The Effects of Teaching Reading Strategies on the Third-Grade High School Students' Reading Comprehension Ability

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Abstract
The present study was an attempt to investigate the effects of teaching reading strategies on EFL students' reading comprehension ability. Among various types of reading strategies, those which were developed into the present study were: 1) Identifying inferences in statements, 2) Identifying what referents are referring to in paragraphs, and 3) Inferring unknown vocabulary from context. Three classes of 103 students were randomly selected to take part in this study. One of these classes with 32 students was selected for the pilot study. The other two groups randomly assigned into experimental and control groups took the NELSON Test. The mean and standard deviations were computed. The students whose scores fell in the range of “mean ±1 standard deviation” were selected. Therefore, 31 students in one class and 30 students in the other participated as the subjects of the study. A standardized pre-test was given to the subjects in both groups. The control group was being taught without resorting to any kind of the reading strategies, but the experimental group was taught and being exposed to the reading strategies. After the treatment the subjects were given a post-test. It was very similar to the pre-test, including some reading comprehension questions that were chosen from the standardized tests administered to the Iranian third grade students as a final test. The findings showed that the experimental group being exposed to the chosen reading strategies, showed higher level of performance on post-test than the control group.

Keywords: reading strategies, reading comprehension, high school students

INTRODUCTION

During the past decades, scholars in the field of second or foreign language teaching have directed an increasing amount of attention to the role of strategies and the extent they are used in reading comprehension processes. The role of reading strategies in reading comprehension is well recognized, and strategic efficiency in reading can distinguish good readers from poor readers (Brown, et al., 1996).
The present study was an attempt to show that teaching reading strategies to language learners can help them in their learning process. By teaching reading strategies, especially at the third-grade of high school, the students will be familiar with the techniques for reading and their familiarity would probably increase their success in learning the materials.

There are various types of reading strategies assumed to be facilitative in EFL reading, but those which were developed into the present study are 1) Identifying inferences in statements, 2) Identifying what referents are referring to in paragraphs, and 3) Inferring unknown vocabulary from context. Through using these strategies readers would be provided with a clear and overall picture of what they were supposed to deal with.

Surprisingly, empirical researches indicate that in most classrooms students receive inadequate instruction of reading skills and strategies (Eslami, 1993; Sedighi, 1996). The teacher’s emphasis is often put on the production of comprehension rather than the processing skill. The present study attempted to find a solution to the problem. It attempted to maximize the teacher’s assistance by incorporating reading strategies into reading instruction.

LITERATURE REVIEW

Language learning strategies are specific actions or techniques that students use, often intentionally, to improve their progress in developing L2 skills. Strategies encompass a wide range of behaviors that can help the development of language competence in many ways. List of the strategies of good language learners refer to a variety of learning strategies, such as taking advantage of practice opportunities, willingly and accurately guessing, consciously developing the L2 as a meaning system and a structure system, and monitoring one’s own speech (Stern, 1983).

Effective L2 learners are aware of the strategies they use and why they use them. Such learners manage to tailor their strategies to the language task and to their own personal needs as learners. Students who are less stressful, do not know how to choose the appropriate strategies or how to link them together into a useful “strategy chain” (Stern, 1983).

Many models of SLA and learning have included language learning strategies. One of the most insightful strategy-related models of language learning is that of MacIntyre (1994), who highlights the importance of effective factors and links the use of a given language learning strategy with task-demands proficiency, aptitude, situation, attitude, motivation, previous success, anxiety, self-confidence, sanctions against strategy use, goals, and criteria for success. In this model, students (influenced by all the variables above) must be aware of the strategy, must have a reason to use it, and must not have a reason not to use it.
Language learning strategies enable students to gain a large measure of responsibility for their own progress, and there is considerable evidence that effective strategy use can be taught. Learner training, which often involves teaching better strategy use and sometimes addresses individual learning styles as well, has been highly successful in some instances and not in others, sometimes depending on the language skills involved (O’Malley & Chamot, 1990). The best learner training includes an explicit and clear focus on specific strategies, has frequent practice opportunities for strategies, strategies to new situation (Oxford, 1990).

