

The Effect of Summarization on the Reading Comprehension of Grade Nine Junior High-school Students

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ABSTRACT

Reading comprehension is central to language and reading is often referred to as the most important of the four language skills for English as a Foreign Language (EFL) learners. In this regard summarization as one of learning strategies play an important role for getting an improved reading comprehension. Summarizing helps students to comprehend knowledge, transferring it to long-term memory significantly. Summarizing, which is one of the metacognitive strategies, leads to effective using of mental skills, and increases remembering and understanding. The purpose of this study is to find whether summarization improves the reading comprehension of junior high school students in grade 9 or not. To do so, 60 students in grade 9 are selected and randomly divided into two control and experimental groups. The homogeneity of their proficiency level was established using a quick placement test (version 2). All students in both groups participated in a reading comprehension test as pretest. The experimental group utilized summarizing strategy two times a week typically 45 minutes in duration for twelve weeks. After each two week instruction, an immediate posttest was administered. At the end of the treatment, a post-test was administered to both groups. The findings of the study indicated that summarizing strategy has a significant effect on learners' reading comprehension.

Keywords: *Reading comprehension, Reading strategy, Summarization, EFL learners*

1. INTRODUCTION

The English language is an international language and people in different areas of expertise need to be proficient in this language. Learning to read in English is a great challenge for EFL learners, especially when it is for academic purposes. Students' academic success depends on well-developed reading comprehension ability.

Reading is not only understanding of printed words, but also it is the kind of process in which learners need to comprehend its implied ideas. "Learning to read is not only learning to recognize words; it is also learning to make sense of texts" (Tierney, 2005; p. 51). Reading comprehension is a thinking process. Comprehension takes the readers to a new level of active understanding and insight. Comprehension increases language knowledge. According to Chamot (1987, P.P.71-84), "learning strategies are techniques, approaches, or deliberate action that students take in order to facilitate the learning". Teaching strategies can help students comprehend text more efficiently (Palinscar, Brown, & Trathen, 1996, Brown, Pressley, Van Meter & Schuder, 1996). Readers must use different types of comprehension strategies in order to be proficient readers. Pressley (2002) asserted that good readers know how to use specific strategies. In contrast, poor readers are weak at making inference. Reading comprehension consists of metacognitive and cognitive strategies. One important type of these strategies is summarizing a text (Armbruster, Anderson, & Ostertage, 1987). In line with this fact, this study examined the most frequently used reading strategy named summarizing.

According to Corder-Ponce, W. L. (2000) summarization is probably the most significant and encompassing of all reading strategies available to the learner for effective studying and comprehension" (p.330) Summarizing helps students to comprehend knowledge, transferring it to long-term memory significantly because it leads students to a) reading to understand, b) to distinguish important ideas, and c) to express the information by using their own words (Senemoglu, 2001:569). In recent years, the importance of the reading comprehension strategies has been understood better; therefore, works on the summarizing strategy training have increased.

The process of summarization focuses attention on the major points of the texts and provides the reader with a conceptual framework that accelerates both memory and comprehension. A superficial grasp of the meaning in sentences is not sufficient for summarizing. One of the most important priorities is comprehensive reading of the text; on the other hand, this needs using mental skills effectively. "For writing good summaries, students must interrelate these new ideas with old ones, and put forward authentic ideas." (Friend, 2001:320). Naturally, a summary cannot include all of the meaning of the original document. Summarization algorithms use information from the entire document to select important portions of the meaning for inclusion in the summary.

It makes little sense, then, to make deletion a separate step from sentence selection, as this takes the decision about what meaning is important away from the summarization algorithm. We might thus expect improved summarization if we divide the sentences into smaller units of meaning that the selection algorithm can act upon.

Summarization is based on Strategy Intervention Model (SIM) which considers students' difficulties by instructing them how to utilize strategies. Knowing how to learn through instruction in summarizing strategy is the main focus of the SIM strategy.

Summarizing is conceived of as a challenge for learners, especially for those in EFL and ESL setting, because they do not know what to include and what to leave out in their summaries (Friend, 2002). Summarization is an effective reading strategy that can help students to make a summary of important proposition from text and summarization help students to comprehend knowledge, transferring it to long-term memory because it leads students to reading to understand, to recognize important ideas and to express the information by using their own words (Senemoglu, 2001: 569).

