Iranian EFL Students' Writing Strategies for Error Correction: An MI Approach

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Abstract

This study tries 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. A total of 73 students majoring in English participated in this investigation. 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.

Keywords: Writing Strategies, MI Approach, Error Correction, Writing Performance

1. Introduction

The main thrust of much second language learning strategy theory and research has been toward the identification and training of so-called good language learning strategies (Porte, 2002). The implied assumption of work on language learning strategies is that the identification of good strategies is of principal benefit to poor learners to improve their language abilities (Wenden, 1991; Oxford, 1990; Rubin, 1975).

The study of L2 writing strategies has interested L2 writing scholars not only because it explains the nature of the process of writing and helps them for construction of powerful models of writing, but also because it helps explain variations in the writing performance of L2 learners.

In the study of L2 writing strategy, some research has attempted to explore the different strategies used at different processes involved in the act of writing. Galbraith and Rijlaarsdam (1999) have linked different strategies to three components of writing. For idea generation, they mention strategies such as brainstorming and outlining. For idea translation, they refer to strategies such as free writing and deferred revision. And for revision they suggest peer revision and collaboration.

Similarly, Issacson and Cleason (1997) believe that the process of writing can be assessed by checking the strategies that students employ at different stages of writing. He focuses on a five step writing process. They are referred to by the acronym POWER. POWER stands for plan, organize, write, edit, and revise. To Issacson, the sub-stages for each of these five stages are the strategies used for writing. Ansai and Uchida (1981) identified six categories and several sub-categories for L2 writing strategies based on their retrospective protocol data analysis. These six categories of writing strategies include planning, retrieving, generating, verbalizing, rereading and other miscellaneous strategies.

In a longitudinal case study of L2 writing strategies, Spack (1999) found that while she helplessly struggling with L2 writing tasks, a Japanese undergraduate student developed some strategies which led to her success. Raimes (1987) also observed that students with a higher L2 writing ability consistently used writing strategies. Applebee (1996) held that children with writing strategies consistently showed clear development with age. In a critical review of L2 writing research, Crapels (1992) contends that NNS learners' problems in EFL composition are caused more by a lack of competence in writing strategy than in general language ability.

There is, however, some research that does not support this contention and has come up with rather different results. The relationship between process skills and product qualities in EFL writing was investigated in Pennington and So's (1993) study. The results of their study indicated no relationship between process skills and product quality data.

While a considerable number of studies have been carried out on the effectiveness of error correction, strategies students employ for error correction have not yet attracted so much attention among ESL/EFL researchers. Much literature on learning strategies in general is available (O'Malley and Chamot, 1990; Oxford, 1990, 1996). Some

researchers (e.g., Ellis, 1994) state that the type of task is one of the variables determining the use of different strategies. Literature on strategies specifically employed for error correction is scarce (Kubota, 2001). Ferris (1995) reported strategies such as "ask teachers for help," "make corrections myself," "check a grammar book," "think about/remember mistakes," "ask a tutor for help," "check a dictionary" were used by ESL students in the US to correct errors. The present research differs from Ferris's study in three ways: Firstly, whereas Ferris used a questionnaire to elicit strategies and relied on informants' memories, a "think-aloud" protocol was used in this study. It is apparent that actual strategies learners use might be different from strategies the learners think they use. This is, moreover, a study of EFL Iranian students learning paragraph writing. Error correction strategies used by ESL learners might be different from those used by learners of English as a foreign language. Ferris reported also error correction strategies in general, but this study investigated strategies used for correction of coded errors. This investigation is also an attempt to find out whether there is a relationship between students' writing strategies for error correction and their dominant multiple intelligences profiles. Moreover. this study, for the first time, tries to find the relationship, if any, between students' writing revision strategies and their dominant MI profiles.

1.1 Multiple intelligences Theory

The conceptualization of intelligence has been changing rapidly in recent times. Actually, there is a several decades-long debate among scholars of intelligence about whether intelligence is singular (general intelligence) or pluralistic (distributed among various relatively independent intellectual faculties) (Block & Dworkin, 1976).

