviation above and below the mean leading to the selection of 60 homogeneous participants for the purposes of this study.

3.2 Research Instruments

3.2.1 Preliminary English Test (PET)

To select the homogeneous intermediate participants for the current study, a proficiency PET was given to the initial ninety learners. Preliminary English Test (PET), the Cambridge Preliminary English Test, or PET for short, is a qualification in English as a Foreign Language awarded by Cambridge ESOL. The test has these sections:

A) Reading (42 items) and writing (two tasks) are taken together ,90 minutes

B) Listening (25 items), 30 minutes

C) Speaking (interview), 10 minutes

PET was administered to the participants and those participants whose scores fell within the range of one standard deviation above and below the mean were selected as the participants of the study.

3.2.2 Listening self-efficacy Questionnaire

Listening self-efficacy questionnaire used in this study was developed by Rahimi and Abedini (2009). This questionnaire, constructed by Rahimi and Abedini (2009), includes 20 items, assessing listening self-efficacy of the participants. Every item is measured on a five point Likert-scale ranging from strongly disagree to strongly agree. They constructed this questionnaire based on three questionnaires of Beliefs about Language Learning (BALLI) developed by Hortwiz (1985), Persian Adaptation of the General Self-efficacy Scale constructed by Nezami, Schwarzer and Jerusalem (1996) and Morgan-Links Student Efficacy Scale (MJSES) made by Jinks and Morgan (1999). According to Rahimi and Abedini (2009), the reliability of this questionnaire was 0.69. The students were asked to read a statement and decide if they: (1) strongly disagree (2) moderately disagree (3) slightly disagree (4) moderately agree (5) strongly agree. The Cronbach alpha of this questionnaire was 0.73 (Rahimi and Abedini (2009).

3.2.3 Multiple Intelligences Questionnaire

In this study, language learners' multiple intelligences were assessed using Howard Gardner's (1993) multiple intelligences questionnaire. Its 80 items assess eight types of intelligences each individual possesses, namely; linguistic/verbal intelligence, logical/mathematical intelligence, visual/spatial intelligence, musical intelligence, bodily/kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalistic intelligence. Gardner (1993) defines each type of intelligence as follows:

3.3 Procedure

Initially, ninety intermediate male learners were selected randomly from among 20 intermediate classes in a Language Academy in Yazd. In order to assure the homogeneity of the participants in terms of overall language proficiency PET was administered to the learners. Afterwards, based on the respective normal curves and histograms, 60 participants were chosen from among the original ninety learners. Following that, the learners were asked to complete the listening self-efficacy and multiple intelligences questionnaires. For self-efficacy questionnaire, students were supposed to express their attitudes with respect to their own conception of self-efficacy by choosing one of the options ranging from strongly disagree to strongly agree. Before completing the questionnaires, a brief explanation was given to the learners on how to fill them. To this end, comprehension and instruction check questions were employed to remove any ambiguities and assure that learners were on the right track.

4. Results

4.1 Checking the Normality Assumption

Table 2. Descriptive Statistics of all types of multiple intelligences and listening self-efficacy scores

Intelligences and Listening self-efficacy scores	N Statistic	Mean Statistic	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Natural Intelligence	100	39.0600	-.178	.241	-.227	.478
Musical Intelligence	100	34.8800	-1.751	.241	1.555	.478
Intrapersonal Intelligence	100	39.0400	-.401	.241	.052	.478
Interpersonal Intelligence	100	38.7400	-.129	.241	-.620	.478
Kinesthetic Intelligence	100	32.9400	.087	.241	-.692	.478
Visual-spatial Intelligence	100	35.9800	-.360	.241	-.082	.478
Logical Intelligence	100	38.5400	-.710	.241	.980	.478
Verbal Intelligence	100	34.4600	-.135	.241	-.129	.478
Total Multiple intelligence	100	293.6400	.256	.241	.530	.478
Listening Self-efficacy	100	65.2500	-.564	.241	.169	.478
Valid N (listwise)	100					

To show the normality of distributions, the descriptive statistics related to the obtained scores on the instruments, including the calculated values of skewedness ratio and kurtosis ratio, are given in Table 2.

As demonstrated in Table 2, the distribution for the total score of multiple intelligences and each type of intelligence as well as the listening self-efficacy falls within the range of -1.96 and +1.96. This point confirms the normality of distributions (Tabachnick & Fidell, 2007). Taking into consideration that all of the skewedness ratios and the kurtosis ratios fell within the range of -1.96 and +1.96 and the results of the Kolmogorov-Smirnov (1967) test supported normality of distributions, the researcher concluded that the data meet the assumptions of parametric statistical techniques. Therefore, the research questions were answered using parametric tests.

4.2 Answering the First Research Question

The first research question of the present study sought to figure out any significant relationship between multiple intelligences and listening self-efficacy. In order to answer this question, the data were analyzed using the Pearson correlation coefficient which is a parametric formula. Table 3 shows the results of this analysis.

