

## **The Relationship between Iranian EFL Learners' Multiple Intelligences and Language Proficiency in Two Age Groups**

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### **Abstract**

The present study was an attempt, in the first place, to find out whether there is any relationship between Iranian EFL learners' multiple intelligences and their language proficiency. The second objective was to explore whether one of intelligences or combination of intelligences are predictors of language proficiency. To this end, 228 subjects of this study were chosen from among 280 English learners at Tehran Language Institutes based on their age and language proficiency level. The participants made up two groups of males and two groups of females, 10-14 and 20-24 age groups. In this study, specific questionnaires were administered for each age group to determine the MI of all subjects. The researchers utilized three instruments: MIDAS-Kids, MIDAS-Adults, and Key English Test (KET). The results indicated that there is a significant relationship between multiple intelligences and language proficiency of Iranian EFL learners. Also, intrapersonal intelligence appeared as the predictor of total KET. Moreover, spatial and linguistic intelligences had significant relationships with language skills.

**Keywords:** Multiple Intelligences, Language proficiency, Age, MIDAS

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## INTRODUCTION

Among the existing theories of intelligence, the theory of multiple intelligences by Gardner in the early 1980s has been the most dominant. Gardner's work has been marked by desire not to just describe the world but to help to create the conditions to change it. Gardner initially formulated a list of seven intelligences. His listing was provisional. The first two are ones that have been typically valued in schools (namely verbal-linguistic and logical-mathematical intelligences); the next three are usually associated with the arts (musical-rhythmic, visual-spatial, and bodily-kinesthetic intelligences); and the final two are what Gardner called personal intelligences (intrapersonal and interpersonal intelligences). In other words, Gardner considers the multiple abilities in MI theory and defines the intelligences into two main categories: (1) the "object-free" forms of intelligence which include linguistic and musical intelligences, and (2) the "object-related" forms of intelligence including logical-mathematical, spatial, and bodily-kinesthetic. Personal intelligences are considered in a single category. Gardner (1983) considers the personal intelligences as a piece, and they are often linked together because of their close relationship. However, he still thinks that there are two forms of personal intelligence. Gardner claims that the seven intelligences rarely operate independently and they are used at the same time and complement one another. As the theory developed, he added naturalistic and existential intelligence to this list. Gardner and Hatch (1990) gave a general description of the nine intelligences as presented in Table 1:

**Table 1.**  
*Gardner's Proposed Intelligences*

Intelligence	Description
Linguistic	The sensitivity to the sounds, rhythms, and meanings of words, sensitivity to the different functions of language
Logical-Mathematical	The sensitivity and capacity to discern, logical mathematical or numerical patterns, the ability to handle long chains of reasoning
Musical	The capacity to create, performs, and appreciate music
Spatial	The capacity to form mental imagery of the world- the large world of the aviator or navigator, or the more local world of the chess player or the surgeon- and to manipulate those mental images

Bodily-Kinesthetic	The ability to control one's body movements handle objects skillfully
Interpersonal	The understanding of other persons- how to interact with them, how to motivate them, and how to understand personalities
Intrapersonal	The capacity to understand oneself- one's strengths, weaknesses, desires, fears, and intelligences, access to one's emotional life
Naturalist	The capacity to make consequential distinctions in nature, between one plant and another, among animals, clouds, mountains, and the like
Existential	Intelligence of big questions, for example, when children ask about the size of the universe, when adults ponder death, love, conflict, the future of the planet, they are engaging in existential issues.

### BACKGROUND OF THE STUDY

Intelligence and education cannot be considered independently. In fact, individual's needs and differences must also be considered. Campbell (1994, cited in Stanford, 2003) believes that MI theory makes a revolution in education because by using it, educators can expand their strategies beyond the linguistic and logical ones. Harmer (2001) states that if we believe in different ways of knowing, the similar methods cannot work for all learners because, for example, a learner with logical-mathematical intelligence can reply to complex grammar explanation, and another one with visual/spatial intelligence needs the diagram or physical demonstration.

Loori (2005) conducted a study in which the differences in intelligences preferences of ESL male and female students are investigated. Ninety international students at three American universities took part in this study. The results showed that “there were significant differences between males' and females' preferences of intelligences. Males preferred learning activities involving logical and mathematical intelligences, whereas females preferred learning activities involving intrapersonal intelligence” (p.77).