This study investigated the effect of teaching systemic-oriented summarization strategies on the reading comprehension of advanced Iranian EFL learners. To put in simple terms, it finds out whether the systemic-oriented summarization strategies can help to solve the problem of EFL readers in reading and enhance their reading comprehension ability. This study attempted to search for ways to effectively enhance students' reading comprehension. English teachers do not know how to use reading strategies effectively. So, this study attempted to introduce more effective strategies to EFL learners (especially Iranian EFL learners) through Halliday's (1985) clause complex Expansion. Finally, this study investigated how systemic oriented summarization strategies can be useful for students' comprehension of text.

2. LITERATURE REVIEW

Generally, reading is considered the most important skill for second /foreign language success in educational contexts. Various studies indicated that the ability to read and make sense of a text is regarded essential for students' comprehension progress. More specifically in EFL contexts such as Iran, among all the four language skills, reading viewed as the most significant and durable ones. A plethora of studies have been carried out to examine the effect of summarizing strategy on reading comprehension. From the earliest days of automatic text summarization through today, extraction of sentences from the original document has been the preferred approach (see, e.g., Barzilay & Elhadad, 1997; Erkan & Radev, 2004; Haghighi & Vanderwende, 2009; Hovy & Lin, 1998; Luhn, 1958; Mihalcea & Tarau, 2004; Piwowarski, Amini, & Lalmas, 2012; Yang & Wang, 2008).

Most of the research which has been done on teaching summarization is based on the model of the text comprehension developed by Brown and Day (1983), and another model developed by Kintsch and Van Dijk (1978). Three kinds of operations which take place during the reading process are taken into account by these models including:

- 1) The elements of meaning are integrated into a coherent whole;
- 2) The whole meaning of the text is compressed into its main ideas;
- 3) The gist is used to modify those elements which have previously been constructed and to have an effect on those yet to be constructed.

In the English reading field, summarizing technique is useful for students in terms of reading comprehension, recalling, and organization. Generally, a vast majority of reasons may be the source of students' difficulties in reading comprehension. Factors such as lack of appropriate reading strategies, lack of background knowledge related to the topic of the passage or lack of attitudes toward reading are examples of the sources of those difficulties. Moreover, there are few teachers who are familiar with the recent strategies to provide some effective opportunities for their students. On the basis of what actually occurs in most EFL classrooms, the strategy which is frequently applied by most EFL teachers and students is the summarizing strategy.

The results from these and other studies (e.g., McNeil & Donant, 1972) indicate that summarization training can transfer to general reading comprehension, at least when the instruction is thorough and explicit. The results from the study skills literature show a similar trend. For example, in a series of studies, B.M. Taylor (1982; Taylor & Beach, 1984; Taylor & Berkowitz, 1980) found a hierarchical summarization training procedure to produce greater recall than other training procedures. The hierarchical training procedure was designed to encourage students to use their knowledge of text structure to relate main and supporting information. Doctorow, Wittrock, and Marks (1978) and

Linden and Wittrock (1981) similarly found that having students generate summary statements while reading was an effective aid to recall.

They suggested that the generation of summary statements caused students to process the text more deeply, thus leading to better retention.

In contrast, Arnold (1942), Germane (1921), Howe and Singer (1975), and Stordahl and Christenson (1956) all failed to find summarization to be more effective than other study strategies, including rereading. In the Stordahl and Christenson (1956) study, students were merely given directions to summarize, with no instruction in how to summarize. In the Arnold (1942) study, students were given such instruction in a college course. The author did not check that they were actually using the taught strategy during studying and did not provide instruction that would facilitate the transfer to novel materials. In the Germane (1921) study, students were limited in the time they had to study, a restriction which may have artificially lowered the effectiveness of the treatment.

Thus, researchers who have found summarization training to transfer to comprehension and retention from text have (a) provided direct instruction so that the technique was thoroughly learned, and either (b) insured that subjects were using the technique on their test materials, or (c) provided specific instruction in the training on how to transfer the technique to novel materials.

