The Role Explicit Teaching of Signals Play on Reading Comprehension

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Abstract - The purpose of this study is to examine the effect of explicit teaching on reading comprehension when EFL learners read signaled text or non-signaled text. The main concern is whether explicit teaching of signal words facilitates reading comprehension. Another issue is whether there is a difference in their reading comprehension scores when students are taught signal words explicitly but read non-signaled texts. The study was conducted at Anadolu University, Education Faculty, English Language Teaching Department. In order to analyze the data mean scores and two-independent-samples t-tests were run. The results of this study indicate that both explicit teaching of signal words and reading signaled texts contribute to the reading comprehension. Also, the results of the t-test show that there is a statistically significant difference between the explicit teaching group and no-teaching group when they read non-signaled texts.

Keywords: Explicit Teaching, Signal Words, Reading Comprehension

1. Introduction

The studies in the last few decades emphasized that the study of language and language learning should include both text and discourse. According to Yule & Brown (1989, p.191) a set of sentences constitute a text if there is a relationship within and between these sentences and if there is no relationship they would be only unrelated sentences. The semantic relations between the sentences and propositions have the cohesive power and indicate coherence; however, in some cases some linguistic elements show the relationship between the facts and propositions in a text which is called cohesion.

Concerning the text, Meyer (1975) stated that coherence focused on the overall logical structure of the text. Halliday and Hasan (1976,1989) described coherence as the extent to which the parts of the text stick together. They also claimed that the structure of the text was constituted along linguistic lines so that internal cohesion and coherence of the textual units could be achieved.

Kaplan and Grabe (2002) noted that written discourse analysis required an emphasis on the text itself, therefore, texts could be examined from the perspective of textlinguistics.

Kaplan and Grabe (2002) also noted that within discourse analysis the combination of creating a large organizational structure and specifying function/semantic relations between each sentence provide a powerful analytic tool in the text. Chung (2000) emphasized that signaling and its relation to reading involves an examination of coherence.

For the textual part of the coherence Kintsch and Van Dijk (1983) identified two levels: Microstructures that are semantic representations that constitute local coherence and macrostructures which are semantic representations of the global discourse. Van Dijk and Kintsch (1983) argued that ideas are retained as a result of these macro-rules.

On the other hand, Van Dijk and Kintsch (1983) argued that coherence is not simply a textual property, reader is also important.

Concerning reading, in the reading process when the interaction between the reader and the text was considered the factors of text organization and signaling of this organization gained importance (Meyer, 2003).

Meyer (2003) defined the signals as stylistic writing devices that highlight aspects of semantic content or structural organization. Lorch and Lorch (1995) claimed that important ideas and relationships in text are emphasized through the use of signals. Meyer (1985) introduced headings, preview statements, pointer words, and words that state the relational structure among main propositions of the text as signals.

Chung (2000) stated that Meyer's (1985) pointer words approximate logical connectives. Halliday and Hasan (1976) called logical connectives as "conjunctives" and Hoey (1983) "conjuncts". Considering these definitions signal words in this study refer to the terms like transitions and phrases that emphasize the relationships between sentences and ideas.
Paragraph headings, on the other hand, announce blocks of content before the reader encounters the detail (Chung, 2000). Hoey (1983) included words, phrases, sentences or sequences of sentences in the definition of “lexical signals” which are referred to as “paragraph headings” in this study.

Meyer (1975) pointed out that signals play a structural role in discourse processing. Hoey (1983) stated that signals indicate relations in a text that are given focus by the writer and decoded by the reader.

Evensen (1985) pointed out that empirical analysis have made it clear that connectors have a fuzzy textual scope in discourse. Moreover, in the reading process whether signal words play the local role of connecting neighboring clauses or sentences or whether they signal global coherence is not clear as stated by Chung (2000).