**Learning strategies and reading strategies**

Parallel with the explosion of methodologies in the late 1980s, in which language teachers faced increased options in the selection of methods and materials, there has been a steady growing interest in considering the task from the learner's point of view and in changing the focus from a teacher-centered. In particular, there is a growing interest in defining how teachers can take change of their own learning and in clarifying how teachers can help students become more autonomous. As a result, a substantial body of research has outlined the behaviors learners use and describe the thought processes they engender while learning an F/SL. In particular, the focus of research has been on identifying the behaviors and thought processes used by language students to learn an F/SL.

Since the present study focused on describing and experimenting reading comprehension strategies, the emphasis will be placed on (1) summarizing learning strategies and their importance in language learning (2) reviewing various reading strategies and the use of them.

Stern defines strategies as ‘the conscious efforts learners make’ and as ‘purposeful activity’ (in Wenden and Rubin, 1987). However, Wenden points out that “strategies referred to as ‘techniques, tactics, potentially conscious plans, consciously employed operations, learning skills, basic skills, functional skills, cognitive abilities, language processing strategies, problem solving procedures”. These multiple designations point to the elusive nature of the term (Wenden, 1987).

She distinguishes three different questions that strategy research has addressed: ‘what do L2 learners do to learn a second language? How do they manage or self-direct these efforts? What do they know about which aspects of the L2 learning process?’ and she thus classifies strategies as: 1) referring to language learning behaviors, 2) referring to what learners know about the strategies they use, and 3) referring to what learners know about aspects of L2 learning other than the strategies they use.

Wenden lists six characteristics of the language-learning behaviors that she calls strategies:

1) Strategies refer to specific actions and techniques.
2) Some strategies will be observable, others will not (making a mental comparison).
3) Strategies are problem-oriented.
4) Strategies contribute directly and indirectly to language learning.
5) Sometimes strategies may be consciously deployed, or they can become automated and remain below the level of consciousness.
6) Strategies are behaviors that are amenable to change: i.e. unfamiliar ones can be learned. (Wenden, 1987)

Since 1970s there has been no shortage of reading and L2 learning theorists advocating teaching students to use a variety of reading strategies in order to read better (Cohen, 1990; O’Malley & Chamot, 1990; and Block, 1986). These strategies start from traditionally recognized reading skills of skimming & scanning, contextual guessing, skipping unknown words, tolerating ambiguity, reading for meaning, critical reading, and making inferences, to more recently recognized strategies such as building and activating background knowledge, recognizing text structure, metacognitive awareness, comprehension monitoring, and finally writing one’s way into reading.

Much of the research into, and teaching of, reading strategies remains fairly crude and frequently fails to distinguish between strategies as defined more generally in the strategy literature, and ‘skills’ as often used in the reading literature. The language learning literature cited above suggests that a distinguishing feature of strategies might be the degree of consciousness with which they are developed.

The use of reading strategies

In recent years there has been an upsurge of research and pedagogical examination of the use of strategies in reading comprehension. In exploratory, descriptive investigations of small numbers of individual learners using think aloud techniques, studies by Block (1986) identified apparent relations between certain types of reading strategies and successful & unsuccessful foreign or second language reading. For example, Honsenfeld’s (1979) successful reader: 1) kept the meaning of the passage in the mind during the reading; 2) read in “broad Phrases”; 3) skipped words viewed as unimportant to total phrase meaning, and 4) had a positive self-concept as a reader. By contrast, his unsuccessful reader: 1) lost the meaning of sentences as soon as they were decoded; 2) read in short phrases; 3) seldom skipped words as unimportant, viewing words as “equal” in terms of their contribution to total phrase meaning; and 4) had a negative self-concept as a reader.

Kern (1989) evaluated the effects of strategy training on intermediate-level French students’ reading comprehension and inferential ability, and determined what type of learners drive greatest benefit from the instruction. He found that explicit instruction in comprehension strategies could improve intermediate level students’ ability to comprehend French texts and to infer the meanings of the unfamiliar words from context.

