An SFL-oriented Framework for the Teaching of Reading in EFL Context

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Abstract

This study aimed to introduce a systematic framework for the interactive instruction of reading based on Systemic Functional Linguistics (SFL). To do so, 60 undergraduate TEFL students taking an advanced reading course were assigned to two equal groups. Both groups were pre-tested for their comparability, and then the experimental group was treated with SFL-oriented knowledge for 13 two-hour sessions with the control group just receiving the traditional grammar-oriented method of teaching reading. Following the treatment, a post-test was administered to both groups the results of which indicated that there was a significant difference at $p < .05$ in the performance of the two groups on reading comprehension. Detailed analyses revealed that the treated group had a better performance on understanding the lower-level intra-sentential relationships and higher-level contextual components involved in reading comprehension. It was concluded that the SFL-based teaching of reading comprehension had a great effect on the reading comprehension of Iranian TEFL students.

Keywords: Systemic Functional Linguistic (SFL), EFL reading, Interactive reading

1. Introduction

Reading in EFL and ESL settings has challenged and still challenges many researchers, practitioners and students. By far, non-native learners either rely on reading through the text in an arduous word-by-word manner or overlook the textual clues and guess at the meaning of the passage on the basis of their background knowledge. As a way out from this predicament, it is thought vital to equip non-native students with an approach to reading that involves interaction with the text as a whole. To this end, the present paper investigates the effectiveness of systemic discourse-semantic knowledge, which provides the simultaneous incorporation of the global and local meaning-making resources, on the reading comprehension of the Iranian students.

2. Literature Review

There are numerous approaches to reading that are classified into bottom-up, top-down and interactive. Bottom-up model stresses the linear translation of the information in the text; top-down model highlights cognitive processes and background knowledge; and interactive model stresses the parallel use of the lower- and higher-level components in the reading process. Grabe (1988) talks of three different senses for the term interactive: reading as an interactive process, which focuses on the text-reader relations; interactive model of reading, which concentrates on the integration of lower- and higher- components of the reading process; and textual interactive reading, which involves a sort of interaction with the text as a whole.

Following the textual interactive reading, this paper continues to borrow from systemic functional linguistics (SFL) for its theoretical framework. Accordingly, language is functional; must be analyzed at the text level; and is only understood in relation to the context of situation (register) and context of culture (genre). Martin (1992) defines genre as a staged, goal-oriented social process. This means that each genre is composed of a number of stages called schematic structure or text structure that function to demarcate the transition from one phase to another to attain an overall social goal. Register, says Halliday (1985), is a configuration of three variables; field (subject matter), tenor (participants in the communication) and mode (the channel through which message is exchanged), in the context of situation.

Likewise, language has two planes: discourse-semantics and lexico-grammar. The former looks at language from two perspectives. Discoursally, it deals with coherence and cohesion at the text level; and semantically it deals with the three strands of meanings (meta-functions) at the clause level. Coherence, as holds Eggins (1994), is either generic, created through the togetherness of the functional stages of a genre; or registerial, created through the togetherness of the variables of a register, whereas cohesion refers to the dependency relationships between different parts of the text through references, conjunctions and lexical relations across the text (Halliday & Hasan, 1976). But, the latter; i.e., lexico-grammar, serves to realize the meta-functions at the clause level. The experiential meaning, representing our experiences, is realized by a configuration of Process (verb), Participant (nominal group) and Circumstance (prepositional phrase); interpersonal meaning, enacting our social relationships, by that of Subject (nominal group), Finite (modal verb), Adjunct (prepositional phrase); and textual meaning, organizing the other two in a message, is realized by Theme (element occupying the initial position in the clause) and Rheme (elements following the Theme).

Studies (Carrell, 1983; Carrell & Eisterhold, 1988) indicate that EFL and ESL readers do not utilize knowledge-based and text-based processes effectively and engage almost exclusively in one type of the processing to the neglect of the other and to the detriment of comprehension in consequence. Farhady and Sajadi (2009) contend that most Iranian students suffer from deficiencies in reading that, state Birjandi et al. (2004), lie not only in macro-skills but in micro-skills. This awkward situation is seen at both the secondary and post-secondary levels (Lotfipour-Saedi, 2005). Therefore, it seems crucial to come up with a systematic framework that can instantaneously account for different factors like linguistic and contextual knowledge involved in reading (Sadeghi, 2007).

