The Relevance of Multiple Intelligence Theory to Narrative Performance: A Study of Iranian Undergraduates of English

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Abstract

The present study aims to investigate the relationship between Iranian undergraduate students' narrative writing performance including its five components (content, coherence, vocabulary, language use, and mechanics) and their multiple intelligences. Fifty homogeneous Persian speaking EFL learners participated in the study. The Multiple Intelligence test and English narrative writing essay were adopted in the study. The data were analyzed through descriptive statistics, and Pearson correlation. The correlation analysis of the results showed astatistically significant negative relationship between logical intelligence and narrative writing. Moreover, correlation analysis indicated that logical intelligence had a negative significant contribution toward vocabulary and language use of narrative writing. Moreover, interpersonal and intrapersonal intelligences showed significant negative relation to vocabulary of writing, the only significant positive relationship was between mechanics of writing and verbal intelligence.

Keywords: multiple intelligence theory, narrative writing, Pearson correlation

1. Introduction

The multiple intelligence theory which was proposed by Howard Gardner published in his book "Frames of Mind" in1983. This theory, developed by his team at Harvard University, which suggests that there are several and relatively independent intelligences which can be combined in a various ways by individuals. The theory of Howard Gardner was in response to the work that had done in France around 1900 by Alfred Binet. Gardner (1983) asserts that intelligence should be viewed in a pluralistic way as the ability of a person to respond to new events and situations successfully and his or her capacity to learn from past experience (p.21). Initially, Gardner has identified seven different intelligences, based on research which indicates that intelligence is multiple and occurs in different parts of the brain and the mind system. More recently, he has added an eighth and discussed the possibility of a ninth (Gardner, 1999).

The multiple intelligences, as defined by Hoerr (2000) are in the following:

1) Linguistic: sensitivity to the meaning and order of words.

2) Logical-mathematical: The ability to handle chains of reasoning and recognize patterns and order.

3) Spatial: The ability to perceive the world accurately and to recreate or transform aspects of that world.

4) Bodily-kinesthetic: The ability to use the body skillfully and handle objects adroitly.

5) Musical: Sensitivity to pitch, melody, rhythm, and tone.

6) Interpersonal: The ability to understand people and relationships.

7) Intrapersonal: Access to one's emotional life as a means to understand oneself and others.

8) Naturalist: The ability to recognize and classify the numerous species, the flora and fauna, of an environment (p.4).

The principal claims of multiple intelligences theory proposed by Gardner (1983) are as follows: firstly, human beings have all of the intelligences; secondly, intelligences usually interact with each other in virtually every

realm of human activity, and thirdly, the use of multiple intelligences allows people to cooperate in every society activity, rather to exclude certain individuals.

Second language learning, including writing skill, would seem to be basically a linguistic process, and it clearly requires some degree of intelligence responsible for such developments. But someone with a highly developed intelligence, as measured by conventional IQ tests, is not necessarily a successful SL learner (Rahimi & Qhannadzadeh, 2010, p.2012). Harklau (2002) declares that "writing should play a more prominent role in classroom-based studies of second language acquisition" (Ahmadian & Hosseini, 2012, p.112). He also argues that not only should students learn to write but also they should write to learn. According to his idea, nowadays "reading and writing pass from being the object of instruction to a medium of instruction". Writing is indeed basic to thinking about and learning knowledge in all fields and as a means of communicating that knowledge. Writing, viewed as a discovery process, provides opportunities for ongoing learning. It becomes clear, then, that the act of writing itself is a way of structuring, formulating, and reacting to the inner and outside worlds (Marefat, 2007, p.150).

To this end, the implementation of the theory of multiple intelligences in the English writing teaching is an important and innovative aspect in developing writing at University of Zahedan. Accordingly, the purpose of the present study was to investigate the correlations between undergraduate learners of English students' multiple intelligences and English narrative writing essay and components of this mode of writing. It is expected to ascertain the dominant intelligence related to narrative and its' components.

2. Empirical Studies

In this section some studies related to the correlation between MI and English writing proficiency are mentioned, a number of studies have applied MI theory in English writing curriculum in foreign countries and Iran. It should be noted that there is no single empirical research found with regard to the relationship between the MI and narrative writing, particularly its' components of writing.