Table 3. Pearson's Correlation between Total multiple Intelligences and Listening self-efficacy

		Total Multiple Intelligences	Listening self-efficacy
Pearson	Correlation Coefficient	1.000	.335**
	Total Multiple Intelligences		.000
	Sig. (2-tailed)		.000
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

According to the results of the analysis reported in Table 3, there is a significant correlation between Total multiple intelligences and Listening self-efficacy, $\rho = .33$, $n = 100$, $p < .01$. Therefore, it is concluded that there is a significant relationship between total multiple intelligence scores and the listening self-efficacy of the learners.

4.3 Answering the Second Research Question

The second research question of the study addressed the relationship between EFL learners' listening self-efficacy and different types of intelligences. In order to answer this question, the data were analyzed using the Pearson coefficient of correlation which is a parametric formula. Tables 4 and 5 show the results of this analysis.

Table 4. Pearson's Correlation between Natural, Musical, Intrapersonal and Interpersonal Intelligences and Listening self-efficacy

		Achievement	Natural	Musical	Intrapersonal	Interpersonal
Pearson	Correlation Coefficient	1.000	.090*	.125**	.282**	.340**
	Self-efficacy scores		.029	.002	.000	.000
	Sig. (2-tailed)	.	.029	.002	.000	.000
	N	100	100	100	100	100

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

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5. Pearson's Correlation between Logical Verbal Kinesthetic and Visual Intelligences and Listening self-efficacy

			Listening Self-efficacy	Logical	Verbal	Kinesthetic	Visual
Pearson	Listening Self-efficacy	Correlation Coefficient	1.000	.093*	.012	.016	.010
		Sig. (2-tailed)	.	.024	.724	.692	.587
		N	100	100	100	100	100

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

**. Correlation is significant at the 0.01 level (2-tailed).

According to the results of the analysis reported in Tables 4 and 5, there was a significant and positive correlation between Listening self-efficacy and natural intelligence, $\rho = .09$, $n = 100$, $p < .05$., between Listening self-efficacy and musical intelligence, $\rho = .12$, $n = 100$, $p < .01$., between Listening self-efficacy and intrapersonal intelligence, $\rho = .28$, $n = 100$, $p < .01$., between Listening self-efficacy and interpersonal intelligence, $\rho = .34$, $n = 100$, $p < .01$., between Listening self-efficacy and logical intelligence $\rho = .03$, $n = 100$, $p < .05$., and between listening self-efficacy and kinesthetic intelligence as well as verbal and visual intelligence.

Based on the abovementioned findings, all of the intelligence types, except kinesthetic intelligence as well as verbal and visual intelligence were significantly related to listening self-efficacy. In other words, out of 8 intelligence types, five of them were significantly associated with listening self-efficacy.

4.4 Answering the Third Research Question

As reported earlier, the correlations between self-efficacy scores and 5 out of 8 multiple intelligence types turned out to be significant. These 5 intelligence types were: natural, musical, intrapersonal, interpersonal and logical intelligences. As a result, the researcher opted for the multiple regression analysis to probe the third research question. In order to answer this question, a standard multiple regression analysis was run. Table 6 shows the variables of the regression model. Natural, musical, intrapersonal, interpersonal and logical intelligences were the predictor variables and listening self-efficacy score was the predicted variable.

Table 6. Variables of the regression model

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	Natural, musical, intrapersonal, interpersonal and logical intelligences	.	Enter

a. All requested variables entered.

b. Dependent Variable: Listening self-efficacy.

Table 7 presents the regression model summary including R and R².

Table 7. Model Summary– R and R Square

Model	R	R ²	Adjusted R ²	S E of the Estimate
1	.377 ^a	.142	.135	15.355

a. Predictors: (Constant), Natural, musical, intrapersonal, interpersonal and logical intelligences b. Dependent Variable: Listening self-efficacy.

As reported in Table 7, R turned out to be 0.377 and R² turned out to be 0.142. This means that the model explains 14.2 percent of the variance in listening self-efficacy scores (Cohen, Cohen, West, & Aiken, 2003). Table 8 reports the results of ANOVA ($F(7, 92) = 19.5$, $p = 0.00$), the results of which are considered statistically significant. This means that the model can significantly predict EFL learners' Listening self-efficacy

scores.

Table 8. Regression output: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23051.102	7	4610.220	19.552	.000 ^a
	Residual	138880.283	92	235.790		
	Total	161931.385	99			

a. Predictors: (Constant), Natural, musical, intrapersonal, interpersonal and logical intelligences b. Dependent Variable: Listening self-efficacy.

Table 8 demonstrates the Standardized Beta Coefficients which signify the degree to which each predictor variable contributes to the prediction of the predicted variable. The inspection of the Sig. values shows that among the 5 predictor variables, only interpersonal and intrapersonal intelligences can make statistically significant unique contributions to the equation as their Sig. values were less than .05.