Several researchers have suggested that the type of reading strategies a student employs are directly related to his or her level of linguistic competence in the foreign
language, however, for some researchers, identifying reading strategies was not an end itself. They argued that reading strategies should be integrated into classroom instruction. Numerous researchers have suggested steps to follow when conducting reading comprehension strategy instruction. Yang (1995) summarized these general steps as follows: 1. Diagnosis: Developing students’ awareness of different strategies; identifying and assessing students’ current language strategies through observations, questionnaires, interviews, diaries, self-report surveys, think-aloud procedures, etc. 2. Preparation: Explaining the concept and importance of learning strategies; providing students’ knowledge about language learning strategies and information on motivation and beliefs, etc. 3. Instruction: Providing direct and informed instructions on learning strategies through explanation, modeling, practice, and integration; providing different practice opportunities with various learning tasks. 4. Evaluation: Helping students evaluate their own strategy use; evaluating the whole strategy training and revising the training component if necessary.

For predicting unfamiliar vocabulary based on context clues, Zhang (1992) suggested a comprehension framework for the use of context clues. The framework has two major dimensions: syntactic clues & semantic clues. The syntactic clues were related to grammatical structure whereas semantic clues involved intra- & inter-sentence meaning relationship. Zhang argued that, by understanding how the writer used grammar, the reader would have a direct key to unlocking a word meaning. The reader should also use semantic clues such as restatement, use of examples & summary clues when guessing the meaning of a new word.

**Reading comprehension strategy research**

Research on reading comprehension in 1970s has demonstrated that it is the result of an interaction between the reader and the text. The reader brings his background knowledge and a certain set of reading strategies to the reading task at one hand, while the text on the other hand, provides the reader with a certain kind of rhetorical organization. Therefore, we may conclude that three major factors are involved in comprehending and storing the information contained in a text: (1) ability to use background knowledge about the content area of the text; (2) ability to recognize and use the rhetorical structure of a text; and (3) ability to use efficient reading strategies.

Reading strategies refer to those mental processes that readers consciously choose to use in accomplishing reading tasks. Such strategies may contribute to successful comprehension or detract from it. In principle, what distinguishes strategies from other processes is the element of choice involved in their selection. In reality, the degree of awareness that readers have about their choice of strategies falls on a continuum from total awareness to the total task of awareness. If the reader’s attention is called to the use of a strategy, it is likely that s/he would be able to describe it. Of course, this would not be the case with respect to certain learning processes that are beyond the realm of consciousness.
The ESL strategy training (O’Malley & Chamot, 1990) demonstrated that learning strategy training could be effectively implemented in real classroom setting. The principle objective in his study was to discover whether and how foreign language instructors would incorporate learning strategy instruction in their classrooms. A second objective was to use instructor’s in-depth knowledge about their students and their course objectives to select for instructing those strategies which they believed would be the most effective in promoting student achievement in specific language skills. Finally, the researcher focused on discovering how instructors would integrate the strategy instruction in the class activities and whether they would opt for direct or embedded instruction.

A number of classes of participating instructors were observed when learning strategy instruction was taking place, and narrative descriptions were developed of the instructional context, individual class activities, learning strategies taught and practiced, and any difficulties encountered. The transcripts of class observation were analyzed to identify the types of strategies taught for different language tasks and the manner in which individual instructors delivered instruction designed to promote student use of learning strategies.

The principle strategies taught for reading comprehension were:

1) Inferencing: instructor identified and named the strategies based on students’ description of ways in which they used context both at the sentence and discourse levels to guess the meaning of unknown words.
2) Deduction: the instructor elicited from the students their application of grammatical rules to identify the form of unknown words in the text which lead to guess about the type of word it would be.
3) Elaboration: the instructor recognized and encouraged students’ use of prior knowledge, both academic and real world, to make decisions about probable meanings
4) Transfer: the instructor elicited from students’ recognition of cognates and similar sounding words in the L2 that could be applied to understanding the new words in the L2.

Procedures for planning the scope and sequence of strategy training activities have been suggested by a number of researchers. In all of these, the teacher identifies and assesses the strategies students are already using, then explains the strategy and provides opportunities to practice it (Cohen, 1990; Hosenfeld, 1981).