Then there appears to be a need to investigate signals concerning the text and the reader. Another issue that deals with signal words is how to teach these signal words to the learners. In the field of second language acquisition, there has been debate concerning the type of instruction. The general issue is whether an explicit approach to instruction is best (Doughty, 2003). Explicit instruction includes all types in which rules are explained to learners or when learners are directed to find rules by attending to forms. There have been studies investigating the role of explicit teaching in student learning in second language acquisition field; however, this study combined explicit teaching and signal words and their effect on reading comprehension. Specifically, the outcomes of this study will provide valuable insights into the teaching of signal words to learners and its effect on reading comprehension when learners read signaled and non-signaled texts.

2. Literature Review Empirical Studies on Signals

The effect of signal words on reading has been studied from two different dimensions: the effect on recall and the effect on comprehension.

Several studies investigated the effect of signals on recall rather than reading comprehension (Meyer, Brunth and Bluth, 1980; Loman and Mayer, 1983).

Considering whether readers pay attention to the textual information and cues to the content structure, Horiba (2000) designed a study to examine how native and non-native readers process and represent text. With a think aloud session readers reported their thoughts while they were processing through discourse. It had been predicted that when processing the text, readers would pay more attention to textual information and cues to the text's content structure. Horiba used 14 native and 14 non-native readers. The native and non-native readers were randomly assigned to one of the two reading conditions for each language group: read freely and read for coherence.

It was found that read-for-coherence task had some facilitative effect on the construction of text representations in non-native readers, that is, non-native readers' recall was as good as native readers' recall in the read for coherence condition. As a result, more coherent text representations were constructed which was reflected in better recall.

In another study, Sanders and Noordman (2000) investigated two aspects of text structure in the processing of expository text. First, they searched whether the processing of the information depends on the type of coherence relation. Second, they focused on the way in which linguistic marking of relations influences processing. In the experiment they used reading, verification and free recall tasks. As a result of the experiments they found out that both factors affected text processing. Specifically they found that explicit marking of the relations resulted in faster processing but did not affect recall. It was concluded that the relational marker has an effect during online processing but its influence decreases over time. However, it was stated that this finding contrasts with the effect of the coherence relation which is also manifest in the recall.

On the contrary, in a number of studies, signaling did not increase the total amount of information recalled (Rickards, Fajen, Sullivan and Gillespie, 1997; Meyer, 1975).

Also, there have been studies investigating the effect of signals on reading in relation to comprehension. Geva and Ryan (1985) for example, investigated the effects of explicit and implicit conjunctions in relation to reading comprehension and found that conjunctions facilitate reading comprehension. However, in their study, they used reading comprehension questions in the form of true-false questions; therefore, they were criticized by a number of researchers like Chung(2000) for having used invalid means of testing reading comprehension.

Chung (2000) in her study investigated the effect of logical connectives and paragraph headings on reading comprehension. Using a reading comprehension test she allocated subjects into high, medium or low performance groups. As the instrument of her study she produced four versions of an authentic text: Version 1 was a non-signaled passage, Versions 2, 3 and 4 were written with logical connectives, paragraph headings and these two signals in combination. As the result of her study, she found out that the subjects who are at the
Another line of research studied the use of discourse markers. Ying (2006) investigated English compositions of native speakers and Japanese and Chinese non-native speakers and found an obvious difference among the three groups of students in their preferences for particular types of discourse markers. Also, various kinds of misuse of discourse markers were found in the essays written by the non-native speakers.

Khatib (2011) investigated knowledge of discourse markers and its relation to reading comprehension. He measured knowledge of discourse markers through examining the subjects’ recognition. He found that there is a high correlation between the students’ knowledge of discourse markers and their reading comprehension.

To date studies of signals focused on either recall of information in the reading process or their effect on reading comprehension. However, there have been no studies investigating both explicit teaching of signal words and its effect on reading comprehension when readers read signaled and non-signaled texts. The purpose of this study is to examine the effect of explicit teaching on reading comprehension when EFL learners read signaled text or non-signaled text. The main concern is whether explicit teaching of signal words facilitates reading comprehension. Another issue is whether there is a difference in their reading comprehension scores when students are taught signal words explicitly but read non-signaled texts.

