

The Relationship between Multiple Intelligences and Writing Ability of Iranian EFL Learners

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Abstract

The relationship between multiple intelligences and learning of L2 language skills is a burgeoning area of research. This study aimed at finding the relationship between Multiple Intelligences (MI) and the writing ability of EFL learners. For this purpose, the body of female BA sophomores in TEFL at Urmia University (N = 47), within the age range of 18-25, was given a close look using an intact group research design. The proposed hypothesis predicted no significant relationship between MI and writing ability of the participants. The participants were given Armstrong's MI questionnaire which used a Likert Scale. The participants' writing samples were also obtained using an IELTS writing task and were correlated with the scores on the MI questionnaire. The scoring of writing was done analytically following pre-specified criteria. The writings were scored by two raters yielding an inter-rater reliability of 0.8. Results obtained through Multiple Regression indicated that the components of MI did not have a significant relationship with the writing ability of the participants. Detailed results and implications are discussed in the paper.

Keywords: multiple intelligences, writing ability, EFL learners

1. Introduction

Individualism grew out in the second half of the 20th century, welcoming values and differences typical of individuals with an ever-lasting interest (Akbari & Hosseini, 2008). The physical aspects of man took up a hugely lengthy time to be examined, and eventually gave way to the whole body of physical, cognitive, and affective factors as the overriding determiners of what human beings are. This new development drew the attention of educators and led to a renewed view of their educational practice. Following this shift of attention in teaching/learning circles, the unsettled concept of what distinguishes one person from another has been the center of discussions. Differences between individuals can be described in innumerable ways which can accordingly categorize each person on the basis of his/her particularly prominent intelligence types. What this means in educational contexts is that different learning styles are accompanied with different intelligences in individuals (Yenice & Aktamis, 2010).

According to Gardner's (1983) Multiple Intelligences (MI) theory, subsequent to century-long educational and psychological debates on traditional concepts regarding intelligence, a substantial change of view seemed inevitable. Enjoying a high level of Intelligence Quotient (IQ) would facilitate achieving success, according to conventional wisdom. That is, there was only one dimension of mental ability, along which everyone could be sorted out. With a moment's in-depth consideration, though, this concept of a 'pure' intelligence measurable by a single IQ score can be labeled inaccurate. Gardner (1999) called the belief of a general unitary intelligence into question by pointing out the existence of multiple intelligences and plotted the human potentials out beyond the confines of IQ. The eight intelligences proposed by Gardner (1999) are linguistic, logical/mathematical, spatial, bodily/kinesthetic, interpersonal, intrapersonal, visual/spatial, and naturalist intelligences. The following lines provide definitions for these intelligence types:

- *Musical intelligence:* The capacity to perceive (e.g., as a music aficionado), discriminate (e.g., as a music critic), transform (e.g., as a composer), and express (e.g., as a performer) musical forms.
- *Bodily-kinesthetic intelligence:* Expertise in using one's whole body to express ideas and feelings (e.g., as an actor, a mime, an athlete, or dancer) and facility in using one's hands to produce or transform things (e.g., as a

craftsperson, sculptor, mechanic, or surgeon).

- *Logical/mathematical intelligence* is the capacity to use numbers effectively (e.g., as a mathematician, tax accountant, or statistician) and to reason well (e.g., as a scientist, computer programmer, or logician).
- *Spatial intelligence* is the ability to perceive the visual-spatial world accurately (e.g., as a hunter, a scout, or guide) and to perform transformations upon those perceptions (e.g., as an interior decorator, architect, artist, or inventor). This intelligence involves sensitivity to color, line, shape, form, space, and the relationships that exist between these elements.
- *Linguistic intelligence* is the capacity to use words effectively, whether orally (e.g. as a storyteller, orator, or politician) or in writing (e.g. as a poet, playwright, editor, or journalist). This intelligence includes the ability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimensions or practical uses of language.
- *Interpersonal intelligence*: The ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people.
- *Intrapersonal intelligence*: Self-knowledge and the ability to act adaptively on the basis of that knowledge.
- *Naturalist intelligence*: Expertise in the recognition and classification of the numerous species — the flora and the fauna — of an individual's environment. (Armstrong, 2009, pp. 6-7)