This singular approach to understanding intelligence has been challenged in the past three decades, with the strongest challenges coming from anthropologists and neuroscientists. Anthropologists have challenged the idea of general intelligence as a parochial western view and noted the different value placed on different capacities across cultural groups (Greenfield, 1997; Greenfield, et al., 2003). Neuroscientists have provided increasing evidence that the brain is a highly differentiated organ with specific capacities linked to specific neural networks (e.g., Pinker, 1997). Learning, from a neuro-scientific understanding, is defined as modification of synaptic strength and neural connections. Thus, the brain and its functions are shaped by experience derived from environmental transactions. Whether through structured learning opportunities in the classroom or in psychotherapy, or through informal and naturally-occurring experiences such as familial interactions or neighborhood events, such transactions are believed to change brain chemistry and subsequent behavior (LeDoux, 2002; Siegel, 1999).

In the pluralist tradition, Gardner (1983), a psychologist, proposed a theory of multiple intelligences (MI). He has been, in Smith and Smith's (1994) terms, a paradigm shifter. Gardner has questioned the idea that intelligence is a single entity, that it results from a single factor, and that it can be measured simply via IQ tests. He has also challenged the cognitive development work of Piaget. Bringing forward evidence to show that at any one time a child may be at very different stages, for example, in number development and spatial/visual maturation, Gardner has successfully undermined the idea that knowledge at any one particular developmental stage hangs together in a structured whole.

In 1983, Gardner suggested that all people possess at least seven different intelligences which operate in varying degrees depending on each person's individual profile of intelligences. In each person one intelligence is dominant based on his/her past experiences and learning opportunities. Gardner's (1983, p. 21) definition of intelligence is "the ability to solve problems, or to fashion products, that are valued in one or more cultural or community settings." According to this pluralized way of understanding intellect, various areas of the brain are responsible for different functions and we have intelligence in all areas (Poole, 1999). Seven well-established and vastly discussed intelligences in Gardner list are Visual/spatial, Verbal/Linguistic, Musical/Rhythmic, Logical/Mathematical, Bodily/Kinesthetic, Interpersonal, and Intrapersonal intelligences. The last two intelligences were the researcher's main concern in the present study.

2. Purpose

The purpose of this study was two fold. First, the researcher tried to shed some light on the relationship between writing strategies Iranian EFL students employed when they received written teacher feedback on the first draft of their paragraph writing tasks and their dominant MI profiles. Moreover, the researcher tried to see whether the adoption of a certain revision strategy resulted in any improvement in the learners' writing performance.

3. Research questions and hypotheses

The following questions were tackled in this study:

a) Is there any relationship between students' writing revision strategies and their MI profiles?

b) Is there any relationship between students' writing revision strategies and improvement in their writing performance?

Taking these questions into account, the following null-hypotheses are proposed:

a) There is no significant relationship between students' writing revision strategies and their MI profiles.

b) There is no significant relationship between students' writing revision strategies and their writing performance.

4. **Participants**

The EFL population from which the participants were selected included university students majoring in English (either in English Translation or English Literature) at Isfahan University. Both the daytime and evening sophomore students were addressed in this study. They participated in paragraph writing courses called "Advanced Writing." They had passed eight credits on reading comprehension, eight credits on grammar, and eight more credits on listening comprehension.

A total of 73 male and female students that enrolled in two academic writing classes participated in this study. The results of the background information questionnaire administered at the beginning of the course revealed that most of them had passed some courses in private language teaching institutes and centers besides their guidance and high school English learning experiences. Few subjects had visited an English speaking country and none of them took up residence in any English speaking country. They had passed no courses in English writing before.

5. Research Instruments

For the purpose of data collection, two instruments were employed in this study-- (a) an analytic scoring rubric and (b) MI questionnaire.