In specific the study set out the following research questions:

1. Is there a significant difference in the reading comprehension scores between the subjects who have been taught signal words explicitly and the subjects who have not get any explicit teaching when the subjects read signaled texts?
2. Is there a significant difference in the reading comprehension scores of the subjects who have been taught signal words explicitly when they read signaled texts and when they read non-signaled texts?
3. Is there a significant difference in the reading comprehension scores between the subjects who have been taught signal words explicitly and the subjects who have not get any explicit teaching when they read non-signaled texts?
4. Is there a significant difference in the reading comprehension scores of the subjects who have not get any teaching of signal words when they read signaled texts and when they read non-signaled texts?

3. Methodology Subjects

The study was conducted at Anadolu University, Education Faculty, English Language Teaching Department. 100 subjects participated in the study. The subjects took writing and reading classes in the first semester and have been taking these courses during the second semester. The researcher is familiar with the first year syllabi and knows that the subjects are not given focus for coherence explicitly. In reading and writing classes, students are provided with texts that contain signal words, are asked comprehension questions on these texts but they are not explained what the functions of these signal words are and they are not given any tasks to focus specifically on these signal words.

Also, all subjects were monolingual speakers of Turkish between the ages 17-19.

3.1. Instruments for Data Collection

Three different texts were chosen focusing on sequence signals, listing signals, comparison and contrast signals and cause and effect signals from an intermediate level reading book: Reading and Study Skills by John Kimmelman, Charles Martin, Harriet Krantz and Sandra Seltzer and the first text was an original one from a magazine. The texts were chosen from the textbook because they focused on each type of signal word that the researcher would like to investigate. Moreover, these texts were prepared for intermediate level students. Original text was also used in order to provide authentic material.

Each text was adapted to form two versions: Version 1 is called “signaled text”. The signaled text contained three texts and these texts included logical connectives to show sequence, listing, comparison/contrast and cause/effect relations between sentences and ideas. The three texts in the “signaled text” also contained paragraph headings as signals.

Version 2 is called “non-signaled text”. Non-signaled text contained the same three texts in the signaled text but all of the connectives and paragraph headings were omitted.

Reading comprehension questions were selected to test understanding microstructure and macrostructure levels but since it was not the focus of the study, comprehension was analyzed in general.

3.2. Instructional Context and Procedures

Firstly in order to control the level of the students who participated in the study, all first year students at Anadolu University Education Faculty English Language teaching Department were given Michigan proficiency test. Students who got a score between 60 and 70 were asked to participate in the
study. 100 students volunteered to take part and these students were randomly put into experimental and control groups. 50 students were put into the experimental group which is called “explicit teaching group” and the explicit teaching group was taught signal words explicitly. Another group of 50 students acted as the control group and the control group is called “no-teaching group” and they did not get any treatment. The groups decided on a day to come for the study.

The explicit teaching group was taught signal words explicitly by the researcher teacher during 10 hours. The group decided on a time that they could meet each week for the treatment. Considering the duration of treatment, Doughty (2003) noted that more than 7 hours of teaching was cited as long. As the procedures of the treatment, different tasks were used in order to focus specifically on signal words. First, the subjects were taught the meanings of signal words, how signal words are used and what functions they have in a sentence, for what purpose they are used and what logical connections they make between ideas. Then the subjects were given exercises to make them use the signal words to combine the sentences and ideas. The subjects were also given an exercise containing sentences without signals and they were asked to find what the relation can be between the sentences. Later, explanations were enhanced to the paragraph level and the subjects were explained how to use signals in order to find the main idea and supporting ideas in a paragraph. In specific, the subjects were explained what kind of development of the text the signal word indicates in the text and what hierarchy of importance the signal word represents in the text.

Following the treatment, the reading test was administered three days after the treatment ended.