Educational programs are expected to meet numerous goals. In line with these expectations, it was put forth that students as individuals do not only respond to the stimuli in the world; they possess minds and these minds in turn hold pictures, languages, ideas, and so on (Armstrong, 2009). We would be mistaken if we think all students come to school with equal intellectual strengths, likes, and with the same ability to process information, for they rarely share biological and cultural backgrounds, nor are they of the same personal records. Even though this inequality, in itself, makes the job of a teacher a more complex one, a skilled teacher would take advantage of these complications, making his pedagogical approach the most effective (Mulalic, Mohd Shah, & Ahmad, 2009). What was mentioned above introduces the concept of an "Individual-Centered School" (Gardner, 2006, p. 172) that takes these different and discrete facets of cognition seriously. This approach recognizes differences in intellectual potentials and will open new vistas for students. What language learning concentrates on does not merely concern receiving instruction or using different information types effectively; it also engages teaching critical and analytical thinking skills when it comes to the practical use of the information (Albitz, 2007).

For ESL/EFL learners, mastery of writing ability is counted as one of the contributing avenues to success in learning the language. According to Chastain (1988, p. 244), "Writing is a basic communication skill and a unique asset in the process of learning a second language." For him, writing is an act of conceptualization which involves thinking, writing, and thinking during the process. Writing is one of the most challenging skills for L2 learners to master, and the important roles that one's MI can play begin to evolve when we look at how the brain sets out to experience the actual act of reading and writing (Armstrong, 2003; Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012). Apart from converting a message into code, when we write, we also check the formation of letters visually. In this way, spatial intelligence intervenes to relate to the printed words, enabling us to check the sameness of visual images and sounds; besides, we ought to use our knowledge of musical sounds, nature sounds, and sounds of words in order to correspond letters and sounds. Properly, moreover, we carry in information from our kinesthetic intelligence to establish the visual and auditory sensations into meaning. As soon as we organize the data grammatically, the syntactic structure, the logical mathematical transformations, interpersonal, and intrapersonal intelligences are put to use (Armstrong, 2003).

Developing writing ability is a skill which is given slight attention in Iranian contexts both by teachers and learners. A small amount of class time is allocated to developing this skill. Writings are mostly done outside classroom for which the students seek help from other sources. It is often seen as a means of strengthening vocabulary or grammatical knowledge rather than as a tool for communicating ideas. However, students can ideally benefit from their individual potentials in intelligences to draw on during the act of writing, an attempt the highlighting of which will bring about valuable benefits. With an eye always on the students' intelligences, a lot can hopefully be done to meet different needs of different students in different settings. Teachers can have other choices available when teaching in addition to that of overemphasizing IQ as the only factor important in learning, and thus this will create a sense of equality by focusing on all individuals possessing whatever intelligence type they might and not only on those who have high IQs. Accordingly, the purpose of this study was to determine whether or not students with high MI would consequently have high scores in their advanced

writing course. Within this perspective, the consideration of MI theory is an effective way to broaden both the goals and the range of tools at disposal for teaching a foreign language.

Over the past decades, a rapidly growing interest in MI, both in popular media and among researchers in various areas, has been observed. The Multiple Intelligences Theory and its applications to the educational settings are growing so rapidly. In an attempt to discover whether there is any relationship between students' MI profile and their writing skill, Marefat (2007) investigated the participants' scores of their essay writing course exam as well as their MI. The results indicated bodily/kinesthetic, existential, and interpersonal intelligences as the biggest contributors to predicting writing score. Furthermore, the role of logical/mathematical intelligence in Second Language (SL) writing has not clearly been discovered. An investigation of the relationship between quantitative usage of logical connectors, in terms of both token and type, in Iranians' EFL essay writing and their logical/mathematical and linguistic intelligences was carried out by Rahimi and Qannadzadeh (2010). Overall, logical/mathematical intelligence was significantly related to the use of more logical-connectors in their essay writing.

Ozdilek (2010) aimed at investigating MI of sixth grade students to determine the extent to which they affect the students' achievement on the topic of the particle model of matter. The results revealed that there were positive low correlations between achievement and logical/mathematical, visual/spatial, and interpersonal intelligences. Also, it was found that bodily/kinesthetic learners' achievement level were lower than logical/mathematical, visual/spatial, and musical learners. Similarly, naturalistic learners' scores were lower than the logical/mathematical and visual/spatial learners.

Amiryousefi and Tavakoli (2011) carried out a study to determine if test anxiety, type of motivation and intellectual abilities of the participants and their scores on TOEFL iBT reading, listening, and writing parts hold any significant correlation. The results revealed that right at the beginning of the writing act, test anxiety was present; secondly, some factors like meeting the time limit and lack of self-confidence provoked test anxiety; and thirdly, musical and kinesthetic intelligences and writing and listening were found to be correlated.