Razmjoo (2008) studied the strength of the relationship between language proficiency in English and the 9 types of intelligences. He concluded that no significant relationship exists between language proficiency and MI as a whole and each of the nine intelligence types in particular. Similarly, the results revealed no significant difference between male and female participants regarding language proficiency and types of intelligences. Moreover, none of the

intelligences types was diagnosed as the predictor for language proficiency. The results of this investigation point to no significant relationship between multiple intelligences and English language proficiency in Iranian context.

Hajhashemi, Akef, and Anderson (2012) sought to determine the relationship between multiple intelligences and reading proficiency of Iranian EFL pre-university students and to look into the role that gender plays. It was found that there was a statistically significant difference in the mean of musical –rhythmic intelligence scores of the low achievers and the high achievers which was positive and stronger among the low achievers. Accordingly, it seems that the high achievers may have lower musical intelligence, which also indicates that better readers may be less intelligent musically. A statistically significant difference was also found between the mean bodily-kinesthetic intelligence scores of the two genders which was positive and stronger among the females. No significant difference was found between the male and female students in their reading proficiency scores.

Hashemian and Abdipour (2012) explored the relationship between Iranian L2 learners' MI and their language learning strategies (LLS). The results revealed a strong positive relation between the participants' MI scores and their use of LLS. Also, strong positive correlations were found between verbal intelligence and memory and cognitive learning strategies, intrapersonal intelligence and memory learning strategies, and visual intelligence and cognitive learning strategies.

Mashhady (2013) conducted a study to investigate the relationship between emotional intelligence (EI) and self-efficacy in 71 Iranian EFL teachers in private language institutes. The findings showed that EFL teachers' EI was significantly and positively correlated with their self-efficacy, and it could also account for a considerable amount of variance in teachers' self-efficacy. Also results showed significant differences in the teachers' EI and self-efficacy with respect to the demographics- marital status and years of teaching experience.

Bahraminezhad, Maftoon, and Shirinzarii (2014) investigated the relationship between age and multiple intelligences. They concluded that there is a significant relationship between age and MI only for female participates. According to the results of the statistical

analysis, spatial, kinesthetic, and intrapersonal intelligences have a significant relationship with the age of female kids and adults.

Some Iranian researchers, interested in MI theory, have examined the relationship between MI and language proficiency (e. g., Razmjoo, 2008; Hajhashemi, 2012) and also the relationship between age and MI (e.g. Sabaghan, 2004; Rahimian, 2005). However, these studies suffer a shortcoming; in these studies only one questionnaire was used to determine the MI of all subjects, whereas for each age group specific questionnaire should have been administered. Therefore, the researchers used specific questionnaires designed for each age group in order to investigate whether there is any correlation between language proficiency and MI of Iranian EFL learners.

The main objective of this study was to investigate the correlation between each of the individuals' intelligence types and the participants' language proficiency level (along with the pertinent four language skills). The second objective of this study was to explore whether one of intelligences or combination of intelligences are predictors of language proficiency. This study was an attempt to seek answers for the following questions:

1. Is there any statistically significant correlation between Iranian EFL learners' MI scores and their language proficiency test scores?
2. Which type of intelligence or combination of intelligences act as the predictor of language proficiency?

## **METHODOLOGY**

### **Subjects**

Out of 280 EFL students learning English at Atlas and Marefat Institutes of Tehran, only 228 subjects had valid data to participate in this study due to the age restriction and level of language proficiency. The subjects comprised of 147 females and 81 males in which 59.2% belonged to the 10-14 age group and 40.8% belonged to the 20-24 age group. Therefore, the participants made up two groups of male and two groups of female.

### **Instrumentation**

The instruments utilized in this study included (a) Multiple Intelligences Development Assessment Scale (MIDAS) for children (aged 10-14) to find the dominant intelligence of learners belonging to 10-14 age group (b) Multiple Intelligences Development

Assessment Scale (MIDAS) for adults (20 years of age and over) to find the dominant intelligence of learners belonging to 20-24 age group (c) KET as a means of estimating the participants level of proficiency. The two most widely used standardized tests of intelligence are the Wechsler scales and the Stanford-Binet. Both instruments are psychometrically sound, but Gardner (1999) believes that these tests measure only linguistic and logical/mathematical intelligences, with a narrow focus within content in those domains. Many experts, as well as Gardner himself, suggest the MIDAS test as the most widely used scale for measuring MI. The MIDAS scales are designed by Shearer (1996) to measure MI. Shearer (1996) states that whereas IQ tests mark the limits of one's "g," the MIDAS scales describe the intellectual growth and achievement potential for each of the Gardner's domains.