The reading comprehension test was administered during reading classes by the researcher. During the test, firstly, the explicit teaching group who got the treatment was divided into two groups randomly in order to make half of the group answer the signaled texts and to make the other half of the subjects answer the non-signaled texts. This group also answered the reading comprehension questions during one class time.

4. Results

In order to analyze the data, first, the correct responses to the reading comprehension questions were counted for explicit teaching group which was divided into two as the subjects who read signaled texts and the subjects who read non-signaled texts. Also, the correct responses of the no-teaching group which was divided as the subjects who read signaled texts and the subjects who read non-signaled texts were counted.

Then to obtain an average value, mean scores were calculated for each group. In order to answer the research questions two-independent-samples t-tests were run in SPSS.

In order to analyze the data mean scores and two-independent-samples t-tests were run in SPSS to find the differences between:

1. Explicit teaching – no-teaching groups when the subjects read signaled texts.
2. The subjects who read signaled texts – the subjects who read non-signaled texts in the explicit teaching group.
3. Explicit teaching – no-teaching groups when the subjects read non-signaled texts.
4. The subjects who read signaled texts – the subjects who read non-signaled texts in the no-teaching group.

Firstly, half of the explicit teaching group was given signaled texts and the other half was given non-signaled texts during the reading comprehension test. For the explicit teaching group answering the signaled texts and answering the non-signaled texts the mean scores were calculated. For the explicit teaching group answering the signaled texts mean score is 87.40 and SD is 8.41. For the explicit teaching group answering the non-signaled texts mean score is 73.10 and SD is 13.70.

Also, half of the no-teaching group was given signaled texts and the other half was given non-signaled texts to be answered during the reading comprehension test. For the no-teaching group answering the signaled texts and answering the non-signaled texts the mean scores were calculated.

For the no-teaching group answering the signaled texts mean score is 77.30, SD is 13.80. For the no-teaching group answering the non-signaled texts mean score is 63.80 and SD is 11.80.

The mean scores and standard deviations are given for each group in Table 1.
The results of t-test show that there is a statistically significant difference between the mean scores of the subjects who read signaled texts and non-signaled texts in the explicit teaching group (t = 3.46, p < 0.5). This result indicates that although students are taught signal words when they read non-signaled texts, their comprehension scores are lower.

For the third research question “Is there a significant difference in the reading comprehension scores between the subjects who have been taught signal words explicitly and the subjects who have not get any explicit teaching when they read non-signaled texts?” two-independent samples t-test was run. The results of the t-test are given in Table 4.

The results of the t-test show that there is a statistically significant difference between the explicit teaching group and no-teaching group when they read non-signaled texts (t = 1.98, p < 0.5). This result indicates that the subjects who have been taught signal words explicitly get better reading comprehension scores although they read non-signaled texts.

In order to investigate how the students who have been taught signal words explicitly can answer the non-signaled texts better, 7 subjects who got 80 and more from the reading comprehension test were interviewed. First, the subjects were asked what the problem was with the texts. All 7 subjects said the texts lack logical connections. Then the subjects were asked how they could understand the texts and answer the questions. All seven subjects said they inserted signal words which seem logical to combine the sentences.

Finally, concerning the fourth research question “Is there a significant difference in the reading comprehension scores of the subjects who have not get any teaching of signal words when they read signaled and non-signaled texts?” t-test was run to find the difference between the mean scores of the subjects who read signaled texts and non-signaled texts in the no-teaching group. The results of the t-test are given in Table 5.
The results of the t-test show that there is a statistically significant difference in the reading comprehension scores between the subjects who read the signaled texts and non-signaled texts in the no-teaching group (t = 2.88, p < 0.05). This result indicates that although the subjects are not taught signal words explicitly, when they are given signaled texts the comprehension scores are better than the subjects who read the non-signaled texts.

5. Discussion

The results of this study indicate that both explicit teaching of signal words and reading signaled texts contribute to the reading comprehension.