5.1. An Analytic Scoring Rubric

Concerning the issue of scoring the students' writings, 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, the researcher employed the Roebuck's (2001) analytic scoring rubrics for composition.

5.2. MI Questionnaire

To identify the intelligence profile of the participants, the researcher employed McKenzie's (1999) questionnaire that was used in a previous study in this area (Marefat, 2005). It presents 90 statements related to each of the nine intelligences proposed by Gardner. 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.

6. Data Collection procedures

In order to investigate the research hypotheses, this study was carried out using the quasi- experimental method. The data collection for this study took place in autumn semester, 2006 at Isfahan University. All of the participants took the pretest at the beginning of the semester-- paragraphs written by the participants on a given topic to measure their general writing ability at the beginning of the course. The extreme cases were discarded in the final data analyses.

In order to improve the assessment of the students' paragraphs 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. Wier (1993) 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 982 paragraphs written on four topics by the members of the four participating groups.

The assessment of each draft was made by two independent raters. They were the researcher himself, and one of the competent colleagues who had more than ten years of experience in teaching advanced writing and essay writing courses. Nevertheless, the co-raters in a session discussed the detailed procedure for the analytic marking of papers. This session was held to ensure consistent grading between the raters. The average of the total scores assigned to each paragraph was the final index for EFL writing quality considered in all later analyses.

At the end of the course all subjects were required to write a paragraph without receiving any feedback. These writings were compared to their pre-test paragraphs to see if they had any significant improvement in their paragraph writing.

The revision strategies of the students were determined by means of think- aloud protocol (TAP). As it was not practical to use TAP for all participants, a group of thirty students from all participating groups were randomly selected. The researcher assigned a time for each student. They were required to attend the researcher's office and were asked to read their own paragraphs along with corresponding teacher responses (in the form of underlining errors and assigning codes to each kind of error) and say what they did as they encountered each underlined error along with the coded error. The teacher wrote down whatever they said.

At the end of the paragraph writing course, the participants were required to write paragraphs on a given topic to be compared with their first writings in the data analysis.

7. Data Analysis

The data basically consisted of the participants' written production before and after the treatments as well as their intelligence profiles based on McKenzie's (1999) questionnaire. In order to investigate the research questions and hypotheses addressed in this study, the following statistical procedures were conducted: (1) one-way analysis of variance (ANOVA), (2) Levene's Test of Homogeneity of Variances, (3) analysis of covariance (ANCOVA), (4) Pearson correlation, and (5) analysis of chi-square. A brief discussion of the rationale for employing these procedures is, thus, provided below.

First, a one-way ANOVA was run to find out that the participants were homogeneous in terms of their writing proficiency (first writing drafts). Levene's Test was frequently used in order to make sure of the homogeneity of variances. A Pearson correlation was, also, computed to find the inter-rater reliability of the two raters.

8. Results

The research hypotheses along with the respective analyses of data will be dealt with in this section.

In order to make sure that the participants were homogeneous in terms of their writing performance in the pretest, a one-way ANOVA was run to compare the mean scores of the groups on the Pretest. The F-observed value .049 at 3 and 125 degrees of freedom was lower than the critical value of F, i.e. 2.67 (Table 1).

Based on these results, it could be claimed that the two groups were homogenous in terms of their writing ability.

It should be noted that the two groups were also homogenous in terms of their variances. The F-test of Levene's statistics (F=.243) indicated that there was not any marked difference between the variances of the four groups. The F-test value of .243 was lower than the critical value of F at 3 and 125 degrees of freedom, i.e. 2.67 (Table 2).

Based on the collected writing samples, some writing quality scores were calculated for each participant. The writing quality scores for the two groups were based on the average of scores assigned by an experienced writing instructor and the researcher. A Pearson correlation was computed to find the inter-rater reliability of the two raters. The r-value of .79 with a probability of .000 indicated that there was a high correlation between the two rater's ratings. Table 3 shows the analysis.