### **Procedure**

The following procedures were proceeded to carry out the study. Since the subjects in this research were at the elementary level of language proficiency, it was necessary for the researchers to translate MIDAS (adults and kids versions) into Persian so that they could be easily comprehensible to the participants. Therefore, in the first step, both versions of MIDAS (kids and adults versions) were translated to Persian. Next, In order to find out the dominant intelligence of each group (10-14 and 20-24 year) MIDAS (adults and kids versions) were administered and the eight different scores for the eight intelligences were obtained. The second step of the procedure was the administration of the English proficiency test, KET, version 2003. It was administered to 30 elementary students in the pilot study phase and the process of item analysis was performed based on their scores. Only three items were removed because their (IF) indices were beyond .63. The modified test was administered to 35 other students, and the reliability coefficient of it was found as .88, showing an acceptable reliability index for the test. The revised KET test was administered in Marefat and Atlas institutes to evaluate the level of proficiency of the students belonging to 10-14 and 20-24 age groups.

### **RESULTS**

In order to investigate the relationship between multiple intelligences and language proficiency, the Pearson Product Moment Correlation

Coefficient was applied for each group. In this case, multiple intelligences is considered as the independent variable, while language proficiency, along with the pertinent four language skills, is taken as the dependent variable.

### First Phase

As the first phase, the relationship between the scores on each intelligence and the scores on KET (total), reading, writing, listening, and speaking of female children (10-14 year) was investigated. Table 2 shows the results.

**Table 2.**  
*Correlation between MI and Language Proficiency of Female Children*

		Total KET	Speaking	Listening	Writing	Reading
Spatial intelligence	Pearson Correlati	.087	.352**	-.228*	.069	.291**
	Sig.	.446	.001	.043	.545	.009
	N	91	91	91	91	91

\*Correlation is significant at the 0.05 level (2-tailed)  
\*\*Correlation is significant at the 0.01 level (2-tailed)

As Table 2 illustrates, the correlation coefficient of spatial intelligence with speaking and reading is significant with r values of .352, and .291 at  $p < 0.01$ , respectively. There is also a negative significant correlation between spatial intelligence and listening with an r value of -.228 at  $p < 0.05$ . Other intelligences are not mentioned because they do not play an important role as a predictor.

### Second Phase

For the second phase of data analysis, the relationship between the scores on each intelligence and language proficiency of male children (10-14 year) was investigated. Table 3 shows the correlation between these variables of group2.

**Table 3.**  
*Correlation between MI and Language Proficiency of Male Children*

		Total KET	Speaking	Listening	Writing	Reading
Intrapersonal intelligence	Pearson Correlation	.456**	.395**	.307*	.399**	.320*
	Sig.	.002	.008	.043	.007	.034
	N	44	44	44	44	44

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

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

As Table 3 indicates, the intrapersonal intelligence is correlated with total KET and speaking with *r* values of .456 and .395, respectively at the 0.01 level of significance for a two tailed prediction. Also, it can be seen that there is a significant relationship between intrapersonal intelligence and listening, writing, and reading with *r* values of .307, .399, and .320, respectively at 0.05 level of significance for a two tailed prediction.

### Third Phase

In this phase, the relationship between the scores obtained on MIDAS and language proficiency of female adults (20-24 year) was investigated. Table 4 summarizes the correlation between these variables of group 3.

**Table 4.**  
*Correlation between MI and Language Proficiency of Female Adults*

		Total KET	Speaking	Listening	Writing	Reading
Linguistic intelligence	Pearson Correlation	.138	.059	.202	.234*	.292
	Sig.	.312	.667	.986	.045	.501
	N	56	56	56	56	56

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

As we can see in the Table 4, there is a significant correlation between linguistic intelligence and writing with an *r* value of .234 at the 0.05 level for a two tailed prediction.



#### Fourth Phase

For the last phase of the data analysis, the relationship between the scores obtained on each intelligence and the scores on KET (total), reading, writing, listening, and speaking of male adults (20-24 year) was investigated. Table 5 illustrates the correlation between these variables of group 4.

