Influence of Rhetorical Pattern on Improving EFL Students' Reading Comprehension

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Abstract. Schema theory states that recall of information relayed by the rhetorical patterns which offer extra linkage should be better than that of the descriptive schema. Since in Iran there is no schemata of rhetorical patterns in the native language, little research has been conducted. The present study, therefore, intends to investigate the effect of rhetorical patterns on Iranian high school students' reading comprehension. Participating in this study were 85 female students. One expository text with two rhetorically different patterns was used in this study. Using a between-subjects design, the subjects were divided into two groups. One group of students read the descriptive text while the other group read the causative text. The participants' reading comprehension was measured by recall protocol and cloze test. The results of the statistical analysis indicated that the subjects who read the causative text performed better than the subjects who read the descriptive text. This suggested that rhetorical pattern offers a guarantee for Iranian high school students that their comprehension will improve.

Key Words: Rhetorical Pattern, Schema theory, Reading Comprehension, EFL Readers, ANOVA Test

1. Introduction

In Iran, students rarely have contact with English outside the classroom. So, reading English textbooks plays an important role in foreign language learning. That is why Hassany (1995) believes that the main objective of teaching English in Iran is reading comprehension. However, many Iranian high school students have difficulty in comprehending reading texts. Their L2 reading comprehension scores indicate that they are not performing well. The education these students receive does not enable them to attain full competence in using the English language (Dahmardeh, 2009, p. 46). According to Noora (2008), reading is the most emphasized skill at the university level. But Iranian high school students who enter university are not prepared for the reading demands of texts. Payvandi (2003), in his study, explained that the experts at different levels maintain that teaching or learning foreign languages in Iran has not been successful. The problem of poor reading comprehension in a foreign language for Iranian students seems to be due to the lack of knowledge about the rhetorical pattern of the text.   "A rhetorical pattern is part of the macrostructure of a text and it contains the logical organization of the text which the writer has used to present the intended meaning" (Sharp, 2002, p. 111). However, according to Vahidi (2006), in Iran no schemata of rhetorical patterns there is in the native language. So, little research has been conducted to investigate the effect of this variable on the students' reading comprehension.

In some recent studies, several researchers (Hayashi, 2004; Ferdosipour & Delavar, 2011; Salmani Nodoushan, 2010; Sharp, 2002; Vahidi, 2006; Zhang, 2008) have attempted to sort out the effect of rhetorical pattern on reading comprehension. But most of them used college students as subjects. However, studies which consider the effect of rhetorical pattern on students' reading comprehension at the high school level are scarce.

The current study has been done to fill this gap and answer the following research question: 'does rhetorical pattern (description/causation) affect Iranian EFL students' reading comprehension at the high school level?'

Through answering the research question, it is hoped that a better understanding of this variable can contribute to enhance the students' and teachers' knowledge in the reading comprehension area. Such an understanding will provide significant insights to improve high school students' academic competence and develop their reading ability in preparation for university education. It is also expected that the results of this study can provide useful solutions to improve the reading comprehension scores of EFL high school students.

2. Background of the Study

The investigation of text structure role on reading comprehension is not a new idea. Bartlett (1932) had subjects read the American Indian folktale, 'The War of Ghosts'. He noticed that when they were required to retell the story which contained certain incoherent sections, subjects would restructure it to establish coherence. They would shorten the text, eliminate names and titles and generalize the information to comply with their own expectations. Although Bartlett's (1932) study is more than fifty years old, many modern researchers have attempted to extend it by conducting more experiments. One of the most persistent findings in the text structure literature which many researchers have attempted to investigate is the role of rhetorical patterns on reading comprehension. Understanding the rhetorical relations of texts is thought to be at the heart of the comprehension process of the text and of the writers' intention in the text (Alavi, 2001).

Meyer (1975, 1979) distinguished five different types of rhetorical patterns (expository organization). She called them collection, description, causation, problem/solution, and comparison. Based on the schema theory, three formal schemata (comparison/contrast, problem/solution, and cause/effect) which offer

extra linkage are better in the recall of information than description schema. Some researchers (Meyer & Freedle, 1984; Carrell, 1984; Zhang, 2008) believe that description type represents the loosest organizational type and students have more difficulty with this type of organization.