**Reading strategy instruction**

For some researchers, identifying reading strategies is not an end. They argued that reading strategies should be integrated into classroom instruction (Oxford, 1990). Many of these studies are theory-based but application-oriented. The purpose is to equip readers with necessary reading skills.
Blaton & Wood (1984) argued that most comprehension instruction failed to provide students with demonstrations and strategies on how to comprehend written materials and how to take a test. They provided an alternative model of direct instruction in reading comprehension test-taking strategies. The model consisted on three stages: 1) modeling, 2) repeated exposure via guided practice, and 3) transfer to printed settings. In this model Blaton & Wood demonstrated step by step how to identify question type and locate corresponding answers from a written passage. They also gave students plenty of opportunities to practice the strategies following direct instruction on test-taking strategies was heuristic.

Ross (1999) also proposed a model on reading strategy instruction. The target audiences in this study were middle school students and the strategy taught was compensation strategy. The reading materials used were either students' textbooks or books of their own choice. Having given examples of how to infer a word's meaning from the context, the teacher would give students sentences with some unknown words and ask them to use context clues to infer their meaning. Cooperative learning was stressed as the students worked in groups, then each group shared their thinking and inferences with the whole class. Ross claimed that this model was an answer to the challenge to middle school teachers who had to deal with students to diverse reading competence and interests. Another advantage of this model was that it integrated reading instruction with cooperative learning techniques.

This new trend of combining strategy instruction with cooperative learning approach is also found in Mc Connell's experiment (2000). In this case, students were encouraged to integrate verbal understanding with visual imagery in the reading process. They were first informed of the general topic of the text they were going to read. Then they were asked to draw their mental impression of the topic in a picture form. In this process of drawing mental impression, the students not only developed their visual ability but also used unique background knowledge. Following this they would read the text and redraw their pictures with other students and had group reading. Three valuable characteristics of the experiment were: 1) students' initiative and input were stressed; 2) visualization was included as part of reading process, and 3) peer cooperation and learning were integrated with regular reading strategy instruction.

In short, reading strategy research has found its market for application in regular classrooms. This occurs as a reply to the urgent demand to meet the diverse needs and backgrounds of our students and to raise the general level of their reading achievement. Two noticeable trends in recent reading strategy instruction are 1) combination of strategies is preferred than single strategy and 2) reading strategy instruction is integrated with cooperative learning approach. Considering the fact that reading strategy instruction is often conducted with a larger group of students, the use of cooperative learning approach seems to be a suitable solution.

RESEARCH QUESTION
Is there any difference between the reading comprehension ability of the students who receive instruction on reading strategies (identifying inferences in statements; locating referents; and inferring unknown vocabulary from context) and those who do not receive this instruction?

METHOD

Design

In this study, a standardized proficiency test was used to choose homogeneous classes to start with. Then, classes not students were randomly assigned to experimental and control groups; however, the subjects’ scores were used to be confident of homogeneity of the two groups in such a way that the same number of students with one standard deviation above and below the mean existed in each class; to insure that the subjects in both groups were homogeneous, a t-test was run; therefore, the design of this research was a pretest and posttest intact group design without a problem of internal and external validity. The data obtained were analyzed via SPSS version 19.

Participants

Since the type of sampling employed in this study was cluster sampling, that is, the unit of selection was not an individual but a group of individuals who were naturally together, three classes with a number of 103 students took part in this study. The mean age of the students of the study was about 18 ranging from 17 to 19. They were studying in the third grade of Tasoua High School in Marlik, Shahriar. One of these classes with 32 students was randomly selected for the pilot study. The researcher provided them with a language proficiency test taken from Nelson test in order to standardize it.

The other two groups randomly assigned into experimental and control groups, took the standardized Nelson test, which had 45 items. Then based on the scores, the mean and standard deviation were computed. The students whose scores fell in the range of “mean ±1 standard deviation” were selected for the research study. Therefore, 31 students in one class and 30 students in the other participated as the subjects of the study.