**Table 5.**

*Correlation between MI and Language Proficiency of Male Adults*

		Total KET	Speaking	Listening	Writing	Reading
Intrapersonal intelligence	Pearson Correlation	.314*	.131	.273	.292	.298
	Sig.	.049	.441	.102	.079	.073
	N	37	37	37	37	37
*Correlation is significant at the 0.05 level (2-tailed)						

As Table 5 illustrates, there is a significant relationship only between intrapersonal intelligence and total KET with an  $r$  value of .314 at the 0.05 level of significance for a two tailed prediction.

#### DISCUSSION

The results of the statistical analyses showed some significant relationships between the MI scores and the language proficiency scores of Iranian EFL learners. In group 1, there was not any significant relationship between total KET and MI scores. However, the interesting point is that some correlations were found between spatial intelligence, their dominant intelligence, and reading, speaking, and listening. Teele (2004) states that spatial students often need to see pictures before they can comprehend the meaning. Since in both reading and speaking parts of KET, students were provided with visual illustrations (a picture in reading part and pictorial cards in speaking), the positive relationship between reading and speaking with spatial intelligence could be justified. Similarly, the negative correlation between spatial intelligence and listening might be due to the assessment instrument having no graphic organizers. Concerning group 2, intrapersonal intelligence was the only intelligence having positive correlation with total KET scores, speaking, listening, reading, and writing. Although interpersonal intelligence was not the dominant

intelligence of group 2, there was a little difference between this intelligence and mathematical intelligence, the dominant intelligence. However, Furnham, and Buchanan (2005) state that one finding of research on subjectively estimated intelligence is that males always overestimate mathematical intelligence. Therefore, intrapersonal intelligence, the closest to the dominant intelligence of group 2, is also a good predictor of language proficiency and four relevant skills. These positive correlations might be justified by saying that intrapersonal students are aware of their own strengths, weaknesses, and inner feelings. They can be reflective thinkers and do well on independent study projects (Teele, 2004).

Regarding group 3, female adults (20-24 year), there was a positive correlation only between linguistic intelligence and writing. This positive correlation could be justified because linguistic people have the ability to analyze and manipulate language and also pay special attention to grammar and vocabulary. They enjoy writing as well (Nolen, 2003).

In group 4, male adults (20-24 year), the positive correlation was found only between intrapersonal intelligence and total KET scores. Affective variables are important factors in second language mastery especially for adult learners, such as self-esteem, inhibition, and anxiety which are aspects of intrapersonal intelligence (Smith, 2003). This can justify the positive correlation. Meanwhile, it seems that this intelligence plays a more important role in language proficiency of male kids rather than male adults.

Moreover, it is important to stress that any conclusion should be interpreted in the light of the many limitations and delimitations that the researcher had in conducting the research. Also, no significant relationship was found in some parts which might be attributed partly to the nature of the instruments used for data collection. A difficulty with the use of questionnaires is the fact that some subjects may not report what they actually do due to either personal or educational reasons (Hatch& Farhadi, 1982).

## **CONCLUSIONS**

This study was an attempt to explore the possible relationship between multiple intelligences and language proficiency. The findings showed that only one intelligence, intrapersonal intelligence, appeared to be the predictor of total KET scores, although spatial and linguistic

intelligences had also significant relationships with different language skills.

As a matter of fact, spatial intelligence had a positive and also a negative correlation with reading and listening of female children, respectively. Intrapersonal was found as a good predictor for total KET scores, speaking, listening, reading, and writing of male kids. This intelligence also had a significant relationship with the total score of KET for male adults. Also, linguistic intelligence was found as the predictor of the scores of female adults in writing.

Language teachers can offer more effective teaching techniques and also find faster and less time consuming ways to teach, based on learners' dominant intelligences. In other words, learners could be directed to the best and most suitable ways of learning. For instance, based on the finding of this research, intrapersonal intelligence was a good predictor for total KET scores, speaking, listening, reading, and writing of male kids. Therefore, teachers are highly recommended to activate the students' intrapersonal intelligence in the process of teaching. However, all students should have the opportunity not only further to develop their dominant intelligences, but also to develop their weaker intelligences. In this regard, Teele (2004) argues that teachers should not only lean on students' strong points but it is sometimes essential to emphasize areas of weaknesses in order to strengthen learners as well.

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