Ansari and Varnosfadrani (2010) also tried to shed some light on the Iranian EFL students' writing strategies at the revision stage of the process of writing in relation to students' interpersonal or intrapersonal intelligences. The results indicated that there was a significant relationship between the participants' writing revision strategies and their dominant MI profiles. An analysis of covariance also indicated that the type of revision did not have any significant effect on the participants' writing achievement.

Looi Lin and Ghazali (2010) studied how multiple-intelligence strategies and instructions can be used to improve the writing ability of students. The experimental group was taught the five multiple intelligences related to writing: verbal-linguistic, logical-mathematical, visual-spatial, interpersonal and intrapersonal. Students were also taught the five multiple-intelligence strategies related to writing that were brainstorming, topic-word association, rank ordering, mind-mapping, and met cognition. Both the experimental and the control groups were given two compositions: a narrative and an expository. After two months of training they were given a posttest to find out whether there was any significant difference in the writing ability of students. Significant improvement is seen in the overall writing ability of students and also in the six traits analyzed after two months of training.

Investigating whether or not there is any relationship between students' multiple-intelligence profiles and their writing products, Marefat (2007) conducted a research study on EFL Iranian undergraduate students (aged 19-27 years) who studied English literature and translation. The data were collected through the students' average scores on three essays and McKenzie's MI Inventory. She found that kinesthetic, existential and interpersonal intelligences made the greatest contributions in predicting the writing scores of the students.

Mokhtar, Majid, and Foo (2008) conducted a research study entitled, "Teaching information literacy through learning styles: The application of Gardner's multiple intelligences". They believe that making the students independent learners and knowledge workers of tomorrow lies in being information literate (IL). Later, the quality of the project work of the experimental group who received IL course training was compared to that of the control group. It was found that the students who had received IL training (experimental group) had better performance in their project work as compared to those who had not received such training (control group).

Rahimi and Qannadzadeh (2010) investigated the relationship between quantitative usage of logical connectors, in terms of both token and type,in Iranians' EFL essay writing and theirlogical/mathematical and linguistic intelligences.The findings revealed that EFL students with higher logical/mathematical intelligence tend to use more logical connectors in their essay writing.

Ahmadian and Hoseeini (2012) conducted a research to investigate possible relationship between L2 learners' multiple intelligence (MI) and their writing performance. Thirty three female homogeneous Persian speaking

EFL learners participated in the study. The correlation analysis of the results revealed a statistically significant relationship between participants' MI and their performance on writing. Furthermore, the results of regression analysis showed that among all eight intelligences, linguistic intelligence is the best predictor of writing performance.

3. The Present Study

3.1. Research Questions

This study seeks to find answers to the following questions:

1. Is there any relationship between undergraduate learners' types of intelligence and narrative writing?

2. Is there any significant relationship between types of intelligences and sub-components of narrative writing tasks?

3.2 Participants

The EFL participants were selected from university students majoring in English (either in English Translation or English Literature) at Sistan and Baluchestan University. They all participated in speaking courses called "Oral Production" and all of them passed a course in English writing which is called "Advanced Writing". They were 16 males and 34 females undergraduate students with an age range of 18 to 25,who were selected from a group of 75 students based on their performance on Oxford Placement Test (OPT), with a reasonable degree of reliability.

Consequently, the selection of participants was based at first upon a convenience sampling procedure due to availability , practicality reasons and finally the result of the students'proficiency test.

3.3 Instrumentation

3.3.1 Proficiency Test

The language proficiency test contains of 60 multiple choice items from Oxford Placement Test (2001). In order to estimate how reliable the use of Oxford Placement Test is, the internal consistency of the test was computed based on KR-21 formula. The reliability index for the OPT in this study was found to be 0.94, which is considered a high positive reliability.