The transfer effects of summarization training have usually been explained using a metacognitive framework (e.g., Baker & Brown, 1984). Metacognition, as it relates to reading comprehension, refers to a student's awareness and control of the reading process. Using this framework, theorists have suggested that summarization training makes students more aware of the structure of ideas within text and of how individual ideas relate to each other. This increased awareness makes students better able to evaluate their reading and more aware of the processes necessary to comprehend text.

The metacognitive framework has been used to explain the effects of summarization training alone on improved reading comprehension (e.g., Baumann, 1984; Hare & Borchardt, 1984). Summarization training has also been incorporated into large metacognitive training programs (e.g., Dansereau et al., 1979; Palincsar & Brown, 1983; Paris et al., 1982). Summarization training is just one of many types of instructional programs designed to improve students' metacognitive control of the reading process. Experimenters have trained students to monitor their understanding actively (Paris et al., 1984), to employ specific fix-up strategies (Garner, Hare, Alexander, Haynes, & Winograd, 1984), to use self-questioning during reading (Andr6 & Anderson, 1979; Wong & Jones, 1982), and to incorporate knowledge about question-answer relationships (Raphael & Pearson, 1982).

Another factor that might contribute to these transfer effects is that summarization training (and possibly other types of training as well) teaches students to pay greater attention to the text, in addition to teaching a specific skill. Students taught to process text in any given manner may spend more time reading or may read the text more closely. Increased time spent on the task of reading has consistently been related to reading achievement (see Berliner, 1981). It may be this greater degree of attention resulting in longer reading times, in addition to the taught skills that results in transfer to general reading and studying skills.

Because researchers have found poor readers to be less attentive than good readers (Samuels & Edwall, 1981), a treatment that encourages students to attend to text might have stronger effects for poorer readers. Indeed, some of the training procedures discussed above were originally developed to curb impulsive behavior. Meichenbaum and Goodman (1971), for example, trained students to slow down and increase accurate responding using talk-through procedures similar to those discussed above. Such a procedure did increase the study time of impulsive students and decrease their errors on a perceptual matching task. These training procedures may have similar effects on a more complex reading task.

The focus of this study, then, is the effects of direct and explicit summarization training on reading and studying behavior. If such training serves to make students more aware of important information in text, as the metacognitive hypothesis would predict, then this effect should be reflected in the notes they take during studying, as well as in differential recall of important and less important information. If summarization training serves to increase attention to the text, then this effect should be reflected in longer studying times.

3. METHODOLOGY

3.1. Participants

To conduct the current study, two groups of Junior high school students in grade 9 each consisting of 30(control) and 31(experimental) students of pre intermediate level were selected for the purpose of this study based on the placement test. Their age ranged from 13 to 15. All participants were foreign language learners of English. The students in intact English language classes were randomly divided into control and experimental groups, with experimental group receiving summarizing strategy for treatment and the control group was not trained on the strategy.

3.2. Material

The following materials were utilized for the purpose of the present study:

English placement test (quick placement test version2). This test consisted of grammar, vocabulary and reading comprehension sections. By analyzing the placement scores it is found at that the students under study are homogeneous.

Pretest and post reading comprehension test. The pretest comprised of five English passages of comparable length from the English course material Prospect 3 with 25 multiple choice items. The test was built to measure the comprehension ability of the students in both groups before the experiment. No changes or modifications were made to the texts. Before giving the pretest to the participants it was given to a group of students as a sample of participants in order to pilot the test items by analyzing them through item difficulty and choice distribution. As a result, 5 test items were deleted to pilot the test items. The pretest was used as posttest after twelve weeks of instruction at the end of the treatment.

Reading comprehension tests. Students were assigned with several reading comprehension passages and tasks during twelve weeks of experiment (two sessions each week, 45 minutes in duration). Fifteen reading passages of appropriate length from Steps to Understanding by L.A.Hill was given to the subjects. Five reading comprehension tests were used as an immediate posttest to ensure of students' reading comprehension achievements after each two-week instruction of summarizing strategy. Each immediate posttest involved two passages with 10 multiple choice items.

3.3. Procedure

This is an experimental design study conducted within 3 months. In order to conduct this study some books were utilized. The Prospect 3 was the main book but along with this book some reading passages were used to teach and in this study were selected from Oxford University Press Steps to Understanding Series. The reasons for choosing these reading passages is that they are at the level of the participant's pre intermediate level ,which was practiced in both control and experimental groups.