A review of relevant literature reveals that many researchers (Ferdosipour & Delavar, 2011; Hayashi, 2004; Salmani Nodoushan, 2010; Sharp, 2002; Souici, 2010; Zhang, 2008) have examined the influence of rhetorical patterns on reading comprehension. All these studies except Hayashi (2004) and Souici (2010) offered the support for the idea that rhetorical patterns play a positive role in the recall of information.

Sharp (2002) studied the effect of four rhetorically different passages with identical content on 490 Hong Kong Chinese school children. His study is notable because it was conducted with a large number of participants. Through cloze procedure and recall protocols, the students' reading comprehension was measured. The results of study indicated a clear difference in comprehension between the text types and suggested that pedagogical support to increase awareness of rhetorical patterns would be beneficial. More interestingly, the results of cloze test showed that description text was found to be significantly easier for all participants. This result did not support Meyer and Freedle (1984) and Carrell's (1984) study. In another study, Hayashi (2004) examined the relationship between recall and text structures for five types of texts: collection of description, causation, problem/solution, comparison, and an additional 'oriental' text structure, ki-shoo-ten-ketsu. The participants were Japanese, Chinese, and Korean ESL students with intermediate or above English proficiency attending an intensive English language program at a university. The findings of the recall protocol and multiple-choice questions showed that, unlike previous studies, rhetorical differences in text did not have significant effect on recall.

Zhang (2008) and Souici (2010) attempted to examine the effects of rhetorical patterns on EFL students at university level. In Zhang's (2008) study, the analysis of the recall protocol and cloze test showed that subjects performed better with problem-solution and comparison-contrast structure (highly structured schema) than with description structure (loosely controlled schema). This study supported Meyer and Freedle (1984) and Carrell's (1984) work. In another study, Souici (2010) conducted a research to investigate the role of rhetorical functions to overcome chemistry Master students difficulties when reading scientific English. The results obtained from comprehension questions showed that the role of rhetorical functions, which is basically related to EST (English for Science and Technology), cannot be guaranteed without taking into account students' level in General English. In other words, it is the students' poor level in General English that creates obstacles and difficulties when reading scientific English. Souici's (2010) findings supported Hayashi's (2004) study.

In reviewing the effect of rhetorical patterns on reading comprehension, with the exception of Vahidi (2006), Salmani Nodoushan (2010), and Ferdosipour and Delavar (2011), relatively no research has been undertaken with the effect of rhetorical patterns on Iranian EFL students' reading comprehension. Vahidi (2006) investigated reading comprehension from the discourse point of view on 155 students at the university level which measured by multiple-choice questions. She examined the comprehension of academic/expository text and discourse knowledge of paragraph structure. It was assumed that it was the interaction between textual competence, including textual cohesion or rhetorical organization, and the text that could lead to discourse comprehension. Her findings indicated that there was a relationship between the knowledge of text integration and text comprehension. In another study, Salmani Nodoushan (2010) conducted an experiment to see whether explicit instruction of descriptive and causative text organization positively affected L3 reading recall. 240 university male students whose second language was Farsi participated in the study. The results obtained from immediate recall test showed

that explicit instruction had a positive effect on L3 reading recall. His study's findings also indicated that description texts were significantly easier for recall than causative texts. In a more recent study, Ferdosipour and Delavar (2011) explored the effects of rhetorical patterns on the university students' reading comprehension. The analysis of multiple-choice questions revealed that subjects displayed better recall of the text with highly structured schema.

However, rare studies have been conducted to study the effect of rhetorical patterns on reading comprehension of Iranian high school students. Besides, previous studies conducted in Iran have not used cloze test as an instrument to measure students' reading comprehension. Cloze test method is quite vital in the educational life of Iranian test-takers (Sharafi & Barati, 2011). Taken together, the findings of Vahidi's (2006), Salmani Nodoushan's (2010), Ferdosipour and Delavar (2011), and the other studies mentioned above can be used as sources of information in investigating whether rhetorical patterns influence Iranian high school students' reading comprehension.