First of all, the results show that when students are taught signal words explicitly by focusing on signals specifically, that is, explaining the meaning, purpose and functions both at the sentence level and paragraph level, reading comprehension scores are higher when compared to the no-teaching group if students read signaled texts. When students are taught signal words explicitly, they can make connections between sentences in the text easily and their comprehension is better when compared to the students who are not taught signal words explicitly.

Moreover, the results show that when students are taught signal words explicitly, although they read non-signaled texts, they can comprehend better when compared to the students who are not taught signal words explicitly. This finding indicates that teaching of signal words contribute to the reading comprehension regardless of text type as signaled or non-signaled.

Besides, the findings show that students who read signaled texts comprehend better than the students who read non-signaled texts if they are taught signal words explicitly. This finding suggests that reading signaled text is helpful in reading comprehension. Also, students who are taught signal words but given non-signaled texts to read comprehend better than the students who are not taught signal words and given non-signaled texts. These findings reflect that teaching of signal words contribute to the reading process.

These findings correlate with Khatib (2011) who found that one of the factors contributing to the overall comprehension of reading texts is the comprehension of discourse markers and the relationships between text propositions. Other factors include vocabulary, sentence structure, and background knowledge related to the content of the texts.

Moreover, the results of the study provide evidence for explicit instruction. As Doughty (2003) suggests, explicit instruction includes all types in which rules are explained to learners or when learners are directed to find rules by attending to forms.

6. Conclusion

This study aimed at finding the effect of explicit teaching of signal words when students read signaled and non-signaled texts. Signal words were taught explicitly by focusing on signals specifically with different tasks and explanations of meanings, functions and purposes at the sentence and paragraph level to enhance students’ knowledge on signal words. Results of the findings gave an insight into reading comprehension of the students who were taught signal words explicitly when reading signaled or non-signaled texts. The explicit teaching of signal words demonstrated that it contributed to reading comprehension regardless of texts with signals or without signals.

As a conclusion, we can say that teaching signal words explicitly and giving students signaled texts to read contribute to reading comprehension in reading classes. Explicit teaching of signal words is also helpful to student understanding when the students read non-signaled texts because they can insert logical connectors between the sentences or ideas in the text when they get explicit teaching.

7. Implications for the Teaching of Reading

Given the results in favor of signaled texts and explicit teaching of signals, it is recommended that the students should be provided with texts that have logical connectors so that they can understand the relations between the sentences and ideas in a text. It is also suggested that explicit teaching of signals may aid reading comprehension. In the reading classes students are given different tasks with the reading texts. An important task should be the focus on signals that indicate different relationships between sentences and ideas. Students should be taught what kind of development of the text the signal word indicates in the text, what kind of a relationship they establish between two sentences (or sequences of sentences), what hierarchy of importance in the text

Table 5. Results of t-test on the difference between the subjects who read signaled texts and non-signaled texts in no-teaching group.

<table>
<thead>
<tr>
<th>(No-teaching group)</th>
<th>N</th>
<th>Mean</th>
<th>Mean dif.</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signaled texts</td>
<td>25</td>
<td>77.30</td>
<td>13.50</td>
<td>2.88</td>
<td>0.008</td>
</tr>
<tr>
<td>Non-signaled texts</td>
<td>25</td>
<td>63.80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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the signal word represents and so on. Furthermore, considering the importance of signals in reading to make connections between the ideas in the text, students should be taught how to make better use of signals in order to understand the text better.

8. Suggestions for Further Research

In this study, signal words were taught to a group of intermediate level students studying in English Language Teaching Department in Anadolu University. Future research could investigate the explicit teaching of signal words at different proficiency levels when students read signaled and non-signaled texts and the results could be compared among different proficiency levels.

Second, in this study the effect of explicit teaching was investigated on reading comprehension. It would be interesting to find out the effect of explicit teaching of signal words when students read signaled texts on recall.

References


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