The subjects of the study were students with pre intermediate level selected by administering a standard placement test. Prior to the study, five reading comprehension passages with 20 multiple choice questions were administered to students as a pretest. The allotted time to test administration was 45 minutes. The obtained scores from the two classes were statistically analyzed and compared to figure out whether there was any significant difference between the control and experimental groups in terms of their reading comprehension ability. Once the pre-test was administered, a treatment procedure was assigned to experimental group. The researcher (the teacher) first modeled and explicitly instructed the summarizing strategy with some examples to the experimental group until she was confident that each student learned how to use it properly. The treatment phase consisted of three sessions of instruction in each week typically 45 minutes in duration. After explicit instruction of the strategy based on Brown and Day (1983) general rules of summarization; the reading passages were taught in each session and subjects were asked to summarize the passages at home and submit their works to the teacher. In the next session based on the subjects' summaries and their questions and problems, the researcher prepared some comments and feedback and provided them orally to all of them. The feedback given by the teacher consisted of some examples of the strong points of the summary as well as guidelines for improving the subject's summary production. The students read, shared, and discussed the reading and then completed the related exercises individually, in pairs or in small groups. And the recycle continued until the end of the experiment. With the control group, the researcher followed the ordinary approaches of teaching reading comprehension. The control group class began with previewing the topic; focusing on main points of the passage and new vocabularies. The students read the passages silently. Then the teacher taught the passage using the other ordinary strategies and approaches including skimming, scanning, and inference. Finally, they completed the exercises individually, in pairs or in small groups. The summarizing strategy was worked for two weeks- and then at the end of each two week instruction an immediate post-test was administered to both groups according to the strategy worked. Five immediate post-test were conducted for summarizing strategy within twelve weeks of instruction. At the end of the twelve weeks instruction, a reading comprehension test similar to pretest was administered to both groups as posttest.

3.4. Data Analysis

A standardized quick placement test (version 2) was administered to determine the general proficiency level of the students as pre intermediate. A pre-test is administered between the two groups before the treatment phase. An independent sample t-test was then run to see if the two groups performed significantly differently on the reading comprehension pre-test or not. After twelve weeks of instruction, all the students in both groups were given the reading comprehension post-test which was the same as the pretest. An independent t-test was run between the post-test scores of the two groups to find out whether the experimental group who received the treatment work significantly better than the control group or not. Also, the two t-tests are compared with each other (paired t-test). The results obtained from this statistical analysis (Table 1) indicated no significant difference ($p(0.866) > 0.05$) in learners' performance on the

pre-test among the control and experimental groups' subjects, that is, the two groups did not differ significantly in their performance on the reading comprehension pre-test.

Table 1. Independent t-test comparing the performance of the two groups on the reading comprehension pre-test

Variable	N	Mean	SD	SEM	DF	sig
Experimental	31	14.161	3.912	0.702		
Control	30	14.133	3.850	0.703	29	0.866

After twelve weeks of instruction, all the students in both groups were given the reading comprehension post-test which was the same as the pretest. An independent t-test was run between the post-test scores of the two groups to find out whether the experimental group who received the treatment work significantly better than the control group or not. The statistical results of the reading comprehension post-test are summarized in table 2. The results demonstrate significant difference in the performance of the two groups on reading comprehension test ($p= 0.00, p> 0.05$), since the obtained p value is smaller than <0.05 , suggesting that reading strategy instruction was able to exert a significant effect on the reading.

Table 2. Independent t-test comparing the performance of the two groups on the reading comprehension post-test

Variable	N	Mean	SD	SEM	DF	sig
Experimental	31	17.387	2.347	0.421		
Control	30	14.266	3.777	0.689	29	0.000

Finally, in order to figure out whether the treatment given to the experimental group had made any significant change within this group and to see if the students in this group had performed significantly differently on the post-test compared with the pre-test, the reading comprehension pre-and post-test scores of the experimental group were compared using a paired t-test. The results obtained from this statistical test are summarized in table 3. The results show that a significant difference ($p= 0.000<0.05$) was found between the performance of the students of the experimental group on the pre-and post-tests suggesting that reading comprehension strategy instruction could create a significant change on the behavior of the aforementioned group within the instruction period.