All things considered, this paper posits two research questions and two two-tailed hypotheses in connection with the explicit instruction of discourse-semantics as an independent variable and the reading comprehension as a dependent variable as follows:

1- Is there any difference in the performance of the experimental group and control group in understanding the lower-level components involved in reading comprehension?

2- Is there any difference in the performance of the experimental group and control group in understanding the higher-level components involved in reading comprehension?

H_0: There is no significant difference between those Iranian TEFL undergraduates who receive explicit instruction of discourse-semantics and those Iranian TEFL undergraduates who do not receive this instruction.

H_1: There is a significant difference between those Iranian TEFL undergraduates who receive explicit instruction of discourse-semantics and those Iranian TEFL undergraduates who do not receive this instruction.

3. Method

A non-equivalent control group design was devised to investigate the effectiveness of the instruction of discourse-semantics on the reading comprehension of the Iranian students. To do so, 60 TEFL undergraduates who were supposed to cover an advanced reading course at two branches of Islamic Azad University were chosen and assigned to one experimental group and one control group. Having become sure of the homogeneity of the groups through the administration of pre-test, the researchers treated the experimental group with discourse-semantic knowledge including factual genres; register; cohesion; and functional grammar (Processes, modality, Theme and New information, complexing) for thirteen two-hour sessions for one semester on the basis of the systemic pedagogical cycle of teaching, modelling and practising (Hammond et al., 1992), and then administered a post-test to both groups in the end. The measuring instruments were composed of an IELTS reading test composed of three consecutive reading passages with forty questions altogether, a multiple choice functional grammar test with 20 questions developed on the basis of the first passage of the IELTS reading test and a summary test of the same first passage of the IELTS reading test. The last functional and summary measures had been developed on the basis of the lower-level language and higher-level discourse knowledge involved in the IELTS reading respectively. Each question item in the IELTS and functional test was scored one point, and then the obtained score was calculated in terms of percentage. As to the summary test, the scoring was based on a five-point rubric constructed by the researcher. After all three tests had been found to be reliable ($r > 0.7$) through the estimation of Spearsman Correlation Coefficient for the IELTS reading and functional grammar and through the estimation of Pearson Product Moment Coefficient for the inter-ratings in both the pre-test and the post-test, they were checked for content validity through consultation with a panel of three experts from three different universities and for construct.

The descriptive analysis of the data collected through the pre-test given to both the experimental group and control group revealed that the two groups were homogeneous in their performance on reading comprehension as well as the lower-level and higher-level components thereof. Moreover, the inferential analysis carried out through multiple t-test showed that the two groups had no significant difference ($p > .05$) in the mean scores for reading comprehension assessed by an IELTS reading comprehension test, the lower-level components of reading comprehension assessed by a functional grammar test, and in the mean scores for the higher-level components of reading comprehension assessed by a summary test (Table 2). On the contrary, the data analysis through independent-samples t-test indicated that there was a significant difference in the mean reading comprehension scores for the experimental group (M=43.14, SD=15.24) and the control group [M=26.01, SD=10.72; t(52)=4.77, p=.00], thus rejecting the null hypothesis that there is no significant difference between those Iranian TEFL undergraduates who receive explicit instruction of discourse-semantics and those Iranian TEFL undergraduates who do not receive this instruction. As regards the two research questions, the independent-sample t-tests (Table 2) revealed that there was a significant difference in the mean functional grammar scores for the experimental group (M=43.51, SD=12.31) and the control group [M=32.03, SD=9.01; t(52)=3.91, $p<.00$], and in the mean summary scores for the experimental group (M=1.78, SD=.88) and the control group [M=1.04, SD=.64; t(51)=, $p<.001$]. Furthermore, the paired sample t-tests carried out within the experimental group between Time 1 and Time 2 indicated that there was a significant difference at the $\alpha<.05$ level between the treated experimental group and non-experimental control group (See Table 3).