Table 9. Regression output: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		T	Significance	Part Correlation
	B	SE	β				
1 (Constant)	53.267	6.670			7.986	.000	
Natural	.174	.120	.057		1.457	.146	.056
Musical	.132	.111	.047		1.186	.236	.045
Intrapersonal	.287	.127	.107		2.249	.025	.086
Interpersonal	.715	.117	.285		6.107	.000	.233
Logical	-.035	.079	-.018		-.436	.663	-.017

The comparison of β values in Table 9 shows that interpersonal intelligence type has the largest β coefficient ($\beta = 0.285$, $t = 6.107$, $p = 0.000$). This means that interpersonal intelligence makes the strongest statistically significant unique contribution to explaining listening self-efficacy scores. Therefore, it can be concluded that interpersonal intelligence could more strongly predict the listening self-efficacy scores of the participants. Moreover, intrapersonal intelligence was ranked as the second predictor of listening self-efficacy. Finally, the inspection of Part correlation (semi partial correlation coefficient) shows that interpersonal intelligence uniquely explains 5.4 percent of the variance in Listening self-efficacy scores. ($.233 \times .233 = .054$).

5. Discussion and Conclusion

To begin with, the first research question attempted to systematically explore the way EFL learners' multiple intelligences and listening self-efficacy scores are associated. It was found that there is a significant relationship between total multiple intelligence scores and the listening self-efficacy of the learners. As for the findings for the second research question, it was found that all of the intelligence types, except kinesthetic intelligence, verbal and visual intelligence, were significantly related to listening self-efficacy. In other words, 5 out of 8 intelligence types were significantly associated with listening self-efficacy. It was also shown that the model can significantly predict EFL learners' Listening self-efficacy scores.

Ample research studies have explored the state of multiple intelligences in the learning process and consequently its role in English language learning has been emphasized (Tirri & Komulainen, 2002; Shore, 2004; Kallenbach, 1999; Ahmadian & Hosseini, 2012; Marefat, 2007; Sadeghi & Farzizadeh, 2012; Hajhashemi & Eng, 2012; Panahi, 2011; Zarei & Mohseni, 2012; Lazear, 1991; Tahriri & Divsar, 2011). Based on the studies conducted on these two variables, the conclusion is that multiple intelligences play a major role in language learning.

As it was mentioned above, it was revealed that there was a significant and positive correlation between total multiple Intelligences and listening self-efficacy scores, This significant relationship seems to confirm the findings of the MIT studies which have fostered a new approach in education and have been the basis of the

most important theory in the area of personal development (Tirri & Komulainen, 2002). Nowadays, teachers apply the MI-based educational program since it addresses the range of different ways people learn (Shore, 2004; Kallenbach, 1999). The relationship between multiple intelligences and the learning of second language skills is a burgeoning area of research. However, it cannot be ignored that the magnitude of the relationship between the two variables raises doubts about the meaningfulness of the relationship (Tirri & Komulainen, 2002; Shore, 2004; Kallenbach, 1999). Perhaps other studies would reduce this uncertainty through replicating this study in similar and different contexts.

The results related to the first research question are found to be consistent with Shore's (2001) study in which she examined the use of multiple intelligences in George Washington University second language classrooms. The findings indicated that utilizing multiple intelligence-based lessons in the foreign language classrooms led to higher self-efficacy and therefore greater achievement in second language learning. Another study whose results are in line with the current study is the one conducted by IKiz and Çakar (2010) in which the relationship between multiple intelligences and the academic achievement levels was investigated. Academic achievement scores turned out to be related to students' multiple intelligences.

The second research question was intended to systematically investigate the relationship between EFL learners' achievement scores and different intelligence types. As stated earlier (see instruments), the questionnaire of multiple intelligences comprises eight components, namely; interpersonal, intrapersonal, logical, verbal, kinesthetic, visual, musical and natural intelligences. Hoping to provide a more vivid understanding of the relationship between listening self-efficacy scores and multiple intelligence types, this research question examined the relationship between Listening self-efficacy scores, on the one hand, and different components of multiple intelligences, on the other hand.

Based on the results of the parametric Pearson coefficient of correlation, it was concluded that all of the intelligence types, except kinesthetic, verbal and visual intelligence, were significantly related to self-efficacy scores. In other words, out of 8 intelligence types, 5 of them were significantly associated with Listening self-efficacy scores. The results gained here seem to be inconsistent with Razmjoo's (2008) study in which he examined the strength of the relationship between language proficiency in English and different types of intelligences. The results indicated no significant relationship between language proficiency and the combination of intelligences in general and the types of intelligences in particular. Therefore, more studies seem to be required to further explore the nature of this relationship. Another finding of this study was that interpersonal intelligence makes the strongest unique contribution to explaining Listening self-efficacy scores. Hence, it can be concluded that interpersonal intelligence could predict more strongly the listening self-efficacy scores of the participants. Moreover, intrapersonal intelligence was ranked as the second predictor of achievement scores.

There is a unanimous consensus among language educators that learners play a crucial role in the process of learning (Mitchell & Myles, 2004; Richards & Rodgers, 2001). In order to play this role appropriately, they should be cognizant of the fact that knowing one's intelligences and employing them appropriately can substantially promote language learning (Modiano, 2001). Therefore, learners should attempt to get to know the intelligences they possess (Giancarlo & Facione, 2001). In addition, they should attempt to promote their ability to use multiple intelligences appropriately through other factors which can positively affect their multiple intelligences.

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