Table 3. Paired t-test comparing the performance of the experimental group on the reading comprehension pre-and post-tests.

Experimental	Mean	SD	SEM	DF	t	sig
Pre- Post test	3.225	1.995	0.358	30	9.002	0.000

4. DISCUSSION

From the results of the study we conclude that:

First, the summarization training had a significant effect on the recall of major information in a studying task, but did not significantly affect recall of minor information. This finding suggests that the summarization training may have taught students to concentrate on major information and to disregard less important information. This suggestion is confirmed by the analyses involving the quality of notes taken during studying. The experimental group took significantly more notes, and included significantly more major information in their notes. This result appears to confirm the metacognitive hypothesis that summarization training improves reading skill by heightening awareness of top-level information in texts. It was also hypothesized that summarization training may train students to be more attentive when they read, and that this greater attention in itself may lead to improved reading.

Second, the summarization training used here appears to have improved subjects' ability to summarize short paragraphs, although this training also appears to have had differential effects for different types of paragraphs. The training had its strongest effects for paragraphs with the main idea stated within the paragraph, but had little effect for paragraphs for which the main idea statement had to be invented. The inclusion of more direct instruction in deriving

main ideas is important for another reason. Summarization training produces its effects on recall of important information through greater attention to such information while reading. Therefore, better main idea identification might lead to better recall of information from text. If the data had supported only the attention hypothesis, such additional training might not have seemed necessary to improve the program's effectiveness. Thus, a summarization training program expanded to include additional training in identifying main ideas appears to improve students' reading and learning from text skills. It appears to do so by increasing students' awareness of major information during studying. Such a program can be implemented by classroom teachers after a short orientation and appears to offer a useful addition to a reading curriculum.

The results of the study advocated the idea that successful use of a reading strategy depends on different factors such as the knowledge of how to utilize that strategy which was provided through a strategy based instruction (Soleimani, H., & Hajghani, S. (2013). This fact can stand for the present study. As it is demonstrated in the data, there is a relationship between the degree of reading comprehension ability and utilizing of the summarizing strategy. In other words, students' comprehension ability enhanced when they used the mentioned strategy in comprehending the passages.

To sum up the final results of the study, summarizing strategy could influence students' reading comprehension ability sufficiently and made statistically significant improvement in the students' reading ability. For years, and more recently, summarizing strategy is regarded as an important tool in reading comprehension but as revealed in the present study it is still worth to put emphasize on it. Generally, the results of the current study demonstrated that comprehension skills and abilities can be improved by employing appropriate strategies. Strategy instruction would help learners to think thoroughly about the strategies they could apply to enhance their reading comprehension and become proficient readers.

5. CONCLUSION

As Novak argues "the central purpose of education is to empower learners to take charge of their own meaning making" and learning strategies such as summarizing strategy are powerful tools to serve such requirements. It means that when students are instructed the learning strategies such as summarizing strategies they can cope with reading passages more enthusiastically. In other words, the students' viewpoints of reading passages in English as a complicated and difficult process is changed to a pleasant and achievable skill. So they access to the awareness of analyzing the texts and get the main points easily.

Teachers should introduce summarization to the students as one of the techniques of learning strategies, check for proper summarizations and identify students' weaknesses in reading comprehension. The students at first are fully dependent on the teacher gradually they become more independent, at last the students become fully independent.

According to many researchers (e.g. Armbruster, Anderson & Ostertage, 1987; Bean & Steenwyk, 1984; Berkowitz, 1986; Doctrow, Wittrock & Marks, 1978; Wittrock & Alesandrini, 1990) instructing students to generate summaries of text has been shown to improve comprehension.

As discussed earlier, this study wants to figure out the effect of the summarizing strategy on junior high school grade 9 students' reading comprehension. The findings indicated that there is positive relation between learners' using summarizing strategies and improved reading comprehension. This study encouraged teachers to provide opportunities for learners to become acquainted with summarizing strategy and help them match their styles with this strategy. The proposed study showed that comprehension strategies such as summarizing could be considered as an effective method for teaching and learning of reading skill.

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