Instruments

The instruments of this study were as follows:

1. The Nelson test. The homogeneity of the subjects was controlled through their scores on the Nelson test. The subjects, who were almost homogeneous, were selected and the heterogeneous subjects excluded from the statistical analysis.

2. An standardized reading comprehension test as a pre-test was administered to check the extent of their knowledge of intended reading strategies and their reading comprehension ability. This test was administered prior to teaching reading strategies.
3. At the end of the study, the subjects were given a post-test including reading comprehension questions similar to the pre-test.

**Procedure**

Thirty-one students in the control group were being taught without resorting to any kind of the reading strategies and 30 students in the experimental group were taught while being exposed to the reading strategies.

Six reading passages from “Book 3” were selected. Then, these six passages were taught in two different ways to the two experimental and control group. In each session, one passage was presented to both groups. The control group was taught just the way they learned and read the English reading passages and vocabulary items in their own classes at school, while the experimental group was taught the chosen reading strategies to use for building reading comprehension, as well as, their normal class activities.

First, students were given some information about the general principles of reading comprehension section of final exams. It was emphasized that all the information needed to answer the questions is in the passage. Then, they were given some general rules for reading and answering the reading passages and questions.

Afterward, in two separate sessions the researcher taught students how to use context clues to understand the passage. They were being taught how to use clues from other words in the sentence or passage to determine the meaning of unfamiliar words. They were taught how vocabulary meanings are given in English in various ways.

1) Using the verb “to be”  
2) Using appositives  
3) Using punctuation  
4) Using examples  
5) Using clauses  
6) Using other words in the sentence

Then, in the next two session students in experimental group practiced with referents (Identifying what the referents are referring to). Students were given different examples to locate: 1) Subject pronoun referents, 2) Possessive pronoun referents, and 3) Adjectives clause referents.

Next, in two other session students practiced with inferences. Students were taught that while reading English passages some details are not stated explicitly, but they can be understood from the other details that are stated. Then, they were given instruction and examples for making inferences based on the information given in the statement.

Finally, in one session students in both groups sat for the post-test. The purpose was to determine whether there was a significance difference between these two groups regarding their reading comprehension ability.
Data Analysis

To specify the reliability of the test, the Kuder-Richardson formula 21 (KR-21) was utilized in the pilot test. Moreover, the researcher made sure of the content and construct validity of the language proficiency test. To be confident about the homogeneity of the subjects in the classes assigned to experimental and control groups, a t-test was applied as a technique for comparing the variances of the two set of scores that the subjects in the experimental and control groups got in the language proficiency test.

Then, a standardized pre-test was given to the subjects in both groups before any treatment. Later, six reading passages from “Book 3” were selected. Then, these six passages were taught in two different ways to the two experimental and control group. In each session, one passage was presented to both groups. The control group was taught just the way they learned and read the English reading passages and vocabulary items in their own classes at school, while the experimental group was taught the chosen reading strategies to use for building reading comprehension, as well as, their normal class activities.

Finally, a standardized post-test was given to the subjects in both groups to prove or disprove the Null hypothesis.

RESULTS

The NELSON test was given to the pilot group with 32 students who were similar to the students under the study. Then, the characteristics of the individual items including item facility, item discrimination, and choice distribution as well as the characteristics of the items altogether consisting of reliability and validity were determined. Therefore, 5 items of the newly developed test were omitted. The reliability of the test was computed through KR-21 method. The test had the suitable reliability index of 0.85.

Furthermore, to estimate the construct validity of the NELSON test, it was given to the second grade of high school students. After scoring their papers, the descriptive statistics of these two groups were calculated. The result is shown in the following table.

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>M</th>
<th>Std. Deviation</th>
<th>Std. Error of Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three</td>
<td>32</td>
<td>30.70</td>
<td>13.44</td>
<td>2.63</td>
</tr>
<tr>
<td>Two</td>
<td>30</td>
<td>15.55</td>
<td>6.35</td>
<td>1.76</td>
</tr>
</tbody>
</table>

Looking at Table 1, one can find that the difference between the means of these two groups of students was large.