An analysis of chi-square was run to investigate the relationship between the students' writing revision strategies and their Mi profiles. As displayed in Table 4, the chi-square observed value, 8.02, was at one degree of freedom greater than the critical value of chi-square, i.e. 3.84.

These results indicated that there was a significant relationship between the students' writing revision strategies and their Mi profiles; hence, the first null-hypothesis was rejected. However, this conclusion must be made cautiously because more than 50 percent of the cells (Table 5) have expected frequencies less than five.

A close inspection of the frequencies displayed in Table 5 reveals the fact that all of the 13 intrapersonal students used independent strategies for solving the problems, while the 8 interpersonal students use equal number of independent and peer revision strategies.

An analysis of covariance (ANCOVA) was run to compare the means of the final test of writing with the pretest of writing.

As displayed in Table 6, the F-observed value for the effect of the type of revision strategies is 1.82. This amount of F at 1 and 19 degrees of freedom was lower than the critical f-value, i.e. 4.38.

Based on these results, the fifth null-hypothesis was supported, and it could be concluded that type of revision strategies do not have any significant effect on the students' writing achievement.

The F-value for the effect of the Pretest of writing - .086 - was not statistically significant (F=.086<Fcrit= 4.38, d.f. 1, 19). These results indicated that there was not any significant difference between the two revision strategies (independence and dependence), and the students' performance on the pretest did not have a significant effect on their performance on the final test of writing. Table 7 displays the descriptive statistics for the two revision strategies on the final test of writing.

The last point to be included was the test of homogeneity of variance. The results of the Levene test of homogeneity of variance indicated that the two revision strategies enjoyed homogeneity of variances and the results of the ANCOVA were valid. The probability of the F-test- .48 - was greater than the .05 level of significance proposed by the researcher.

Discussion on test results

Based on the results of the data analyses, the null-hypotheses are discussed below. The hypotheses will first be discussed individually and then concerning the application of multiple intelligences theory as well as writing revision strategies a general discussion will be made.

As for the first null hypothesis, an analysis of chi-square indicated that there was a significant relationship between the participants' writing revision strategies and their MI profiles. It means that those participants that have dominant interpersonal intelligence use strategies that are social and interactional. Fore example, they might ask a friend for help, or they may get help from their teacher. Intrapersonal intelligence learners, on the other hand, tend to apply personal and individual strategies such as applying grammatical knowledge, checking in a dictionary, restructuring sentences, and guessing. This finding shows that McKenzie's questionnaire could best determine the true dominant profile of each participant. Furthermore, the revision strategies students preferred were compatible with their dominant MI profiles. The applicability of MI theory in writing revision strategies is a vivid evidence that MI theory can play a significant role in language teaching environments in general and in writing instruction in particular.

Based on the analysis of covariance, the second null hypothesis was supported. Therefore, it can be concluded that the type of revision strategies did not have any significant effect on the students' writing achievement. This result is very interesting because it shows that participants' writing improvement is not one dimensional. Any advance in writing achievement involves other aspects and factors. The first and perhaps the most important factor is related to the nature of writing errors. Some errors necessitate that the writer adopts a strategy that might not match his/her dominant MI profile. For example, an intrapersonal intelligence learner might choose to depend on his/her personal knowledge to correct an error but the fact is that that error is beyond his/her linguistic competence and any personal attempt might fail to be productive. An interpersonal intelligence learner, on the other hand, may prefer to get help from a friend that is probably misleading but through a little personal attempt can notice his/her careless mistake straight away.