3. Methodology

3.1 Participants

In order to investigate the effect of rhetorical pattern on reading recall, the researcher compared two subject groups' recall of a descriptive and a causative text. Based on English scores in the previous semester, 85 female students were sampled from a population of 11th grade students majoring in experimental science in the Savojbolagh County in the Alborz Province. They were intermediate students who were selected from 5 high schools. Their ages ranged from 16 to 17. All of them had already contact with English as a foreign language for five years, with an average of three hours of English classes per week.

3.2 Material

Two versions of an expository text with identical content but different rhetorical pattern were used in this study. The two types of rhetorical pattern selected in the study were chosen from Sharp's (2002) study. The content of this text was about *healthy eating*. Since the participants' major was experimental science, the text was familiar for them. The reliability and validity of using this instrument had been established in Sharp's (2002) study. Flesch-Kincaid's readability formula (software) was applied to both texts in order to improve the validity of the texts. The Ease score of descriptive and causative text were 56 and 52. Further, three professional teachers who were asked comment on the organization and the difficulty level of each text also confirmed that the texts exemplified the two rhetorical forms. Harrison (1979 cited in Alderson, 2000) claimed that the best measure of text difficulty is expert judgment, and when that is not available, readability formulae.

3.3 Instruments

A free recall test and a cloze test were used for data collection in this study. Recall test has been the most common method employed in measuring reading behavior and reading comprehension. This method is also suitable for measuring reading comprehension of a large number of subjects. In a free recall test, the participants' comprehension of reading texts was measured by scoring their recall protocol. In this method, the participants write on a sheet of paper whatever they comprehend about the texts right after they read them. Since the participants write everything they remember immediately after reading the text, it cannot be a test of memory. They write recall protocols in their first language. So, as Bernhardt and James (1987, p. 67) states, "students' productive skills do not interfere with the analysis of their comprehension".

Cloze procedure was used as another technique in which words were deleted from the selected texts. In this procedure, the test takers are asked to fill in the blanks with their best guesses as to the missing words. The percentage of correctly guessed words is the scoring method. One point was given to the proper word.

Deletion rates for the text were: *description* every 5th word, 25 deletions; *causation* every 5th word, 28 deletions.

3.4 Procedures

The participants were divided into two groups. They were randomly assigned to the experimental conditions, and told that participation did not affect their course grade. Each participant received a reading expository text (description or causation), a cloze test on the same text, and a white blank sheet where they could write their recall protocols. The experiment started with the researcher reading the instructions aloud in Farsi while the students read them silently. They were given a brief introduction about the topic and then were asked to read the text and took notes if they wished in fifteen minutes. After reading the text they were asked to put the text inside the envelope and write down everything they could remember from the text in complete sentences both in terms of structure and in words used in ten minutes. They could also use their own words or those of the original text in Farsi, without consulting the text or their notes. They were instructed to put their answer sheet in the envelope after completing the recall task. The cloze test was then attempted in fifteen minutes.

3.5 Data analysis

Each of two texts was divided into idea units by three different raters (two native English speakers and one non-native English speaker whose first language was Farsi). Following the Johnson system (1970), which the sentence is divided at the place at which people would normally take a breath, the non-native English speaker and the two native English speakers collaborated in dividing the texts into pausal units. According to Sharp (2002, p. 116), "Since there is a certain amount of overlap in the text reconstructions, it is recommended to confirm them by native and non-native English speaker judgments". Separately, the non-native English speaker and the two English native speakers identified the total idea units for each text and then the researcher compared the results. The identical information in

both texts (description and causation) versions was reduced to 25 and 26 idea units for the purpose of marking. Then, participants' reading comprehension was measured by the number of idea units recalled. The researcher followed the text segmentation of Johnson (1970) and Zhang (2008) to allow number of idea units assessment of recall. The researchers use Johnson and Zhang's system since their application is simple and they allow quantitative and qualitative assessment of recall. One mark was given to each idea unit which participant recalled. Accounting importance level differences in recall was similar to Sharp's (2002) and Zhang's (2008) study in which the idea units were accounted for importance level within the text. Three marks were given for main generalization idea units, two marks were given for supporting generalization idea units, and one mark was given for supporting details idea units.