However, the researcher ran further statistical calculation to compare the means. In other words, a test of significance or t-test was run to find out whether the difference between the means was statistically significant. The result is presented in Table 2.
The Effects of Teaching Reading Strategies on Students’ Reading Comprehension Ability

Table 2. Independent samples test for pilot groups

<table>
<thead>
<tr>
<th></th>
<th>t-observed</th>
<th>t-critical</th>
<th>d.f</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.39</td>
<td>2</td>
<td>60</td>
</tr>
</tbody>
</table>

Looking at the above table and comparing the t-test observed with the t-critical, one can see that with at .05 level of significance the difference between the means of students of grade 3 and grade 2 was large enough to claim that the students of the upper grade answered the questions of the English language proficiency test of NELSON much better than the students of the lower grade. In fact, it was proved that they had the needed constructs of English language appropriate to their level.

Therefore, the researcher concluded that the proficiency test had measured those language constructs that it was supposed to measure, which resulted in being sure that the test had construct validity.

Process of homogeneity

The second part of statistical process of this study was related to the calculations done to select students to have two homogeneous groups. To do so, two classes, one with 36 and the other with 35 students were required to take the standardized proficiency test. Then, the mean and the standard deviation of their scores were calculated. The following Table shows the descriptive statistics of the two groups.

Table 3. Descriptive statistics of the two groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group1</td>
<td>36</td>
<td>13.27</td>
<td>2.73</td>
<td>.45</td>
</tr>
<tr>
<td>Group2</td>
<td>35</td>
<td>12.96</td>
<td>3</td>
<td>.52</td>
</tr>
</tbody>
</table>

Later on, those students whose scores fell between one standards deviation above and below the mean were chosen as the subjects of this study. Therefore, 30 students from group one and 31 students from group two were selected. Since cluster sampling was used in this study and the researcher did not have the chance to put individuals randomly into two groups, another descriptive statistics has been calculated to be sure of the groups’ homogeneity. The independent t-test was calculated to compare the mean scores of the two groups. Its result has been revealed in the following table.

Table 4. Descriptive statistics of the two groups (group1 & 2)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>X</th>
<th>S</th>
<th>V</th>
<th>Observed t</th>
<th>Critical t</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>31</td>
<td>13.27</td>
<td>2.7</td>
<td>7.45</td>
<td>.46</td>
<td>2</td>
<td>59</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>12.95</td>
<td>3.12</td>
<td>9.73</td>
<td>.46</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

As this table shows, the difference between the mean scores of these two groups is little; however, a t-test was needed to prove that this difference is not significant.

By looking at the above table, one can find that the t-observed value, .46 at 59 degrees of freedom is lower than the t-critical value, i.e., 2 at .05 level of significance. It is clear that
the t-observed is smaller than t-critical (.46>2). It can be concluded that the two groups were homogeneous in terms of their language proficiency.

Calculations related to the pre-tests of two groups

The two groups were randomly assigned to the experimental (with 30 students) and control (31 students) groups. Before teaching reading strategies to the experimental group, a pre-test was given to these groups to check their reading comprehension ability and their knowledge of the subject matter to be sure of the groups’ homogeneity. Because these two groups were assigned randomly, the mean performance of the two groups in reading comprehension ability should not significantly differ prior to the treatment.

Table 5. Descriptive statistics for pre-test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>X</th>
<th>Var</th>
<th>S.D</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>30</td>
<td>14.3</td>
<td>13.45</td>
<td>3.67</td>
<td>1.61</td>
</tr>
<tr>
<td>Control</td>
<td>31</td>
<td>13.77</td>
<td>13.98</td>
<td>3.74</td>
<td>2</td>
</tr>
</tbody>
</table>

As the table shows, the difference between these two means is very little. However, more statistical computations were done to show that the difference between these two mean scores was not statistically significant.

Table 6. Independent t-test

<table>
<thead>
<tr>
<th>t-observed</th>
<th>t-critical</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.58</td>
<td>2</td>
<td>59</td>
</tr>
</tbody>
</table>

By looking at the above table, one can find that the t-observed value, .58 at 59 degrees of freedom is lower than the t-critical value, i.e., 2 at .05 level of significance. It is clear that the t-observed is smaller than t-critical (.46>2). It can be concluded that the two groups are homogeneous in terms of their reading comprehension ability and their knowledge of the subject matter.