3.3.2 MI Questionnaire

In order to identify the intelligence profile of the participants, Mckenzie's (1999) questionnaire was utilized to collect information about the intelligence profiles of the participants. The checklist consists of eight sections. This questionnaire can be found on 80 statements related to each of e eight intelligence proposed by Gardner.The overall internal consistency of the questionnaire was determined by the researcher using Cronbach alpha (CA) and it turned out to be 0.763 which is an acceptable and high index of reliability. In Table 1 the reliability for MI questionnaire as a whole and in particular for each sub-scale is illustrated.

3.3.3 Writing Index

Writing ability of the students was determined by taking narrative writing at the beginning of the term. Concerning the issue of scoring the students' writing, the analytic approach to marking was applied in this study. In order to reduce scorer errors and contribute to the reliability and validity of the scores given to each paper, scoring was based upon the profile developed by Jacobs, Zinkgraf, Wormuth, Hartfield, and Hughey (1981) scoring.

3.4 Data Collection and Analysis

At first all of the participants (at first 75 students) took the Oxford Placement Test (OPT) to reveal their proficiency level. To make sure that the participants were homogeneous in terms of their proficiency level in the test of Oxford Placement, a researcher used the score value to compare the students. According to OPT the obtained scores are categorized as follows: low proficiency level (0-28), intermediate level (29-47), and advanced level (48-60). According to the results, fifty of the students were placed in an intermediate level, so the intermediate level students were chosen as a desired group. Rests of participants were discarded in the final data analyses so there was a homogenous group of 50 students in an intermediate level. Based on these results, it could be claimed that the students were homogenous in terms of their proficiency level.

Then the participants were given the multiple intelligences questionnaire which was distributed among them. They had enough time to go over the questionnaire items and answer them. As it was consisted of eight parts and each parts include ten sentences, the participants were required to place a "1" next to each statement they felt

accurately described them. If they did not identify with a statement, they were asked to leave the space provided blank. Thus, students' score on each subscale could range from zero to ten**.**

In the next session, participants were asked to write the narrative composition (around 400 words). In order to improve the assessment of the students' compositions and to help neutralize the effects of any probable inconsistent marking behavior of the scorers, based on the claim that multiple marking can improve the reliability of marking written texts (Weir, 1990), the researcher decided to have more than one assessment employing analytical scoring procedures. Weir (1990) also remarks that work marked independently by two different markers, with their marks being averaged, is a more reliable estimate than if it were marked by a single marker or by different markers assigning a single score. The total number of papers was 50 compositions written by the participants.

Since two raters were asked to score writing, each student had two scores; the average of the total scores assigned to composition was the final index for EFL writing quality considered in all later analyses. The reliability of two rates scores was defined by the use of Pearson correlation. According to Table 2, the r-value of 0.60 indicates an acceptable degree of reliability between the two raters' scores.

In order to investigate which intelligence is in relation with dependent variables of current study the data were analyzed through statistical analysis of Pearson correlation for the total score of narrative composition and its' components.

4. Results and Discussion

4.1 Results of Pearson Correlation

The focus of this study was to investigate the correlation between two sets of variables, multiple intelligences sub-scales as independent variables and narrative writing as dependent. The results presented in Table 3.

As can be clearly seen, the statistically significant correlation exists between the participants' average scores on narrative writing and MI sub-scales. The result shows that there is a statistically significant negative correlation between logical intelligence and narrative writing (Table 3).

In order to answer the second research question, the relationship between the participants' score on each intelligence sub-scales and their scores of narrative writing components was investigated by running Pearson correlation (Table 3). The results indicated that among all eight intelligences, logical intelligence negatively correlates with language use and vocabulary of narrative writing; also, it showed that interpersonal intelligence has negative relation with vocabulary of narrative writing scores. However, only verbal intelligence and mechanics of narrative writing make a statistically significant positive correlation with each other.

5. Conclusion

The present study was an attempt to investigate the relationship between MI sub-scales and students' EFL narrative writing composition including the writing components. The finding indicates that the relationship exists between MI sub-scales and narrative writing. Based on the results of the study, students with higher logical intelligence tend to scoreless in narrative composition.

Moreover, the negative relationship existed between logical intelligence and vocabulary and language of the narrative writing. Vocabulary of the narrative writing also had a negative relation with interpersonal intelligence. So the students with weaker interpersonal and logical intelligence were better at vocabulary writing of narrative composition. The only positive relation was between mechanics of narrative composition and verbal intelligence.