4. Findings and Conclusion

This section is concerned with the discussion of the findings from reading comprehension test, functional test and summary test respectively.

Based on the results of the reading comprehension test, it can be held that the Iranian students learning English as a foreign language will have high performance on reading comprehension if they are given explicit instruction of systemic discourse-semantic knowledge, which entails knowledge of different text types with different schematic structures; knowledge of the inevitable situational factors; that is, field, tenor and mode, involved in communicative events; knowledge of cohesive devices, especially those specific to the written texts; and knowledge of functional grammar including different Process types together with their Participants and Circumstances, Thematic structure, Given-New information, and mood and modality. This supports the Gerot's (2000) assertion that it is not an exaggeration to claim that readers will be successful to the extent that they understand the social context; namely, genre and register, encapsulated by the text and to the extent that they understand how language used in the text functions. She further contends that the context-text relationship posited by SFL explains how reading comprehension is possible; when we comprehend text, we predict from text; or rather language, to context. Thus when writing, we predict from context to text, and when reading we predict from text to context in terms of genre, filed, tenor, mode, and the metafunctions encoded through the grammatical structures of transitivity, mood and theme.

The findings of the present study go in line with the result of a study conducted by Chen and Yang (2006) on two groups of Taiwanese EFL learners. They investigated the impact of a systemic functional linguistics-based science text and a conventional science text on students' reading comprehension. In so doing, they selected two groups and provided one of them with a science text designed on the basis of systemic functional linguistics (ST group) and the other with a science text which had already been designed as a standard text for secondary school students (CT group). Both groups were administered a reading comprehension test and a prior knowledge test. The findings revealed that the ST group, which was given a text devised in conformity to the SFL in terms of schematic structure, cohesive devices, Processes, modality, Theme-Rheme, had a better performance on reading comprehension than the CT group, and that the performance of the low prior knowledge students in the ST group was significantly better than that in the CT group. They concluded that texts which were manipulated in accordance with the SFL theory facilitated students' reading comprehension, especially that of the students with low prior knowledge.

The findings from the functional grammar test indicated that in the pre-test the experimental group and control group were homogeneous in terms of understanding the lower-level linguistic meanings involved in the reading comprehension, whilst in the post-test the experimental group had a better performance than the control group. This difference in the performance of the two groups, furthermore, was significant at the level $\alpha<.01$ in this sense that the difference between the two groups in the performance on understanding the intra- and inter-sentential meaning relationships across the reading text was brought about by the treatment the researcher had given to the experimental group throughout a semester not by the chance alone.

This part of the findings goes in agreement with those of Cooper (1984) in that the comprehending of reading passages requires the understanding of semantic relationships between words, syntactic features, and the meaning of sentence connectors, and the students who have a command of these components outperform those who do not in reading comprehension. It also advocates Birjandi et al. (2004) in that Iranian EFL university students have problems in micro-skills such as references, word meanings, discourse markers and grammatical structures comprising the lower-level linguistic knowledge in the reading comprehension even though they are formally taught to decode the meaning of the words and to understand the grammatical structures in reading texts since the guidance school, where they are introduced to the English course for the first time in the Iranian educational system.

Based on this investigation, it can be claimed that Iranian English learners do not utilize the lower-level language components to the benefit of reading comprehension, and that they can perform better on understanding the intra- and inter-sentential meaning relationships; that is, the logico-semantic relationships within and beyond sentences, involved in reading comprehension if they are explicitly instructed systemic discourse-semantic knowledge, including the knowledge of text types; inevitable social factors in communicative events; cohesive devices; and the knowledge of Process types, Thematic structure, Given-New information, and mood and modality. That is to say, treated with the SFL-oriented knowledge, Iranian EFL learners will become able to make advantage of the functional grammar and cohesive devices in identifying and understanding the semantic and logical relationships holding between the words within the sentences, on the one hand, and between the sentences across the text, on the other hand.