A more plausible explanation is related to the nature of MI theory. Gardner (1999) believes that our intelligence profiles are not fixed, which means that we can develop both our stronger and weaker areas. McKenzie (1999) contends that knowing our multiple intelligences would empower each one of us to learn and act. It can help us realize our strengths and weaknesses. It is, then, the teacher's job to develop strategies to compensate for the weaknesses and maneuver on the strengths. The administration of the McKenzie's questionnaire revealed that among the participants, 71 had intrapersonal profiles and 11 interpersonal profiles. This can show a big fault with the educational system in Iran. Teachers in schools and high schools did not offer diversified activities and tasks in the classrooms so that they could tap to the different intelligences. In the last two decades there has been a growing interest among ESL/EFL teachers in using cooperative learning activities. A good deal of research exists in other areas of education suggesting that cooperative learning is associated with benefits in such key areas as learning, self-esteem, liking for school, and interethnic relations (Johnson, Johnson, and Holubec,1993; Slavin, 1995). In second and foreign language learning, theorists propose several advantages for cooperative learning: increased student talk, more varied talk, a more relaxed atmosphere, greater motivation, more negotiation of meaning, and increased amount of comprehensible input. In spite of all these benefits, Iran education system still suffers from traditional methods of teaching. Like other traditional education systems, Iran education emphasizes verbal and mathematical intelligences and the students are exposed just to personal and individual styles of learning and practicing. Using mnemonic devices, singing songs and poems, employing images/pictures, role playing, lecturing, and holding some classes outdoors that are related to musical, visual/spatial, bodily/kinesthetic, and naturalistic intelligences are almost forgotten in our educational system. Consequently, multiple intelligences of the students are not well nourished during the long years they study at schools.

Gardner (1983) argues that there is both a biological and a cultural basis for the multiple intelligences. Neurobiological research indicates that learning is an outcome of the modifications in the synaptic connections between cells. Primary elements of different types of learning are found in particular parts of the brain where corresponding transformations have occurred. Thus, various types of learnings results in synaptic connections in different areas of the brain.

In addition to biology, Gardner argues that culture also plays a large role in the development of intelligences. Different societies value different types of intelligences. The cultural value placed upon the ability to perform certain tasks provides the motivation to become skilled in those areas. Thus, while particular intelligences might be highly evolved in many people of one culture, those same intelligences might not be as developed in the individuals of another.

Therefore, as the malnourishment of Iranian students' intelligences is evident, one cannot conclude that the same two strengthened intelligences should be practiced in the classrooms because this means that the same traditional system has to be followed. The fact is that all eight intelligences are needed to live life well. Teachers, therefore, need to attend to and activate all intelligences, not just the first two that lave been their traditional concern.

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Table 1. One-way ANOVA Pretest by Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.323	3	.108	.049	.986
Within Groups	273.631	125	2.189		
Total	273.953	128			

Table 2. Levene's Test of Homogeneity of Variances

Levene Statistic	Df1	df2	Sig.
.243	3	125	.866

Table 3. Inter-rater Reliability Coefficient

		FINALR2
FINALR1	Pearson Correlation	.795(**)
	Sig. (2-tailed)	.000
	N	129

Table 4. Chi-square Analysis MI-Profiles by Revision Strategies

	Value	df	Sig.
Pearson Chi-Square	8.029	1	.005

Table 5. Frequencies of Use of Revision Strategies by Mi-Profiles

2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.52.

				Strategy		Total
				Independent	Peer	
Miprofile	Intrapersonal	Count	13	0		13
		% within MIPROFILE	100.0%	.0%		100.0%
	Interpersonal	Count	4	4		8
		% within MIPROFILE	50.0%	50.0%		100.0%
Total		Count	17	4		21
		% within MIPROFILE	81.0%	19.0%		100.0%

Table 6. ANCOVA Revision Strategies, Pretest on Final Test of Writing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
PRETEST	.243	1	.243	.086	.772
STRATEGY	5.116	1	5.116	1.821	.193
Error	53.389	19	2.810		
Total	5549.250	22			

Table 7. Descriptive Statistics Final Test of Writing by Revision Strategies

STRATEGY	Mean	Std. Deviation	N
INDEPENDENT	16.06	1.714	18
DEPENDENT	14.63	1.109	4
Total	15.80	1.695	22

Table 8. Levene's Test of Equality of Variance

F	Df1	df2	Sig.
.498	1	20	.488

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