This research was conducted on only fifty participants without considering the gender as a variable; hence, replication of the research is suggested with more students in relation to their gender. Other studies can examine whether intelligences, which have a significant relationship with writing performance, can be used in lesson planning and teaching strategies or not.

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Appendix

Table 1. Correlation of MI Sub-scales

	Verbal	logical	Visual	Bodily	Musical	Interpersonal	Intrapersonal	Naturalistic
	Correlations are significant at p < .05000 N=50							
Verbal	1.0000	-.1311	.3378	.3319	.2836	.0828	.0673	.3002
	p= ---	p=.364	P=.016	p=.019	p=.046	p=.568	p=.643	p=.034
Logical	-.1311	1.0000	.1217	.1837	.0322	.3555	.2379	.3167
	p=.364	p= ---	P=.400	p=.201	p=.824	p=.011	p=.096	p=.025
Visual	.3378	.1217	1.0000	.5160	.3157	.3232	.4148	.5631
	p=.016	p=.400	P= ---	p=.000	p=.026	p=.022	p=.003	p=.000
Bodily	.3319	.1837	.5160	1.0000	.2568	.4297	.2312	.5449
	p=.019	p=.201	P=.000	p= ---	p=.072	p=.002	p=.106	p=.000
Musical	.2836	.0322	.3157	.2568	1.0000	.2146	.4077	.1730
	p=.046	p=.824	P=.026	p=.072	p= ---	p=.134	p=.003	p=.230
Interpersonal	.0828	.3555	.3232	.4297	.2146	1.0000	.3789	.4052
	p=.568	p=.011	P=.022	p=.002	p=.134	p= ---	p=.007	p=.004
Intrapersonal	.0673	.2379	.4148	.2312	.4077	.3789	1.0000	.1891
	p=.643	p=.096	P=.003	p=.106	p=.003	p=.007	p= ---	p=.188
Naturalistic	.3002	.3167	.5631	.5449	.1730	.4052	.1891	1.0000
	p=.034	p=.025	P=.000	p=.000	p=.230	p=.004	p=.188	p= ---

Table 2. Reliability of Two Raters' Score

	Total	Content	Coherence	Vocabulary	Language	Mechanics	Total
	Correlations are significant at p < .05000 N=50						
Total	.5209						
	P=.000						
Content		.7215					
		p=.000					
Coherence			.3628				
			p=.010				
Vocabulary				.5020			
				p=.000			
Language					.3170		
					p=.025		
Mechanics						.4188	
						p=.002	
Total							.6048
							p=.000

Table 3. Correlation of Each Intelligence and Components of Narrative Writing Score

	Content	Coherence	Vocabulary	language	Mechanics	Total
	Marked correlations are significant at p < .05000 N=50					
verbal	-.1126	-.0911	.0617	.0984	.4117	.0332
	P=.436	P=.529	p=.670	p=.496	p=.003 *	P=.819
logical	.0827	-.0321	-.4473	-.4543	-.2713	-.2795
	P=.568	P=.825	p=.001*	p=.001	p=.057	P=.049 *
Visual	.1567	.0209	-.1571	-.1507	.0591	-.0367
	P=.277	P=.886	p=.276	p=.296	p=.683	P=.800
Bodily	.1826	.0293	-.1356	-.1237	.0934	-.0069
	P=.204	P=.840	p=.348	p=.392	p=.519	P=.962
Musical	-.2595	-.1932	-.0399	-.0547	.2141	-.1228
	p=.069	P=.179	p=.783	p=.706	p=.135	P=.396
Interpersonal	.0902	-.0158	-.3040	-.2214	.0892	-.1205
	p=.533	p=.913	p=.032 *	p=.122	p=.538	P=.404
Intrapersonal	-.1091	-.2201	-.2777	-.2269	.0550	-.2232
	p=.451	p=.125	p=.051	p=.113	p=.705	P=.119
Naturalistic	.1267	.1260	-.0869	-.0930	-.0135	.0060
	p=.381	p=.383	p=.548	p=.521	p=.926	P=.967