Finally the findings from the summary test used to assess the Iranian students' understanding of the register and genre of the reading comprehension passages indicated that both the experimental group and the control group were, in the pre-test, almost homogeneous in terms of understanding the higher-level discoursal relationships involved in the reading comprehension, whereas in the post-test the experimental group had a better performance than the control group. This difference in the performance of the two groups, moreover, was significant at the level $\alpha < .01$ in this sense that the difference between the two groups in the performance on understanding the discoursal relationships across the reading text was caused by the treatment given to the experimental group throughout a semester not by the chance alone.

This part of the findings is consistent with the findings of previous research studies (Carrell, 1992; Shokouhi & Amin, 2010) about the influence of the structure familiarity on reading comprehension. The result of the research by Shokouhi and Amin showed that the students' familiarity with the context of a genre is an important factor in reading comprehension. They concluded that the rhetorical form as a significant phenomenon is more important than content in the comprehension of top-level structure of a text and in the comprehension of event sequence and temporal relationships among events. Moreover, the result of a study as to the role of the formal schema on reading comprehension (Carrell, 1992; Zhang, 2008) revealed that the overt teaching of the formal background knowledge; that is to say, register and genre, brings about an increase in the recall of the main ideas of the reading passage at issue and facilitates reading comprehension in consequence.

Based on the findings of this research as well as the previous studies, it can be claimed that Iranian university students will understand the global discourse aspect of the reading comprehension passages better if they are given formal teaching about the register; that is, the field, tenor and mode of the discourse, and the genre of different text types in accordance with the systemic functional linguistics. The familiarity with the register and genre helps students understand and interpret the meaning of the words, phrases, sentences and paragraphs making up a text in relation to the context of situation, which focuses on who, what, how, when and where, on the one hand, and the context of culture, which focuses on the cultural aspect of the communicative event being intended by the writer, on the other hand.

All things considered, it can be concluded that a systemic orientation to reading comprehension can engage students in the considering of the global aspects of the text at the discourse and the local aspects of the text at the sentence level at the same time. This interaction in the lower and higher levels of the reading text provides for a systematic framework whereby the students can discover the semantic and logical relationships holding between the words, phrases, sentences and paragraphs throughout the text. Globally, the students are enabled to identify the schematic structure of the written text at stake along with their constituent stages, which come together to fulfill an overall purpose; and locally they are enabled to identify the logical and semantic relationships obtaining between the sentences and within the phrases and words within the sentences. This framework puts premium on the forgotten area in the reading comprehension activities; that is to say, it takes the students beyond the sentence level, which is of great significance in the Iranian EFL setting, and familiarize them with the

context of situation and the context of culture, which renders possible the understanding and comprehending of the written texts.

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Table 1. Inferential Statistics for Pre-test

Variable		N	Mean	SD	t	df	p
RC	Experimental Group	27	26.11	15.67	.36	52	.71
	Control Group		24.81	9.87			
FG	Experimental Group	27	32.40	12.73	1.83	41.24	.07
	Control Group		27.22	7.25			
Sum	Experimental Group	26	1.09	.60	.84	46	.40
	Control Group	22	.96	.43			

Table 2. Independent Sample T-test

Variable		N	Mean	SD	t	df	P
RC	Experimental Group	27	43.14	15.24	4.77**	52	.00
	Control Group	27	26.01	10.72			
FG	Experimental Group	27	43.51	12.31	3.91**	52	.00
	Control Group	27	32.03	9.01			
Sum	Experimental Group	27	1.78	.88	3.40**	49	.001
	Control Group	24	1.04	.64			

**. Difference is significant at the 0.01 level (2-tailed).

Table 3. Paired Sample T-test

Variable		N	Mean	SD	t	df	P
RC	Time 1	27	26.11	15.67	-5.71**	26	.00
	Time 2		43.14	15.24			
FG	Time 1	27	32.40	12.73	-4.13**	26	.00
	Time 2		43.51	12.31			
Sum	Time 1	26	1.09	.60	-3.07**	25	.005
	Time 2		1.82	.87			

**. Difference is significant at the 0.01 level (2-tailed).