In spite of the growing number of studies investigating the relationship between MI and aspects of language learning, particularly learning language skills, less research has been reported in the literature to explore this relation between MI and L2 writing abilities. To bridge the existing gap on the unclear picture of the link between different intelligence types and EFL writing, this study took the following as the research question:

Is there any significant relationship between Iranian university EFL learners' MI and their writing ability?

H: There is no significant relationship between the Iranian university EFL learners' MI and their ability in writing.

2. Method

2.1 Participants

Within this study, the participants were chosen from the general population of Urmia University students, Iran, without random assignment on the basis of non-probability intact sampling procedure. The participants were all sophomores working toward a BA degree in English Language and Literature at the English Language and Literature Department. The class consisted of 55 male and female participants, within the age range of 18-25. The candidates were administered an MI questionnaire in order to measure their MI profiles, as well as a test of writing ability based on an IELTS topic, whose scores were to be matched with the scores on the MI questionnaire. Since the female participants outnumbered their male counterparts in a significant sense and in order to control for the effect of gender, the final analyses were based on 47 female candidates only, by excluding males. The first language (L1) of most of the participants was Turkish language with 5 having Kurdish and 6 having Farsi as their L1.

2.2 Instruments

This research used a translated (Persian) version of Armstrong's MI questionnaire (1995) — with the reliability of 0.7 — to measure the participants' MI. To ensure translation reliability, the questionnaire was once translated into Farsi by the researchers which was also reviewed by two other experts in English; this led to revisions of the translation so that it finally turned out to be more user-friendly. This forty-item questionnaire, including items representing eight intelligence types based on Gardner's MI theory, was administered to the participants. Each intelligence type was measured using five statements for which the participants were requested to respond to items considering their relevance as describing themselves. This was made possible through using a Likert scale ranging from 1 to 5: "1 = strongly disagree", "2 = disagree", "3 = somewhat agree", "4 = agree", and "5 = strongly

agree". The questionnaire featured a cover letter introducing the aims of the study as well as issues related to the confidentiality of elicited data. Following that, instructions as to how to answer the questionnaire were provided. The scores on this questionnaire were compared with the participants' scores on an persuasive essay of 250 words based on an IELTS topic acting as the participants' final exam for their Advanced Writing Course.

2.3 Procedures

The purpose of this study was to investigate the relationship between Iranian EFL learners' writing ability and their MI. To this end, a cohort of 47 female BA sophomores of English Literature at Urmia University participated in the study in December of 2010. The participants were given Armstrong's MI questionnaire (1995) as well as a test of writing ability based on an IELTS writing topic. The test of writing ability was based on the following IELTS writing topic: "A good number of people believe that it is better for children to grow up in the countryside than in a big city. To what extent do you agree or disagree?" The participants were supposed to back up their intended ideas through writing a persuasive essay. Writing products were rated by 2 raters, yielding an inter-rater reliability of 0.8.

Completing the questionnaire took 30-40 minutes and the writing test took 60 minutes. The written products were rated following pre-specified criteria of: layout, organization, content, coherence, unity, completeness, grammar, vocabulary, punctuation, spelling, quantity, handwriting, formality, capitalization, and overall quality. The scores on the questionnaire were compared with the scores of writing products. To answer the relevant null-hypothesis, the obtained data were analyzed using Multiple Regression (Mackey & Gass, 2005) using Statistical Package for Social Sciences (SPSS) software, version 19.

3. Results

In this study, the variable of MI (independent variable) was used to predict a second variable, i.e. writing ability (dependent variable). To test the validity of the predictor variable for predicting the other variable, data on writing ability was collected from the students through the writing test, whose scores were then matched with those on MI questionnaire utilizing Multiple Regression Analysis (Mackey & Gass, 2005).

Table 1. Symmetric Measures: MI & Writing Ability

	Value	Asymp. Std Error ^a	Approx. T ^b	Approx. Sig.
Interval by Pearson r	.052	.142	.351	.727 ^c
N of valid cases	47			

a. not assuming the null hypothesis.

b. using the asymptotic standard error assuming the null hypothesis.

c. based on normal approximation.

In order to find the correlation between MI and writing ability, Pearson r was utilized. Table 1 presents the results of the analysis for MI as an overall construct. As the table above shows, there is no significant relationship between university EFL learners' MI and their ability in writing. Since the value of Significance (Sig.) shown in the table is more than the p-value ($\alpha = 0.05$), there is a 95 percent confidence in the claim that there is no significant relationship between the university EFL learners' MI and their ability in writing.