Since the raw scores of recall protocol and cloze test were different, the researcher converted the raw scores into percentages. The number of idea units recalled was transformed into a percentage of the number of idea units in the original text based on Zhang (2008). After the administration of scoring, the data were collected and subjected to statistical analysis. Using Statistical Package for Social Sciences (SPSS), the means and standard deviations of the two groups' responses were computed. For further check, one-way analysis of variance (ANOVA) was employed to determine the effect of rhetorical pattern on participants' reading comprehension. The critical F value for significance level was set at $p < 0.05$.

4. Results

The data gathered in this study were subjected to quantitative analysis. The specific statistical procedure for analyzing this research was a one-way analysis of variance (ANOVA) used in order to test the effect of the independent variable (rhetorical pattern) on dependent variable. The dependent variable in this study was reading comprehension scores as measured by recall protocol (recall of idea units and importance level) and cloze test. In terms of the research question, the

result is discussed in the following: 'does rhetorical pattern (description/causation) affect Iranian EFL high school students' reading comprehension?'

The means and standard deviation of three kinds of score: recall of idea units, importance level, and cloze test for the two rhetorically different (description and causation) texts are showed in Table 1(at the end of the article). As shown in Table 1, the means of three kinds of scores for two rhetorically texts are so different from each other. For idea units recall scores, mean scores for descriptive and causative texts were M= 74.65 and M= 80.86. For importance level recall score, mean scores for descriptive and causative texts were M= 69.88 and M= 76.43. In terms of cloze test, mean scores for descriptive and causative texts were M= 73.38 and M= 79.55. With reference of means for three kinds of scores, the results show that the participants who read causative text outperformed than the participants who read descriptive text.

For more check, one-way analysis of variance (ANOVA) was then conducted to determine whether a significant difference existed between two groups' mean scores on each of the dependent measures. As illustrated in Table 2 (at the end of the article), the F value turned out to be significant (F= 7.537; $P < 0.05$) for the recall of idea units. The F value for the importance level was also significant (F= 6.894, $P < 0.05$). As shown in Table 2 (at the end of the article), the cloze test demonstrated a significant difference between the two different texts (F= 6.231; $P < 0.05$). Therefore, the results of recall protocols (using the number of idea units recall, the importance level recall) and cloze test indicated that rhetorical pattern did influence Iranian EFL students' reading comprehension scores at high school level.

5. Discussions

The results indicated that rhetorical pattern had a significance effect on all dependent measures (recall scores for idea units, importance level, and cloze test). The mean score of causative text shows that the students who read causative text

outscored than the students who read descriptive text (Table 1). The results overall showed that rhetorical pattern offers a guarantee for Iranian high school students that their comprehension will improve. This result confirmed Carrell's (1984) idea that Asians recall best with causation structure than description structure.

The findings of the present study lend more support to the schema theory notion that recall of information relayed by the causative pattern, which offer extra linkage, should be better than that of the descriptive pattern. Generally, the effect of rhetorical pattern on text comprehension observed in the present study is similar to Meyer and Freedle (1984), and Zhang (2008) in which it indicated that subjects performed better recall of the text with highly structured rhetorical pattern (causation) than the one with loosely controlled rhetorical pattern (description). Meyer and Freedle (1979) stated that causative type of rhetorical pattern has 'an extra link of relationship' over the descriptive type of rhetorical pattern. Their findings indicated that students who were exposed to causative pattern recalled more than descriptive pattern. Therefore, it is plausible that causative texts activate the readers' appropriate schemata so that they can understand the new materials more efficiently.

The result is also similar to the studies of sharp (2002), Vahidi (2006), and Salmani Nodoushan (2010), in which it revealed that rhetorical differences did have significant effect on recall. In providing more supports, however, the findings appear to be slightly opposed to Sharp's (2002) and Salmani Nodoushan's (2010) studies. In Sharp's (2002) and Salmani Nodoushan's (2010) studies, the subjects recalled more from description structure than causation structure. This is opposed to this study. The results of cloze test in Sharp's (2002) study showed that description text was found to be significantly easier for all participants. The differences in teaching systems between Iran and Hong Kong, correspondingly, may lead to different findings. English is the medium in class in Sharp's study (2002) while Farsi is the instruction language in this study except in English class. In

Salmani Nodoushan's (2010) study, he instructed university students the expository discourse type description and causation. This explicit instruction increased their ability to identify and use the amount of information recalled. Furthermore, the difference in tests (immediate and delayed) and subjects' selection between the current study and Salmani Nodoushan's (2010) may also be resulted in this discrepancy.