Calculations related to the post-tests of two groups

Then, six reading passages were chosen from “High School English Book 3” and taught differently to the two groups. In each session on reading passage was presented to both groups. The control group was taught just the way they learned and read the English reading passages and vocabulary items in their own classes at school, while the experimental group was taught the chosen reading strategies to use for building reading comprehension as the treatment of the study, as well as, their normal class activities.

Finally, based on the average score of each student, the mean score of each group was calculated.

Table 7. Descriptive statistics for post-test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>X</th>
<th>Var</th>
<th>S.D</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>3.74</td>
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</tr>
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<td>Experimental</td>
<td>Control</td>
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<tr>
<td>30</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.6</td>
<td>16.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.35</td>
<td>14.48</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4.42</td>
<td>3.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.38</td>
<td>2.69</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

As the table shows, the difference between these two means of performance is large enough to show that the difference is actually related to the treatment. It means that teaching reading strategies affect students’ reading comprehension ability. However, more statistical computations were done to show whether the difference between these two mean scores was statistically significant.

**Table 8. Independent t-test**

<table>
<thead>
<tr>
<th>t-observed</th>
<th>t-critical</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.11</td>
<td>2</td>
<td>59</td>
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</tbody>
</table>

Taking a look at table 8, you can see that the t-observed value calculated to compare the mean scores of the two groups on the post-test is 5.11. This amount of t at 59 degrees of freedom is much greater than the t-critical value, i.e. 2 at .05 level of significance. As the table shows, the difference between these two means of performance is large enough to show that there is a significant difference between the reading comprehension ability of the students who receive instruction on reading strategies (identifying inferences in statements; locating referents; and inferring unknown vocabulary from context) and those who do not receive this instruction.

**DISCUSSION AND CONCLUSION**

Obtaining the needed data, the researcher ran the necessary statistical procedures as it was discussed. It was proved that the experimental group being exposed to the chosen reading strategies, showed higher level of performance on post-test than the control group. Therefore, the null hypothesis, teaching reading strategies has no effect on the reading comprehension of the third-grade high school students, was rejected.

Based on the positive results of this study, we can conclude that the observed difference in the performance of the post-test was due to experimental treatment. The result of this study revealed that the students' degree of learning increase when they are aware of reading strategies.

Furthermore, by the chance to practice such reading strategies in the class, students in the experimental group became more confident in comprehending the reading passages. Consequently, they were highly motivated to continue reading the passages and answer the questions following them. On the contrary, the students of the control group lacked such motivation. Therefore, the researcher suggests the people involved in teaching English as a FL to provide the students with by having such activities.

The next suggestion is related to the reaction of the experimental group. It was seen that the students gradually went toward becoming less dependent on the teacher’s assistance. Therefore, it is suggested that language teachers should be familiar with such strategies and teach them to their students in order to help them to take the responsibility of their own learning.
Researcher suggests that less competent learners may improve their skills through training in strategies evidenced by more successful learners (Carrel, et. al., 1989). By learning how to read students can increase their power of learning materials rapidly and do not waste their time a lot. All the mentioned activities can be done by teaching appropriate reading strategies to students. Strategy instruction helps to improve comprehension as well as efficiency in reading. By using strategies, students will improve their reading ability and will be better readers.

Researcher suggests that teaching readers to use reading strategies should be a prime consideration in the reading classroom. The significance of strategy training is that it equips the students with problem-solving abilities, which they can apply whenever they encounter reading difficulties. It promotes learner autonomy, enables students to take responsibility for their own learning even when they are no longer in a formal classroom setting.

Therefore, reading strategies can be considered as certain types of enabling activities because they equip the reader with a base knowledge necessary for dealing with the content of the structure of materials. Therefore, teaching students to become more strategic when they read increases their understanding of important textual information, as well as their motivation (Nolan, 1991).

REFERENCES