Table 2 reveals the relationships between the components of MI and the writing ability of the participants. Even when components of MI are concerned, no significant relationships were found between MI categories and writing ability, implying that the relevant null-hypothesis should be confirmed.

Table 2. Symmetric Measures: MI (considered individually) and Writing Ability

N of valid cases		47		
Interval by Pearson r	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Intrapersonal intelligence	.160	.124	1.085	.284 ^c
Interpersonal intelligence	-.069	.153	-.463	.646 ^c
Bodily/kinesthetic intelligence	.149	.154	1.008	.319 ^c
Verbal intelligence	.104	.138	.701	.487 ^c
Logical/Mathematical intelligence	.024	.159	.160	.873 ^c
Visual/Spatial intelligence	-.150	.131	-1.016	.315 ^c
Musical intelligence	.123	.159	.830	.411 ^c
Naturalist intelligence	-.109	.138	-.735	.466 ^c

a. not assuming the null hypothesis.

b. using the asymptotic standard error assuming the null hypothesis.

c. based on normal approximation.

Since the value of significance for all the MI types assumes a greater value than that of the p ($\alpha = 0.05$), the relevant null hypothesis is confirmed. Otherwise stated, the observed correlation between university EFL learners' ability in writing and their intrapersonal, interpersonal, bodily/kinesthetic, verbal, logical/mathematical, visual/spatial, musical, and naturalist intelligences does not indicate any significant go-togetherness.

4. Discussion

Results obtained through Pearson Correlation indicated that neither MI as a whole nor the components of MI had a significant relationship with writing ability. The findings of the present study confirm the results obtained by Razmjoo (2008), who found no significant relationship between language success and MI. Given that in the current study the eight intelligence types bore no significant correlation with the writing ability, our findings are at odds with Saricaoglu and Arican's (2009) findings that there was a significant correlation between the types of intelligences and the students' success in writing, listening, and grammar. Similarly, Mahdavi's study (2008) revealed a correlation in a significant sense between MI and both TOEFL and IELTS listening comprehension performance. In Delgoshaei and Delavari's (2012) research, the impact of a multiple-intelligences educational approach on cognitive maturity of pre-school children was investigated. Having applied an MI approach in the classroom as an educational method, they observed an increase in all certain domains of pre-school children's cognitive development. Significant relationships between MI and performance on writing performance has also been confirmed in the study undertaken by Hosseini (2012) within whose study the linguistic intelligence served as the best predictor of the writing performance of participants.

Although this study failed to establish a relationship between MI and the writing ability of the participants, MI theory entails an active involvement with educational reform in which students with different intellectual abilities and intelligence types can benefit more from different educational methods intertwined with MI approaches that cater for their distinct needs and capabilities; this sensitivity subsequently can pave the way for jumpstarting students' achievement. Human minds are highly differentiated. It is particularly fallacious to evaluate human mind from just one perspective, to raise the issue of a single intelligence or a single problem-solving capacity. If education opts for the achievement of its highlighted aims, what can be regarded as extraordinarily significant would be the recognition of the students' unique capacities, which involves judgment about the potentials of the individuals and how each can be nurtured in its most effective way. No two learners are alike, and teachers must realize that a single teaching method will not work in a classroom. Having said that, Gardner's (1983) MI theory has educational implications through which learners' particular intelligence types are to illuminate educational paths right from the start to enable the teacher to adapt his/her teaching styles to the intelligences and learning preferences that inform individual learners.

Further exploration into the growing and complicated potentials of multiple intelligences needs to be carried out. If this exploration is backed by research, the next step would be to find ways to help students use higher intelligence levels. In spite of the fact that this target might seem fascinating, that is not what the current educational systems are mostly after. Developing the variation is of less significance compared to the standardization of a learner's performance (Stanciua, Orban, & Bocos, 2011). So the best way out of this resistance to be flexible would be to call for uniformity of content, assessment, and outcome in line with MI implications. Based on students' clearly different intelligences, the instructional programs can use different lesson plans; thus, teachers will be able to differentiate students' similarities and differences better. As a result, the potentialities of an individual will extend to life-long learning. And at this stage, contributions of MI theory toward success will dawn on us. The predictive validity of MI has not yet been fully established among researchers, as the results of different research studies have not been congruent, though most researchers have set out to find a link between MI and academic achievement as a whole. A more comprehensive body of research would be the one including all the skills of foreign language learning. With further research, the connection between MI and success can be verified. Thereafter, subsequent ways can be searched out to help students operate at higher intelligence levels.

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