However, in this study, a significant effect was found for the recall of idea units, importance level, and cloze test between two rhetorically different texts as accord with Carrell (1992), Sharp (2003), and Ferdosipour and Delavar (2011) studies in that it revealed that rhetorical pattern indeed affects reading comprehension.

On the other hand, the findings reported in this study is opposed to Hayashi's (2004) in which it revealed that rhetorical differences did not have significant effect on recall. This study also did not support Souici's (2010) findings in that the role of rhetorical functions which was basically related to EST could not be guaranteed without taking into account students' level in general English. The difference in findings between the current study and Hayashi (2004) may, in part, have arisen from combining of ESL Japanese, Chinese, and Korean subjects in Hayashi's study, with possibly unforeseen consequences. In addition, the small cell size for each group, perhaps led to different results. Hayashi used multiple-choice question as an instrument. This difference use of instrument seems to result in the difference findings. Moreover, the difference findings between this study and Souici (2010) may be due to the difference of participants' reading proficiency.

However, the findings of these two studies which conducted by Hayashi (2004) and Souici (2010) that there is no statistically significant effect of rhetorical pattern in learners' reading comprehension will need the support of further research.

6. Conclusion

The purpose of this study was to find out whether Iranian EFL learners at high school level were affected by rhetorical pattern when reading in English. The two reading texts identical in content but different in rhetorical pattern were used as instruments on the two groups of participants. Results indicated a statistically significant difference. The findings revealed that text comprehension was associated with text structure, such that high-structured texts (causation) were more likely to facilitate comprehension than low-structured texts (description). These findings bear pedagogical implications for EFL teachers and material designers. Since the present data indicated that students performed better on causative text than descriptive text, it is recommended that rhetorical patterns should be highlighted in instruction reading by teachers in their classrooms. However, as already mentioned, in Iran no schemata of rhetorical patterns there is in the native language (Vahidi, 2006) and the dominant teaching English method in most of the language classes is based on grammar-translation method (Noora, 2008). So, the results of the study help reading teachers to improve their students' reading comprehension through emphasizing on instruction rhetorical patterns. According to Carrell (1985), EFL reading teachers need be cognizant of the rhetorical pattern of texts and should teach their students to recognize and use the top-level organization of text to facilitate comprehension and recall. As Carrell (1984a, p. 465) stated, "if teachers of reading devote reading instruction to the identification of different rhetorical structures, they can facilitate ESL reading comprehension, retention, and recall for their students".

Despite meaningful implications for practical teaching and learning, the findings of the present study are not generalizable to every text type since text types used in this study are not representative of all possible text types. Moreover, the sample size is not large enough to generalize the results. Generally speaking, since language is a complex phenomenon and nobody is able to cover its every aspect, it seems that there is still a dearth of research in relation to rhetorical

pattern. Further research into this topic should, thus, consider using larger number of participants and rhetorical patterns beyond the two patterns investigated here. Moreover, longer texts which contain more varied patterns within each text can be another line of research. Comparison between males and females for whether male readers are more talented in recall or females might also be considered.

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Table1

Descriptive Statistics for Descriptive and Causative Texts

Pattern		Idea units	Importance level	Cloze
Description	Mean	74.65	69.88	73.38
	Std. Deviation	10.43	11.21	11.73
	N	46	46	46
Causation	Mean	80.86	76.43	79.55
	Std. Deviation	10.33	11.76	10.91
	N	39	39	39
Total	Mean	77.49	72.88	76.21
	Std. Deviation	10.78	11.86	11.71
	N	85	85	85

Note: *N= number of participants*

Table 2

Results of One-Way ANOVA Test for Descriptive and Causative Texts

	SS	df	MS	F	Sig.
Idea units	813.70143	1	813.7014	7.537941	0.007
	8959.63757	83	107.9474		
	9773.339	84			
Importance level	906.874996	1	906.875	6.894523	0.010
	10917.4514	83	131.5356		
	11824.3264	84			
Cloze	805.245494	1	805.2455	6.231846	0.015
	10724.8118	83	129.2146		
	11530.0573	84			